



# **ORDINARY MEETING OF COUNCIL**

## **ENCLOSURES**

Tuesday 14 February 2017

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Australian Government  
Australian Radiation Protection  
and Nuclear Safety Agency

# Fact Sheet

## Mobile Phone Base Stations and Health

**Based on current research there are no established health effects that can be attributed to the low RF EME exposure from mobile phone base station antennas.**

### Introduction

There are mobile phone base station antennas on towers and buildings throughout Australia's populated areas. These antennas are part of the mobile phone network and they emit low level radiofrequency (RF) electromagnetic energy (EME). This fact sheet provides information about concern of adverse health effects arising from exposure to RF EME from base station antennas.

### How does the mobile phone network operate?

When a call is made from a mobile phone, RF signals are transmitted between its antenna and the antenna at a nearby base station. The phone call is then routed through the phone network to the destination phone. Base station antennas must be elevated and located clear of physical obstruction to ensure wide coverage.

In an area of increasing mobile phone use the number of additional base stations needed to maintain service quality increases, even in areas where mobile network coverage already exists. If this is not done the mobile network will not operate properly and, as a result, mobile phone users may not be able to connect to their network.

### Are base stations regulated in Australia?

The RF EME emissions from mobile phone base stations and other communications installations are regulated by the Australian Communications



and Media Authority (ACMA). The ACMA's regulatory arrangements require base stations to comply with the exposure limits in the ARPANSA RF Standard. The ARPANSA Standard is designed to protect people of all ages and health status against all known adverse health effects from exposure to RF EME. The ARPANSA Standard is based on scientific research that shows the levels at which harmful effects occur and it sets limits, based on international guidelines, well below these harmful levels.

The ACMA also requires base stations to comply with an industry code of practice which requires telecommunications carriers to inform and consult with the local community when planning, installing or upgrading base stations.

### How much RF EME are people exposed to from base stations?

The maximum levels of exposure of RF EME from base stations may be calculated from details of the equipment installed. These calculations are made available in the ARPANSA EME reports provided by the telecommunications companies on the Radio Frequency National Site Archive website, [www.rfnsa.com.au](http://www.rfnsa.com.au). The base station sites may be located by searching by postcode or town.

EME exposure to the public from base stations is typically hundreds of times below the limits of the ARPANSA RF Standard.

**Do base stations cause any health effects?**

Health authorities around the world, including ARPANSA and the World Health Organization, have examined the scientific evidence regarding possible health effects from base stations. Current research indicates that there are no established health effects from the low exposure to the RF EME from mobile phone base station antennas.

**How about people who work very close to base station antennas?**

Workers accessing rooftops and towers that house base station antennas must consult with building and facility management before entering the site. A guide to working safely near mobile phone base stations is available at <https://www.radioworksafes.com.au/>.

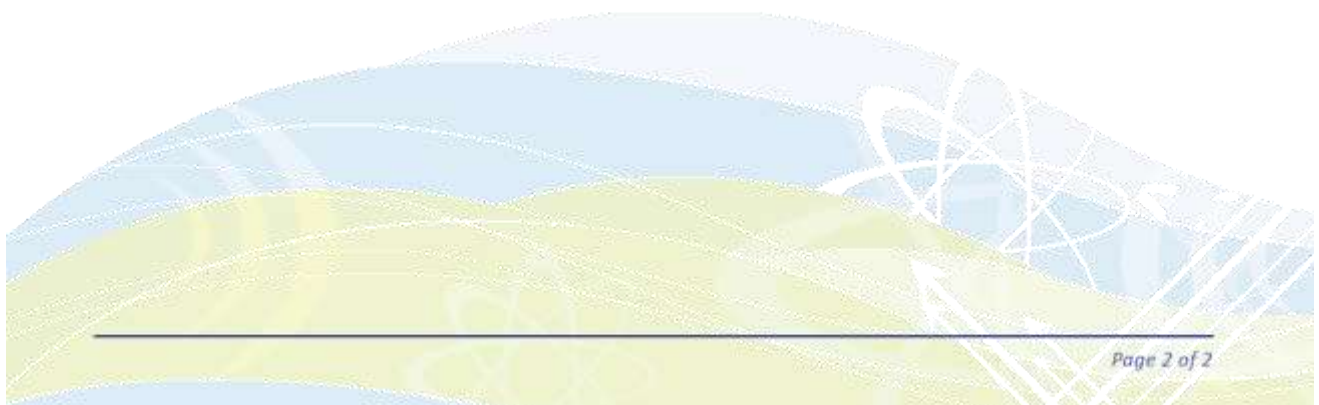
**Conclusion**

No adverse health effects are expected from continuous exposure to the RF EME emitted by the antennas on mobile phone base stations.

ARPANSA will continue to review the research into potential health effects of RF EME emissions from mobile phone base stations and other sources in order to provide accurate and up-to-date advice.

**Useful Links**

- ARPANSA fact sheet on RF EME  
[www.arpansa.gov.au/RadiationProtection/basics/rf.cfm](http://www.arpansa.gov.au/RadiationProtection/basics/rf.cfm)
- The ARPANSA RF Standard  
[www.arpansa.gov.au/Publications/codes/rps3.cfm](http://www.arpansa.gov.au/Publications/codes/rps3.cfm)
- WHO fact sheet on base stations  
[www.who.int/peh-emf/publications/facts/fs304/en/](http://www.who.int/peh-emf/publications/facts/fs304/en/)
- AMTA information on Australian base stations  
[www.rfnsa.com.au](http://www.rfnsa.com.au)  
[www.mobilesitesafety.com.au](http://www.mobilesitesafety.com.au)



## Environmental EME Report 1 Havilah Place, KIAMA NSW 2533

This report provides a summary of Calculated RF EME Levels around the wireless base station

Date 25/7/2016

RFNSA Site No. 2533025

### Introduction

The purpose of this report is to provide calculations of EME levels from the existing facilities at the site and any proposed additional facilities.

This report provides a summary of levels of radiofrequency (RF) electromagnetic energy (EME) around the wireless base station at 1 Havilah Place KIAMA NSW 2533. These levels have been calculated by Radhaz Consulting using methodology developed by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

The maximum EME level calculated for the proposed systems at this site is 1.21% of the public exposure limit.

### The ARPANSA Standard

ARPANSA, an Australian Government agency in the Health and Ageing portfolio, has established a Radiation Protection Standard specifying limits for general public exposure to RF transmissions at frequencies used by wireless base stations. The Australian Communications and Media Authority (ACMA) mandates the exposure limits of the ARPANSA Standard.

### How the EME is calculated in this report

The procedure used for these calculations is documented in the ARPANSA Technical Report "Radio Frequency EME Exposure Levels - Prediction Methodologies" which is available at <http://www.arpansa.gov.au>.

RF EME values are calculated at 1.5m above ground at various distances from the base station, assuming level ground.

The estimate is based on worst-case scenario, including:

- wireless base station transmitters for mobile and broadband data operating at maximum power
- simultaneous telephone calls and data transmission
- an unobstructed line of sight view to the antennas.

In practice, exposures are usually lower because:

- the presence of buildings, trees and other features of the environment reduces signal strength
- the base station automatically adjusts transmit power to the minimum required.

Maximum EME levels are estimated in 360° circular bands out to 500m from the base station.

These levels are cumulative and take into account emissions from all mobile phone antennas at this site.

The EME levels are presented in three different units:

- volts per metre (V/m) – the electric field component of the RF wave
- milliwatts per square metre (mW/m<sup>2</sup>) – the power density (or rate of flow of RF energy per unit area)
- percentage (%) of the ARPANSA Standard public exposure limit (the public exposure limit = 100%).

### Results

The maximum EME level calculated for the proposed systems at this site is 5.47 V/m; equivalent to 79.32 mW/m<sup>2</sup> or 1.21% of the public exposure limit.

### Radio Systems at the Site

There are currently no existing radio systems for this site.

It is proposed that this base station will have equipment for transmitting the following services:

Carrier	Radio Systems
Optus	WCDMA900 (proposed), WCDMA2100 (proposed), LTE700 (proposed), LTE1800 (proposed), LTE2600 (proposed)

### Calculated EME Levels

This table provides calculations of RF EME at different distances from the base station for emissions from existing equipment alone and for emissions from existing equipment and proposed equipment combined.

Distance from the antennas at 1 Havilah Place in 360° circular bands	Maximum Cumulative EME Level – All carriers at this site					
	Existing Equipment			Proposed Equipment		
	Electric Field V/m	Power Density mW/m <sup>2</sup>	% ARPANSA exposure limits	Electric Field V/m	Power Density mW/m <sup>2</sup>	% ARPANSA exposure limits
0m to 50m				3.41	30.78	0.41%
50m to 100m				3.21	27.25	0.49%
100m to 200m				5.47	79.32	1.21%
200m to 300m				4.52	54.28	0.82%
300m to 400m				3.043	24.56	0.37%
400m to 500m				2.28	13.82	0.21%
<b>Maximum EME level</b>				5.47	79.32	1.21
	141.17 m from the antennas at 1 Havilah Place					

### Calculated EME levels at other areas of interest

This table contains calculations of the maximum EME levels at selected areas of interest that have been identified through the consultation requirements of the Communications Alliance Ltd Deployment Code C564:2011 or via any other means. The calculations are performed over the indicated height range and include all existing and any proposed radio systems for this site.

Additional Locations	Height / Scan relative to location ground level	Maximum Cumulative EME Level All Carriers at this site Existing and Proposed Equipment		
		Electric Field V/m	Power Density mW/m <sup>2</sup>	% of ARPANSA exposure limits
Community Centre	4m to 6m	6.075	97.9	1.48%

### RF EME Exposure Standard

The calculated EME levels in this report have been expressed as percentages of the ARPANSA RF Standard and this table shows the actual RF EME limits used for the frequency bands available. At frequencies below 2000 MHz the limits vary across the band and the limit has been determined at the Assessment Frequency indicated. The four exposure limit figures quoted are equivalent values expressed in different units – volts per metre (V/m), watts per square metre (W/m<sup>2</sup>), microwatts per square centimetre (µW/cm<sup>2</sup>) and milliwatts per square metre (mW/m<sup>2</sup>). Note: 1 W/m<sup>2</sup> = 100 µW/cm<sup>2</sup> = 1000 mW/m<sup>2</sup>.

Radio Systems	Frequency Band	Assessment Frequency	ARPANSA Exposure Limit (100% of Standard)
LTE 700	758 – 803 MHz	750 MHz	37.6 V/m = 3.75 W/m <sup>2</sup> = 375 µW/cm <sup>2</sup> = 3750 mW/m <sup>2</sup>
WCDMA850	870 – 890 MHz	900 MHz	41.1 V/m = 4.50 W/m <sup>2</sup> = 450 µW/cm <sup>2</sup> = 4500 mW/m <sup>2</sup>
GSM900, LTE900, WCDMA900	935 – 960 MHz	900 MHz	41.1 V/m = 4.50 W/m <sup>2</sup> = 450 µW/cm <sup>2</sup> = 4500 mW/m <sup>2</sup>
GSM1800, LTE1800	1805 – 1880 MHz	1800 MHz	58.1 V/m = 9.00 W/m <sup>2</sup> = 900 µW/cm <sup>2</sup> = 9000 mW/m <sup>2</sup>
LTE2100, WCDMA2100	2110 – 2170 MHz	2100 MHz	61.4 V/m = 10.00 W/m <sup>2</sup> = 1000 µW/cm <sup>2</sup> = 10000 mW/m <sup>2</sup>
LTE2300	2302 – 2400 MHz	2300 MHz	61.4 V/m = 10.00 W/m <sup>2</sup> = 1000 µW/cm <sup>2</sup> = 10000 mW/m <sup>2</sup>
LTE2600	2620 – 2690 MHz	2600 MHz	61.4 V/m = 10.00 W/m <sup>2</sup> = 1000 µW/cm <sup>2</sup> = 10000 mW/m <sup>2</sup>
LTE3500	3425 – 3575 MHz	3500 MHz	61.4 V/m = 10.00 W/m <sup>2</sup> = 1000 µW/cm <sup>2</sup> = 10000 mW/m <sup>2</sup>

### Further Information

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) is a Federal Government agency incorporated under the Health and Ageing portfolio. ARPANSA is charged with responsibility for protecting the health and safety of people, and the environment, from the harmful effects of radiation (ionising and non-ionising).

Information about RF EME can be accessed at the ARPANSA website, <http://www.arpansa.gov.au>, including:

- Further explanation of this report in the document 'Understanding the ARPANSA Environmental EME Report'
- The procedure used for the calculations in this report is documented in the ARPANSA Technical Report; 'Radio Frequency EME Exposure Levels - Prediction Methodologies'
- the current RF EME exposure standard  
Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), 2002, 'Radiation Protection Standard: Maximum Exposure Levels to Radiofrequency Fields — 3 kHz to 300 GHz', Radiation Protection Series Publication No. 3, ARPANSA, Yallambie Australia.  
[Printed version: ISBN 0-642-79400-6 ISSN 1445-9760] [Web version: ISBN 0-642-79402-2 ISSN 1445-9760]

The Australian Communications and Media Authority (ACMA) is responsible for the regulation of broadcasting, radiocommunications, telecommunications and online content. Information on EME is available at <http://emr.acma.gov.au>.

The Communications Alliance Ltd Industry Code C564:2011 'Mobile Phone Base Station Deployment' is available from the Communications Alliance Ltd website, <http://commsalliance.com.au>.

Contact details for the Carriers (mobile phone companies) present at this site and the most recent version of this document are available online at the Radio Frequency National Site Archive, <http://www.rfnsa.com.au>.

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# Asset Management Plan

## Buildings



November 2016



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## 1. EXECUTIVE SUMMARY

### Context

The Kiama Municipal Council area is located on the south coast of NSW. This Buildings asset management plan describes the services provided by Council to facilitate effective service delivery of Building Infrastructure to the community.

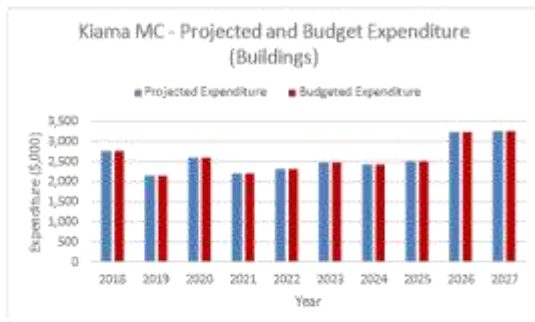
Councils Buildings comprise of Commercial Premises, Community Centres, Operational Buildings, Public Toilets, Emergency Services, Sports Facilities and Surf Life Saving Clubs.

These Buildings infrastructure assets have a replacement value of \$87,603,329

### What does it Cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan (AM Plan) includes operations, maintenance, renewal and upgrade of existing assets over the 10 year planning period is \$26,052,371 or \$2,605,237 on average per year.

Estimated available funding for this period is \$26,052,371 or \$2,605,237 on average per year which is 100% of the cost to provide the service. Projected expenditure required to provide services in the AM Plan compared with planned expenditure currently included in the Long Term Financial Plan are shown in the graph below.



### What we will do

We plan to provide Building services as follows:

- Maintenance, renewal and upgrade of Buildings to meet service levels set by Council in annual budgets.
- All required asset renewals have been incorporated into the 10 year financial plan.
- New and Upgraded Buildings within the 10 year financial plan are contained in Appendix C

### What we cannot do

The Buildings Asset Management Plan is aligned with Councils 10 year Financial Plan, accordingly we cannot Create New Buildings or Upgrade existing Buildings that have not been included in the current plans without additional funding.

### Managing the Risks

There are risks associated with providing the service and not being able to complete all identified activities and projects. We have identified major risks as:

- Public safety from unsafe structures
- Loss of service from Building being closed due to defects
- Financial Loss due to Fire or Storm events that damage Buildings

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

- Inspecting the buildings annually.
- Developing Scheduled Maintenance Plans to prevent defects.
- Insuring the building against Damage caused by Fire and other events.

### Confidence Levels

This AM Plan is based on a medium level of confidence information.

### The Next Steps

The actions resulting from this asset management plan are:

- Conduct maintenance in accordance with the asset management plan.
- Conduct renewals in accordance with the asset management plan.
- Conduct enhancements in accordance with the asset management plan.

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**Questions you may have****What is this plan about?**

This asset management plan covers the Buildings infrastructure that serve the Kiama Municipal Council community. It does not cover buildings's that are not owned by Kiama Municipal Council.

**What is an Asset Management Plan?**

Asset management planning is a comprehensive process to ensure delivery of services from infrastructure is provided in a financially sustainable manner.

An asset management plan details information about infrastructure assets including actions required to provide an agreed level of service in the most cost effective manner. The plan defines the services to be provided, how the services are provided and what funds are required to provide the services.

**Why is there a funding shortfall?**

Most of the Council's Buildings were constructed by developers, council funding and from government grants. Some buildings have been provided and accepted without consideration of ongoing operations, maintenance and replacement needs.

At the present time few of these assets are approaching the later years of their life and require structural replacement.

Our present funding levels are sufficient to continue to provide existing services at current levels in the medium term.

**What options do we have?**

Council will continue to resolve the requirements for Maintenance and inspection funding by:

1. Improving asset knowledge so that data accurately records the asset inventory, how assets are performing and when assets are not able to provide the required service levels,
2. Improving our efficiency in operating, maintaining, renewing and replacing existing assets to optimise life cycle costs,
3. Identifying and managing risks associated with providing services from infrastructure,
4. Making trade-offs between service levels and costs to ensure that the community receives the best return from infrastructure,
5. Identifying assets surplus to needs for disposal to make saving in future operations and maintenance costs,

6. Consulting with the community to ensure that Building Infrastructure and costs meet community needs and are affordable,
7. Developing partnership with other bodies, where available to provide services,
8. Seeking additional funding from governments and other bodies to better reflect a 'whole of government' funding approach to infrastructure services.

**What happens if we don't manage the shortfall?**

It is likely that we will not achieve the optimum lifecycle cost for Buildings Infrastructure.

**What can we do?**

We can develop options, costs and priorities for future Buildings Infrastructure, consult with the community to plan future services to match the community service needs with ability to pay for services and maximise community benefits against costs.

**What can you do?**

We will be pleased to consider community consultation on the issues raised in this asset management plan and suggestions on how we may change or reduce its Buildings Infrastructure to ensure that the appropriate level of service can be provided to the community within available funding.

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## 2. INTRODUCTION

### 2.1 Background

This asset management plan is to demonstrate responsive management of assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding needed to provide the required levels of service over a 10 year planning period.

The asset management plan follows the format for AM Plans recommended in Section 4.2.6 of the International Infrastructure Management Manual<sup>1</sup>.

The asset management plan is to be read with the organisation's Asset Management Policy, Asset Management Strategy and the following associated planning documents:

- Community Strategic Plan
- Work Force Plan
- 10 Year Financial Plan
- Delivery Program
- Operational Plan

This infrastructure assets covered by this asset management plan are shown in Table 2.1. These assets are used to provide Buildings Infrastructure to service the community.

**Table 2.1: Assets covered by this Plan**

Asset Category	Quantity	Replacement Value
Structure	150	43,666,742
Roof Structure	41	2,899,514
Internal Finishes	40	21,725,494
Electrical	41	6,990,696
Mechanical	41	10,699,060
Fire & Security	29	1,348,712
Vertical Transport	3	235,022
Appurtenances	5	38,088
<b>Total</b>		<b>87,603,329</b>

Key stakeholders in the preparation and implementation of this asset management plan are: Shown in Table 2.1.1.

**Table 2.1.1: Key Stakeholders in the AM Plan**

Key Stakeholder	Role in Asset Management Plan
Councillors	<ul style="list-style-type: none"> <li>• Represent needs of community/shareholders,</li> </ul>
General Manager	<ul style="list-style-type: none"> <li>• Allocate resources to meet the organisation's objectives in providing services while managing risks,</li> <li>• Ensure organisation is financial sustainable.</li> </ul>
Directors	<ul style="list-style-type: none"> <li>• Ensure the plans objectives and financial requirements are included in councils integrated planning and reporting documentation</li> </ul>
Manager Of Works	<ul style="list-style-type: none"> <li>• Delivery of the asset management plan objectives</li> </ul>

<sup>1</sup> IPWEA, 2011, Sec 4.2.6, *Example of an Asset Management Plan Structure*, pp 4|24 – 27.

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



Item 11.5

Enclosure 1

## 2.2 Goals and Objectives of Asset Management

The organisation exists to provide services to its community. Some of these services are provided by infrastructure assets. We have acquired infrastructure assets by purchase, by contract, construction by our staff and by donation of assets constructed by developers and others to meet increased levels of service.

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.<sup>2</sup>

## 2.3 Plan Framework

Key elements of the plan are

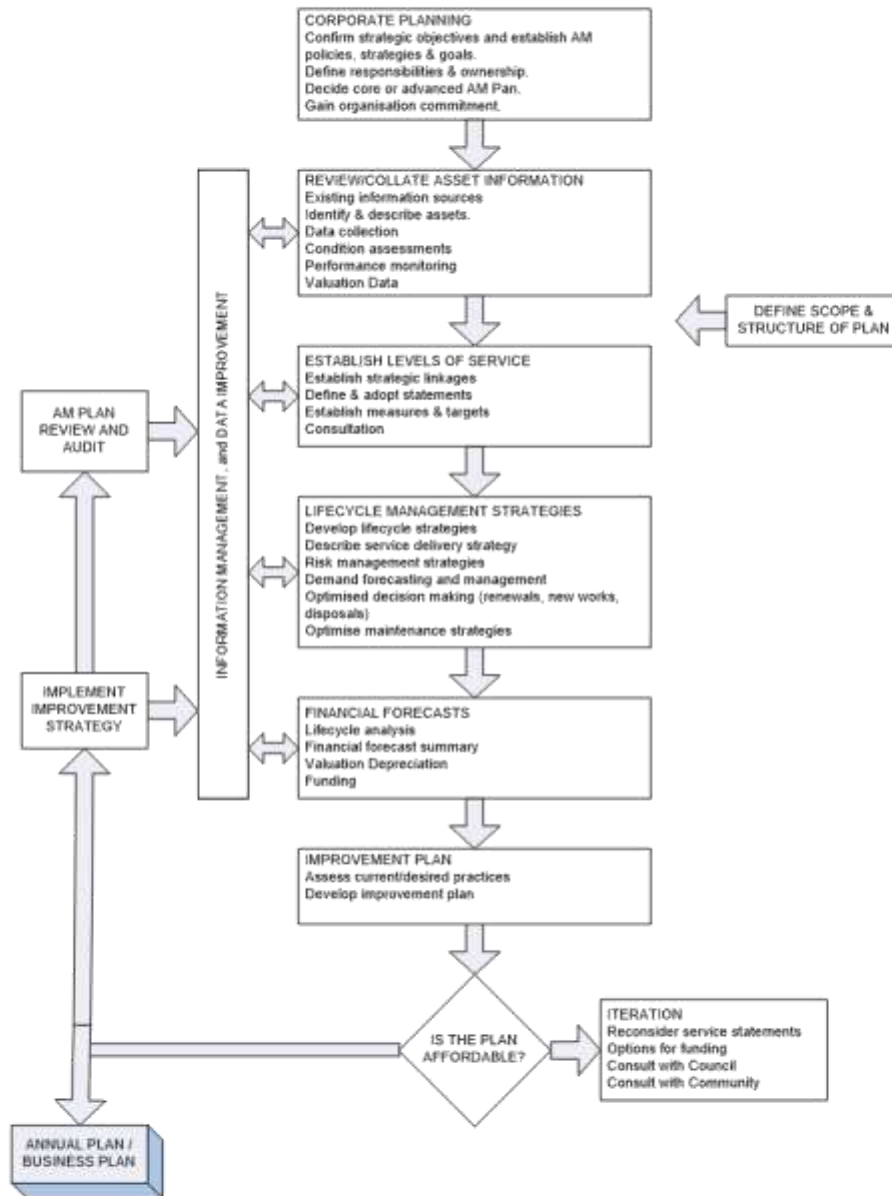
- Levels of service – specifies the services and levels of service to be provided by the organisation,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Life cycle management – how Council will manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices,
- Monitoring – how the plan will be monitored to ensure it is meeting organisation’s objectives,
- Asset management improvement plan.

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

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<sup>2</sup> Based on IPWEA, 2011, IIMM, Sec 1.2 p 1|7.

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





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## 2.4 Core and Advanced Asset Management

This asset management plan is prepared as a 'core' asset management plan over a 20 year planning period in accordance with the International Infrastructure Management Manual<sup>3</sup>. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. Core asset management is a 'top down' approach where analysis is applied at the 'system' or 'network' level.

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

## 2.5 Community Consultation

This 'core' asset management plan is prepared to facilitate community consultation initially through feedback on public display of draft asset management plans prior to adoption by the Council. Future revisions of the asset management plan will incorporate community consultation on service levels and costs of providing the service. This will assist the Council and the community in matching the level of service needed by the community, service risks and consequences with the community's ability and willingness to pay for the service.

## 3. LEVELS OF SERVICE

### 3.1 Customer Research and Expectations

The organisation carries out an IRIS Survey prior to re-developing Community Strategic Plan on customer satisfaction and expectations from all infrastructure areas.

The organisation uses this information in developing its Strategic Plan and in allocation of resources in the budget.

### 3.2 Strategic and Corporate Goals

This asset management plan is prepared under the direction of the organisation's vision, mission, goals and objectives.

Our vision is:

***Working together for a healthy, sustainable and caring community***

Our mission is:

***Kiama Council will work to create a Municipality that has a healthy, vibrant lifestyle, beautiful environment and harmonious, connected and resilient community***

---

<sup>3</sup> IPWEA, 2011, IIMM.

Relevant organisational goals and objectives and how these are addressed in this asset management plan are:

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

Plan Level	Plan No.	Plan Description	Measure's
CSP Strategy	2.13	Effectively manage other assets to cater for current and future generations (including car parks, community buildings, cemeteries and dams)	
DP Action	2.13.1	Manage community buildings by the creation and implementation of the Community Buildings Asset Management Plan actions	Maintain or increase community satisfaction with community buildings Optimal renewal of community buildings infrastructure The community buildings Asset Management Plan is fully funded Capital works are delivered in accordance with Delivery Program
OP Activity	2.13.1.1	Manage community asset renewals	Percentage of renewal program completed Percentage of renewals updated in the Asset Management Information System Percentage of scheduled designs completed Renewal Budget YTD%
OP Activity	2.13.1.2	Manage community buildings new asset creation	New Asset Budget v Actual expenditure percentage Percentage of new asset program completed Percentage of scheduled designs completed
OP Activity	2.13.1.3	Manage community buildings asset maintenance and operation	Unscheduled Maintenance Budget YTD%
OP Activity	2.13.1.4	Create a Community Buildings Asset Management Plan	New Asset schedule created for following year Budget Renewal schedule created for following year Budget
CSP Strategy	4.11	Ensure Council owned buildings and infrastructure are planned and maintained with consideration to both current and future generations	
DP Action	4.11.1	Ensure the Strategic Asset Management Plan is maintained and funded in the 10 year financial plan	Strategic Asset Management Plan is funded to meet Community Strategic Plan objectives
OP Activity	4.11.1.1	Review and re-adopt the Asset Management Policy	Policy re-adopted within 12 months of newly elected Councillors
OP Activity	4.11.1.2	Maintain a Strategic Asset Management Plan (SAMP) aligned with individual Asset Management Plans	Percentage of plans aligned with SAMP
OP Activity	4.11.1.3	Ensure ongoing alignment of Asset Management with Councils 10 year financial Plan	Percentage of plans aligned with 10 year Financial Plan
OP Activity	4.11.1.4	Seek infrastructure funding from external sources	Value of grants secured

The organisation will exercise its duty of care to ensure public safety is accordance with the infrastructure risk management plan prepared in conjunction with this AM Plan. Management of infrastructure risks is covered in Section 5.2

**3.3 Legislative Requirements**

The organisation has to meet many legislative requirements including Australian and State legislation and State regulations. These include:

**Table 3.3: Legislative Requirements**

Legislation	Requirement
Local Government Act 1993	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Protection of the Environment Operations Act 1997	To ensure that all reasonable and practicable measures are taken to protect, restore and enhance the quality of the environment having regard to the principles of ecologically sustainable development.
Australian Accounting Standards	Sets out the financial reporting standards relating to Infrastructure assets. Standards of particular relevance to Infrastructure Assets include: <ul style="list-style-type: none"> <li>• AASB116 Property, Plant &amp; Equipment – prescribes requirement for recognition and depreciation of property, plant and equipment assets</li> <li>• AASB136 Impairment of Assets - aims to ensure that assets are carried at amounts that are not in excess of their recoverable amounts</li> <li>• AASB1021 Depreciation of Non-Current Assets - specifies how depreciation is to be calculated</li> <li>• AAS1001 Accounting Policies - specifies the policies that Council is to have for recognition of assets and depreciation</li> <li>• AASB1041 Accounting for the reduction of Non-Current Assets - specifies the frequency and basis of calculation depreciation and revaluation basis used for assets</li> <li>• AAS1015 Accounting for acquisition of assets - method of allocating the value to new assets on acquisition</li> </ul>
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)
Civil Liability Act 2002	Protects the Council from civil action by requiring the courts to take into account the financial resources, the general responsibilities of the authority and the compliance with general practices and applicable standards.
Water Management Act 2000	The objects of this Act are to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations and, in particular: <ul style="list-style-type: none"> <li>• to apply the principles of ecologically sustainable development, and</li> <li>• to protect, enhance and restore water sources, their associated ecosystems, ecological processes and biological diversity and their water quality, and</li> <li>• to recognise and foster the significant social and economic benefits to the State that result from the sustainable and efficient use of water, including:                             <ul style="list-style-type: none"> <li>○ benefits to the environment, and</li> <li>○ benefits to urban communities, agriculture, fisheries, industry and recreation, and</li> <li>○ benefits to culture and heritage, and</li> <li>○ benefits to the Aboriginal people in relation to their spiritual, social, customary and economic use of land and water,</li> </ul> </li> <li>• to recognise the role of the community, as a partner with government, in resolving issues relating to the management of water sources,</li> <li>• to provide for the orderly, efficient and equitable sharing of water from water sources,</li> <li>• to integrate the management of water sources with the management of other aspects of the environment, including the land, its soil, its native vegetation and its native fauna,</li> <li>• to encourage the sharing of responsibility for the sustainable and efficient use of water between the Government and water users,</li> <li>• to encourage best practice in the management and use of water.</li> </ul>
Work Health And Safety Act 2011	To take a constructive role in promoting improvements in occupational health, safety and welfare practices and assisting in the preservation of public health and safety in all undertakings of Council

The organisation will exercise its duty of care to ensure public safety in accordance with the infrastructure risk management plan linked to this AM Plan. Management of risks is discussed in Section 5.2.

**3.4 Community Levels of Service**

Service levels are defined service levels in two terms, customer levels of service and technical levels of service.

Community Levels of Service measure how the community receives the service and whether the organisation is providing community value.

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?

The organisation's current and expected community service levels are detailed are aligned with the Community Strategic Plan and shown in Table 3.2. The agreed expected community levels of service based on resource levels in the current long-term financial plan and community consultation/engagement.

**3.5 Technical Levels of Service**

**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, mowing grass, energy, inspections, etc.
- Maintenance – the activities necessary to retain an asset 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).

Service and asset managers plan, implement and control technical service levels to influence the customer service levels.<sup>4</sup>

<sup>4</sup> IPWEA, 2011, IIMM, p 2.22

**4. FUTURE DEMAND**

**4.1 Demand Drivers**

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

**4.2 Demand Forecast**

The present position and projections for demand drivers that may impact future service delivery and utilisation of assets were identified and are documented in Table 4.3.

**4.3 Demand Impact on Assets**

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

**Table 4.3: Demand Drivers, Projections and Impact on Service**

Demand drivers	Present position	Projection	Impact on services
Population Growth	The estimated population is 21,314	The estimated annual population Growth is 1.37%	No impact on Services in the life of this plan apart from developer contributions from new subdivisions.
Climate Change	Infrastructure designed to suite current standards	Potentially Rising sea levels, additional rainfall and El Nino storm events.	No impact on Services in the life of this plan.

**4.4 Demand Management Plan**

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

Non-asset solutions focus on providing the required service without the need for the organisation to own the assets and management actions including reducing demand for the service, reducing the level of service (allowing some assets to deteriorate beyond current service levels) or educating customers to accept appropriate asset failures<sup>5</sup>. Examples of non-asset solutions include providing services from existing infrastructure such as aquatic centres and libraries that may be in another community area or public toilets provided in commercial premises.

Opportunities identified to date for demand management are shown in Table 4.4. Further opportunities will be developed in future revisions of this asset management plan.

**Table 4.4: Demand Management Plan Summary**

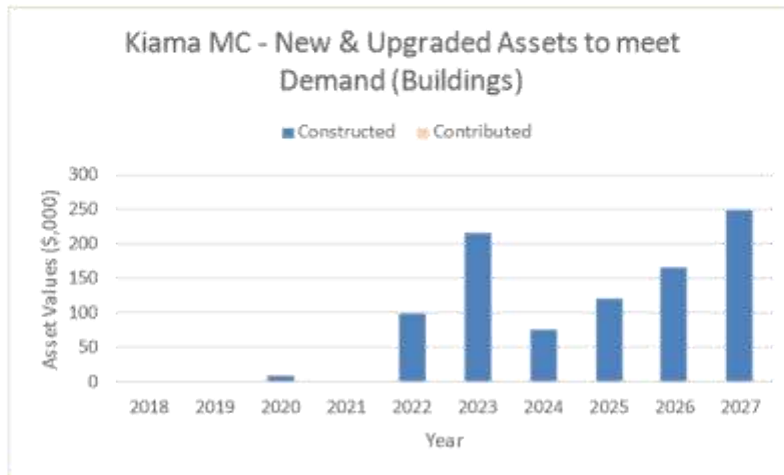
Demand Driver	Impact on Services	Demand Management Plan
Population Growth	No impact on Services in the life of this plan.	Additional assets are acquired as part of the developer contributions. Council will need to fully fund the life cycle costs of these new assets.
Climate Change	No impact on Services in the life of this plan.	No impact on Services in the life of this plan.

<sup>5</sup> IPWEA, 2011, IIMM, Table 3.4.1, p 3]58.

**4.5 Asset Programs to meet Demand**

The new assets required to meet growth will be acquired free of cost from land developments and constructed/acquired by the organisation. New assets constructed/acquired by the organisation are discussed in Section 5.5. The cumulative value of new contributed and constructed asset values are summarised in Figure 1.

**Figure 1: New & Upgraded Assets to meet Demand**



Acquiring these new assets will commit the organisation to fund ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs in Section 5.

**5. LIFECYCLE MANAGEMENT PLAN**

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

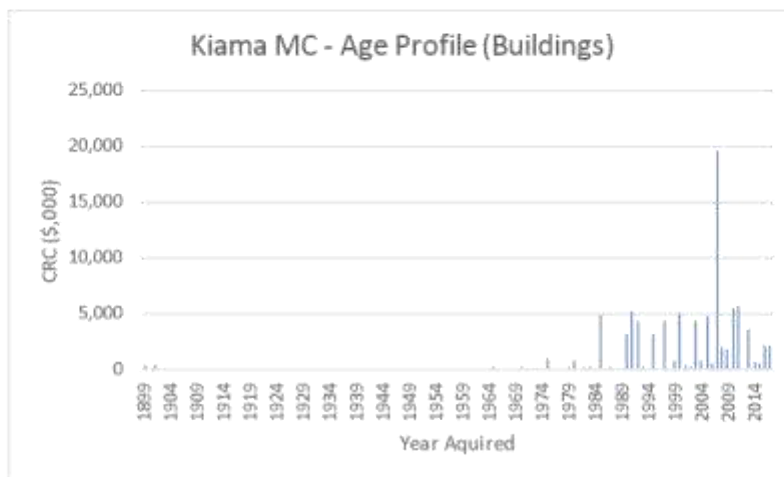
**5.1 Background Data**

**5.1.1 Physical parameters**

The assets covered by this asset management plan are shown in Table 2.1.

The age profile of the assets include in this AM Plan is shown in Figure 2.

**Figure 2: Asset Age Profile**



Plans showing the assets are:

- Work As Executed Drawings stored in the corporate document management system (Trim). These documents are linked to individual assets records in the corporate asset management system (Authority).
- Assets are geographically displayed on the corporate Geographic information system which is fully integrated to Council's Asset Management System.

5.1.2 Asset capacity and performance

The organisation’s services are generally provided to meet design standards where these are available.

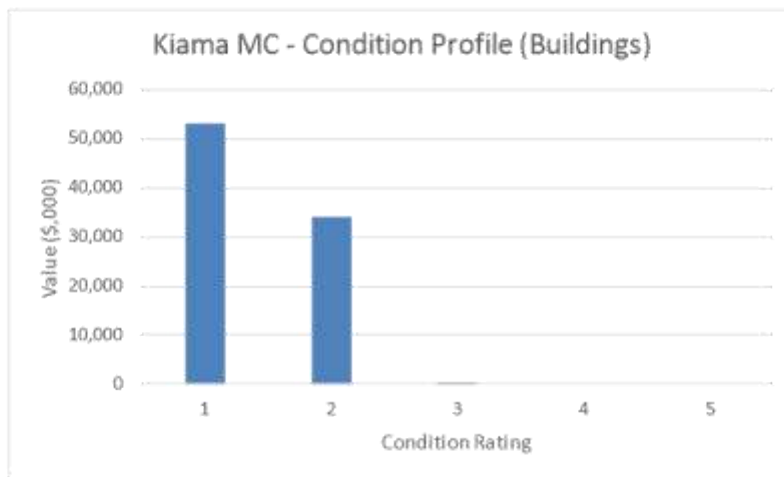
Council has an integrated approach to service delivery and where capacity or performance requirements of assets require a change the Funding Allocation Process is used to ensure that the lifecycle costs are incorporated into the Integrated Planning and Reporting framework including the 10 Year Financial Plan, Asset Management Plan and Workforce Plan.

5.1.3 Asset condition

Condition is monitored by inspecting the assets on a regular cycle. In addition all assets have condition inspections that align with the 5 year Financial Revaluation of Assets.

The condition profile of our assets is shown in Figure 3.

Fig 3: Asset Condition Profile



Condition is measured using a 1 – 5 grading system<sup>6</sup> as detailed in Table 5.1.3.

Table 5.1.3: Simple Condition Grading Model

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

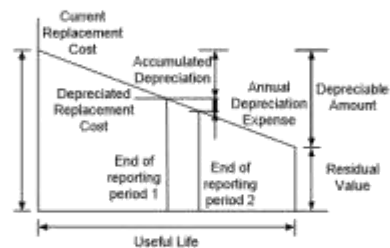
<sup>6</sup> IPWEA, 2011, IIMM, Sec 2.5.4, p 2|79.



5.1.4 Asset valuations

The value of assets recorded in the asset register as at 30/06/2015 covered by this asset management plan is shown below. Assets were last revalued at 30/06/2015. Assets are valued using the depreciated replacement cost methodology. This asset class is revalued every 5 years.

Current Replacement Cost	\$87,603,329
Depreciable Amount	\$87,201,336
Depreciated Replacement Cost <sup>7</sup>	\$49,999,905
Annual Depreciation Expense	\$1,287,601



Useful lives were reviewed in June 2016 by assessing the condition of assets.

Key assumptions made in preparing the valuations were:

- Unit rate of excavation assumed a common sub surface material type
- Condition assessment of the samples reflects the entire network
- Where the dimensional information was absent default dimensions were used

Various ratios of asset consumption and expenditure have been prepared to help guide and gauge asset management performance and trends over time.

Rate of Annual Asset Consumption (Depreciation/Depreciable Amount)	1.48%
Rate of Annual Asset Renewal (Capital renewal exp/Depreciable amount)	1.30%

In 2018 the organisation plans to renew assets at 87.76% of the rate they are being consumed and will be increasing its asset stock by 0.000% in the year. All future asset renewals are fully funded in councils LTFFP.

5.1.5 Historical Data

All Buildings asset data and financial data are stored in Councils Corporate Asset Management system.

5.2 Infrastructure Risk Management Plan

An assessment of risks<sup>3</sup> associated with service delivery from infrastructure assets has identified critical risks that will result in loss or reduction in service from infrastructure assets or a 'financial shock' to the organisation. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' - requiring immediate corrective action and 'High' - requiring prioritised corrective action identified in the Infrastructure Risk Management Plan, together with the estimated residual risk after the selected treatment plan is operational are summarised in Table 5.2. These risks are reported to management and Council.

<sup>7</sup> Also reported as Written Down Current Replacement Cost (WDCRC).

**Table 5.2: Critical Risks and Treatment Plans**

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Buildings	Damaged or Destroyed by Fire or Storm Event	VH	Buildings and Contents Insurance	Low	

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

**5.3 Routine Operations and Maintenance Plan**

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

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

**5.3.1 Operations and Maintenance Plan**

Operations activities affect service levels including quality and function through street sweeping and grass mowing frequency, intensity and spacing of street lights and cleaning frequency and opening hours of building and other facilities.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating, eg road patching but excluding rehabilitation or renewal. Maintenance may be classified into reactive, planned and specific maintenance work activities.

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

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

Specific maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, replacing air conditioning units, etc. This work falls below the capital/maintenance threshold but may require a specific budget allocation.

Actual past maintenance expenditure is shown in Table 5.3.1.

**Table 5.3.1: Maintenance Expenditure Trends**

Year	Maintenance Expenditure	
	Planned and Specific	Unplanned
2014	\$0	\$586,765
2015	\$0	\$536,370
2016	\$0	\$411,133

Planned maintenance work is currently 0.00% of total maintenance expenditure.

Maintenance expenditure levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance expenditure levels are such that will result in a lesser level of service, the service consequences and service risks have been identified and service consequences highlighted in this AM Plan and service risks considered in the Infrastructure Risk Management Plan.

Assessment and prioritisation of reactive maintenance is undertaken by Council staff using experience and judgement. In conjunction with response levels of service detailed in Appendix A.

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,
- 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.

Asset hierarchy

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

The organisation’s service hierarchy is shown in Table 5.3.2.

**Table 5.3.2: Asset Service Hierarchy**

Service Hierarchy	Service Level Objective
Commercial Premises	Generate income.
Community Centre’s	Provide venues for the Community to meet and hold events
Operational Buildings	Provide facilities for KMC internal use for staffing, depot services, waste
Public Toilets	Provide public toilet facilities
Emergency Services	Provide facilities for the Rural Fire Service and State Emergency Service
Sports Facilities	Provide Change rooms, canteens, and club house facilities to sports field users.
Surf Life Saving Clubs	Provide Surf Living Saving Clubs with facilities on beaches.

Critical Assets

Critical assets are those assets which have a high consequence of failure but not necessarily a high likelihood of failure. By identifying critical assets and critical failure modes, organisations can target and refine investigative activities, maintenance plans and capital expenditure plans at the appropriate time.

Operations and maintenances activities may be targeted to mitigate critical assets failure and maintain service levels. These activities may include increased inspection frequency, higher maintenance intervention levels, etc. Critical assets failure modes and required operations and maintenance activities are detailed in Table 5.3.2.1.

Table 5.3.2.1: Critical Assets and Service Level Objectives

Critical Assets	Critical Failure Mode	Operations & Maintenance Activities
Building Structure	Loss of structural integrity	<ul style="list-style-type: none"> <li>• Inspection</li> <li>• Painting of deterrable surfaces</li> <li>• Rectification of defects</li> </ul>
Internal Finishes	Hazardous to users	<ul style="list-style-type: none"> <li>• Inspection</li> <li>• Rectification of defects</li> </ul>
Roofs	Water Ingress	<ul style="list-style-type: none"> <li>• Inspection</li> <li>• Rectification of defects</li> </ul>

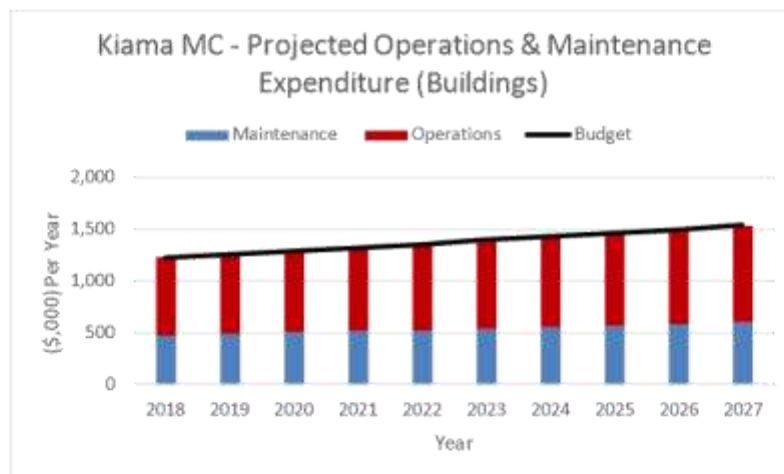
Standards and specifications

Maintenance work is carried out in accordance with relevant Standards and Specifications.

5.3.3 Summary of future operations and maintenance expenditures

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 4.

Figure 4: Projected Operations and Maintenance Expenditure



Deferred maintenance, ie works that are identified for maintenance and unable to be funded are to be included in the risk assessment and analysis in the infrastructure risk management plan.

Maintenance is funded from the operating budget where available. This is further discussed in Section 6.2.

5.4 Renewal/Replacement Plan

Renewal and replacement expenditure is major work which does not increase the asset’s design capacity but restores, rehabilitates, replaces or renews an existing asset to its original or lesser required service potential. Work over and above restoring an asset to original service potential is upgrade/expansion or new works expenditure.

5.4.1 Renewal plan

Assets requiring renewal/replacement are identified from one of three methods provided in the 'Expenditure Template'.

- Method 1 uses Asset Register data to project the renewal costs using acquisition year and useful life to determine the renewal year, or
- Method 2 uses capital renewal expenditure projections from external condition modelling systems (such as Pavement Management Systems), or
- Method 3 uses a combination of average *network renewals plus defect repairs* in the *Renewal Plan* and *Defect Repair Plan* worksheets on the 'Expenditure template'.

Method 1 was used for this asset management plan.

The useful lives of assets used to develop projected asset renewal expenditures are shown in Table 5.4.1. Asset useful lives were last reviewed on June 2016.<sup>9</sup>

**Table 5.4.1: Useful Lives of Assets**

<b>Asset Category</b>	<b>Useful Life</b>
Structure	35 to 100 years
Roof Structure	40 to 100 years
Internal Finishes	20 to 100 years
Electrical	20 to 50 years
Mechanical	20 to 100 years
Fire & Security	30 to 50 years
Vertical Transport	20 to 50 years
Appurtenances	10 to 50 years

5.4.2 Renewal and Replacement Strategies

The organisation will plan capital renewal and replacement projects to meet level of service objectives and minimise infrastructure service risks by:

- Planning and scheduling renewal projects to deliver the defined level of service in the most efficient manner,
- Undertaking project scoping for all capital renewal and replacement projects to identify:
  - the service delivery 'deficiency', present risk and optimum time for renewal/replacement,
  - the project objectives to rectify the deficiency,
  - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
  - and evaluate the options against evaluation criteria adopted by the organisation, and
  - select the best option to be included in capital renewal programs,
- Using 'low cost' renewal methods (cost of renewal is less than replacement) wherever possible,
- Maintain a current infrastructure risk register for assets and 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,

- 21 -

- Review current and required skills base and implement workforce training and development to meet required construction and renewal needs,
- Maintain a current hierarchy of critical assets and capital renewal treatments and timings required ,
- Review management of capital renewal and replacement activities to ensure Council is obtaining best value for resources used.

#### Renewal ranking criteria

Asset renewal and replacement is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (eg replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (eg roughness of a road).<sup>10</sup>

It is possible to get some indication of capital renewal and replacement priorities by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have a high utilisation and subsequent impact on users would be greatest,
- The total value represents the greatest net value to the organisation,
- Have the highest average age relative to their expected lives,
- Are identified in the AM Plan as key cost factors,
- Have high operational or maintenance costs, and
- Where replacement with modern equivalent assets would yield material savings.<sup>11</sup>

Council has an integrated approach to service delivery and where capacity or performance requirements of assets require a change the Funding Allocation Process is used to ensure that the lifecycle costs are incorporated into the Integrated Planning and Reporting framework including the 10 Year Financial Plan, Asset Management Plan and Workforce Plan.

The 10 year Renewal Plan is detailed in Appendix B.

#### Renewal and replacement standards

Renewal work is carried out in accordance with the relevant Standards and Specifications.

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<sup>10</sup> IPWEA, 2011, IIMM, Sec 3.4.4, p 3|60.

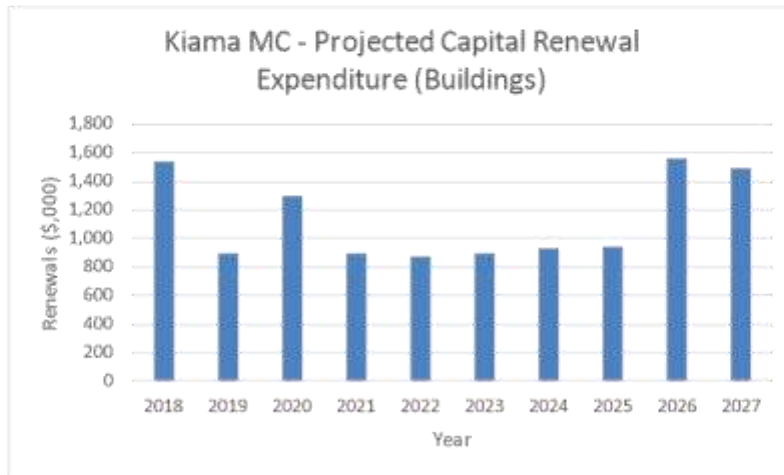
<sup>11</sup> Based on IPWEA, 2011, IIMM, Sec 3.4.5, p 3|66.

5.4.3 Summary of future renewal and replacement expenditure

Projected future renewal and replacement expenditures are forecast to increase over time as the asset stock increases from growth. The expenditure is summarised in Fig 5. Note that all amounts are shown in real values.

The projected capital renewal and replacement program is shown in Appendix B.

Fig 5: Projected Capital Renewal and Replacement Expenditure



Deferred renewal and replacement, ie those assets identified for renewal and/or replacement and not scheduled in capital works programs are to be included in the risk analysis process in the risk management plan.

Renewals and replacement expenditure in the organisation’s capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

5.5 Creation/Acquisition/Upgrade Plan

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

5.5.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as councilor/director or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programs.

5.5.2 Capital Investment Strategies

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:

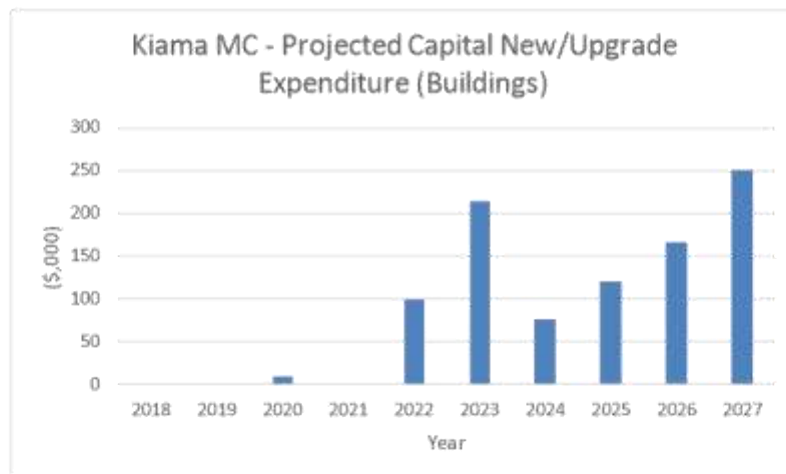
- the service delivery 'deficiency', present risk and required timeline for delivery of the upgrade/new asset,
- the project objectives to rectify the deficiency including value management for major projects,
- the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
- management of risks associated with alternative options,
- and evaluate the options against evaluation criteria adopted by Council, 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.

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2.

5.5.3 Summary of future upgrade/new assets expenditure

Projected upgrade/new asset expenditures are summarised in Fig 6. The projected upgrade/new capital works program is shown in Appendix C. All amounts are shown in real values.

Fig 6: Projected Capital New/Upgrade Asset Expenditure



Expenditure on new assets and services in the organisation’s capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

5.6 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6, together with estimated annual savings from not having to fund operations and maintenance of the assets. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any. Any revenue gained from asset disposals is accommodated in Council’s long term financial plan.

Where cashflow projections from asset disposals are not available, these will be developed in future revisions of this asset management plan.



**Table 5.6: Assets Identified for Disposal**

Asset	Reason for Disposal	Timing	Disposal Expenditure	Operations & Maintenance Annual Savings
Nil	N/A	N/A	0	0

**5.7 Service Consequences and Risks**

The organisation has prioritised decisions made in adopting this AM Plan to obtain the optimum benefits from its available resources. Decisions were made based on the development of 3 scenarios of AM Plans.

**Scenario 1** - What we would like to do based on asset register data

**Scenario 2** – What we should do with existing budgets and identifying level of service and risk consequences (ie what are the operations and maintenance and capital projects we are unable to do, what is the service and risk consequences associated with this position). This may require several versions of the AM Plan.

**Scenario 3** – What we can do and be financially sustainable with AM Plans matching long-term financial plans.

The development of scenario 1 and scenario 2 AM Plans provides the tools for discussion with the Council/Board and community on trade-offs between what we would like to do (scenario 1) and what we should be doing with existing budgets (scenario 2) by balancing changes in services and service levels with affordability and acceptance of the service and risk consequences of the trade-off position (scenario 3).

**5.7.1 What we cannot do**

There are no identified operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years.

**5.7.2 Service consequences**

All Operations and maintenance activities and capital projects are funded in the 10 Year Financial Plan.

**5.7.3 Risk consequences**

There are no additional risk consequences based on section 5.7.1

Ongoing risks have been included with the Infrastructure Risk Management Plan summarised in Section 5.2 and risk management plans actions and expenditures included within projected expenditures.

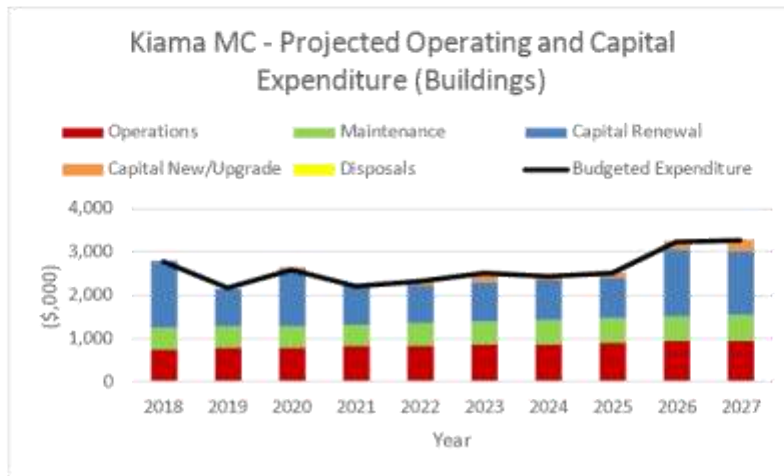
**6. FINANCIAL SUMMARY**

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

**6.1 Financial Statements and Projections**

The financial projections are shown in Fig 7 for projected operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets). Note that all costs are shown in real values.

**Fig 7: Projected Operating and Capital Expenditure**



**6.1.1 Sustainability of service delivery**

There are four key indicators for service delivery sustainability that have been considered in the analysis of the services provided by this asset category, these being the asset renewal funding ratio, long term life cycle costs/expenditures and medium term projected/budgeted expenditures over 5 and 10 years of the planning period.

**Asset Renewal Funding Ratio**

Asset Renewal Funding Ratio<sup>12</sup> 100.00%

The Asset Renewal Funding Ratio is the most important indicator and reveals that over the next 10 years, Council is forecasting that it will have 100.00% of the funds required for the optimal renewal and replacement of its assets.

**Long term - Life Cycle Cost**

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the asset life cycle. Life cycle costs include operations and maintenance expenditure and asset consumption (depreciation expense). The life cycle cost for the services covered in this asset management plan is \$2,672,269 per year (average operations and maintenance expenditure plus depreciation expense projected over 10 years).

<sup>12</sup> AIFMG, 2012, Version 1.3, Financial Sustainability Indicator 4, Sec 2.6, p 2.16

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Life cycle costs can be compared to life cycle expenditure to give an initial indicator of affordability of projected service levels when considered with age profiles. Life cycle expenditure includes operations, maintenance and capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure over the 10 year planning period is \$2,511,607 per year (average operations and maintenance plus capital renewal budgeted expenditure in LTFP over 10 years).

A shortfall between life cycle cost and life cycle expenditure is the life cycle gap. The life cycle gap for services covered by this asset management plan is -\$160,661 per year (-ve = gap, +ve = surplus).

Life cycle expenditure is 93.99% of life cycle costs.

The life cycle costs and life cycle expenditure comparison highlights any difference between present outlays and the average cost of providing the service over the long term. Currently the life cycle expenditure is less than that life cycle cost due to the majority of the buildings infrastructure being in the early to mid stages of their useful lives. Renewal outlays will need to be increased in the future when the assets are reaching the later stages of their useful lives.

Knowing the extent and timing of any required increase in outlays and the service consequences if funding is not available will assist organisations in providing services to their communities in a financially sustainable manner. This is the purpose of the asset management plans and long term financial plan.

#### Medium term – 10 year financial planning period

This asset management plan identifies the projected operations, maintenance and capital renewal expenditures required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

These projected expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall. In a core asset management plan, a gap is generally due to increasing asset renewals for ageing assets.

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is \$2,511,607 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$2,511,607. This indicates that Council expects to have 100.00% of the projected expenditures needed to provide the services documented in the asset management plan.

#### Medium Term – 5 year financial planning period

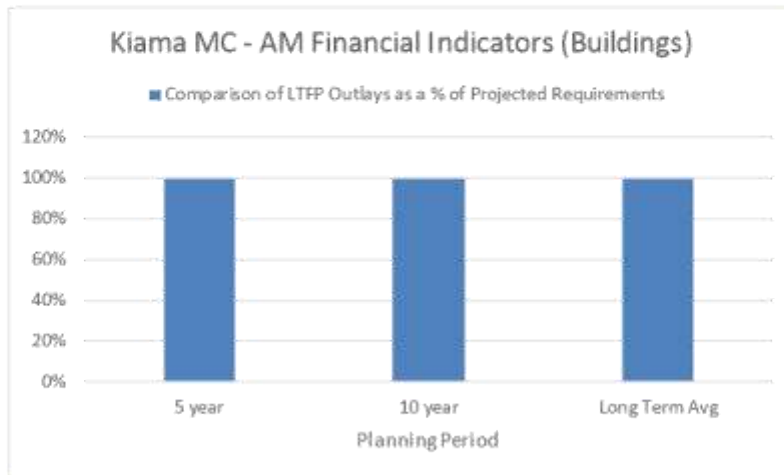
The projected operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is \$2,395,852 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$2,395,852 This indicates that Council expects to have 100.00% of projected expenditures required to provide the services shown in this asset management plan.

Asset management financial indicators

Figure 7A shows the asset management financial indicators over the 10 year planning period and for the long term life cycle.

Figure 7A: Asset Management Financial Indicators



Providing services from infrastructure in a sustainable manner requires the matching and managing of service levels, risks, projected expenditures and financing to achieve a financial indicator of approximately 100% for the first years of the asset management plan and ideally over the 10 year life of the Long Term Financial Plan.

Figure 8 shows the projected asset renewal and replacement expenditure over the 10 years of the AM Plan. The projected asset renewal and replacement expenditure is compared to renewal and replacement expenditure in the capital works program, which is accommodated in the long term financial plan

Figure 8: Projected and LTFP Budgeted Renewal Expenditure

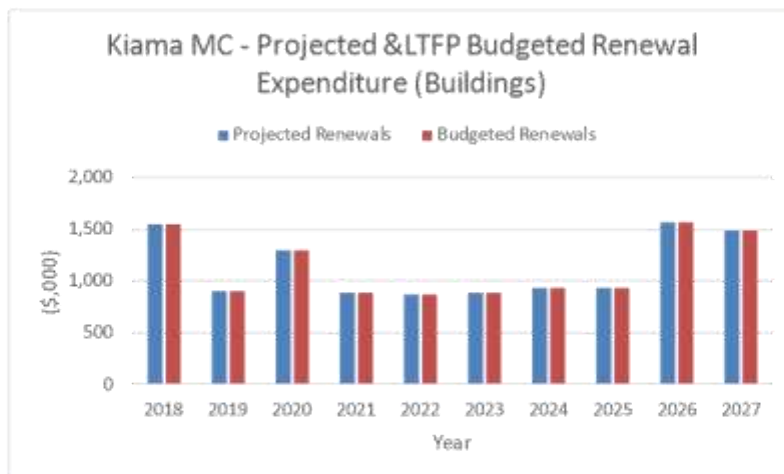


Table 6.1.1 shows the shortfall between projected renewal and replacement expenditures and expenditure accommodated in long term financial plan.

**Table 6.1.1: Projected and LTFP Budgeted Renewals and Financing Shortfall**

Year	Projected Renewals	LTFP Renewal Budget	Renewal Financing Shortfall (-ve Gap, +ve Surplus)	Cumulative Shortfall (-ve Gap, +ve Surplus)
2018	\$1,544	\$1,544	\$0	\$0
2019	\$895	\$895	\$0	\$0
2020	\$1,298	\$1,298	\$0	\$0
2021	\$890	\$890	\$0	\$0
2022	\$870	\$870	\$0	\$0
2023	\$891	\$891	\$0	\$0
2024	\$926	\$926	\$0	\$0
2025	\$936	\$936	\$0	\$0
2026	\$1,564	\$1,564	\$0	\$0
2027	\$1,487	\$1,487	\$0	\$0

All figures are in \$,000

Providing services in a sustainable manner will require matching of projected asset renewal and replacement expenditure to meet agreed service levels with **the corresponding** capital works program accommodated in the long term financial plan.

6.1.2 Projected expenditures for long term financial plan

Table 6.1.2 shows the projected expenditures for the 10 year long term financial plan.

**Table 6.1.2: Projected Expenditures for Long Term Financial Plan (\$000)**

Year	Operations	Maintenance	Capital Renewal	Capital New/Upgrade	Disposals
2018	\$756	\$478	\$1,544	\$0	\$0
2019	\$775	\$490	\$895	\$0	\$0
2020	\$794	\$502	\$1,298	\$10	\$0
2021	\$814	\$514	\$890	\$0	\$0
2022	\$834	\$527	\$870	\$100	\$0
2023	\$855	\$540	\$891	\$215	\$0
2024	\$876	\$554	\$926	\$76	\$0
2025	\$898	\$568	\$936	\$120	\$0
2026	\$921	\$582	\$1,564	\$166	\$0
2027	\$944	\$596	\$1,487	\$250	\$0

\* All figures are in \$,000

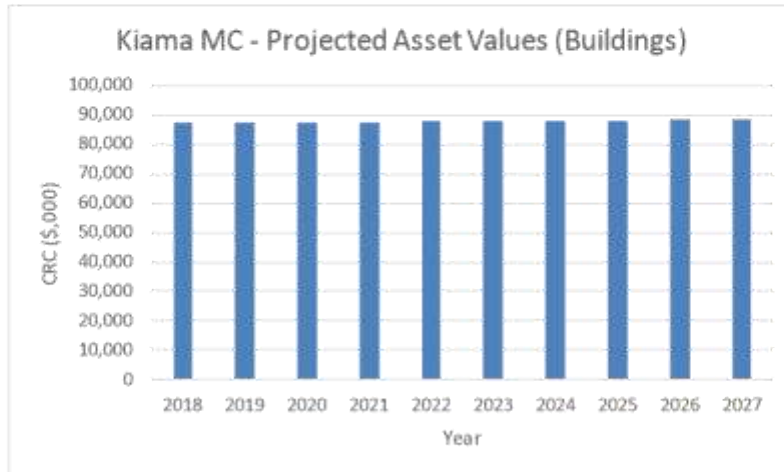
6.2 Funding Strategy

After reviewing service levels, as appropriate to ensure ongoing financial sustainability projected expenditures identified in Section 6.1.2 will be accommodated in the Council's 10 year long term financial plan.

**6.3 Valuation Forecasts**

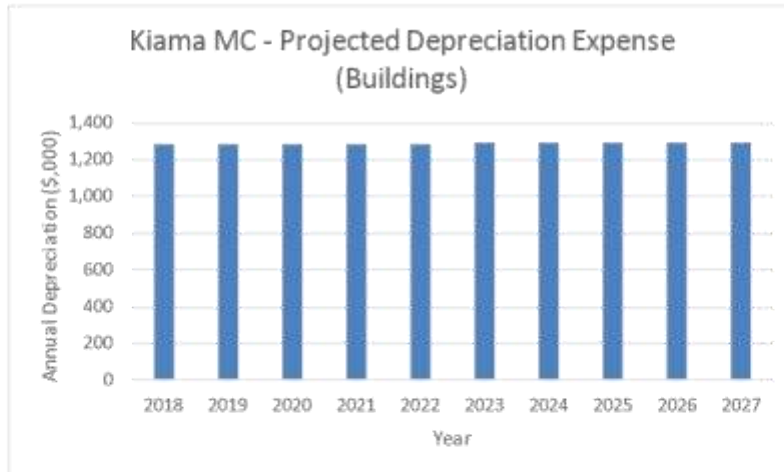
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Figure 9 shows the projected replacement cost asset values over the planning period in real values.

**Figure 9: Projected Asset Values**



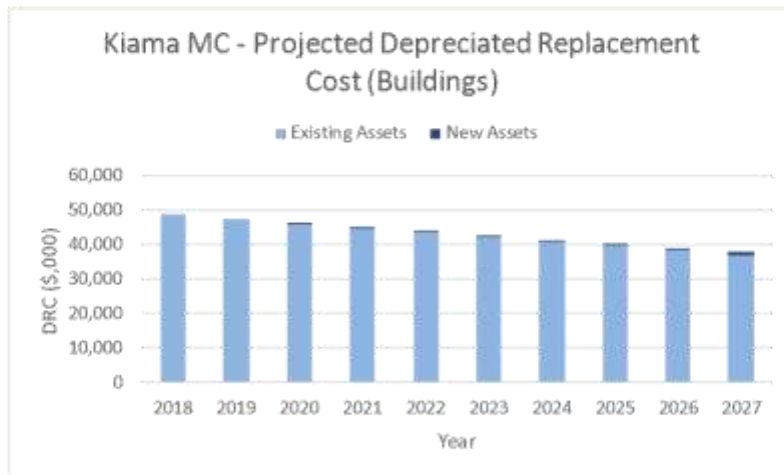
Depreciation expense values are forecast in line with asset values as shown in Figure 10.

**Figure 10: Projected Depreciation Expense**



The depreciated replacement cost will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets. Forecast of the assets' depreciated replacement cost is shown in Figure 11. The depreciated replacement cost of contributed and new assets is shown in the darker colour and in the lighter colour for existing assets.

Figure 11: Projected Depreciated Replacement Cost



**6.4 Key Assumptions made in Financial Forecasts**

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

Key assumptions made in this asset management plan and risks that these may change are shown in Table 6.4.

Table 6.4: Key Assumptions made in AM Plan and Risks of Change

Key Assumptions	Risks of Change to Assumptions
This asset class is fully funded in LTFP	Low
Future funding beyond the LTFP will remain fully funded	Low

**6.5 Forecast Reliability and Confidence**

The expenditure and valuations projections in this AM Plan are based on best available data. Currency and accuracy of data is critical to effective asset and financial management. Data confidence is classified on a 5 level scale<sup>13</sup> in accordance with Table 6.5.

<sup>13</sup> IPWEA, 2011, IIMM, Table 2.4.6, p 2|59.



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**Table 6.5: Data Confidence Grading System**

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

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 6.5.1.

**Table 6.5.1: Data Confidence Assessment for Data used in AM Plan**

Data	Confidence Assessment	Comment
Demand drivers	A	The demand drivers utilised in this plan are currently the most effective way to forecast future requirements
Growth projections	A	The growth projections are based off population increase resulting in rezoning of land for future sub divisions
Operations expenditures	B	The operations expenditure budget is forecasted from data currently in the asset management system
Maintenance expenditures	B	The maintenance expenditure budget is forecasted from data currently in the asset management system
Projected Renewal exps. - Asset values	B	The revaluation of the assets in this plan occurred in June 2016
- Asset useful lives	B	The useful lives of the assets were based on Asset Type, Material and construction date.
- Condition modelling	C	Condition modelling were based on inspections and construction date
- Asset renewals	B	The projected renewals expenditure budget is forecasted from data currently in the asset management system
- Defect repairs	C	Further inspections are required
Upgrade/New expenditures	A	Contained in Appendix C and fully funded
Disposal expenditures	A	There are no disposals identified in the plan

Over all data sources the data confidence is assessed as Medium confidence level for data used in the preparation of this AM Plan.

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## 7. PLAN IMPROVEMENT AND MONITORING

### 7.1 Status of Asset Management Practices

#### 7.1.1 Accounting and financial systems

Kiama Municipal Council uses the Authority corporate information system. This system is used for financial management and reporting. The asset valuations are stored in the Capital Valuation Register of authority with a 1 to 1 match and integration to the Authority Asset Management Module.

Kiama Municipal Council has a documented Asset Accounting Policy.

#### Accountabilities for financial systems

Kiama Municipal Council's Finance Department is responsible for the data and processes pertaining to financial records in Authority. Kiama's Information Technology Department is responsible for system administration and technology infrastructure.

#### Accounting standards and regulations

Kiama Municipal Council adheres to the Australian Accounting Standards in conjunction with the Code of Accounting Practice for all the NSW Local Government Councils.

#### Capital/maintenance threshold

All assets are valued at their fair value. Expenditure on existing assets is considered maintenance where it does not increase the estimated remaining life of the asset.

#### Required changes to accounting financial systems arising from this AM Plan

Nil

#### 7.1.2 Asset management system

Kiama Municipal Council uses the Authority Asset Management System and Work Management System.

#### Asset registers

All registers are stored in the Authority Asset Management System. The system is integrated with Council's GIS system to provide a geographical representation and navigation to assets in the Asset Management System. Some assets are currently missing audited dimensional data.

#### Linkage from asset management to financial system

The Asset Management and Financial System are modules of the Authority Corporate Information System. These modules are fully integrated with a 1 to 1 relationship between assets and financial records.

#### Accountabilities for asset management system and data maintenance

Kiama Municipal Council's Engineering and Works Department are responsible for the configuration and data management of the Asset Management System.

Kiama Municipal Council's Information Technology Department is responsible for system administration and technology infrastructure.

#### Required changes to asset management system arising from this AM Plan

Audit dimensional attributes of asset records.

**7.2 Improvement Plan**

The asset management improvement plan generated from this asset management plan is shown in Table 7.2.

**Table 7.2: Improvement Plan**

Task No	Task	Responsibility	Resources Required	Timeline
1	Audit dimensional attributes of asset records	Engineering And Works Department	Works Crew	Completion 2020
2	Introduction of reactive work orders to manage unscheduled maintenance v scheduled maintenance	Engineering And Works Department	Asset Management & IT	Completion 2018
3	Inspection scheduling and rerecording via the AM system	Engineering And Works Department	Asset Management & IT	Completion 2018
4	Develop site operational plans including scheduled maintenance plan and service levels	Engineering And Works Department	Asset Management	Completion 2018
5	Decommission the Buildings Asset Management Plan in favour of Service Delivery Plans incorporating Asset Management.	KMC Executive Engineering And Works Department	Asset Management, Building Users	Completion 2019
6	Introduction of Internal Charges for Buildings to facilitate Activity Based Costing	Engineering And Works Department Finance Department	Asset Management, Management Accountant, Building Users	Completion 2017

**7.3 Monitoring and Review Procedures**

This asset management plan will be reviewed during annual budget planning processes and amended to recognise any material changes in service levels and/or resources available to provide those services as a result of budget decisions.

The AM Plan will be updated annually to ensure it represents the current service level, asset values, projected operations, maintenance, capital renewal and replacement, capital upgrade/new and asset disposal expenditures and projected expenditure values incorporated into the organisation’s long term financial plan.

The AM Plan has a life of 4 years (Council election cycle) and is due for complete revision and updating before each Council election.

**7.4 Performance Measures**

The effectiveness of the asset management plan can be measured in the following ways:

- The degree to which the required projected expenditures identified in this asset management plan are incorporated into Council’s long term financial plan,
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the ‘global’ works program trends provided by the asset management plan,
- The degree to which the existing and projected service levels and service consequences (what we cannot do), risks and residual risks are incorporated into the Council’s Strategic Plan and associated plans,
- The Asset Renewal Funding Ratio achieving the target of 100%.

**8. REFERENCES**

IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/IIMM](http://www.ipwea.org/IIMM)

IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/namsplus](http://www.ipwea.org/namsplus).

IPWEA, 2009, 'Australian Infrastructure Financial Management Guidelines', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/AIFMG](http://www.ipwea.org/AIFMG).

IPWEA, 2011, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/IIMM](http://www.ipwea.org/IIMM)

Kiama Municipal Council 'Operational Plan 2015-2016 And Delivery Program 2013-2017'

Kiama Municipal Council 'Strategic Asset Management Plan 2002'

**9. APPENDICES**

- Appendix A Maintenance Response Levels of Service
  
- Appendix B Projected 10 year Capital Renewal Program
  
- Appendix C Projected 10 year Capital New/Upgrade Program
  
- Appendix D Abbreviations
  
- Appendix E Glossary

**Appendix A Maintenance Response Levels of Service**

Maintenance Response Level Of Service		
Maintenance Type	Maintenance Activity	Required Maintenance Response
Building Inspections	Public Buildings	Annual Inspection

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**Appendix B Projected 10 Year Capital Renewal Program**

Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Buildings</b>											
28843	Blowhole Point Reserve/Kiama Harbour/KSLSC Rescue Building/Roof (CapRen 2018)	1,544,450	894,632	1,297,863	889,903	869,991	890,505	925,892	935,587	1,563,517	1,487,099
17955	Gerringong Historical Society/School of Arts Hall/Electrical	38,786									
17956	Gerringong Historical Society/School of Arts Hall/Fire - Security	4,848									
17957	Gerringong Historical Society/School of Arts Hall/Internal Finishes	96,965									
17958	Gerringong Historical Society/School of Arts Hall/Mechanical	29,090									
17959	Gerringong Historical Society/School of Arts Hall/Roof	34,466									
17960	Gerringong Historical Society/School of Arts Hall/Structure	490,845									
18217	Kiama Showground/Showground/Pavilion/Internal Finishes	75,000									
18153	Kiama Sports Complex/Leisure Centre/Leisure Centre/Internal Finishes	40,000									
17994	KMC Administration Centre/New Council Chambers/Mechanical	300,000									
3839	Land & Building Assets/ LED Lighting	40,119									
3839	Land & Building Assets/ Buildings	303,081									
18336	North Street Reserve/Amenities (Female)/Structure	51,250									
18354	North Street Reserve/Amenities (Male)/Structure										
18050	Blowhole Point Reserve/Blowhole Point/Pilots Cottage Museum/Roof		25,010								
17884	Kiama Library/Library/ Family History Centre/Community College/Internal Finishes		140,000								
18217	Kiama Showground/Showground/Pavilion/Internal Finishes		40,000								
18153	Kiama Sports Complex/Leisure Centre/Leisure Centre/Internal Finishes		41,000								
3839	Land & Building Assets/ LED Lighting		41,122								
3839	Land & Building Assets/ Building Refurbishment		300,000								
3839	Land & Building Assets/ Buildings		307,500								
18086	Coach House Art Gallery/Coach House Art Gallery/Internal Finishes			300,000							
18105	Jones Beach/Amenities/Structure			250,000							
18217	Kiama Showground/Showground/Pavilion/Internal Finishes			41,000							
18153	Kiama Sports Complex/Leisure Centre/Leisure Centre/Internal Finishes			42,025							
3839	Land & Building Assets/ LED Lighting			42,150							

KIAMA MUNICIPAL COUNCIL – BUILDINGS ASSET MANAGEMENT PLAN

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Asset Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Buildings</b>	<b>1,544,450</b>	<b>894,632</b>	<b>1,297,863</b>	<b>889,903</b>	<b>869,991</b>	<b>890,505</b>	<b>925,832</b>	<b>985,587</b>	<b>1,563,517</b>	<b>1,487,099</b>
3839 Land & Building Assets/ Building Refurbishment			307,500							
3839 Land & Building Assets/ Buildings			315,188							
18092 Jamberoo Youth Hall/Youth Hall/Internal Finishes				40,000						
18217 Kiama Showground/Showground/Pavilion/Internal Finishes				42,025						
18153 Kiama Sports Complex/Leisure Centre/Leisure Centre/Internal Finishes				43,076						
3839 Land & Building Assets/ LED Lighting				100,000						
3839 Land & Building Assets/ Building Refurbishment				341,735						
3839 Land & Building Assets/ Buildings				323,067						
18217 Kiama Showground/Showground/Pavilion/Internal Finishes					43,076					
18153 Kiama Sports Complex/Leisure Centre/Leisure Centre/Internal Finishes					44,153					
3839 Land & Building Assets/ LED Lighting					102,500					
3839 Land & Building Assets/ Building Refurbishment					349,118					
3839 Land & Building Assets/ Buildings					331,144					
18217 Kiama Showground/Showground/Pavilion/Internal Finishes						44,153				
18153 Kiama Sports Complex/Leisure Centre/Leisure Centre/Internal Finishes						45,256				
3839 Land & Building Assets/ LED Lighting						105,063				
3839 Land & Building Assets/ Building Refurbishment						356,611				
3839 Land & Building Assets/ Buildings						339,422				
26023 Gerringong Town Hall/Town Hall/Rooms/Audio Visual System							13,064			
18217 Kiama Showground/Showground/Pavilion/Internal Finishes							45,256			
18153 Kiama Sports Complex/Leisure Centre/Leisure Centre/Internal Finishes							46,388			
3839 Land & Building Assets/ LED Lighting							107,690			
3839 Land & Building Assets/ Building Refurbishment							365,526			
3839 Land & Building Assets/ Buildings							347,908			
18217 Kiama Showground/Showground/Pavilion/Internal Finishes								46,388		
18153 Kiama Sports Complex/Leisure Centre/Leisure Centre/Internal Finishes								47,547		
3839 Land & Building Assets/ LED Lighting									110,382	
3839 Land & Building Assets/ Building Refurbishment									374,664	
3839 Land & Building Assets/ Buildings									356,606	
18054 Blowhole Point Reserve/Blowhole Point/Tourist Information Centre/Kiosk/Internal Finishes									50,000	
18117 Hindmarsh Park/Community Centre/Internal Finishes										60,000

KIAMA MUNICIPAL COUNCIL – BUILDINGS ASSET MANAGEMENT PLAN



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Asset Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Buildings</b>										
18217 Kiama Showground/Showground/Pavilion/Internal Finishes	1,544,450	894,632	1,297,863	889,903	869,991	890,505	925,832	935,587	1,563,517	1,487,099
18153 Kiama Sports Complex/Leisure Centre/Leisure Centre/Internal Finishes									47,547	
3839 Land & Building Assets/ LED Lighting									48,736	
3839 Land & Building Assets/ Building Refurbishment									113,142	
3839 Land & Building Assets/ Buildings									878,571	
18217 Kiama Showground/Showground/Pavilion/Internal Finishes									365,521	
18153 Kiama Sports Complex/Leisure Centre/Leisure Centre/Internal Finishes										48,736
3839 Land & Building Assets/ LED Lighting										49,955
3839 Land & Building Assets/ Building Refurbishment										115,971
3839 Land & Building Assets/ Buildings										710,836
18316 Recycling and Waste Depot/Lunch Room/Structure										374,659
18158 Recycling and Waste Depot/Recycling Shed/Internal Finishes										39,677
18159 Recycling and Waste Depot/Recycling Shed/Mechanical										100,408
										46,857

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**Appendix C Projected New/Upgrade 10 Year Capital Works Program**

Location	Asset	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Bombo Hill Reserve	Amenities Block	0	0	10,000	0	100,000	214,874	75,627	120,000	165,798	250,000
North Kiama Neighbourhood Centre	Installation emergency lighting			10,000							
Works Depot - Belvedere Street	Boom Gate							40,000			
Works Depot - Belvedere Street	Concrete/Wash Bay								120,000		
Works Depot - Belvedere Street	Construct Plant Covered Area										250,000
Works Depot - Belvedere Street	North Access Improvements									165,798	
Works Depot - Belvedere Street	Rear Loading Dock Improvements							35,627			

KIAMA MUNICIPAL COUNCIL – BUILDINGS ASSET MANAGEMENT PLAN

**Appendix D Abbreviations**

<b>AAAC</b>	Average annual asset consumption
<b>AM</b>	Asset management
<b>AM Plan</b>	Asset management plan
<b>ARI</b>	Average recurrence interval
<b>ASC</b>	Annual service cost
<b>BOD</b>	Biochemical (biological) oxygen demand
<b>CRC</b>	Current replacement cost
<b>CWMS</b>	Community wastewater management systems
<b>DA</b>	Depreciable amount
<b>DRC</b>	Depreciated replacement cost
<b>EF</b>	Earthworks/formation
<b>IRMP</b>	Infrastructure risk management plan
<b>LCC</b>	Life Cycle cost
<b>LCE</b>	Life cycle expenditure
<b>LTFP</b>	Long term financial plan
<b>MMS</b>	Maintenance management system
<b>PCI</b>	Pavement condition index
<b>RV</b>	Residual value
<b>SoA</b>	State of the Assets
<b>SS</b>	Suspended solids
<b>vph</b>	Vehicles per hour
<b>WDCRC</b>	Written down current replacement cost

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**Appendix E Glossary****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**

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 hierarchy**

A framework for segmenting an asset base into appropriate classifications. The asset hierarchy can be based on asset function or asset type or a combination of the two.

**Asset management (AM)**

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 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.

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**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.

**Class of assets**

See asset class definition

**Component**

Specific parts of an asset having independent physical or functional identity and having specific attributes such as different life expectancy, maintenance regimes, risk or criticality.

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**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 cash flow 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, including any costs necessary to place the asset into service. This includes one-off design and project management costs.

**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.

**Deferred maintenance**

The shortfall in rehabilitation work undertaken relative to that required to maintain the service potential of an asset.

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

**Economic life**

See useful life definition.

**Expenditure**

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

**Expenses**

Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or increases in liabilities that result in decreases in equity, other than those relating to distributions to equity participants.

**Fair value**

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

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**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.

**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 that contribute to meeting the needs of organisations or the 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 separate 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.

**Key performance indicator**

A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or other target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.

**Level of service**

The defined service quality for a particular service/activity against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental impact, 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 average operations, maintenance and capital renewal expenditure accommodated in the long term financial plan over 10 years. Life Cycle Expenditure may be compared to average Life Cycle Cost to give an initial indicator of affordability of projected service levels when considered with asset age profiles.

**Loans / borrowings**

See borrowings.

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**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 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**

The notion of materiality guides the margin of error acceptable, the degree of precision required and the extent of the disclosure required when preparing general purpose financial reports. Information is material if its omission, misstatement or non-disclosure has the potential, individually or collectively, to influence the economic decisions of users taken on the basis of the financial report or affect the discharge of accountability by the management or governing body of the entity.

**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.

**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 to provide a service. In common use the term typically includes, eg power, fuel, staff, plant equipment, on-costs and overheads but excludes maintenance and depreciation. Maintenance and depreciation is on the other hand included in operating expenses.



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**Operating expense**

The gross outflow of economic benefits, being cash and non cash items, during the period arising in the course of ordinary activities of an entity when those outflows result in decreases in equity, other than decreases relating to distributions to equity participants.

**Operating expenses**

Recurrent expenses continuously required to provide a service, including power, fuel, staff, plant equipment, maintenance, depreciation, on-costs and overheads.

**Operations, maintenance and renewal financing ratio**

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

**Operations, maintenance and renewal gap**

Difference between budgeted expenditures in a long term financial plan (or estimated future budgets in absence of a long term financial plan) and projected expenditures for operations, maintenance and renewal of assets to achieve/maintain specified service levels, totalled over a defined time (e.g. 5, 10 and 15 years).

**Pavement management system (PMS)**

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

**PMS Score**

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

**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).

**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 operations and maintenance expenditure.

**Recurrent funding**

Funding to pay for recurrent expenditure.

**Rehabilitation**

See capital renewal expenditure definition above.

**Remaining useful life**

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

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**Renewal**

See capital renewal expenditure definition above.

**Residual value**

The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.

**Revenue generating investments**

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

**Risk management**

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

**Section or segment**

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

**Service potential**

The total future service capacity of an asset. It is normally determined by reference to the operating capacity and economic life of an asset. A measure of service potential is used in the not-for-profit sector/public sector to value assets, particularly those not producing a cash flow.

**Service potential remaining**

A measure of the future economic benefits remaining in assets. It may be expressed in dollar values (Fair Value) or as a percentage of total anticipated future economic benefits. It is also a measure of the percentage of the asset's potential to provide services that is still available for use in providing services (Depreciated Replacement Cost/Depreciable Amount).

**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.

**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.

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**Value in Use**

The present value of future cash flows expected to be derived from an asset or cash generating unit. 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 net cash inflows, where the entity would, if deprived of the asset, replace its remaining future economic benefits.

Source: IPWEA, 2009, Glossary

Additional and modified glossary items shown \*





# Asset Management Plan

## Footpaths and Cycleways



November 2016

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## 1. EXECUTIVE SUMMARY

### Context

The Kiama Municipal Council area is located on the south coast of NSW. This asset management plan describes the Footpath and Cycleway services provided by Council to the community.

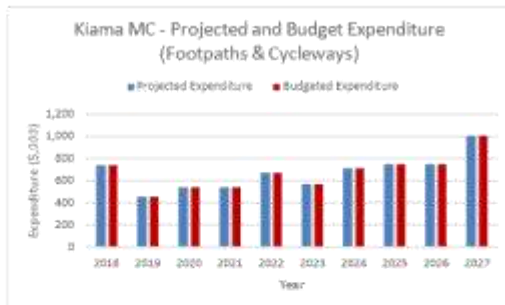
Council had networks of Footpath and Cycleways to allow pedestrian and bicycle transport in the region.

These Footpath and Cycleways assets have a replacement value of \$12,197,659

### What does it Cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan (AM Plan) includes operations, maintenance, renewal and upgrade of existing assets over the 10 year planning period is \$6,753,402 or \$675,340 on average per year.

Estimated available funding for this period is \$6,753,402 or \$675,340 on average per year which is 100% of the cost to provide the service. Projected expenditure required to provide services in the AM Plan compared with planned expenditure currently included in the Long Term Financial Plan are shown in the graph below.



### What we will do

We plan to provide Footpath and Cycleways services as follows:

- Maintenance, renewal and upgrade of Footpath and Cycleways to meet service levels set by Council in annual budgets.
- All required asset renewals have been incorporated into the 10 year financial plan.
- New and Upgraded Footpath and Cycleways within the 10 year financial plan are contained in Appendix C

### What we cannot do

The Footpath and Cycleways Asset Management Plan is aligned with Councils 10 year Financial Plan, accordingly we cannot Create New or Upgraded Footpath and Cycleways that have not been included in the current plans without additional funding.

### Managing the Risks

There are risks associated with providing the service and not being able to complete all identified activities and projects. We have identified major risks as:

- Trip hazards
- Loss of service from Footpath and Cycleways being closed due to defects
- Financial Loss due to Storm events that damage assets

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

- Inspecting the Footpath and Cycleways annually.
- Developing Scheduled Maintenance Plans to prevent defects.

### Confidence Levels

This AM Plan is based on a medium level of confidence information.

### The Next Steps

The actions resulting from this asset management plan are:

- Conduct maintenance in accordance with the asset management plan.
- Conduct renewals in accordance with the asset management plan.
- Conduct enhancements in accordance with the asset management plan.

### Questions you may have

#### What is this plan about?

This asset management plan covers the Footpath and Cycleway infrastructure that serve the Kiama Municipal Council community. It does not cover Footpaths that are not owned by Kiama Municipal Council.

#### What is an Asset Management Plan?

Asset management planning is a comprehensive process to ensure delivery of services from infrastructure is provided in a financially sustainable manner.

An asset management plan details information about infrastructure assets including actions required to

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provide an agreed level of service in the most cost effective manner. The plan defines the services to be provided, how the services are provided and what funds are required to provide the services.

**Why is there a funding shortfall?**

Most of the Council's Footpath and Cycleways were constructed by developers, council funding and from government grants. Some Footpath and Cycleways have been provided and accepted without consideration of ongoing operations, maintenance and replacement needs.

At the present time few of these assets are approaching the later years of their life and require replacement.

Our present funding levels are sufficient to continue to provide existing services at current levels in the medium term.

**What options do we have?**

Council will continue to resolve the requirements for Maintenance and inspection funding by:

1. Improving asset knowledge so that data accurately records the asset inventory, how assets are performing and when assets are not able to provide the required service levels,
2. Improving our efficiency in operating, maintaining, renewing and replacing existing assets to optimise life cycle costs,
3. Identifying and managing risks associated with providing services from infrastructure,
4. Making trade-offs between service levels and costs to ensure that the community receives the best return from infrastructure,
5. Identifying assets surplus to needs for disposal to make saving in future operations and maintenance costs,
6. Consulting with the community to ensure that Footpath and Cycleway Infrastructure and costs meet community needs and are affordable,
7. Developing partnership with other bodies, where available to provide services,
8. Seeking additional funding from governments and other bodies to better reflect a 'whole of government' funding approach to infrastructure services.

**What happens if we don't manage the shortfall?**

It is likely that we will not achieve the optimum lifecycle cost for Footpath and Cycleway Infrastructure.

**What can we do?**

We can develop options, costs and priorities for future Footpath and Cycleway Infrastructure, consult with the community to plan future services to match the community service needs with ability to pay for services and maximise community benefits against costs.

**What can you do?**

We will be pleased to consider community consultation on the issues raised in this asset management plan and suggestions on how we may change or reduce its Footpath and Cycleway Infrastructure to ensure that the appropriate level of service can be provided to the community within available funding.



**2. INTRODUCTION**

**2.1 Background**

This asset management plan is to demonstrate responsive management of assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding needed to provide the required levels of service over a 10 year planning period.

The asset management plan follows the format for AM Plans recommended in Section 4.2.6 of the International Infrastructure Management Manual<sup>1</sup>.

The asset management plan is to be read with the organisation’s Asset Management Policy, Asset Management Strategy and the following associated planning documents:

- Community Strategic Plan
- Work Force Plan
- 10 Year Financial Plan
- Delivery Program
- Operational Plan

This infrastructure assets covered by this asset management plan are shown in Table 2.1. These assets are used to provide Footpath and Cycleway infrastructure to service the community.

**Table 2.1: Assets covered by this Plan**

<b>Asset Category</b>	<b>Quantity</b>	<b>Replacement Value</b>
Shared Pathways	876	12,197,659
<b>Total</b>		<b>12,197,659</b>

Key stakeholders in the preparation and implementation of this asset management plan are: Shown in Table 2.1.1.

**Table 2.1.1: Key Stakeholders in the AM Plan**

<b>Key Stakeholder</b>	<b>Role in Asset Management Plan</b>
Councillors	<ul style="list-style-type: none"> <li>• Represent needs of community/shareholders,</li> </ul>
General Manager	<ul style="list-style-type: none"> <li>• Allocate resources to meet the organisation’s objectives in providing services while managing risks,</li> <li>• Ensure organisation is financial sustainable.</li> </ul>
Directors	<ul style="list-style-type: none"> <li>• Ensure the plans objectives and financial requirements are included in councils integrated planning and reporting documentation</li> </ul>
Manager Of Works	<ul style="list-style-type: none"> <li>• Delivery of the asset management plan objectives</li> </ul>

<sup>1</sup> IPWEA, 2011, Sec 4.2.6, *Example of an Asset Management Plan Structure*, pp 4|24 – 27.

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



Item 11.5

Enclosure 2

## 2.2 Goals and Objectives of Asset Management

The organisation exists to provide services to its community. Some of these services are provided by infrastructure assets. We have acquired infrastructure assets by purchase, by contract, construction by our staff and by donation of assets constructed by developers and others to meet increased levels of service.

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.<sup>2</sup>

## 2.3 Plan Framework

Key elements of the plan are

- Levels of service – specifies the services and levels of service to be provided by the organisation,
- 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 defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices,
- Monitoring – how the plan will be monitored to ensure it is meeting organisation’s objectives,
- Asset management improvement plan.

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

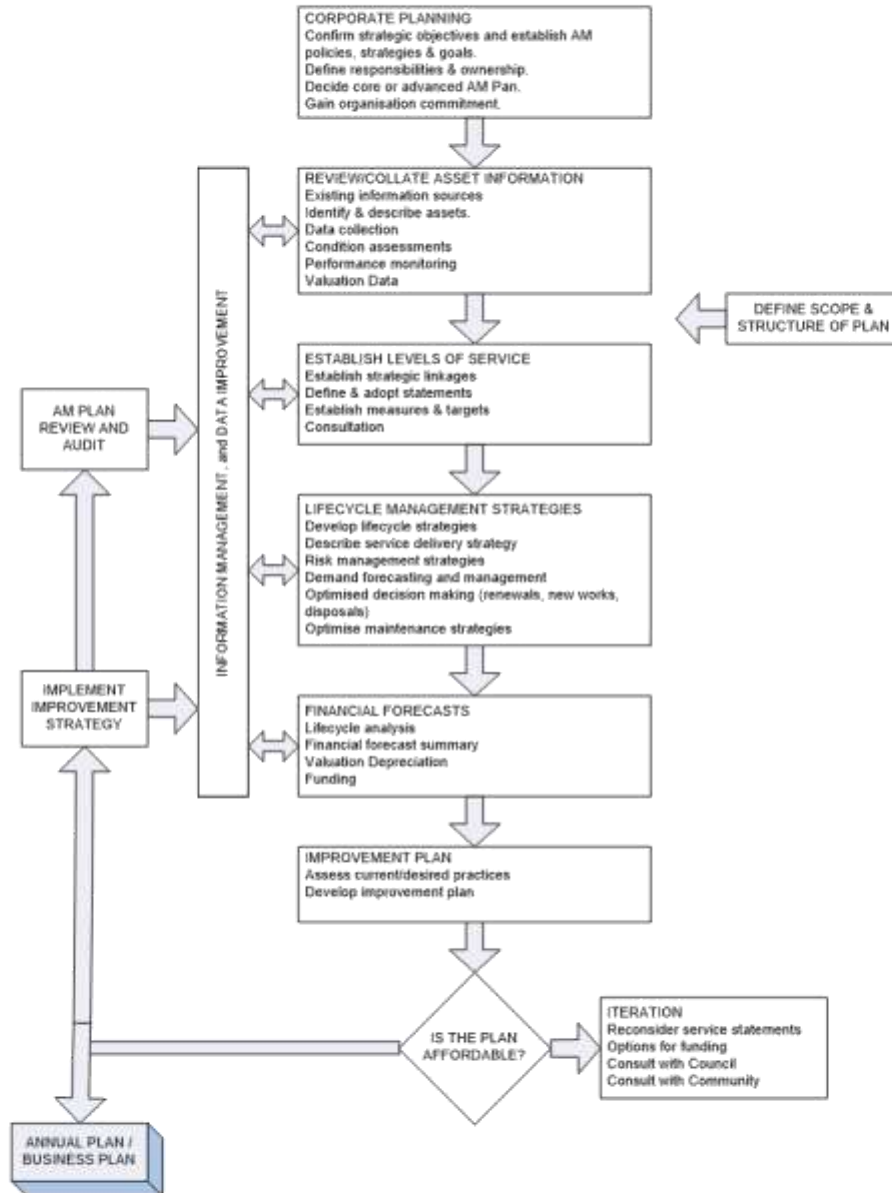
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<sup>2</sup> Based on IPWEA, 2011, IIMM, Sec 1.2 p 1|7.

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**Road Map for preparing an Asset Management Plan**

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



Item 11.5

Enclosure 2

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## 2.4 Core and Advanced Asset Management

This asset management plan is prepared as a 'core' asset management plan over a 20 year planning period in accordance with the International Infrastructure Management Manual<sup>3</sup>. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. Core asset management is a 'top down' approach where analysis is applied at the 'system' or 'network' level.

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

## 2.5 Community Consultation

This 'core' asset management plan is prepared to facilitate community consultation initially through feedback on public display of draft asset management plans prior to adoption by the Council. Future revisions of the asset management plan will incorporate community consultation on service levels and costs of providing the service. This will assist the Council and the community in matching the level of service needed by the community, service risks and consequences with the community's ability and willingness to pay for the service.

## 3. LEVELS OF SERVICE

### 3.1 Customer Research and Expectations

The organisation carries out an IRIS Survey prior to re-developing Community Strategic Plan on customer satisfaction and expectations from all infrastructure areas.

The organisation uses this information in developing its Strategic Plan and in allocation of resources in the budget.

### 3.2 Strategic and Corporate Goals

This asset management plan is prepared under the direction of the organisation's vision, mission, goals and objectives.

Our vision is:

***Working together for a healthy, sustainable and caring community***

Our mission is:

***Kiama Council will work to create a Municipality that has a healthy, vibrant lifestyle, beautiful environment and harmonious, connected and resilient community***

---

<sup>3</sup> IPWEA, 2011, IIMM.

Relevant organisational goals and objectives and how these are addressed in this asset management plan are:

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

Plan Level	Plan No.	Plan Description	Measure's
CSP Strategy	2.10	Effectively manage the transport network of roads, footpaths and cycleways to cater for current and future generations	
DP Action	2.10.2	Manage footpaths and cycleway infrastructure for the community by the implementation of the Shared Pathway Asset Management Plan actions	Maintain or increase community satisfaction with the footpath and cycleway network Optimal renewal of footpath and cycleway infrastructure The Footpath and Cycleway Asset Management Plan is fully funded Capital works are delivered in accordance with Delivery Program
OP Activity	2.10.2.1	Manage footpath and cycleway asset renewals	Percentage of renewal program completed Percentage of renewals updated in the Asset Management Information System Percentage of scheduled designs completed Renewal Budget YTD%
OP Activity	2.10.2.2	Manage footpath and cycleway new asset creation	New Asset Budget v Actual expenditure percentage Percentage of new asset program completed Percentage of scheduled designs completed
OP Activity	2.10.2.3	Manage footpath and cycleway asset maintenance and operation	Unscheduled Maintenance Budget YTD%
OP Activity	2.10.2.4	Create a Footpath and Cycleway Asset Management Plan	New Asset schedule created for following year Budget Renewal schedule created for following year Budget
CSP Strategy	4.11	Ensure Council owned buildings and infrastructure are planned and maintained with consideration to both current and future generations	
DP Action	4.11.1	Ensure the Strategic Asset Management Plan is maintained and funded in the 10 year financial plan	Strategic Asset Management Plan is funded to meet Community Strategic Plan objectives
OP Activity	4.11.1.1	Review and re-adopt the Asset Management Policy	Policy re-adopted within 12 months of newly elected Councillors
OP Activity	4.11.1.2	Maintain a Strategic Asset Management Plan (SAMP) aligned with individual Asset Management Plans	Percentage of plans aligned with SAMP
OP Activity	4.11.1.3	Ensure ongoing alignment of Asset Management with Councils 10 year financial Plan	Percentage of plans aligned with 10 year Financial Plan
OP Activity	4.11.1.4	Seek infrastructure funding from external sources	Value of grants secured

The organisation will exercise its duty of care to ensure public safety is accordance with the infrastructure risk management plan prepared in conjunction with this AM Plan. Management of infrastructure risks is covered in Section 5.2

**3.3 Legislative Requirements**

The organisation has to meet many legislative requirements including Australian and State legislation and State regulations. These include:

**Table 3.3: Legislative Requirements**

Legislation	Requirement
Local Government Act 1993	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Protection of the Environment Operations Act 1997	To ensure that all reasonable and practicable measures are taken to protect, restore and enhance the quality of the environment having regard to the principles of ecologically sustainable development.
Australian Accounting Standards	Sets out the financial reporting standards relating to Infrastructure assets. Standards of particular relevant to Infrastructure Assets include: <ul style="list-style-type: none"> <li>• AASB116 Property, Plant &amp; Equipment – prescribes requirement for recognition and depreciation of property, plant and equipment assets</li> <li>• AASB136 Impairment of Assets - aims to ensure that assets are carried at amounts that are not in excess of their recoverable amounts</li> <li>• AASB1021 Depreciation of Non-Current Assets - specifies how depreciation is to be calculated</li> <li>• AAS1001 Accounting Policies - specifies the policies that Council is to have for recognition of assets and depreciation</li> <li>• AASB1041 Accounting for the reduction of Non-Current Assets - specifies the frequency and basis of calculation depreciation and revaluation basis used for assets</li> <li>• AAS1015 Accounting for acquisition of assets - method of allocating the value to new assets on acquisition</li> </ul>
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)
Civil Liability Act 2002	Protects the Council from civil action by requiring the courts to take into account the financial resources, the general responsibilities of the authority and the compliance with general practices and applicable standards.
Water Management Act 2000	The objects of this Act are to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations and, in particular: <ul style="list-style-type: none"> <li>• to apply the principles of ecologically sustainable development, and</li> <li>• to protect, enhance and restore water sources, their associated ecosystems, ecological processes and biological diversity and their water quality, and</li> <li>• to recognise and foster the significant social and economic benefits to the State that result from the sustainable and efficient use of water, including:                             <ul style="list-style-type: none"> <li>○ benefits to the environment, and</li> <li>○ benefits to urban communities, agriculture, fisheries, industry and recreation, and</li> <li>○ benefits to culture and heritage, and</li> <li>○ benefits to the Aboriginal people in relation to their spiritual, social, customary and economic use of land and water,</li> </ul> </li> <li>• to recognise the role of the community, as a partner with government, in resolving issues relating to the management of water sources,</li> <li>• to provide for the orderly, efficient and equitable sharing of water from water sources,</li> <li>• to integrate the management of water sources with the management of other aspects of the environment, including the land, its soil, its native vegetation and its native fauna,</li> <li>• to encourage the sharing of responsibility for the sustainable and efficient use of water between the Government and water users,</li> <li>• to encourage best practice in the management and use of water.</li> </ul>
Work Health And Safety Act 2011	To take a constructive role in promoting improvements in occupational health, safety and welfare practices and assisting in the preservation of public health and safety in all undertakings of Council

The organisation will exercise its duty of care to ensure public safety in accordance with the infrastructure risk management plan linked to this AM Plan. Management of risks is discussed in Section 5.2.

**3.4 Community Levels of Service**

Service levels are defined service levels in two terms, customer levels of service and technical levels of service.

Community Levels of Service measure how the community receives the service and whether the organisation is providing community value.

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?

The organisation's current and expected community service levels are detailed are aligned with the Community Strategic Plan and shown in Table 3.2. The agreed expected community levels of service based on resource levels in the current long-term financial plan and community consultation/engagement.

**3.5 Technical Levels of Service**

**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, mowing grass, energy, inspections, etc.
- Maintenance – the activities necessary to retain an asset 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).

Service and asset managers plan, implement and control technical service levels to influence the customer service levels.<sup>4</sup>

<sup>4</sup> IPWEA, 2011, IIMM, p 2.22



**4. FUTURE DEMAND**

**4.1 Demand Drivers**

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

**4.2 Demand Forecast**

The present position and projections for demand drivers that may impact future service delivery and utilisation of assets were identified and are documented in Table 4.3.

**4.3 Demand Impact on Assets**

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

**Table 4.3: Demand Drivers, Projections and Impact on Service**

Demand drivers	Present position	Projection	Impact on services
Population Growth	The estimated population is 21,314	The estimated annual population Growth is 1.37%	No impact on Services in the life of this plan apart from developer contributions from new subdivisions.
Climate Change	Infrastructure designed to suite current standards	Potentially Rising sea levels, additional rainfall and El Nino storm events.	No impact on Services in the life of this plan.

**4.4 Demand Management Plan**

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

Non-asset solutions focus on providing the required service without the need for the organisation to own the assets and management actions including reducing demand for the service, reducing the level of service (allowing some assets to deteriorate beyond current service levels) or educating customers to accept appropriate asset failures<sup>5</sup>. Examples of non-asset solutions include providing services from existing infrastructure such as aquatic centres and libraries that may be in another community area or public toilets provided in commercial premises.

Opportunities identified to date for demand management are shown in Table 4.4. Further opportunities will be developed in future revisions of this asset management plan.

**Table 4.4: Demand Management Plan Summary**

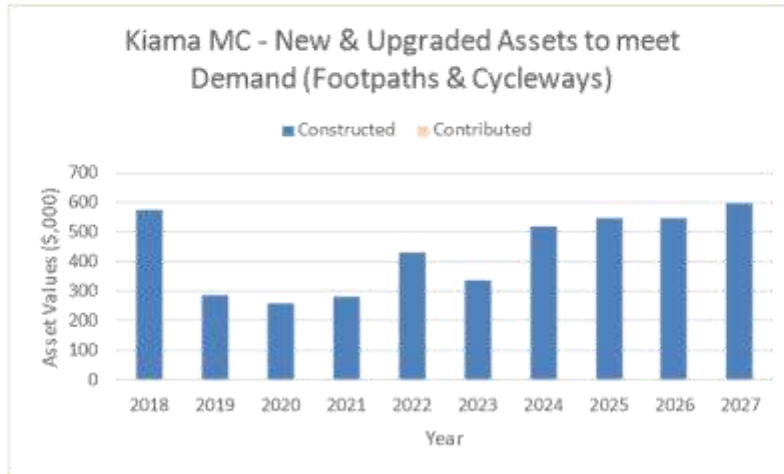
Demand Driver	Impact on Services	Demand Management Plan
Population Growth	No impact on Services in the life of this plan.	Additional assets are acquired as part of the developer contributions. Council will need to fully fund the life cycle costs of these new assets.
Climate Change	No impact on Services in the life of this plan.	No impact on Services in the life of this plan.

<sup>5</sup> IPWEA, 2011, IIMM, Table 3.4.1, p 3|58.

**4.5 Asset Programs to meet Demand**

The new assets required to meet growth will be acquired free of cost from land developments and constructed/acquired by the organisation. New assets constructed/acquired by the organisation are discussed in Section 5.5. The cumulative value of new contributed and constructed asset values are summarised in Figure 1.

**Figure 1: New & Upgraded Assets to meet Demand**



Acquiring these new assets will commit the organisation to fund ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs in Section 5.

**5. LIFECYCLE MANAGEMENT PLAN**

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

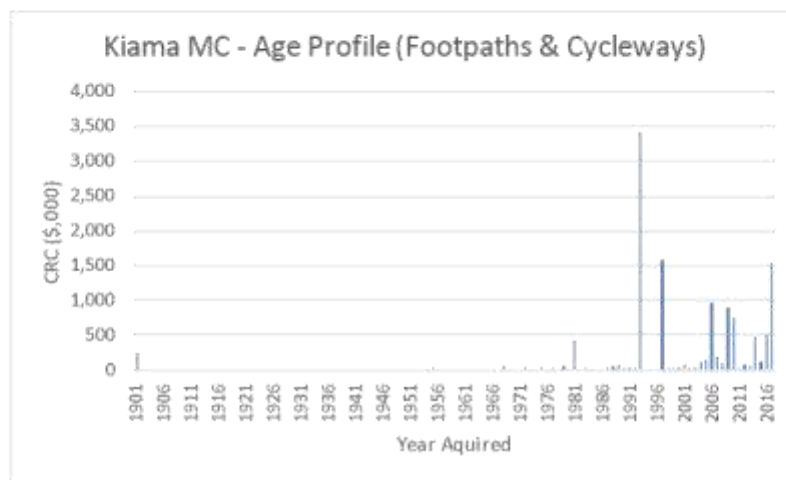
**5.1 Background Data**

**5.1.1 Physical parameters**

The assets covered by this asset management plan are shown in Table 2.1.

The age profile of the assets include in this AM Plan is shown in Figure 2.

**Figure 2: Asset Age Profile**



Plans showing the assets are:

- Work As Executed Drawings stored in the corporate document management system (Trim). These documents are linked to individual assets records in the corporate asset management system (Authority).
- Assets are geographically displayed on the corporate Geographic information system which is fully integrated to Council's Asset Management System.

5.1.2 Asset capacity and performance

The organisation’s services are generally provided to meet design standards where these are available.

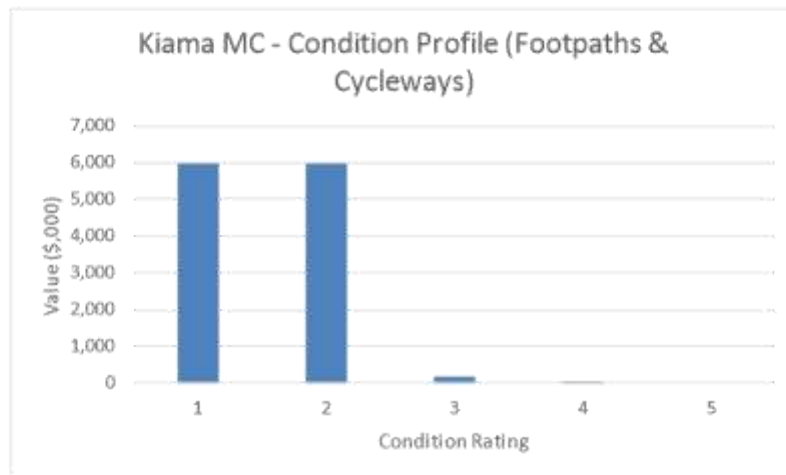
Council has an integrated approach to service delivery and where capacity or performance requirements of assets require a change the Funding Allocation Process is used to ensure that the lifecycle costs are incorporated into the Integrated Planning and Reporting framework including the 10 Year Financial Plan, Asset Management Plan and Workforce Plan.

5.1.3 Asset condition

Condition is monitored by inspecting the assets on a regular cycle. In addition all assets have condition inspections that align with the 5 year Financial Revaluation of Assets.

The condition profile of our assets is shown in Figure 3.

Fig 3: Asset Condition Profile



Condition is measured using a 1 – 5 grading system<sup>6</sup> as detailed in Table 5.1.3.

Table 5.1.3: Simple Condition Grading Model

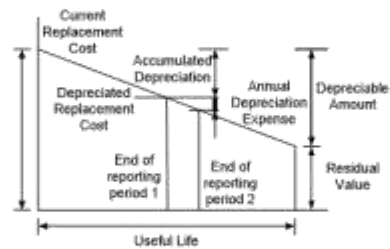
Condition Grading	Description of Condition
1	<b>Very Good:</b> only planned maintenance required
2	<b>Good:</b> minor maintenance required plus planned maintenance
3	<b>Fair:</b> significant maintenance required
4	<b>Poor:</b> significant renewal/rehabilitation required
5	<b>Very Poor:</b> physically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

<sup>6</sup> IPWEA, 2011, IIMM, Sec 2.5.4, p 2|79.

5.1.4 Asset valuations

The value of assets recorded in the asset register as at 30/06/2015 covered by this asset management plan is shown below. Assets were last revalued at 30/06/2015. Assets are valued using the depreciated replacement cost methodology. This asset class is revalued every 5 years.

Current Replacement Cost	\$12,197,659
Depreciable Amount	\$12,197,659
Depreciated Replacement Cost <sup>7</sup>	\$7,985,374
Annual Depreciation Expense	\$287,271



Useful lives were reviewed in June 2016 by assessing the condition of assets.

Key assumptions made in preparing the valuations were:

- Unit rate of excavation assumed a common sub surface material type
- Condition assessment of the samples reflects the entire network
- Where the dimensional information was absent default dimensions were used

Various ratios of asset consumption and expenditure have been prepared to help guide and gauge asset management performance and trends over time.

Rate of Annual Asset Consumption (Depreciation/Depreciable Amount)	2.36%
Rate of Annual Asset Renewal (Capital renewal exp/Depreciable amount)	1.12%

In 2018 the organisation plans to renew assets at 47.43% of the rate they are being consumed and will be increasing its asset stock by 4.722% in the year. All future asset renewals are fully funded in councils LTFFP.

5.1.5 Historical Data

All Footpath and Cycleway asset data and financial data are stored in Councils Corporate Asset Management system.

5.2 Infrastructure Risk Management Plan

An assessment of risks<sup>3</sup> associated with service delivery from infrastructure assets has identified critical risks that will result in loss or reduction in service from infrastructure assets or a 'financial shock' to the organisation. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' - requiring immediate corrective action and 'High' - requiring prioritised corrective action identified in the Infrastructure Risk Management Plan, together with the estimated residual risk after the selected treatment plan is operational are summarised in Table 5.2. These risks are reported to management and Council.

<sup>7</sup> Also reported as Written Down Current Replacement Cost (WDCRC).

Table 5.2: Critical Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Footpaths	Trip hazards from settling or damage to pathways	H	Inspection Program	Low	

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

**5.3 Routine Operations and Maintenance Plan**

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

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

**5.3.1 Operations and Maintenance Plan**

Operations activities affect service levels including quality and function through street sweeping and grass mowing frequency, intensity and spacing of street lights and cleaning frequency and opening hours of building and other facilities.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating, eg road patching but excluding rehabilitation or renewal. Maintenance may be classified into reactive, planned and specific maintenance work activities.

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

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

Specific maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, replacing air conditioning units, etc. This work falls below the capital/maintenance threshold but may require a specific budget allocation.

Actual past maintenance expenditure is shown in Table 5.3.1.

Table 5.3.1: Maintenance Expenditure Trends

Year	Maintenance Expenditure	
	Planned and Specific	Unplanned
2014	\$0	\$78,113
2015	\$0	\$51,781
2016	\$0	\$68,100

Planned maintenance work is currently 0.00% of total maintenance expenditure.

Maintenance expenditure levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance expenditure levels are such that will result in a lesser level

of service, the service consequences and service risks have been identified and service consequences highlighted in this AM Plan and service risks considered in the Infrastructure Risk Management Plan.

Assessment and prioritisation of reactive maintenance is undertaken by Council staff using experience and judgement. In conjunction with response levels of service detailed in Appendix A.

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,
- 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.

Asset hierarchy

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

The organisation’s service hierarchy is shown in Table 5.3.2.

Table 5.3.2: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
Footpaths	Provide pedestrian networks for the community
Shared Pathways	Provide pedestrian and bicycle networks for the community

Critical Assets

Critical assets are those assets which have a high consequence of failure but not necessarily a high likelihood of failure. By identifying critical assets and critical failure modes, organisations can target and refine investigative activities, maintenance plans and capital expenditure plans at the appropriate time.

Operations and maintenance activities may be targeted to mitigate critical assets failure and maintain service levels. These activities may include increased inspection frequency, higher maintenance intervention levels, etc. Critical assets failure modes and required operations and maintenance activities are detailed in Table 5.3.2.1.

Table 5.3.2.1: Critical Assets and Service Level Objectives

Critical Assets	Critical Failure Mode	Operations & Maintenance Activities
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Footpaths	Trip Hazards	<ul style="list-style-type: none"> <li>• Inspection</li> <li>• Rectification of defects</li> </ul>
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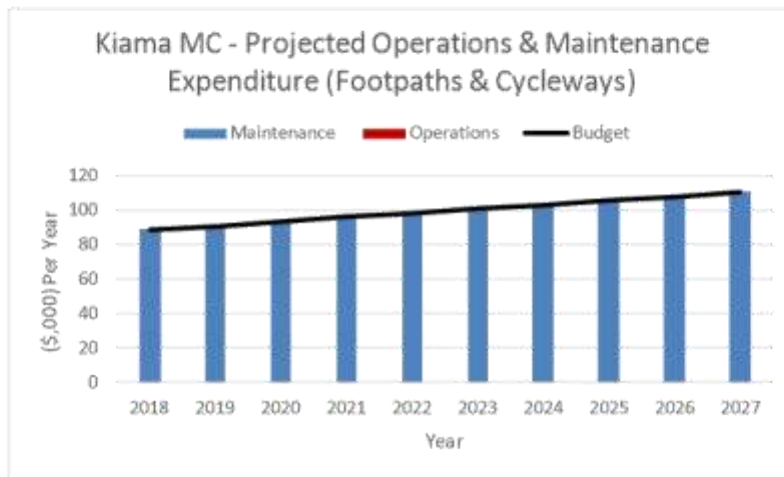
**Standards and specifications**

Maintenance work is carried out in accordance with relevant Standards and Specifications.

**5.3.3 Summary of future operations and maintenance expenditures**

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 4.

**Figure 4: Projected Operations and Maintenance Expenditure**



Deferred maintenance, ie works that are identified for maintenance and unable to be funded are to be included in the risk assessment and analysis in the infrastructure risk management plan.

Maintenance is funded from the operating budget where available. This is further discussed in Section 6.2.

**5.4 Renewal/Replacement Plan**

Renewal and replacement expenditure is major work which does not increase the asset’s design capacity but restores, rehabilitates, replaces or renews an existing asset to its original or lesser required service potential. Work over and above restoring an asset to original service potential is upgrade/expansion or new works expenditure.

**5.4.1 Renewal plan**

Assets requiring renewal/replacement are identified from one of three methods provided in the ‘Expenditure Template’.

- Method 1 uses Asset Register data to project the renewal costs using acquisition year and useful life to determine the renewal year, or



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- Method 2 uses capital renewal expenditure projections from external condition modelling systems (such as Pavement Management Systems), or
- Method 3 uses a combination of average *network renewals* plus *defect repairs* in the *Renewal Plan* and *Defect Repair Plan* worksheets on the 'Expenditure template'.

Method 1 was used for this asset management plan.

The useful lives of assets used to develop projected asset renewal expenditures are shown in Table 5.4.1. Asset useful lives were last reviewed on June 2016.<sup>9</sup>

**Table 5.4.1: Useful Lives of Assets**

<b>Asset Category</b>	<b>Useful Life</b>
Concrete Pathways	50 to 100 years
Paved Areas	25 to 75 years
Ashphalt Pathways	25 to 50 years
Timber Boardwalks	10 to 40 years

**5.4.2 Renewal and Replacement Strategies**

The organisation will plan capital renewal and replacement projects to meet level of service objectives and minimise infrastructure service risks by:

- Planning and scheduling renewal projects to deliver the defined level of service in the most efficient manner,
- Undertaking project scoping for all capital renewal and replacement projects to identify:
  - the service delivery 'deficiency', present risk and optimum time for renewal/replacement,
  - the project objectives to rectify the deficiency,
  - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
  - and evaluate the options against evaluation criteria adopted by the organisation, and
  - select the best option to be included in capital renewal programs,
- Using 'low cost' renewal methods (cost of renewal is less than replacement) wherever possible,
- Maintain a current infrastructure risk register for assets and 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,
- Review current and required skills base and implement workforce training and development to meet required construction and renewal needs,
- Maintain a current hierarchy of critical assets and capital renewal treatments and timings required ,
- Review management of capital renewal and replacement activities to ensure Council is obtaining best value for resources used.

**Renewal ranking criteria**

Asset renewal and replacement is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (eg replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (eg roughness of a road).<sup>10</sup>

<sup>10</sup> IPWEA, 2011, IIMM, Sec 3.4.4, p 3|60.

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It is possible to get some indication of capital renewal and replacement priorities by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have a high utilisation and subsequent impact on users would be greatest,
- The total value represents the greatest net value to the organisation,
- Have the highest average age relative to their expected lives,
- Are identified in the AM Plan as key cost factors,
- Have high operational or maintenance costs, and
- Where replacement with modern equivalent assets would yield material savings.<sup>11</sup>

Council has an integrated approach to service delivery and where capacity or performance requirements of assets require a change the Funding Allocation Process is used to ensure that the lifecycle costs are incorporated into the Integrated Planning and Reporting framework including the 10 Year Financial Plan, Asset Management Plan and Workforce Plan.

The 10 year Renewal Plan is detailed in Appendix B.

#### Renewal and replacement standards

Renewal work is carried out in accordance with the relevant Standards and Specifications.

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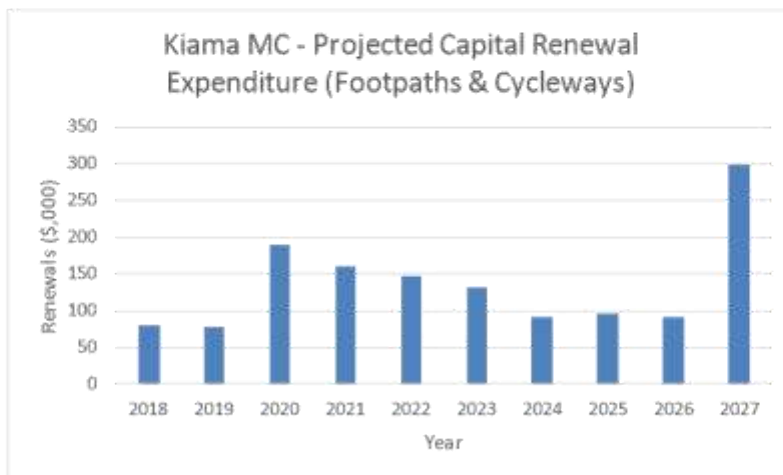
<sup>11</sup> Based on IPWEA, 2011, IIMM, Sec 3.4.5, p 3|66.

5.4.3 Summary of future renewal and replacement expenditure

Projected future renewal and replacement expenditures are forecast to increase over time as the asset stock increases from growth. The expenditure is summarised in Fig 5. Note that all amounts are shown in real values.

The projected capital renewal and replacement program is shown in Appendix B.

Fig 5: Projected Capital Renewal and Replacement Expenditure



Deferred renewal and replacement, ie those assets identified for renewal and/or replacement and not scheduled in capital works programs are to be included in the risk analysis process in the risk management plan.

Renewals and replacement expenditure in the organisation’s capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

5.5 Creation/Acquisition/Upgrade Plan

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

5.5.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as councilor/director or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programs.

5.5.2 Capital Investment Strategies

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:

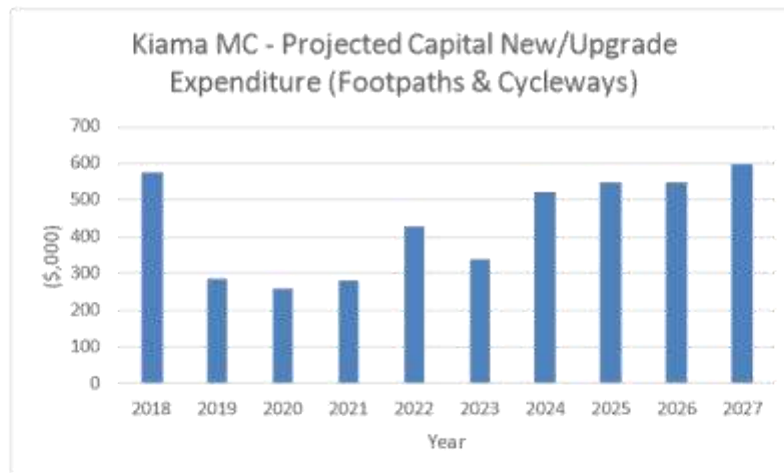
- the service delivery 'deficiency', present risk and required timeline for delivery of the upgrade/new asset,
- the project objectives to rectify the deficiency including value management for major projects,
- the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
- management of risks associated with alternative options,
- and evaluate the options against evaluation criteria adopted by Council, 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.

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2.

**5.5.3 Summary of future upgrade/new assets expenditure**

Projected upgrade/new asset expenditures are summarised in Fig 6. The projected upgrade/new capital works program is shown in Appendix C. All amounts are shown in real values.

**Fig 6: Projected Capital New/Upgrade Asset Expenditure**



Expenditure on new assets and services in the organisation’s capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

**5.6 Disposal Plan**

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6, together with estimated annual savings from not having to fund operations and maintenance of the assets. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any. Any revenue gained from asset disposals is accommodated in Council’s long term financial plan.

Where cashflow projections from asset disposals are not available, these will be developed in future revisions of this asset management plan.

**Table 5.6: Assets Identified for Disposal**

Asset	Reason for Disposal	Timing	Disposal Expenditure	Operations & Maintenance Annual Savings
Nil	N/A	N/A	0	0

**5.7 Service Consequences and Risks**

The organisation has prioritised decisions made in adopting this AM Plan to obtain the optimum benefits from its available resources. Decisions were made based on the development of 3 scenarios of AM Plans.

**Scenario 1** - What we would like to do based on asset register data

**Scenario 2** – What we should do with existing budgets and identifying level of service and risk consequences (ie what are the operations and maintenance and capital projects we are unable to do, what is the service and risk consequences associated with this position). This may require several versions of the AM Plan.

**Scenario 3** – What we can do and be financially sustainable with AM Plans matching long-term financial plans.

The development of scenario 1 and scenario 2 AM Plans provides the tools for discussion with the Council/Board and community on trade-offs between what we would like to do (scenario 1) and what we should be doing with existing budgets (scenario 2) by balancing changes in services and service levels with affordability and acceptance of the service and risk consequences of the trade-off position (scenario 3).

**5.7.1 What we cannot do**

There are no identified operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years.

**5.7.2 Service consequences**

All Operations and maintenance activities and capital projects are funded in the 10 Year Financial Plan.

**5.7.3 Risk consequences**

There are no additional risk consequences based on section 5.7.1

Ongoing risks have been included with the Infrastructure Risk Management Plan summarised in Section 5.2 and risk management plans actions and expenditures included within projected expenditures.

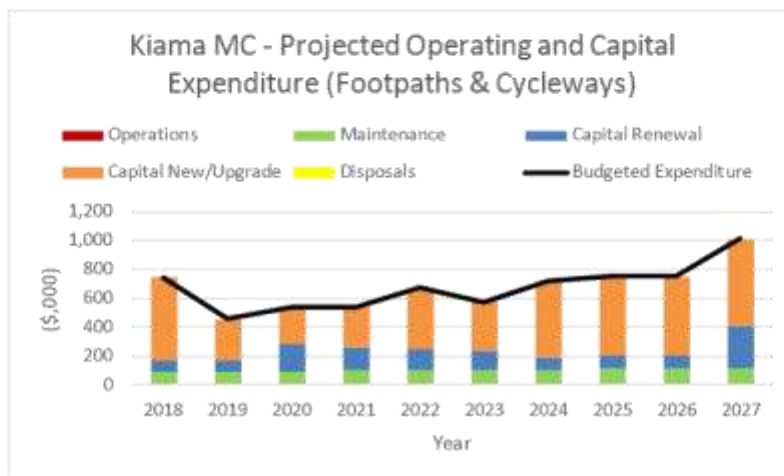
**6. FINANCIAL SUMMARY**

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

**6.1 Financial Statements and Projections**

The financial projections are shown in Fig 7 for projected operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets). Note that all costs are shown in real values.

**Fig 7: Projected Operating and Capital Expenditure**



**6.1.1 Sustainability of service delivery**

There are four key indicators for service delivery sustainability that have been considered in the analysis of the services provided by this asset category, these being the asset renewal funding ratio, long term life cycle costs/expenditures and medium term projected/budgeted expenditures over 5 and 10 years of the planning period.

**Asset Renewal Funding Ratio**

Asset Renewal Funding Ratio<sup>12</sup> 100.00%

The Asset Renewal Funding Ratio is the most important indicator and reveals that over the next 10 years, Council is forecasting that it will have 100.00% of the funds required for the optimal renewal and replacement of its assets.

**Long term - Life Cycle Cost**

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the asset life cycle. Life cycle costs include operations and maintenance expenditure and asset consumption (depreciation expense). The life cycle cost for the services covered in this asset management plan is \$409,077 per year (average operations and maintenance expenditure plus depreciation expense projected over 10 years).

<sup>12</sup> AIFMG, 2012, Version 1.3, Financial Sustainability Indicator 4, Sec 2.6, p 2.16

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Life cycle costs can be compared to life cycle expenditure to give an initial indicator of affordability of projected service levels when considered with age profiles. Life cycle expenditure includes operations, maintenance and capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure over the 10 year planning period is \$235,950 per year (average operations and maintenance plus capital renewal budgeted expenditure in LTFFP over 10 years).

A shortfall between life cycle cost and life cycle expenditure is the life cycle gap. The life cycle gap for services covered by this asset management plan is -\$173,127 per year (-ve = gap, +ve = surplus).

Life cycle expenditure is 57.68% of life cycle costs.

The life cycle costs and life cycle expenditure comparison highlights any difference between present outlays and the average cost of providing the service over the long term. Currently the life cycle expenditure is less than that life cycle cost due to the majority of the footpath and cycleway infrastructure being in the early to mid stages of their useful lives. Renewal outlays will need to be increased in the future when the assets are reaching the later stages of their useful lives.

Knowing the extent and timing of any required increase in outlays and the service consequences if funding is not available will assist organisations in providing services to their communities in a financially sustainable manner. This is the purpose of the asset management plans and long term financial plan.

#### Medium term – 10 year financial planning period

This asset management plan identifies the projected operations, maintenance and capital renewal expenditures required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

These projected expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall. In a core asset management plan, a gap is generally due to increasing asset renewals for ageing assets.

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is \$235,950 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$235,950. This indicates that Council expects to have 100.00% of the projected expenditures needed to provide the services documented in the asset management plan.

#### Medium Term – 5 year financial planning period

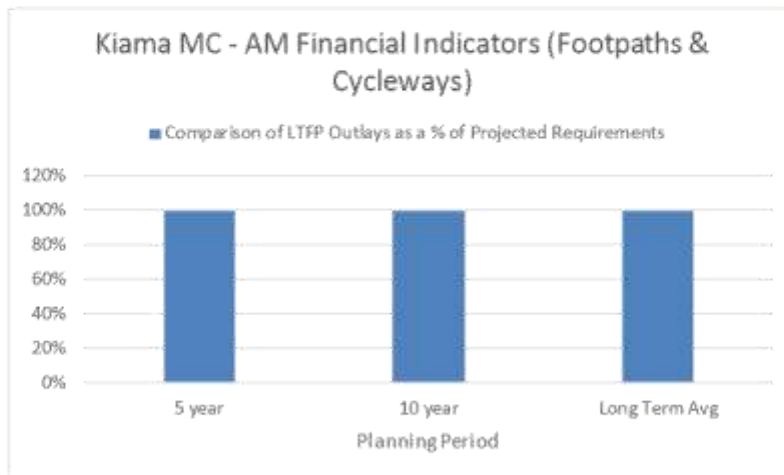
The projected operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is \$224,159 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$224,159 This indicates that Council expects to have 100.00% of projected expenditures required to provide the services shown in this asset management plan.

Asset management financial indicators

Figure 7A shows the asset management financial indicators over the 10 year planning period and for the long term life cycle.

Figure 7A: Asset Management Financial Indicators



Providing services from infrastructure in a sustainable manner requires the matching and managing of service levels, risks, projected expenditures and financing to achieve a financial indicator of approximately 100% for the first years of the asset management plan and ideally over the 10 year life of the Long Term Financial Plan.

Figure 8 shows the projected asset renewal and replacement expenditure over the 10 years of the AM Plan. The projected asset renewal and replacement expenditure is compared to renewal and replacement expenditure in the capital works program, which is accommodated in the long term financial plan

Figure 8: Projected and LTFP Budgeted Renewal Expenditure

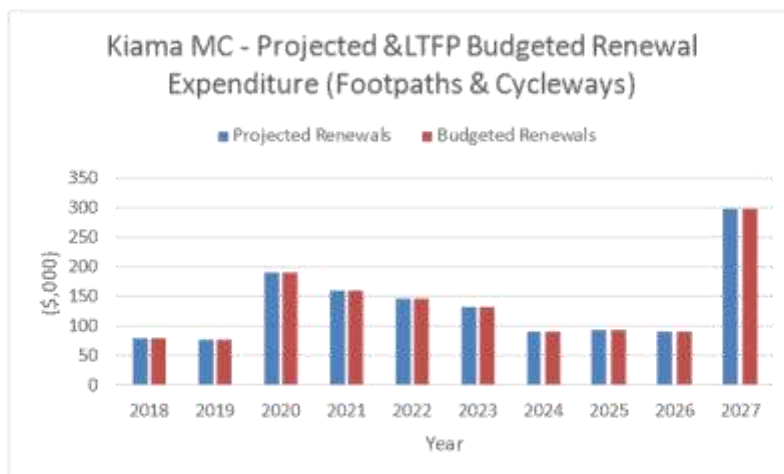




Table 6.1.1 shows the shortfall between projected renewal and replacement expenditures and expenditure accommodated in long term financial plan.

**Table 6.1.1: Projected and LTFP Budgeted Renewals and Financing Shortfall**

Year	Projected Renewals	LTFP Renewal Budget	Renewal Financing Shortfall (-ve Gap, +ve Surplus)	Cumulative Shortfall (-ve Gap, +ve Surplus)
2018	\$80	\$80	\$0	\$0
2019	\$77	\$77	\$0	\$0
2020	\$190	\$190	\$0	\$0
2021	\$160	\$160	\$0	\$0
2022	\$146	\$146	\$0	\$0
2023	\$132	\$132	\$0	\$0
2024	\$91	\$91	\$0	\$0
2025	\$95	\$95	\$0	\$0
2026	\$91	\$91	\$0	\$0
2027	\$300	\$300	\$0	\$0

All figures are in \$,000

Providing services in a sustainable manner will require matching of projected asset renewal and replacement expenditure to meet agreed service levels with **the corresponding** capital works program accommodated in the long term financial plan.

6.1.2 Projected expenditures for long term financial plan

Table 6.1.2 shows the projected expenditures for the 10 year long term financial plan.

**Table 6.1.2: Projected Expenditures for Long Term Financial Plan (\$000)**

Year	Operations	Maintenance	Capital Renewal	Capital New/Upgrade	Disposals
2018	\$0	\$89	\$80	\$576	\$0
2019	\$0	\$91	\$77	\$285	\$0
2020	\$0	\$94	\$190	\$260	\$0
2021	\$0	\$96	\$160	\$283	\$0
2022	\$0	\$98	\$146	\$430	\$0
2023	\$0	\$101	\$132	\$340	\$0
2024	\$0	\$103	\$91	\$520	\$0
2025	\$0	\$106	\$95	\$550	\$0
2026	\$0	\$108	\$91	\$550	\$0
2027	\$0	\$111	\$300	\$600	\$0

\* All figures are in \$,000

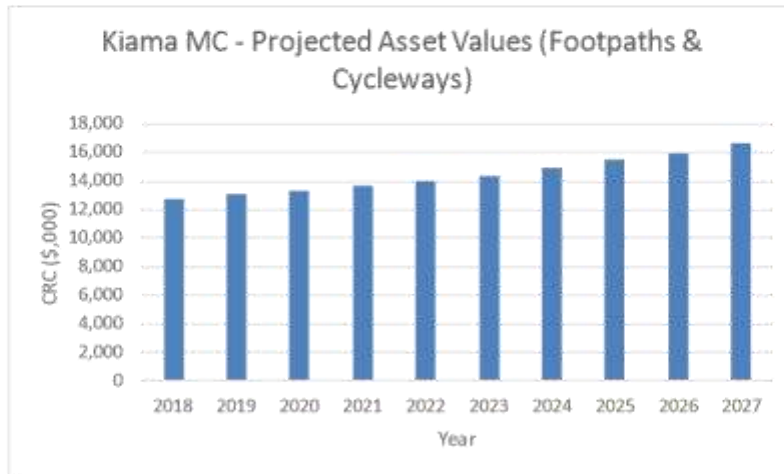
6.2 Funding Strategy

After reviewing service levels, as appropriate to ensure ongoing financial sustainability projected expenditures identified in Section 6.1.2 will be accommodated in the Council’s 10 year long term financial plan.

**6.3 Valuation Forecasts**

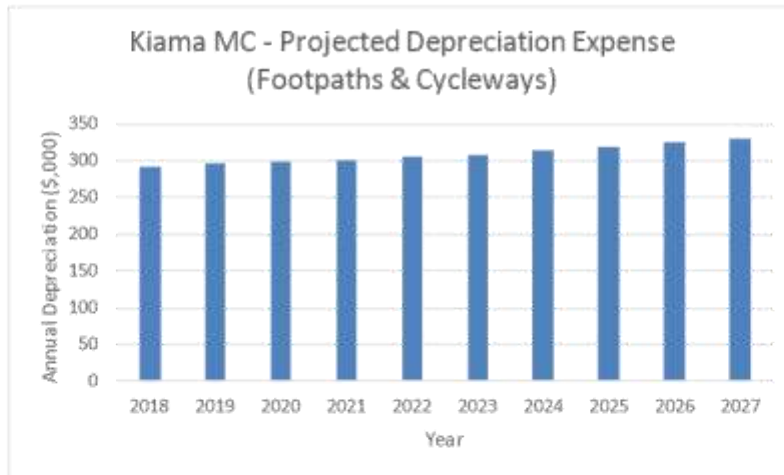
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Figure 9 shows the projected replacement cost asset values over the planning period in real values.

**Figure 9: Projected Asset Values**



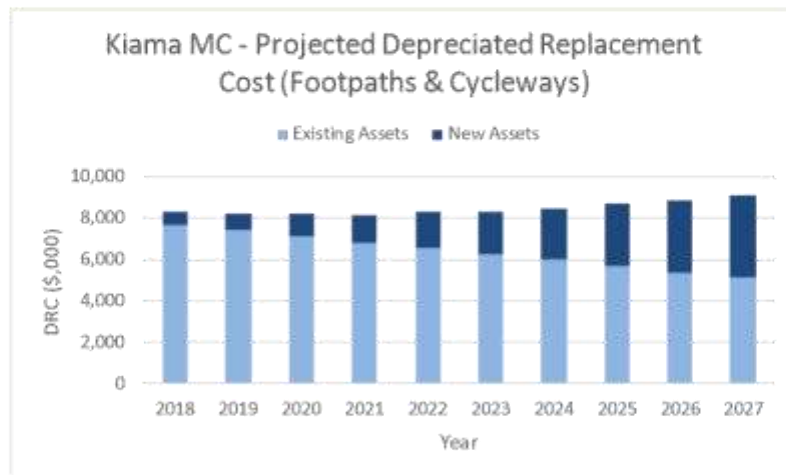
Depreciation expense values are forecast in line with asset values as shown in Figure 10.

**Figure 10: Projected Depreciation Expense**



The depreciated replacement cost will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets. Forecast of the assets' depreciated replacement cost is shown in Figure 11. The depreciated replacement cost of contributed and new assets is shown in the darker colour and in the lighter colour for existing assets.

Figure 11: Projected Depreciated Replacement Cost



**6.4 Key Assumptions made in Financial Forecasts**

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

Key assumptions made in this asset management plan and risks that these may change are shown in Table 6.4.

Table 6.4: Key Assumptions made in AM Plan and Risks of Change

Key Assumptions	Risks of Change to Assumptions
This asset class is fully funded in LTFP	Low
Future funding beyond the LTFP will remain fully funded	Low

**6.5 Forecast Reliability and Confidence**

The expenditure and valuations projections in this AM Plan are based on best available data. Currency and accuracy of data is critical to effective asset and financial management. Data confidence is classified on a 5 level scale<sup>13</sup> in accordance with Table 6.5.

<sup>13</sup> IPWEA, 2011, IIMM, Table 2.4.6, p 2|59.

**Table 6.5: Data Confidence Grading System**

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

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 6.5.1.

**Table 6.5.1: Data Confidence Assessment for Data used in AM Plan**

Data	Confidence Assessment	Comment
Demand drivers	A	The demand drivers utilised in this plan are currently the most effective way to forecast future requirements
Growth projections	A	The growth projections are based off population increase resulting in rezoning of land for future sub divisions
Operations expenditures	B	The operations expenditure budget is forecasted from data currently in the asset management system
Maintenance expenditures	B	The maintenance expenditure budget is forecasted from data currently in the asset management system
Projected Renewal exps. - Asset values	B	The revaluation of the assets in this plan occurred in June 2016
- Asset useful lives	B	The useful lives of the assets were based on Asset Type, Material and construction date.
- Condition modelling	C	Condition modelling were based on inspections and construction date
- Asset renewals	B	The projected renewals expenditure budget is forecasted from data currently in the asset management system
- Defect repairs	B	Further inspections are required
Upgrade/New expenditures	A	Contained in Appendix C and fully funded
Disposal expenditures	A	There are no disposals identified in the plan

Over all data sources the data confidence is assessed as Medium confidence level for data used in the preparation of this AM Plan.

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## 7. PLAN IMPROVEMENT AND MONITORING

### 7.1 Status of Asset Management Practices

#### 7.1.1 Accounting and financial systems

Kiama Municipal Council uses the Authority corporate information system. This system is used for financial management and reporting. The asset valuations are stored in the Capital Valuation Register of authority with a 1 to 1 match and integration to the Authority Asset Management Module.

Kiama Municipal Council has a documented Asset Accounting Policy.

#### Accountabilities for financial systems

Kiama Municipal Council's Finance Department is responsible for the data and processes pertaining to financial records in Authority. Kiama's Information Technology Department is responsible for system administration and technology infrastructure.

#### Accounting standards and regulations

Kiama Municipal Council adheres to the Australian Accounting Standards in conjunction with the Code of Accounting Practice for all the NSW Local Government Councils.

#### Capital/maintenance threshold

All assets are valued at their fair value. Expenditure on existing assets is considered maintenance where it does not increase the estimated remaining life of the asset.

#### Required changes to accounting financial systems arising from this AM Plan

Nil

#### 7.1.2 Asset management system

Kiama Municipal Council uses the Authority Asset Management System and Work Management System.

#### Asset registers

All registers are stored in the Authority Asset Management System. The system is integrated with Council's GIS system to provide a geographical representation and navigation to assets in the Asset Management System. Some assets are currently missing audited dimensional data.

#### Linkage from asset management to financial system

The Asset Management and Financial System are modules of the Authority Corporate Information System. These modules are fully integrated with a 1 to 1 relationship between assets and financial records.

#### Accountabilities for asset management system and data maintenance

Kiama Municipal Council's Engineering and Works Department are responsible for the configuration and data management of the Asset Management System.

Kiama Municipal Council's Information Technology Department is responsible for system administration and technology infrastructure.

#### Required changes to asset management system arising from this AM Plan

Audit dimensional attributes of asset records.

**7.2 Improvement Plan**

The asset management improvement plan generated from this asset management plan is shown in Table 7.2.

**Table 7.2: Improvement Plan**

Task No	Task	Responsibility	Resources Required	Timeline
1	Audit dimensional attributes of asset records	Engineering And Works Department	Works Crew	Completion 2020
2	Introduction of reactive work orders to manage unscheduled maintenance v scheduled maintenance	Engineering And Works Department	Asset Management & IT	Completion 2018
3	Inspection scheduling and recording via the AM system	Engineering And Works Department	Asset Management & IT	Completion 2018

**7.3 Monitoring and Review Procedures**

This asset management plan will be reviewed during annual budget planning processes and amended to recognise any material changes in service levels and/or resources available to provide those services as a result of budget decisions.

The AM Plan will be updated annually to ensure it represents the current service level, asset values, projected operations, maintenance, capital renewal and replacement, capital upgrade/new and asset disposal expenditures and projected expenditure values incorporated into the organisation’s long term financial plan.

The AM Plan has a life of 4 years (Council election cycle) and is due for complete revision and updating before each Council election.

**7.4 Performance Measures**

The effectiveness of the asset management plan can be measured in the following ways:

- The degree to which the required projected expenditures identified in this asset management plan are incorporated into Council’s long term financial plan,
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the ‘global’ works program trends provided by the asset management plan,
- The degree to which the existing and projected service levels and service consequences (what we cannot do), risks and residual risks are incorporated into the Council’s Strategic Plan and associated plans,
- The Asset Renewal Funding Ratio achieving the target of 100%.

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## 8. REFERENCES

IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/IIMM](http://www.ipwea.org/IIMM)

IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/namsplus](http://www.ipwea.org/namsplus).

IPWEA, 2009, 'Australian Infrastructure Financial Management Guidelines', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/AIFMG](http://www.ipwea.org/AIFMG).

IPWEA, 2011, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/IIMM](http://www.ipwea.org/IIMM)

Kiama Municipal Council 'Operational Plan 2015-2016 And Delivery Program 2013-2017'

Kiama Municipal Council 'Strategic Asset Management Plan 2002'



**9. APPENDICES**

- Appendix A Maintenance Response Levels of Service
  
- Appendix B Projected 10 year Capital Renewal Program
  
- Appendix C Projected 10 year Capital New/Upgrade Program
  
- Appendix D Abbreviations
  
- Appendix E Glossary

**Appendix A Maintenance Response Levels of Service**

Maintenance Response Level Of Service		
Maintenance Type	Maintenance Activity	Required Maintenance Response
Footpath and Cycleway Inspections	Sealed Footpaths CBD	Annual Inspection
	Sealed Footpath non CBD	Once every 3 years Inspection
	Unpaved (Gravel) Footpaths	Once every 3 years Inspection
	Constructed Cycleways	Once every 6 month Inspection
Footpath and Cycleway Maintenance	Repair Edge Drop-offs	<ol style="list-style-type: none"> <li>Edge drop offs greater than 100mm shall be repaired within 6 months of being identified.</li> <li>Edge drop offs greater than 100mm and which is not ordinary and obvious to users under all lighting conditions shall be made safe with 1 business day of being identified.</li> </ol>
	Repair Paved area displacements	Paved areas with a vertical displacement of +/- 15mm or horizontal displacement greater than 40mm shall be repaired within 1 week of identification.
	Sealed Pathway displacements	<ol style="list-style-type: none"> <li>Displacement greater than +/- 15mm and within 100m of a hospital, aged care facility, childcare centre will be repaired within 1 working day of identification.</li> <li>Displacement greater than +/- 20mm in defined CBD areas will be repaired within 1 week of identification.</li> <li>Displacement greater than +/- 30mm in other areas will be repaired within 4 weeks of identification.</li> </ol>

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Appendix B Projected 10 Year Capital Renewal Program

Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Footpaths and Cycleways</b>											
22475	Ruth Devenney Reserve/Common Area/Footpath/F02	80,409	76,875	189,669	160,409	145,620	132,053	91,288	94,732	91,380	299,958
3881	Transport/ Footpath Renewal	5,409									
3881	Transport/ Footpath Renewal	75,000	76,875								
19167	Riverside Drive/Seg 15 Bridge to Soc Boundary/Footpath/R01			11,208							
18885	Riverside Drive/Seg 15 Bridge to Soc Boundary/Footpath/R02			14,677							
19013	South Kiama Drive/Seg 02 Attunga Ave to David Smith Pl/Footpath/R01			50,079							
19228	South Kiama Drive/Seg 03 David Smith Pl to Princes Hwy/Footpath/R01			13,739							
19227	South Kiama Drive/Seg 04 Princes Hwy to Marks St/Footpath/R01			21,169							
3881	Transport/ Footpath Renewal			76,797							
18992	Crooked River Road/Seg 03 Headland Dr to Riverleigh Ave/Footpath/R01				1,119						
18881	Crooked River Road/Seg 03 Headland Dr to Riverleigh Ave/Footpath/R02				36,948						
18883	Crooked River Road/Seg 04 Riverleigh Ave to Crooked River Bridge/Footpath/R01				9,875						
19218	Crooked River Road/Seg 04 Riverleigh Ave to Crooked River Bridge/Footpath/R02				3,244						
18878	Crooked River Road/Seg 05 Crooked River Bridge/Footpath/R02				1,013						
18879	Crooked River Road/Seg 05 Crooked River Bridge/Footpath/R03				1,594						
19008	Shoalhaven Street/Seg 02 Terralong St to Akuna St/Footpath/L01				7,456						
18996	Shoalhaven Street/Seg 12 Bland St to Tanner Pl/Footpath/R01				11,345						
19054	Terralong Street/Seg 12 Mearns Pl to Hawilah Pl/Footpath/R01				7,048						
3881	Transport/ Footpath Renewal				80,767						
22472	Black Head Reserve/Common Area/Footpath/F01					2,602					
22414	Boneyard Reserve/Common Area/Footpath/F06					191					
22415	Boneyard Reserve/Common Area/Footpath/F07					1,751					
18910	Gipps Street/Seg 01 Collins St to Hothersal St/Footpath/R02					24,348					
22468	Kingsford Smith Lookout/Common Area/Footpath/F01					4,512					
19092	Terralong Street/Seg 11 Thomson St to Mearns Pl/Footpath/L01					14,852					

KIAMA MUNICIPAL COUNCIL – FOOTPATHS and CYCLEWAYS ASSET MANAGEMENT PLAN

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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Footpaths and Cycleways</b>											
19035	Terralong Street/Seg 11 Thomson St to Meares Pl/Footpath/L02	80,409	76,875	189,669	160,409	145,620	132,053	91,288	94,732	91,380	299,958
3881	Transport/ Footpath Renewal					82,786					
18912	Gipps Street/Seg 01 Collins St to Hothersal St/Footpath/L02						1,421				
18909	Gipps Street/Seg 01 Collins St to Hothersal St/Footpath/R01						45,776				
3881	Transport/ Footpath Renewal						84,856				
19053	Terralong Street/Seg 11 Thomson St to Meares Pl/Footpath/R02							4,311			
3881	Transport/ Footpath Renewal					86,977					
19270	Crooked River Road/Seg 06 Crooked River Bridge to Scc Boundary/Footpath/L03								5,581		
3881	Transport/ Footpath Renewal								89,151	91,380	
3881	Transport/ Footpath Renewal										20,507
22318	Bonaira Reserve/Common Area/Footpath/F02										461
22320	Bonaira Reserve/Common Area/Footpath/F04										4,780
18826	Bong Bong Street/Seg 05 Railway Pde to Shoalhaven St/Footpath/L01										11,797
18827	Bong Bong Street/Seg 06 Shoalhaven St to Collins St/Footpath/L01										519
19213	Burke Parade/Seg 01 Riverleigh Ave to Dixon St/Footpath/R03										448
19215	Burke Parade/Seg 01 Riverleigh Ave to Dixon St/Footpath/R05										364
19217	Burke Parade/Seg 01 Riverleigh Ave to Dixon St/Footpath/R07										10,164
27265	Cathedral Rocks Avenue/Seg 01 North Kiama Dr to Commissioner'S La/Footpath/R01										24,628
18874	Collins Street/Seg 05 Intersection to Collins La/Footpath/L02										44,287
19103	Collins Street/Seg 05 Intersection to Collins La/Footpath/R01										2,166
19104	Collins Street/Seg 05 Intersection to Collins La/Footpath/R03										2,639
19105	Collins Street/Seg 05 Intersection to Collins La/Footpath/R04										16,401
18866	Collins Street/Seg 06 Collins La to Terralong St/Footpath/L01										2,193
18865	Collins Street/Seg 06 Collins La to Terralong St/Footpath/L03										39,746
18882	Crooked River Road/Seg 02 Belmifels La to Headland Dr/Footpath/R01										2,651
18876	Crooked River Road/Seg 06 Crooked River Bridge to Scc Boundary/Footpath/L01										1,917
18888	Dido Street/Seg 01 Jamberoc Rd to Glenbrook Dr/Footpath/R01										863
22351	Gerrigong Town Hall/Common Area/Footpath/F04										

KIAMA MUNICIPAL COUNCIL – FOOTPATHS and CYCLEWAYS ASSET MANAGEMENT PLAN

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Asset Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Footpaths and Cycleways</b>										
22479 Jamberoo Parklands/Reid Park/Footpath/F02	80,409	76,875	185,669	160,409	145,620	132,053	91,288	94,732	91,380	299,958
22416 Spring Creek Reserve/Common Area/Footpath/F02										2,697
22425 Spring Creek Reserve/Common Area/Footpath/F07										3,797
22427 Spring Creek Reserve/Common Area/Footpath/F09										7,269
3881 Transport/ Footpath Renewal										5,999
										93,665

KIAMA MUNICIPAL COUNCIL – FOOTPATHS and CYCLEWAYS ASSET MANAGEMENT PLAN

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Appendix C Projected New/Upgrade 10 Year Capital Works Program

Location	Asset	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Footpath Construction Program 17/18	Various	170,000									
Footpath Construction Program 18/19	Various		85,000								
Footpath Construction Program 19/20	Various			60,047							
Footpath Construction Program 20/21	Various				82,858						
Footpath Construction Program 21/22	Various					180,000					
Footpath Construction Program 22/23	Various						140,000				
Footpath Construction Program 23/24	Various							220,000			
Footpath Construction Program 24/25	Various								250,000		
Footpath Construction Program 25/26	Various									250,000	
Footpath Construction Program 26/27	Various										300,000
Hymas Creek Jamberoo	Construct pedestrian bridge	186,000									
Jamberoo Valley Cycleway	Planning survey	20,000									
Jamberoo Valley Cycleway 17/18	Cycleway	200,000									
Jamberoo Valley Cycleway 18/19	Cycleway		200,000								
Jamberoo Valley Cycleway 19/20	Cycleway			200,000							
Jamberoo Valley Cycleway 20/21	Cycleway				200,000						
Jamberoo Valley Cycleway 21/22	Cycleway					250,000					
Jamberoo Valley Cycleway 22/23	Cycleway						200,000				
Jamberoo Valley Cycleway 23/24	Cycleway							300,000			
Jamberoo Valley Cycleway 24/25	Cycleway								300,000		
Jamberoo Valley Cycleway 25/26	Cycleway									300,000	
Jamberoo Valley Cycleway 26/27	Cycleway										300,000

KIAMA MUNICIPAL COUNCIL – FOOTPATHS and CYCLEWAYS ASSET MANAGEMENT PLAN

**Appendix D Abbreviations**

<b>AAAC</b>	Average annual asset consumption
<b>AM</b>	Asset management
<b>AM Plan</b>	Asset management plan
<b>ARI</b>	Average recurrence interval
<b>ASC</b>	Annual service cost
<b>BOD</b>	Biochemical (biological) oxygen demand
<b>CRC</b>	Current replacement cost
<b>CWMS</b>	Community wastewater management systems
<b>DA</b>	Depreciable amount
<b>DRC</b>	Depreciated replacement cost
<b>EF</b>	Earthworks/formation
<b>IRMP</b>	Infrastructure risk management plan
<b>LCC</b>	Life Cycle cost
<b>LCE</b>	Life cycle expenditure
<b>LTFFP</b>	Long term financial plan
<b>MMS</b>	Maintenance management system
<b>PCI</b>	Pavement condition index
<b>RV</b>	Residual value
<b>SoA</b>	State of the Assets
<b>SS</b>	Suspended solids
<b>vph</b>	Vehicles per hour
<b>WDCRC</b>	Written down current replacement cost

**Appendix E Glossary****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**

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 hierarchy**

A framework for segmenting an asset base into appropriate classifications. The asset hierarchy can be based on asset function or asset type or a combination of the two.

**Asset management (AM)**

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 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.



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**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.

**Class of assets**

See asset class definition

**Component**

Specific parts of an asset having independent physical or functional identity and having specific attributes such as different life expectancy, maintenance regimes, risk or criticality.

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**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 cash flow 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, including any costs necessary to place the asset into service. This includes one-off design and project management costs.

**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.

**Deferred maintenance**

The shortfall in rehabilitation work undertaken relative to that required to maintain the service potential of an asset.

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

**Economic life**

See useful life definition.

**Expenditure**

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

**Expenses**

Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or increases in liabilities that result in decreases in equity, other than those relating to distributions to equity participants.

**Fair value**

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

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**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.

**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 that contribute to meeting the needs of organisations or the 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 separate 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.

**Key performance indicator**

A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or other target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.

**Level of service**

The defined service quality for a particular service/activity against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental impact, 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 average operations, maintenance and capital renewal expenditure accommodated in the long term financial plan over 10 years. Life Cycle Expenditure may be compared to average Life Cycle Cost to give an initial indicator of affordability of projected service levels when considered with asset age profiles.

**Loans / borrowings**

See borrowings.

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**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 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**

The notion of materiality guides the margin of error acceptable, the degree of precision required and the extent of the disclosure required when preparing general purpose financial reports. Information is material if its omission, misstatement or non-disclosure has the potential, individually or collectively, to influence the economic decisions of users taken on the basis of the financial report or affect the discharge of accountability by the management or governing body of the entity.

**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.

**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 to provide a service. In common use the term typically includes, eg power, fuel, staff, plant equipment, on-costs and overheads but excludes maintenance and depreciation. Maintenance and depreciation is on the other hand included in operating expenses.

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**Operating expense**

The gross outflow of economic benefits, being cash and non cash items, during the period arising in the course of ordinary activities of an entity when those outflows result in decreases in equity, other than decreases relating to distributions to equity participants.

**Operating expenses**

Recurrent expenses continuously required to provide a service, including power, fuel, staff, plant equipment, maintenance, depreciation, on-costs and overheads.

**Operations, maintenance and renewal financing ratio**

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

**Operations, maintenance and renewal gap**

Difference between budgeted expenditures in a long term financial plan (or estimated future budgets in absence of a long term financial plan) and projected expenditures for operations, maintenance and renewal of assets to achieve/maintain specified service levels, totalled over a defined time (e.g. 5, 10 and 15 years).

**Pavement management system (PMS)**

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

**PMS Score**

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

**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).

**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 operations and maintenance expenditure.

**Recurrent funding**

Funding to pay for recurrent expenditure.

**Rehabilitation**

See capital renewal expenditure definition above.

**Remaining useful life**

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

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**Renewal**

See capital renewal expenditure definition above.

**Residual value**

The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.

**Revenue generating investments**

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

**Risk management**

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

**Section or segment**

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

**Service potential**

The total future service capacity of an asset. It is normally determined by reference to the operating capacity and economic life of an asset. A measure of service potential is used in the not-for-profit sector/public sector to value assets, particularly those not producing a cash flow.

**Service potential remaining**

A measure of the future economic benefits remaining in assets. It may be expressed in dollar values (Fair Value) or as a percentage of total anticipated future economic benefits. It is also a measure of the percentage of the asset's potential to provide services that is still available for use in providing services (Depreciated Replacement Cost/Depreciable Amount).

**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.

**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.

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**Value in Use**

The present value of future cash flows expected to be derived from an asset or cash generating unit. 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 net cash inflows, where the entity would, if deprived of the asset, replace its remaining future economic benefits.

Source: IPWEA, 2009, Glossary

Additional and modified glossary items shown \*



# Asset Management Plan

## Recreation and Open Space





November 2016

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## 1. EXECUTIVE SUMMARY

### Context

The Kiama Municipal Council area is located on the south coast of NSW. This Recreation and Open Space asset management plan describes the services provided by Council to facilitate effective service delivery of Infrastructure to the community.

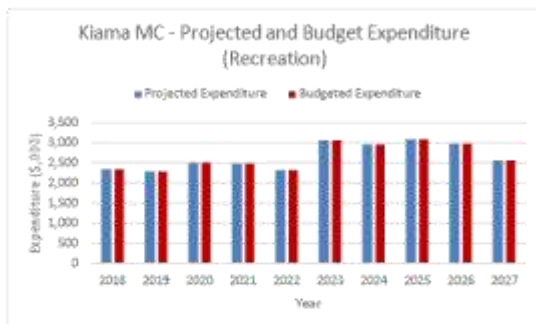
Councils Recreation and Open Space comprises a wide range of assets including Playgrounds, Sports Fields, Boat Ramps, Park furniture, Pools etc.

These Recreation and Open Space infrastructure assets have a replacement value of \$10,755,091

### What does it Cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan (AM Plan) includes operations, maintenance, renewal and upgrade of existing assets over the 10 year planning period is \$26,717,587 or \$2,671,759 on average per year.

Estimated available funding for this period is \$26,717,587 or \$2,671,759 on average per year which is 100% of the cost to provide the service. Projected expenditure required to provide services in the AM Plan compared with planned expenditure currently included in the Long Term Financial Plan are shown in the graph below.



### What we will do

We plan to provide Recreation and Open Space Infrastructure services as follows:

- Maintenance, renewal and upgrade of Recreation and Open Space Infrastructure to meet service levels set by Council in annual budgets.
- All required asset renewals have been incorporated into the 10 year financial plan.

- New and Upgraded Recreation and Open Space Infrastructure within the 10 year financial plan are contained in Appendix C

### What we cannot do

The Recreation and Open Space Asset Management Plan is aligned with Councils 10 year Financial Plan, accordingly we cannot Create New Recreation and Open Space Infrastructure or Upgrade existing Recreation and Open Space Infrastructure that have not been included in the current plans without additional funding.

### Managing the Risks

There are risks associated with providing the service and not being able to complete all identified activities and projects. We have identified major risks as:

- Public safety from unsafe structures
- Financial Loss due to Storm events that damage Recreation and Open Space Infrastructure

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

- Inspecting the Recreation and Open Space Infrastructure.
- Developing Scheduled Maintenance Plans to prevent defects.

### Confidence Levels

This AM Plan is based on a medium level of confidence information.

### The Next Steps

The actions resulting from this asset management plan are:

- Conduct maintenance in accordance with the asset management plan.
- Conduct renewals in accordance with the asset management plan.
- Conduct enhancements in accordance with the asset management plan.

### Questions you may have

#### What is this plan about?

This asset management plan covers Recreation and Open Space Infrastructure that serve the Kiama Municipal Council community. It does not cover assets that are not owned by Kiama Municipal Council.

#### What is an Asset Management Plan?

Asset management planning is a comprehensive process to ensure delivery of services from

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infrastructure is provided in a financially sustainable manner.

An asset management plan details information about infrastructure assets including actions required to provide an agreed level of service in the most cost effective manner. The plan defines the services to be provided, how the services are provided and what funds are required to provide the services.

#### **Why is there a funding shortfall?**

Most of the Council's Recreation and Open Space Infrastructure were constructed by developers, council funding and from government grants. Some Recreation and Open Space Infrastructure have been provided and accepted without consideration of ongoing operations, maintenance and replacement needs.

At the present time few of these assets are approaching the later years of their life and require structural replacement.

Our present funding levels are sufficient to continue to provide existing services at current levels in the medium term.

#### **What options do we have?**

Council will continue to resolve the requirements for Maintenance and inspection funding by:

1. Improving asset knowledge so that data accurately records the asset inventory, how assets are performing and when assets are not able to provide the required service levels,
2. Improving our efficiency in operating, maintaining, renewing and replacing existing assets to optimise life cycle costs,
3. Identifying and managing risks associated with providing services from infrastructure,
4. Making trade-offs between service levels and costs to ensure that the community receives the best return from infrastructure,
5. Identifying assets surplus to needs for disposal to make saving in future operations and maintenance costs,
6. Consulting with the community to ensure that Recreation and Open Space Infrastructure and costs meet community needs and are affordable,
7. Developing partnership with other bodies, where available to provide services,
8. Seeking additional funding from governments and other bodies to better reflect a 'whole of government' funding approach to infrastructure services.

#### **What happens if we don't manage the shortfall?**

It is likely that we will not achieve the optimum lifecycle cost for Recreation and Open Space Infrastructure.

#### **What can we do?**

We can develop options, costs and priorities for future Recreation and Open Space Infrastructure, consult with the community to plan future services to match the community service needs with ability to pay for services and maximise community benefits against costs.

#### **What can you do?**

We will be pleased to consider community consultation on the issues raised in this asset management plan and suggestions on how we may change or reduce its Recreation and Open Space Infrastructure to ensure that the appropriate level of service can be provided to the community within available funding.

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## 2. INTRODUCTION

### 2.1 Background

This asset management plan is to demonstrate responsive management of assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding needed to provide the required levels of service over a 10 year planning period.

The asset management plan follows the format for AM Plans recommended in Section 4.2.6 of the International Infrastructure Management Manual<sup>1</sup>.

The asset management plan is to be read with the organisation's Asset Management Policy, Asset Management Strategy and the following associated planning documents:

- Community Strategic Plan
- Work Force Plan
- 10 Year Financial Plan
- Delivery Program
- Operational Plan

This infrastructure assets covered by this asset management plan are shown in Table 2.1. These assets are used to provide Recreation and Open Space Infrastructure to service the community.

---

<sup>1</sup> IPWEA, 2011, Sec 4.2.6, *Example of an Asset Management Plan Structure*, pp 4|24 – 27.

**Table 2.1: Assets covered by this Plan**

<b>Asset Category</b>	<b>Quantity</b>	<b>Replacement Value</b>
Boat Ramps	6	218,058
Bridge Deck	1	45,164
Bridge Sub Structure	1	19,671
Global Fence Item	18	389,089
Global Handrails	3	8,003
Global Landscape Item	7	245,488
Global Light Item	48	892,330
Global Litter Bin Item	24	7,672
Global Retaining Wall Item	23	1,528,068
Global Sculpture & Monument Item	1	10,157
Global Seat Item	9	204,463
Global Table Item	15	24,229
Global Utilities	2	11,049
Global Water Service	2	5,441
Land & Buildings Asset Class	1	301,585
Pool Component Item	1	5,389
Pool Shell Item	4	390,125
Road Kerb & Gutter Item	18	1,848
Road Pavement Item	25	207,613
Road Surface Item	14	195,510
Sewerage	2	54,890
Site Active Play Area Item	12	1,155,824
Site BBQ Item	6	38,563
Site Bridge Item	6	124,054
Site Irrigation Network Item	58	382,315
Site Playground Item	84	847,728
Site Sport Equipment Item	1	141,457
Site Structure Item	40	3,275,458
Telecommunications	1	23,850
<b>Total</b>		<b>10,755,091</b>

Key stakeholders in the preparation and implementation of this asset management plan are: Shown in Table 2.1.1.

**Table 2.1.1: Key Stakeholders in the AM Plan**

<b>Key Stakeholder</b>	<b>Role in Asset Management Plan</b>
Councillors	<ul style="list-style-type: none"> <li>Represent needs of community/shareholders,</li> </ul>
General Manager	<ul style="list-style-type: none"> <li>Allocate resources to meet the organisation’s objectives in providing services while managing risks,</li> <li>Ensure organisation is financial sustainable.</li> </ul>
Directors	<ul style="list-style-type: none"> <li>Ensure the plans objectives and financial requirements are included in councils integrated planning and reporting documentation</li> </ul>
Manager Of Works	<ul style="list-style-type: none"> <li>Delivery of the asset management plan objectives</li> </ul>

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



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## 2.2 Goals and Objectives of Asset Management

The organisation exists to provide services to its community. Some of these services are provided by infrastructure assets. We have acquired infrastructure assets by purchase, by contract, construction by our staff and by donation of assets constructed by developers and others to meet increased levels of service.

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.<sup>2</sup>

## 2.3 Plan Framework

Key elements of the plan are

- Levels of service – specifies the services and levels of service to be provided by the organisation,
- 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 defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices,
- Monitoring – how the plan will be monitored to ensure it is meeting organisation’s objectives,
- Asset management improvement plan.

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

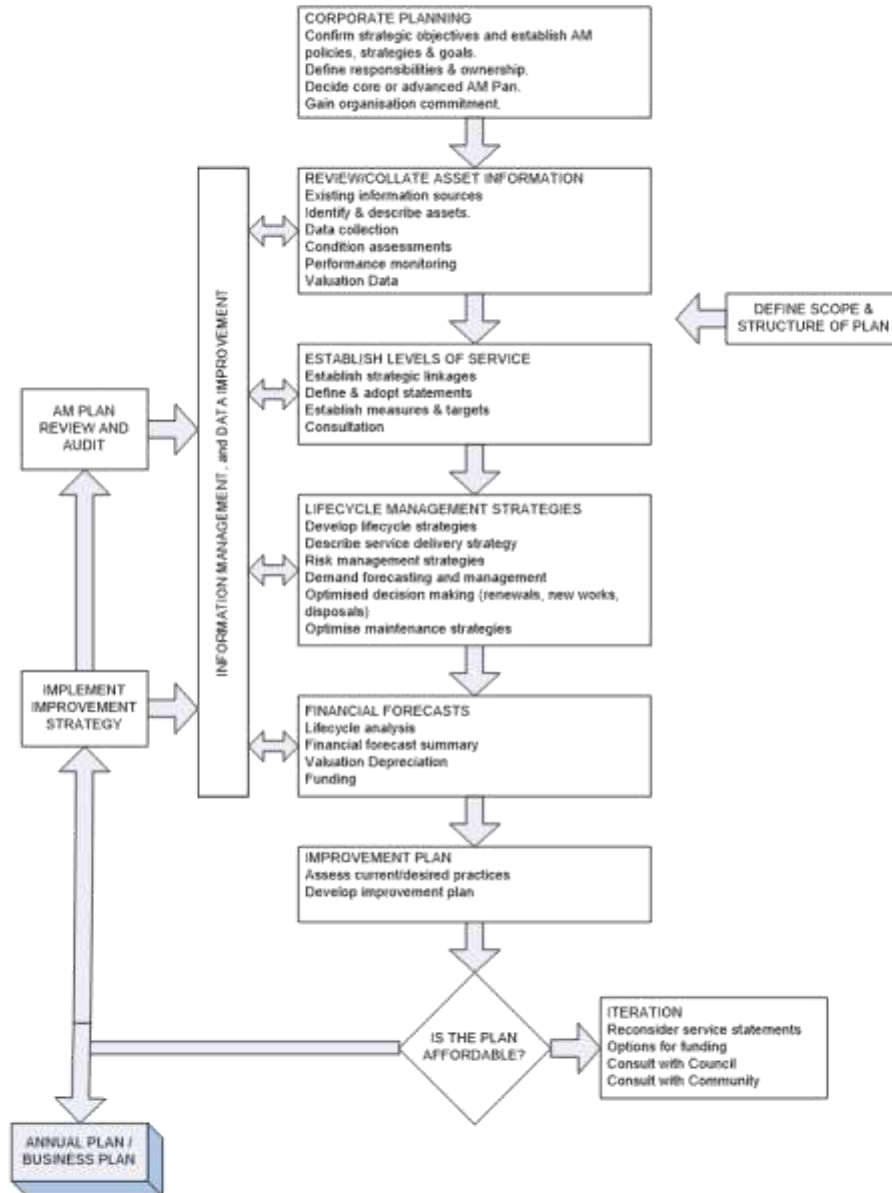
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<sup>2</sup> Based on IPWEA, 2011, IIMM, Sec 1.2 p 1|7.



**Road Map for preparing an Asset Management Plan**

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



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## 2.4 Core and Advanced Asset Management

This asset management plan is prepared as a 'core' asset management plan over a 20 year planning period in accordance with the International Infrastructure Management Manual<sup>3</sup>. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. Core asset management is a 'top down' approach where analysis is applied at the 'system' or 'network' level.

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

## 2.5 Community Consultation

This 'core' asset management plan is prepared to facilitate community consultation initially through feedback on public display of draft asset management plans prior to adoption by the Council. Future revisions of the asset management plan will incorporate community consultation on service levels and costs of providing the service. This will assist the Council and the community in matching the level of service needed by the community, service risks and consequences with the community's ability and willingness to pay for the service.

## 3. LEVELS OF SERVICE

### 3.1 Customer Research and Expectations

The organisation carries out an IRIS Survey prior to re-developing Community Strategic Plan on customer satisfaction and expectations from all infrastructure areas.

The organisation uses this information in developing its Strategic Plan and in allocation of resources in the budget.

### 3.2 Strategic and Corporate Goals

This asset management plan is prepared under the direction of the organisation's vision, mission, goals and objectives.

Our vision is:

***Working together for a healthy, sustainable and caring community***

Our mission is:

***Kiama Council will work to create a Municipality that has a healthy, vibrant lifestyle, beautiful environment and harmonious, connected and resilient community***

---

<sup>3</sup> IPWEA, 2011, IIMM.

Relevant organisational goals and objectives and how these are addressed in this asset management plan are:

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

Plan Level	Plan No.	Plan Description	Measure's
CSP Strategy	2.12	Effectively manage recreation and open space infrastructure to cater for current and future generations	
DP Action	2.12.1	Manage recreation and open space infrastructure by the creation and implementation of the Recreation and Open Space Asset Management Plan actions	Maintain or increase community satisfaction with recreation and open space infrastructure
			Optimal renewal of recreation and open space infrastructure
			The Recreation and Open Space Asset Management Plan is fully funded
			Capital works are delivered in accordance with Delivery Program
OP Activity	2.12.1.1	Manage recreation and open space asset renewals	Percentage of renewal program completed
			Percentage of renewals updated in the Asset Management Information System
			Percentage of scheduled designs completed
			Renewal Budget YTD%
OP Activity	2.12.1.2	Manage recreation and open space new asset creation	New Asset Budget v Actual expenditure percentage
			Percentage of new asset program completed
			Percentage of scheduled designs completed
OP Activity	2.12.1.3	Manage recreation and open space asset maintenance and operation	Unscheduled Maintenance Budget YTD%
OP Activity	2.12.1.4	Maintain the Recreation and Open Space Asset Management Plan including reserves, sports fields, playgrounds and skate parks	New Asset schedule created for following year Budget
			Renewal schedule created for following year Budget
CSP Strategy	4.11	Ensure Council owned buildings and infrastructure are planned and maintained with consideration to both current and future generations	
DP Action	4.11.1	Ensure the Strategic Asset Management Plan is maintained and funded in the 10 year financial plan	Strategic Asset Management Plan is funded to meet Community Strategic Plan objectives
OP Activity	4.11.1.1	Review and re-adopt the Asset Management Policy	Policy re-adopted within 12 months of newly elected Councillors
OP Activity	4.11.1.2	Maintain a Strategic Asset Management Plan (SAMP) aligned with individual Asset Management Plans	Percentage of plans aligned with SAMP
OP Activity	4.11.1.3	Ensure ongoing alignment of Asset Management with Councils 10 year financial Plan	Percentage of plans aligned with 10 year Financial Plan
OP Activity	4.11.1.4	Seek infrastructure funding from external sources	Value of grants secured

The organisation will exercise its duty of care to ensure public safety is accordance with the infrastructure risk management plan prepared in conjunction with this AM Plan. Management of infrastructure risks is covered in Section 5.2

**3.3 Legislative Requirements**

The organisation has to meet many legislative requirements including Australian and State legislation and State regulations. These include:

**Table 3.3: Legislative Requirements**

Legislation	Requirement
Local Government Act 1993	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Protection of the Environment Operations Act 1997	To ensure that all reasonable and practicable measures are taken to protect, restore and enhance the quality of the environment having regard to the principles of ecologically sustainable development.
Australian Accounting Standards	Sets out the financial reporting standards relating to Infrastructure assets. Standards of particular relevance to Infrastructure Assets include: <ul style="list-style-type: none"> <li>• AASB116 Property, Plant &amp; Equipment – prescribes requirement for recognition and depreciation of property, plant and equipment assets</li> <li>• AASB136 Impairment of Assets - aims to ensure that assets are carried at amounts that are not in excess of their recoverable amounts</li> <li>• AASB1021 Depreciation of Non-Current Assets - specifies how depreciation is to be calculated</li> <li>• AAS1001 Accounting Policies - specifies the policies that Council is to have for recognition of assets and depreciation</li> <li>• AASB1041 Accounting for the reduction of Non-Current Assets - specifies the frequency and basis of calculation depreciation and revaluation basis used for assets</li> <li>• AAS1015 Accounting for acquisition of assets - method of allocating the value to new assets on acquisition</li> </ul>
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)
Civil Liability Act 2002	Protects the Council from civil action by requiring the courts to take into account the financial resources, the general responsibilities of the authority and the compliance with general practices and applicable standards.
Water Management Act 2000	The objects of this Act are to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations and, in particular: <ul style="list-style-type: none"> <li>• to apply the principles of ecologically sustainable development, and</li> <li>• to protect, enhance and restore water sources, their associated ecosystems, ecological processes and biological diversity and their water quality, and</li> <li>• to recognise and foster the significant social and economic benefits to the State that result from the sustainable and efficient use of water, including:                             <ul style="list-style-type: none"> <li>○ benefits to the environment, and</li> <li>○ benefits to urban communities, agriculture, fisheries, industry and recreation, and</li> <li>○ benefits to culture and heritage, and</li> <li>○ benefits to the Aboriginal people in relation to their spiritual, social, customary and economic use of land and water,</li> </ul> </li> <li>• to recognise the role of the community, as a partner with government, in resolving issues relating to the management of water sources,</li> <li>• to provide for the orderly, efficient and equitable sharing of water from water sources,</li> <li>• to integrate the management of water sources with the management of other aspects of the environment, including the land, its soil, its native vegetation and its native fauna,</li> <li>• to encourage the sharing of responsibility for the sustainable and efficient use of water between the Government and water users,</li> <li>• to encourage best practice in the management and use of water.</li> </ul>
Work Health And Safety Act 2011	To take a constructive role in promoting improvements in occupational health, safety and welfare practices and assisting in the preservation of public health and safety in all undertakings of Council

The organisation will exercise its duty of care to ensure public safety in accordance with the infrastructure risk management plan linked to this AM Plan. Management of risks is discussed in Section 5.2.

**3.4 Community Levels of Service**

Service levels are defined service levels in two terms, customer levels of service and technical levels of service.

Community Levels of Service measure how the community receives the service and whether the organisation is providing community value.

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?

The organisation's current and expected community service levels are detailed are aligned with the Community Strategic Plan and shown in Table 3.2. The agreed expected community levels of service based on resource levels in the current long-term financial plan and community consultation/engagement.

**3.5 Technical Levels of Service**

**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, mowing grass, energy, inspections, etc.
- Maintenance – the activities necessary to retain an asset 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).

Service and asset managers plan, implement and control technical service levels to influence the customer service levels.<sup>4</sup>

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<sup>4</sup> IPWEA, 2011, IIMM, p 2.22

**4. FUTURE DEMAND**

**4.1 Demand Drivers**

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

**4.2 Demand Forecast**

The present position and projections for demand drivers that may impact future service delivery and utilisation of assets were identified and are documented in Table 4.3.

**4.3 Demand Impact on Assets**

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

**Table 4.3: Demand Drivers, Projections and Impact on Service**

Demand drivers	Present position	Projection	Impact on services
Population Growth	The estimated population is 21,314	The estimated annual population Growth is 1.37%	No impact on Services in the life of this plan apart from developer contributions from new subdivisions.
Climate Change	Infrastructure designed to suite current standards	Potentially Rising sea levels, additional rainfall and El Nino storm events.	No impact on Services in the life of this plan.

**4.4 Demand Management Plan**

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

Non-asset solutions focus on providing the required service without the need for the organisation to own the assets and management actions including reducing demand for the service, reducing the level of service (allowing some assets to deteriorate beyond current service levels) or educating customers to accept appropriate asset failures<sup>5</sup>. Examples of non-asset solutions include providing services from existing infrastructure such as aquatic centres and libraries that may be in another community area or public toilets provided in commercial premises.

Opportunities identified to date for demand management are shown in Table 4.4. Further opportunities will be developed in future revisions of this asset management plan.

**Table 4.4: Demand Management Plan Summary**

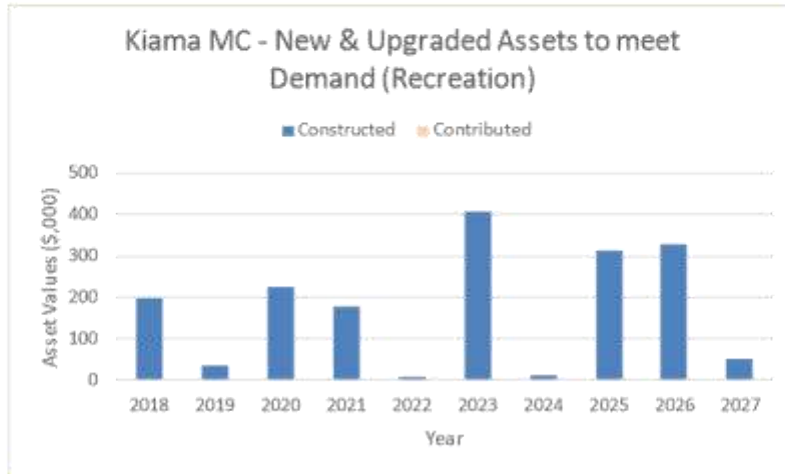
Demand Driver	Impact on Services	Demand Management Plan
Population Growth	No impact on Services in the life of this plan.	Additional assets are acquired as part of the developer contributions. Council will need to fully fund the life cycle costs of these new assets.
Climate Change	No impact on Services in the life of this plan.	No impact on Services in the life of this plan.

<sup>5</sup> IPWEA, 2011, IIMM, Table 3.4.1, p 3|58.

**4.5 Asset Programs to meet Demand**

The new assets required to meet growth will be acquired free of cost from land developments and constructed/acquired by the organisation. New assets constructed/acquired by the organisation are discussed in Section 5.5. The cumulative value of new contributed and constructed asset values are summarised in Figure 1.

**Figure 1: New & Upgraded Assets to meet Demand**



Acquiring these new assets will commit the organisation to fund ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs in Section 5.

**5. LIFECYCLE MANAGEMENT PLAN**

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

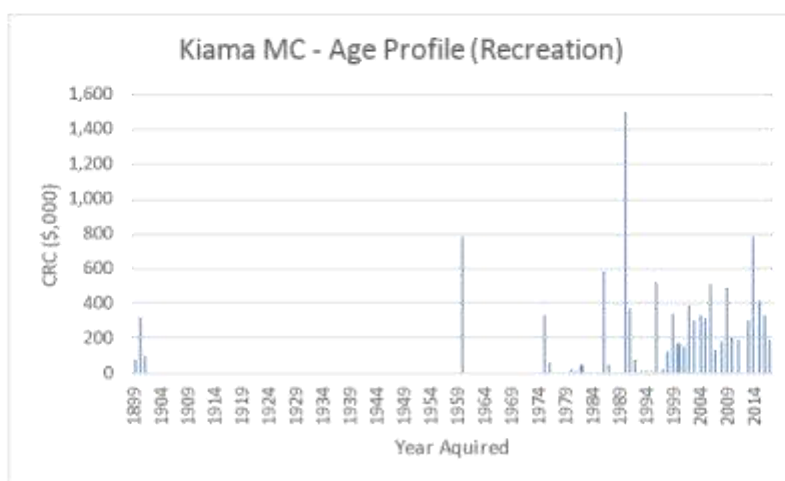
**5.1 Background Data**

**5.1.1 Physical parameters**

The assets covered by this asset management plan are shown in Table 2.1.

The age profile of the assets include in this AM Plan is shown in Figure 2.

**Figure 2: Asset Age Profile**



Plans showing the assets are:

- Work As Executed Drawings stored in the corporate document management system (Trim). These documents are linked to individual assets records in the corporate asset management system (Authority).
- Assets are geographically displayed on the corporate Geographic information system which is fully integrated to Council’s Asset Management System.



5.1.2 Asset capacity and performance

The organisation’s services are generally provided to meet design standards where these are available.

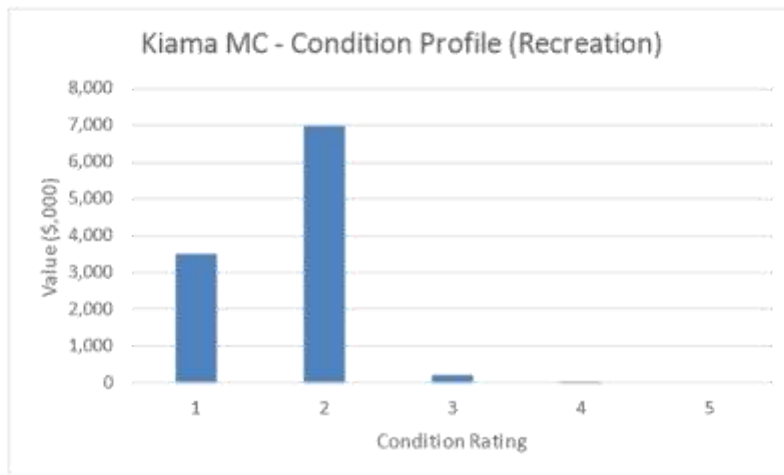
Council has an integrated approach to service delivery and where capacity or performance requirements of assets require a change the Funding Allocation Process is used to ensure that the lifecycle costs are incorporated into the Integrated Planning and Reporting framework including the 10 Year Financial Plan, Asset Management Plan and Workforce Plan.

5.1.3 Asset condition

Condition is monitored by inspecting the assets on a regular cycle. In addition all assets have condition inspections that align with the 5 year Financial Revaluation of Assets.

The condition profile of our assets is shown in Figure 3.

Fig 3: Asset Condition Profile



Condition is measured using a 1 – 5 grading system<sup>6</sup> as detailed in Table 5.1.3.

Table 5.1.3: Simple Condition Grading Model

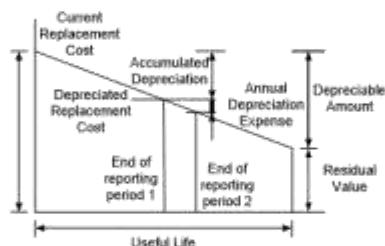
Condition Grading	Description of Condition
1	<b>Very Good:</b> only planned maintenance required
2	<b>Good:</b> minor maintenance required plus planned maintenance
3	<b>Fair:</b> significant maintenance required
4	<b>Poor:</b> significant renewal/rehabilitation required
5	<b>Very Poor:</b> physically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

<sup>6</sup> IPWEA, 2011, IIMM, Sec 2.5.4, p 2|79.

5.1.4 Asset valuations

The value of assets recorded in the asset register as at 30/06/2015 covered by this asset management plan is shown below. Assets were last revalued at 30/06/2015. Assets are valued using the depreciated replacement cost methodology. This asset class is revalued every 5 years.

Current Replacement Cost	\$10,755,091
Depreciable Amount	\$9,649,581
Depreciated Replacement Cost <sup>7</sup>	\$6,420,382
Annual Depreciation Expense	\$289,073



Useful lives were reviewed in June 2016 by assessing the condition of assets.

Key assumptions made in preparing the valuations were:

- Unit rate of excavation assumed a common sub surface material type
- Condition assessment of the samples reflects the entire network
- Where the dimensional information was absent default dimensions were used

Various ratios of asset consumption and expenditure have been prepared to help guide and gauge asset management performance and trends over time.

Rate of Annual Asset Consumption (Depreciation/Depreciable Amount)	3.00%
Rate of Annual Asset Renewal (Capital renewal exp/Depreciable amount)	5.11%

In 2018 the organisation plans to renew assets at 170.61% of the rate they are being consumed and will be increasing its asset stock by 1.843% in the year. All future asset renewals are fully funded in councils LTFFP.

5.1.5 Historical Data

All Recreation and Open Space Infrastructure asset data and financial data are stored in Councils Corporate Asset Management system.

5.2 Infrastructure Risk Management Plan

An assessment of risks<sup>8</sup> associated with service delivery from infrastructure assets has identified critical risks that will result in loss or reduction in service from infrastructure assets or a 'financial shock' to the organisation. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' - requiring immediate corrective action and 'High' - requiring prioritised corrective action identified in the Infrastructure Risk Management Plan, together with the estimated residual risk after the selected treatment plan is operational are summarised in Table 5.2. These risks are reported to management and Council.

<sup>7</sup> Also reported as Written Down Current Replacement Cost (WDCRC).

Table 5.2: Critical Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
nil					

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

**5.3 Routine Operations and Maintenance Plan**

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

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

**5.3.1 Operations and Maintenance Plan**

Operations activities affect service levels including quality and function through street sweeping and grass mowing frequency, intensity and spacing of street lights and cleaning frequency and opening hours of building and other facilities.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating, eg road patching but excluding rehabilitation or renewal. Maintenance may be classified into reactive, planned and specific maintenance work activities.

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

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

Specific maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, replacing air conditioning units, etc. This work falls below the capital/maintenance threshold but may require a specific budget allocation.

Actual past maintenance expenditure is shown in Table 5.3.1.

Table 5.3.1: Maintenance Expenditure Trends

Year	Maintenance Expenditure	
	Planned and Specific	Unplanned
2014	\$0	\$1,614,128
2015	\$0	\$1,570,747
2016	\$0	\$1,635,132

Planned maintenance work is currently 0.00% of total maintenance expenditure.

Maintenance expenditure levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance expenditure levels are such that will result in a lesser level of service, the service consequences and service risks have been identified and service consequences highlighted in this AM Plan and service risks considered in the Infrastructure Risk Management Plan.

Assessment and prioritisation of reactive maintenance is undertaken by Council staff using experience and judgement. In conjunction with response levels of service detailed in Appendix A.

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,
- 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.

Asset hierarchy

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

The organisation’s service hierarchy is shown in Table 5.3.2.

Table 5.3.2: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
To be developed	

Critical Assets

Critical assets are those assets which have a high consequence of failure but not necessarily a high likelihood of failure. By identifying critical assets and critical failure modes, organisations can target and refine investigative activities, maintenance plans and capital expenditure plans at the appropriate time.

Operations and maintenance activities may be targeted to mitigate critical assets failure and maintain service levels. These activities may include increased inspection frequency, higher maintenance intervention levels, etc. Critical assets failure modes and required operations and maintenance activities are detailed in Table 5.3.2.1.

Table 5.3.2.1: Critical Assets and Service Level Objectives

Critical Assets	Critical Failure Mode	Operations & Maintenance Activities
Recreation and Open Space Infrastructure	Loss of structural integrity	<ul style="list-style-type: none"> <li>• Inspection</li> <li>• Painting of deterrable surfaces</li> <li>• Rectification of defects</li> </ul>
Playgrounds	Hazardous to users	<ul style="list-style-type: none"> <li>• Inspection</li> <li>• Rectification of defects</li> </ul>

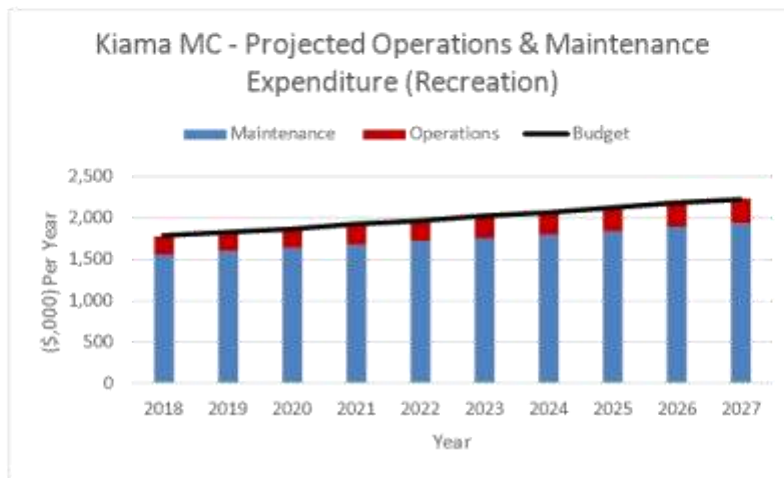
Standards and specifications

Maintenance work is carried out in accordance with relevant Standards and Specifications.

5.3.3 Summary of future operations and maintenance expenditures

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 4.

Figure 4: Projected Operations and Maintenance Expenditure



Deferred maintenance, ie works that are identified for maintenance and unable to be funded are to be included in the risk assessment and analysis in the infrastructure risk management plan.

Maintenance is funded from the operating budget where available. This is further discussed in Section 6.2.

5.4 Renewal/Replacement Plan

Renewal and replacement expenditure is major work which does not increase the asset’s design capacity but restores, rehabilitates, replaces or renews an existing asset to its original or lesser required service potential. Work over and above restoring an asset to original service potential is upgrade/expansion or new works expenditure.

5.4.1 Renewal plan

Assets requiring renewal/replacement are identified from one of three methods provided in the ‘Expenditure Template’.

- Method 1 uses Asset Register data to project the renewal costs using acquisition year and useful life to determine the renewal year, or
- Method 2 uses capital renewal expenditure projections from external condition modelling systems (such as Pavement Management Systems), or
- Method 3 uses a combination of average *network renewals* plus *defect repairs* in the *Renewal Plan* and *Defect Repair Plan* worksheets on the ‘Expenditure template’.

Method 1 was used for this asset management plan.

The useful lives of assets used to develop projected asset renewal expenditures are shown in Table 5.4.1. Asset useful lives were last reviewed on June 2016.<sup>9</sup>

**Table 5.4.1: Useful Lives of Assets**

<b>Asset Category</b>	<b>Useful Life</b>
Boat Ramps	30 to 50 years
Bridge Deck	50 years
Bridge Sub Structure	100 years
Bridge Super Structure	100 years
Global Fence Item	10 to 55 years
Global Handrails	25 to 50 years
Global Landscape Item	25 to 100 years
Global Light Item	12 to 50 years
Global Litter Bin Item	10 to 15 years
Global Retaining Wall Item	20 to 100 years
Global Sculpture & Monument Item	8 years
Global Seat Item	20 to 50 years
Global Sign Item	10 years
Global Table Item	10 to 25 years
Global Utilities	20 to 35 years
Global Water Service	20 years
Pool Component Item	20 years
Pool Shell Item	50 to 75 years
Road Kerb & Gutter Item	100 years
Road Pavement Item	100 years
Road Surface Item	20 to 50 years
Road Traffic Control Item	75 years
Sewerage	30 to 100 years
Site Active Play Area Item	20 to 50 years
Site BBQ Item	15 to 35 years
Site Bridge Item	30 to 100 years
Site Electrical Item	20 years
Site Irrigation Network Item	55 years
Site Playground Item	10 to 25 years
Site Sport Equipment Item	20 years
Site Structure Item	10 to 100 years
Telecommunications	12 years

**5.4.2 Renewal and Replacement Strategies**

The organisation will plan capital renewal and replacement projects to meet level of service objectives and minimise infrastructure service risks by:

\_\_\_\_\_

- 22 -

- Planning and scheduling renewal projects to deliver the defined level of service in the most efficient manner,
- Undertaking project scoping for all capital renewal and replacement projects to identify:
  - the service delivery 'deficiency', present risk and optimum time for renewal/replacement,
  - the project objectives to rectify the deficiency,
  - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
  - and evaluate the options against evaluation criteria adopted by the organisation, and
  - select the best option to be included in capital renewal programs,
- Using 'low cost' renewal methods (cost of renewal is less than replacement) wherever possible,
- Maintain a current infrastructure risk register for assets and 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,
- Review current and required skills base and implement workforce training and development to meet required construction and renewal needs,
- Maintain a current hierarchy of critical assets and capital renewal treatments and timings required ,
- Review management of capital renewal and replacement activities to ensure Council is obtaining best value for resources used.

#### Renewal ranking criteria

Asset renewal and replacement is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (eg replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (eg roughness of a road).<sup>10</sup>

It is possible to get some indication of capital renewal and replacement priorities by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have a high utilisation and subsequent impact on users would be greatest,
- The total value represents the greatest net value to the organisation,
- Have the highest average age relative to their expected lives,
- Are identified in the AM Plan as key cost factors,
- Have high operational or maintenance costs, and
- Where replacement with modern equivalent assets would yield material savings.<sup>11</sup>

Council has an integrated approach to service delivery and where capacity or performance requirements of assets require a change the Funding Allocation Process is used to ensure that the lifecycle costs are incorporated into the Integrated Planning and Reporting framework including the 10 Year Financial Plan, Asset Management Plan and Workforce Plan.

The 10 year Renewal Plan is detailed in Appendix B.

#### Renewal and replacement standards

Renewal work is carried out in accordance with the relevant Standards and Specifications.

#### 5.4.3 Summary of future renewal and replacement expenditure

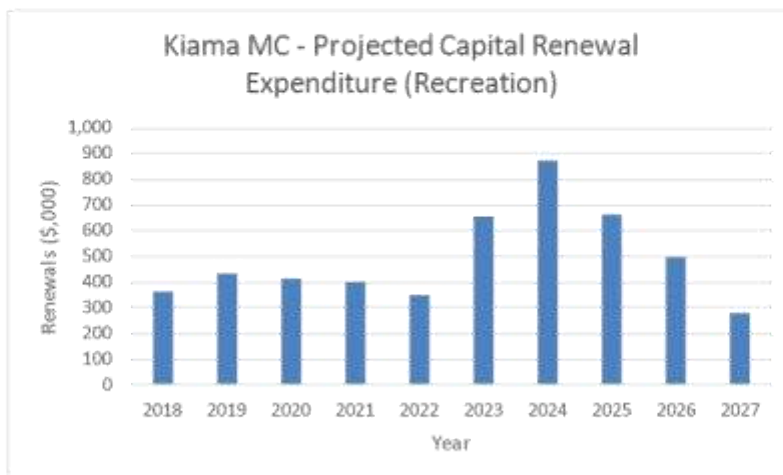
<sup>10</sup> IPWEA, 2011, IIMM, Sec 3.4.4, p 3|60.

<sup>11</sup> Based on IPWEA, 2011, IIMM, Sec 3.4.5, p 3|66.

Projected future renewal and replacement expenditures are forecast to increase over time as the asset stock increases from growth. The expenditure is summarised in Fig 5. Note that all amounts are shown in real values.

The projected capital renewal and replacement program is shown in Appendix B.

Fig 5: Projected Capital Renewal and Replacement Expenditure



Deferred renewal and replacement, ie those assets identified for renewal and/or replacement and not scheduled in capital works programs are to be included in the risk analysis process in the risk management plan.

Renewals and replacement expenditure in the organisation’s capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

**5.5 Creation/Acquisition/Upgrade Plan**

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

**5.5.1 Selection criteria**

New assets and upgrade/expansion of existing assets are identified from various sources such as councilor/director or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programs.

**5.5.2 Capital Investment Strategies**

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,



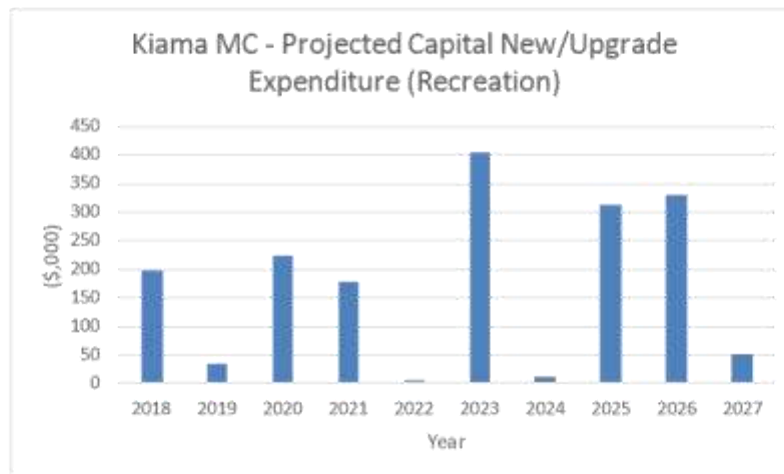
- the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
- management of risks associated with alternative options,
- and evaluate the options against evaluation criteria adopted by Council, and
- select the best option to be included 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.

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2.

5.5.3 Summary of future upgrade/new assets expenditure

Projected upgrade/new asset expenditures are summarised in Fig 6. The projected upgrade/new capital works program is shown in Appendix C. All amounts are shown in real values.

Fig 6: Projected Capital New/Upgrade Asset Expenditure



Expenditure on new assets and services in the organisation’s capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

5.6 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6, together with estimated annual savings from not having to fund operations and maintenance of the assets. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any. Any revenue gained from asset disposals is accommodated in Council’s long term financial plan.

Where cashflow projections from asset disposals are not available, these will be developed in future revisions of this asset management plan.

Table 5.6: Assets Identified for Disposal

Asset	Reason for Disposal	Timing	Disposal Expenditure	Operations &
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				Maintenance Annual Savings
Nil	N/A	N/A	0	0

**5.7 Service Consequences and Risks**

The organisation has prioritised decisions made in adopting this AM Plan to obtain the optimum benefits from its available resources. Decisions were made based on the development of 3 scenarios of AM Plans.

**Scenario 1** - What we would like to do based on asset register data

**Scenario 2** – What we should do with existing budgets and identifying level of service and risk consequences (ie what are the operations and maintenance and capital projects we are unable to do, what is the service and risk consequences associated with this position). This may require several versions of the AM Plan.

**Scenario 3** – What we can do and be financially sustainable with AM Plans matching long-term financial plans.

The development of scenario 1 and scenario 2 AM Plans provides the tools for discussion with the Council/Board and community on trade-offs between what we would like to do (scenario 1) and what we should be doing with existing budgets (scenario 2) by balancing changes in services and service levels with affordability and acceptance of the service and risk consequences of the trade-off position (scenario 3).

**5.7.1 What we cannot do**

There are no identified operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years.

**5.7.2 Service consequences**

All Operations and maintenance activities and capital projects are funded in the 10 Year Financial Plan.

**5.7.3 Risk consequences**

There are no additional risk consequences based on section 5.7.1

Ongoing risks have been included with the Infrastructure Risk Management Plan summarised in Section 5.2 and risk management plans actions and expenditures included within projected expenditures.

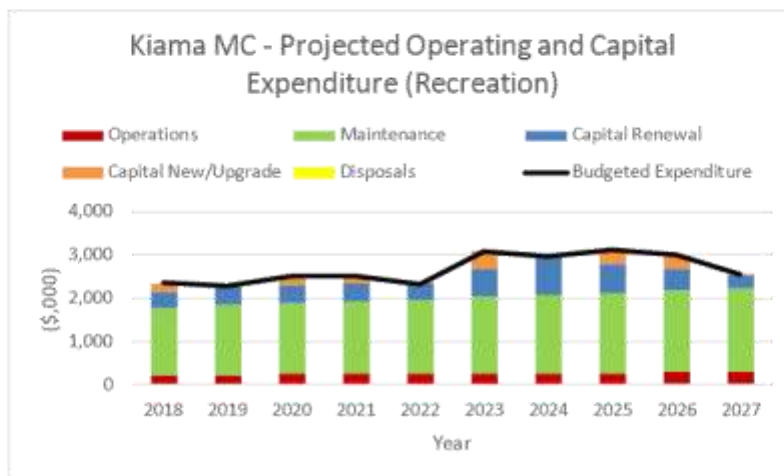
**6. FINANCIAL SUMMARY**

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

**6.1 Financial Statements and Projections**

The financial projections are shown in Fig 7 for projected operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets). Note that all costs are shown in real values.

**Fig 7: Projected Operating and Capital Expenditure**



**6.1.1 Sustainability of service delivery**

There are four key indicators for service delivery sustainability that have been considered in the analysis of the services provided by this asset category, these being the asset renewal funding ratio, long term life cycle costs/expenditures and medium term projected/budgeted expenditures over 5 and 10 years of the planning period.

**Asset Renewal Funding Ratio**

Asset Renewal Funding Ratio<sup>12</sup> 100.00%

The Asset Renewal Funding Ratio is the most important indicator and reveals that over the next 10 years, Council is forecasting that it will have 100.00% of the funds required for the optimal renewal and replacement of its assets.

**Long term - Life Cycle Cost**

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the asset life cycle. Life cycle costs include operations and maintenance expenditure and asset consumption (depreciation expense). The life cycle cost for the services covered in this asset management plan is \$2,301,770 per year (average operations and maintenance expenditure plus depreciation expense projected over 10 years).

<sup>12</sup> AIFMG, 2012, Version 1.3, Financial Sustainability Indicator 4, Sec 2.6, p 2.16

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Life cycle costs can be compared to life cycle expenditure to give an initial indicator of affordability of projected service levels when considered with age profiles. Life cycle expenditure includes operations, maintenance and capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure over the 10 year planning period is \$2,496,810 per year (average operations and maintenance plus capital renewal budgeted expenditure in LTFF over 10 years).

A shortfall between life cycle cost and life cycle expenditure is the life cycle gap. The life cycle gap for services covered by this asset management plan is \$195,040 per year (-ve = gap, +ve = surplus).

Life cycle expenditure is 108.47% of life cycle costs.

The life cycle costs and life cycle expenditure comparison highlights any difference between present outlays and the average cost of providing the service over the long term. Currently the life cycle expenditure is less than that life cycle cost due to the majority of the Recreation and Open Space Infrastructure being in the early to mid stages of their useful lives. Renewal outlays will need to be increased in the future when the assets are reaching the later stages of their useful lives.

Knowing the extent and timing of any required increase in outlays and the service consequences if funding is not available will assist organisations in providing services to their communities in a financially sustainable manner. This is the purpose of the asset management plans and long term financial plan.

#### Medium term – 10 year financial planning period

This asset management plan identifies the projected operations, maintenance and capital renewal expenditures required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

These projected expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall. In a core asset management plan, a gap is generally due to increasing asset renewals for ageing assets.

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is \$2,496,810 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$2,496,810. This indicates that Council expects to have 100.00% of the projected expenditures needed to provide the services documented in the asset management plan.

#### Medium Term – 5 year financial planning period

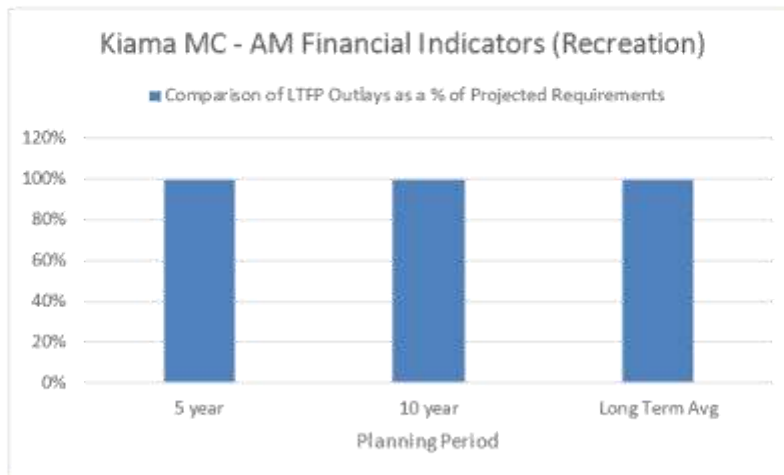
The projected operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is \$2,272,431 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$2,272,431 This indicates that Council expects to have 100.00% of projected expenditures required to provide the services shown in this asset management plan.

Asset management financial indicators

Figure 7A shows the asset management financial indicators over the 10 year planning period and for the long term life cycle.

Figure 7A: Asset Management Financial Indicators



Providing services from infrastructure in a sustainable manner requires the matching and managing of service levels, risks, projected expenditures and financing to achieve a financial indicator of approximately 100% for the first years of the asset management plan and ideally over the 10 year life of the Long Term Financial Plan.

Figure 8 shows the projected asset renewal and replacement expenditure over the 10 years of the AM Plan. The projected asset renewal and replacement expenditure is compared to renewal and replacement expenditure in the capital works program, which is accommodated in the long term financial plan

Figure 8: Projected and LTFP Budgeted Renewal Expenditure

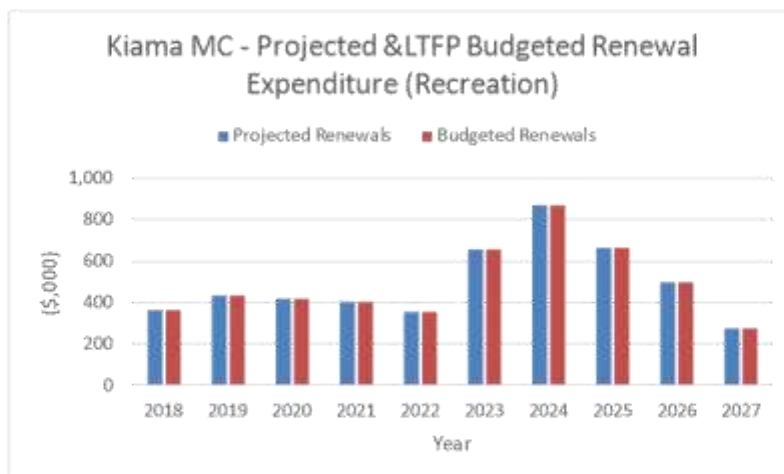


Table 6.1.1 shows the shortfall between projected renewal and replacement expenditures and expenditure accommodated in long term financial plan.

**Table 6.1.1: Projected and LTFP Budgeted Renewals and Financing Shortfall**

Year	Projected Renewals	LTFP Renewal Budget	Renewal Financing Shortfall (-ve Gap, +ve Surplus)	Cumulative Shortfall (-ve Gap, +ve Surplus)
2018	\$360	\$360	\$0	\$0
2019	\$432	\$432	\$0	\$0
2020	\$417	\$417	\$0	\$0
2021	\$401	\$401	\$0	\$0
2022	\$352	\$352	\$0	\$0
2023	\$655	\$655	\$0	\$0
2024	\$874	\$874	\$0	\$0
2025	\$666	\$666	\$0	\$0
2026	\$495	\$495	\$0	\$0
2027	\$280	\$280	\$0	\$0

All figures are in \$,000

Providing services in a sustainable manner will require matching of projected asset renewal and replacement expenditure to meet agreed service levels with **the corresponding** capital works program accommodated in the long term financial plan.

**6.1.2 Projected expenditures for long term financial plan**

Table 6.1.2 shows the projected expenditures for the 10 year long term financial plan.

**Table 6.1.2: Projected Expenditures for Long Term Financial Plan (\$000)**

Year	Operations	Maintenance	Capital Renewal	Capital New/Upgrade	Disposals
2018	\$233	\$1,556	\$360	\$198	\$0
2019	\$238	\$1,595	\$432	\$34	\$0
2020	\$244	\$1,635	\$417	\$224	\$0
2021	\$250	\$1,675	\$401	\$178	\$0
2022	\$257	\$1,717	\$352	\$6	\$0
2023	\$263	\$1,760	\$655	\$406	\$0
2024	\$270	\$1,804	\$874	\$12	\$0
2025	\$276	\$1,849	\$666	\$312	\$0
2026	\$283	\$1,896	\$495	\$330	\$0
2027	\$290	\$1,943	\$280	\$50	\$0

\* All figures are in \$,000

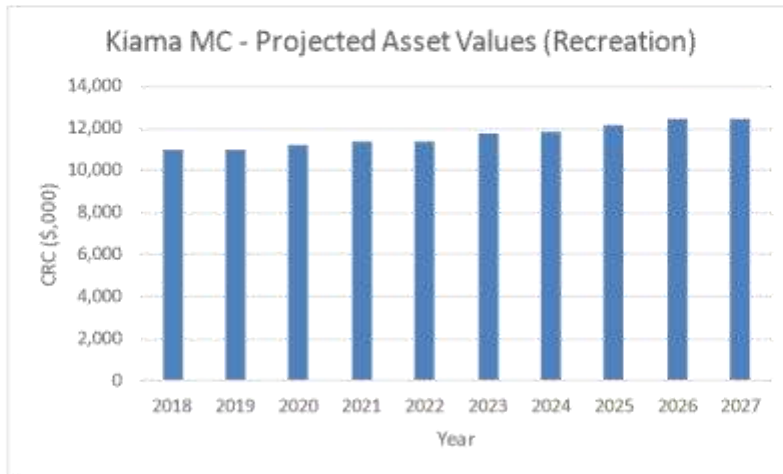
**6.2 Funding Strategy**

After reviewing service levels, as appropriate to ensure ongoing financial sustainability projected expenditures identified in Section 6.1.2 will be accommodated in the Council’s 10 year long term financial plan.

**6.3 Valuation Forecasts**

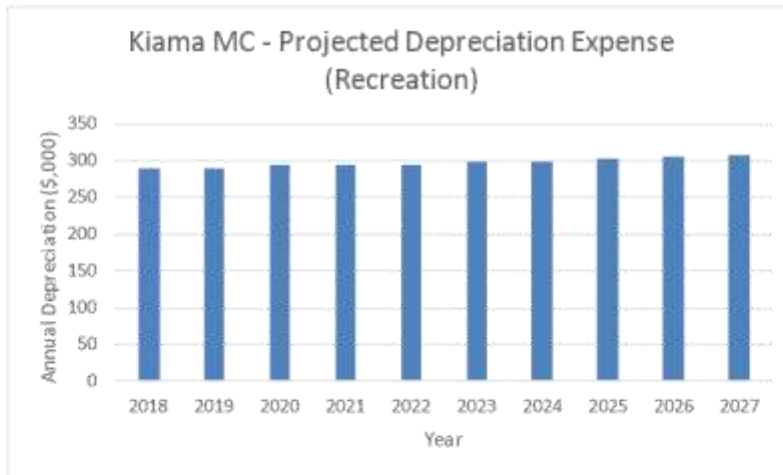
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Figure 9 shows the projected replacement cost asset values over the planning period in real values.

**Figure 9: Projected Asset Values**



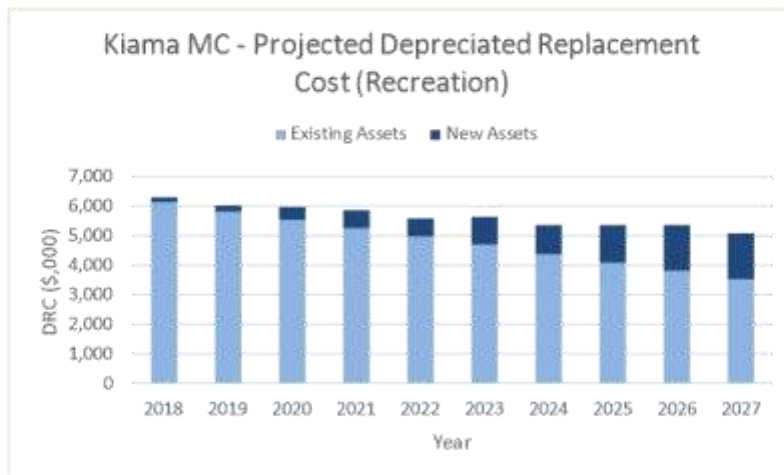
Depreciation expense values are forecast in line with asset values as shown in Figure 10.

**Figure 10: Projected Depreciation Expense**



The depreciated replacement cost will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets. Forecast of the assets' depreciated replacement cost is shown in Figure 11. The depreciated replacement cost of contributed and new assets is shown in the darker colour and in the lighter colour for existing assets.

Figure 11: Projected Depreciated Replacement Cost



**6.4 Key Assumptions made in Financial Forecasts**

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

Key assumptions made in this asset management plan and risks that these may change are shown in Table 6.4.

Table 6.4: Key Assumptions made in AM Plan and Risks of Change

Key Assumptions	Risks of Change to Assumptions
This asset class is fully funded in LTFP	Low
Future funding beyond the LTFP will remain fully funded	Low

**6.5 Forecast Reliability and Confidence**

The expenditure and valuations projections in this AM Plan are based on best available data. Currency and accuracy of data is critical to effective asset and financial management. Data confidence is classified on a 5 level scale<sup>13</sup> in accordance with Table 6.5.

<sup>13</sup> IPWEA, 2011, IIMM, Table 2.4.6, p 2|59.



**Table 6.5: Data Confidence Grading System**

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

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 6.5.1.

**Table 6.5.1: Data Confidence Assessment for Data used in AM Plan**

Data	Confidence Assessment	Comment
Demand drivers	B	The demand drivers utilised in this plan are currently the most effective way to forecast future requirements
Growth projections	A	The growth projections are based off population increase resulting in rezoning of land for future sub divisions
Operations expenditures	B	The operations expenditure budget is forecasted from data currently in the asset management system
Maintenance expenditures	B	The maintenance expenditure budget is forecasted from data currently in the asset management system
Projected Renewal exps. - Asset values	B	The revaluation of the assets in this plan occurred in June 2016
- Asset useful lives	B	The useful lives of the assets were based on Asset Type, Material and construction date.
- Condition modelling	C	Condition modelling were based on inspections and construction date
- Asset renewals	B	The projected renewals expenditure budget is forecasted from data currently in the asset management system
- Defect repairs	C	Further inspections are required
Upgrade/New expenditures	A	Contained in Appendix C and fully funded
Disposal expenditures	A	There are no disposals identified in the plan

Over all data sources the data confidence is assessed as Medium confidence level for data used in the preparation of this AM Plan.

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## 7. PLAN IMPROVEMENT AND MONITORING

### 7.1 Status of Asset Management Practices

#### 7.1.1 Accounting and financial systems

Kiama Municipal Council uses the Authority corporate information system. This system is used for financial management and reporting. The asset valuations are stored in the Capital Valuation Register of authority with a 1 to 1 match and integration to the Authority Asset Management Module.

Kiama Municipal Council has a documented Asset Accounting Policy.

#### Accountabilities for financial systems

Kiama Municipal Council's Finance Department is responsible for the data and processes pertaining to financial records in Authority. Kiama's Information Technology Department is responsible for system administration and technology infrastructure.

#### Accounting standards and regulations

Kiama Municipal Council adheres to the Australian Accounting Standards in conjunction with the Code of Accounting Practice for all the NSW Local Government Councils.

#### Capital/maintenance threshold

All assets are valued at their fair value. Expenditure on existing assets is considered maintenance where it does not increase the estimated remaining life of the asset.

#### Required changes to accounting financial systems arising from this AM Plan

Nil

#### 7.1.2 Asset management system

Kiama Municipal Council uses the Authority Asset Management System and Work Management System.

#### Asset registers

All registers are stored in the Authority Asset Management System. The system is integrated with Council's GIS system to provide a geographical representation and navigation to assets in the Asset Management System. Some assets are currently missing audited dimensional data.

#### Linkage from asset management to financial system

The Asset Management and Financial System are modules of the Authority Corporate Information System. These modules are fully integrated with a 1 to 1 relationship between assets and financial records.

#### Accountabilities for asset management system and data maintenance

Kiama Municipal Council's Engineering and Works Department are responsible for the configuration and data management of the Asset Management System.

Kiama Municipal Council's Information Technology Department is responsible for system administration and technology infrastructure.

#### Required changes to asset management system arising from this AM Plan

Audit dimensional attributes of asset records.

**7.2 Improvement Plan**

The asset management improvement plan generated from this asset management plan is shown in Table 7.2.

**Table 7.2: Improvement Plan**

Task No	Task	Responsibility	Resources Required	Timeline
1	Audit dimensional attributes of asset records	Engineering And Works Department	Works Crew	Completion 2020
2	Introduction of reactive work orders to manage unscheduled maintenance v scheduled maintenance	Engineering And Works Department	Asset Management & IT	Completion 2018
3	Inspection scheduling and rerecording via the AM system	Engineering And Works Department	Asset Management & IT	Completion 2018
4	Develop site operational plans including scheduled maintenance plan and service levels	Engineering And Works Department	Asset Management	Completion 2018

**7.3 Monitoring and Review Procedures**

This asset management plan will be reviewed during annual budget planning processes and amended to recognise any material changes in service levels and/or resources available to provide those services as a result of budget decisions.

The AM Plan will be updated annually to ensure it represents the current service level, asset values, projected operations, maintenance, capital renewal and replacement, capital upgrade/new and asset disposal expenditures and projected expenditure values incorporated into the organisation’s long term financial plan.

The AM Plan has a life of 4 years (Council election cycle) and is due for complete revision and updating before each Council election.

**7.4 Performance Measures**

The effectiveness of the asset management plan can be measured in the following ways:

- The degree to which the required projected expenditures identified in this asset management plan are incorporated into Council’s long term financial plan,
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the ‘global’ works program trends provided by the asset management plan,
- The degree to which the existing and projected service levels and service consequences (what we cannot do), risks and residual risks are incorporated into the Council’s Strategic Plan and associated plans,
- The Asset Renewal Funding Ratio achieving the target of 100%.

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## 8. REFERENCES

IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/IIMM](http://www.ipwea.org/IIMM)

IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/namsplus](http://www.ipwea.org/namsplus).

IPWEA, 2009, 'Australian Infrastructure Financial Management Guidelines', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/AIFMG](http://www.ipwea.org/AIFMG).

IPWEA, 2011, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/IIMM](http://www.ipwea.org/IIMM)

Kiama Municipal Council 'Operational Plan 2015-2016 And Delivery Program 2013-2017'

Kiama Municipal Council 'Strategic Asset Management Plan 2002'

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**9. APPENDICES**

- Appendix A Maintenance Response Levels of Service
  
- Appendix B Projected 10 year Capital Renewal Program
  
- Appendix C Projected 10 year Capital New/Upgrade Program
  
- Appendix D Abbreviations
  
- Appendix E Glossary

**Appendix A Maintenance Response Levels of Service**

Maintenance Response Level Of Service		
Maintenance Type	Maintenance Activity	Required Maintenance Response
Irrigation Systems	Inspections	1) Inspected & Tested every month for active sporting recreational facilities 2) Inspected & Tested 3 monthly for passive parks and reserves
	Defect Rectification	All defective sprinkler systems shall be repaired within 1 week of identification.
BBQ's	Inspection	Problems identified as part of the cleaning schedule and repaired within 4 weeks of identification
	Cleaning	Weekly cleaning
Regulatory Signs	Inspection	Every 2 years
	Cleaning	Every 2 years
	Defect Rectification	Within 2 weeks of identification
Non Regulatory Signs	Inspection	Every 3 years
	Cleaning	Every 3 years
	Defect Rectification	Within 4 weeks of identification
Fencing & Gates	Inspection	Only inspected when a complaint is received
	Defect Rectification	1) Made safe within 5 hours in towns and villages 2) Made safe within 2 working days in other areas
Park Furniture	Inspection	Every 2 years
	Defect Rectification	Within 3 months of identification
Bollards	Inspection	Only inspected when a complaint is received
	Defect Rectification	Within 3 months of identification
Walking Trails and Tracks	Inspection	Only inspected when a complaint is received 1) Within 5 hours of a hazardous complaint 2) Within 2 weeks for non hazardous complaints
Bridges	Inspection	Annually
Tidal Pools	Inspection	Weekly
	Cleaning	As determined from weekly inspection
Boat Ramps	Inspection	Weekly
	Defect Rectification	Major defects within 4 weeks of identification
Skate Parks	Inspection	Every 3 months
	Defect Rectification	1) Structure or surface within 1 working day of identification 2) Surrounds within 1 week of identification
BMX Track	Inspection	Every 3 months
	Defect Rectification	Within 1 week of identification
Playgrounds	Inspection	Every 3 months
	Defect Rectification	1) Structure or surface within 1 working day of identification 2) Surrounds within 1 week of identification
Beaches	Inspection	Only inspected when a complaint is received
	Raking	4 times per season at priority beaches at the following times. Prior to October long weekend, Prior to Christmas school holidays, Prior to Australia Day long weekend & Prior to Easter School holidays

**Appendix B Projected 10 Year Capital Renewal Program**

Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Recreation and Open Space</b>											
25541	Blowhole Point Reserve/Blowhole Point/Fencing	360,195	431,887	417,417	400,543	351,680	655,255	873,735	666,384	495,205	279,638
25605	Blowhole Point Reserve/Blowhole Point/Furniture/BBQ	132,780									
17363	Hillview Circuit Reserve/Playground/Playground 15/Structure	11,237									
25731	Hindmarsh Park/Common Area/Pathway Lights	18,963									
25721	Jubilee Park/Dorothy Bailey Oval/Reserve Lighting/Light 1	34,620									
25723	Jubilee Park/Dorothy Bailey Oval/Reserve Lighting/Light 2	1,845									
24632	Jubilee Park/Netball Area/Courts/Surface	40,000									
27580	Kiama Showground/Chittick Oval/Reserve Lighting/Light 1	20,000									
27581	Kiama Showground/Chittick Oval/Reserve Lighting/Light 2	20,000									
3839	Land & Building Assets/ Sports Association	30,750									
17374	Waabie Reserve/Playground/Playground 11A/Softfall	50,000									
17375	Waabie Reserve/Playground/Playground 11A/Structure		45,000								
17354	Bonaira Reserve/Playground/Playground 13/Structure		45,000								
17346	Croft Place Reserve/Playground/Playground 19/Structure		35,000								
17411	Hindmarsh Park/Playground/Playground 8/Softfall		145,000								
17412	Hindmarsh Park/Playground/Playground 8/Structure		45,000								
17328	James Muir Miller Reserve/Playground/Playground 21/Structure										
25724	Jubilee Park/Dorothy Bailey Oval/Reserve Lighting/Light 3		25,760								
25725	Jubilee Park/Dorothy Bailey Oval/Reserve Lighting/Light 4		25,760								
25657	Kiama Showground/Chittick Oval/Fencing		20,367								
17342	Whitton Place Reserve/Playground/Playground 14/Structure		45,000								
17324	Carinya Way Reserve/Playground/Playground 17/Structure			65,000							
17400	Eureka Reserve/Playground/Playground 3/Structure			45,000							
17379	Jamberoo Parklands/Playground Reid Park/Playground 25/Softfall			70,000							
17380	Jamberoo Parklands/Playground Reid Park/Playground 25/Structure			20,000							
3839	Land & Building Assets/ Playgrounds			70,000							
3839	Land & Building Assets/ Sports Association			32,307							
17419	Surf Beach/Playground/Playground 10/Softfall										
17420	Surf Beach/Playground/Playground 10/Structure										
17338	Attunga Reserve/Playground/Playground 16/Structure			115,110							
25608	Blowhole Point Reserve/Black Beach Reserve/Bollards				65,000						
					39,240						

KIAMA MUNICIPAL COUNCIL – RECREATION AND OPEN SPACE ASSET MANAGEMENT PLAN

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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Recreation and Open Space</b>											
25735	Coastal Walking Track/Common Area/Furniture/Indigenous Poles	360,195	431,887	417,417	400,543 11,211	351,680	655,255	873,735	666,384	495,205	279,638
17403	Gainsborough Chase Reserve/Playground/Playground 1/Softfall				45,000						
17404	Gainsborough Chase Reserve/Playground/Playground 1/Structure				20,000						
17396	Ilika Reserve/Playground/Playground 7/Structure				45,000						
17320	Jubilee Park/Playground/Playground 18/Structure				21,777						
25792	Kiama Sports Complex/Sports Fields/Soccer Training Wall 1				303						
25793	Kiama Sports Complex/Sports Fields/Soccer Training Wall 2				2,305						
25676	KMC Works Depot/Common Area/Water Tank				17,593						
3839	Land & Building Assets/ Sports Association				33,114						
3839	Land & Building Assets/ LED Lighting				100,000						
17371	Bland Street Reserve/Playground/Playground 11/Structure					7,440					
25807	Emery Reserve/Common Area/External Lighting System/Reserve Light 1					13,394					
17300	Emery Reserve/Playground/Playground 24/Softfall					20,000					
17301	Emery Reserve/Playground/Playground 24/Structure					70,000					
17358	Kendalls Beach Reserve/Playground/Playground 2A/Softfall										
17359	Kendalls Beach Reserve/Playground/Playground 2A/Structure					71,750					
25742	Kiama Showground/Showground/Irrigation					32,654					
3839	Land & Building Assets/ Sports Association					33,942					
3839	Land & Building Assets/ LED Lighting					102,500					
17366	Chapman Reserve/Playground/Playground 1A/Softfall						73,544				
17367	Chapman Reserve/Playground/Playground 1A/Structure						20,000				
17311	Gerroa Neighbourhood Centre/Playground/Playground 23/Softfall										
17312	Gerroa Neighbourhood Centre/Playground/Playground 23/Structure						45,000				
17388	Hoolong Reserve/Playground/Playground 4/Structure						45,000				
17391	Jones Beach/Playground/Playground 6/Softfall										
17392	Jones Beach/Playground/Playground 6/Structure						78,700				
25484	Jubilee Park/Michael Cronin Oval/Irrigation						18,697				
25745	Kiama Showground/Common Area/External Lighting						114,460				
3839	Land & Building Assets/ Sports Association						34,791				
3839	Land & Building Assets/ LED Lighting						105,063				
17315	Old School Park Reserve/Playground/Playground 20A/Softfall						45,000				

KIAMA MUNICIPAL COUNCIL – RECREATION AND OPEN SPACE ASSET MANAGEMENT PLAN



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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Recreation and Open Space</b>											
17316	Old School Park Reserve/Playground/Playground 20A/Structure	360,195	431,887	417,417	400,543	351,680	655,255	873,735	666,384	495,205	279,638
25747	Blowhole Point Reserve/Kiama Harbour/Body Twist/Elliptical Trainer/Body Twist						75,000	2,008			
26700	Blowhole Point Reserve/Kiama Harbour/Body Twist/Elliptical Trainer/Elliptical Trainer							2,873			
26699	Blowhole Point Reserve/Kiama Harbour/Body Twist/Elliptical Trainer/Softfall							3,204			
25751	Blowhole Point Reserve/Storm Bay/Body Dips/Body Dips							3,438			
26702	Blowhole Point Reserve/Storm Bay/Body Dips/Softfall							1,249			
25753	Blowhole Point Reserve/Storm Bay/Sit Up Benches/Sit Up Benches							6,188			
26708	Blowhole Point Reserve/Storm Bay/Sit Up Benches/Softfall							2,122			
26701	Blowhole Point Reserve/Storm Bay/Step Ups/Softfall							2,014			
25749	Blowhole Point Reserve/Storm Bay/Step Ups/Step Ups							3,037			
25720	Chapman Reserve/Common Area/External Lighting							3,272			
26704	Chapman Reserve/Common Area/Pull Downs/Elliptical Trainer/Elliptical Trainer							1,821			
25764	Chapman Reserve/Common Area/Pull Downs/Elliptical Trainer/Pull Downs							1,674			
26703	Chapman Reserve/Common Area/Pull Downs/Elliptical Trainer/Softfall							2,538			
17383	James Oates Reserve/Playground/Playground 5/Softfall							20,000			
17384	James Oates Reserve/Playground/Playground 5/Structure							45,000			
26015	Jones Beach/Playground/Playground 6/Shade Structure							28,714			
25755	Kiama Showground/Common Area/Push Up Bars/Push Up Bars							2,656			
26706	Kiama Showground/Common Area/Push Up Bars/Softfall							2,395			
26707	Kiama Showground/Common Area/Step Ups/Softfall							2,182			
25757	Kiama Showground/Common Area/Step Ups/Step Ups							3,293			
3839	Land & Building Assets/ Sports Association							35,661			
3839	Land & Building Assets/ Playgrounds							77,267			
3839	Land & Building Assets/ LED Lighting							107,690			
3839	Land & Building Assets/ Rock Pools & Foreshore							500,000			
25760	Surf Beach/Common Area/Pull Up Bars/Pull Up Bars							636			
26705	Surf Beach/Common Area/Pull Up Bars/Softfall							4,166			
25762	Surf Beach/Coronation Park/Aerobic Cycle/Chest Press/Aerobic Cycle							2,440			

KIAMA MUNICIPAL COUNCIL – RECREATION and OPEN SPACE ASSET MANAGEMENT PLAN

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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Recreation and Open Space</b>											
26710	Surf Beach/Coronation Park/Aerobic Cycle/Chest Press/Chest Press	360,195	431,887	417,417	400,543	351,680	655,255	873,735 2,613	666,384	495,205	279,638
26709	Surf Beach/Coronation Park/Aerobic Cycle/Chest Press/Softfall							3,584			
17407	Gainsborough Sports Fields/Playground/Playground 2/Softfall								51,192		
17408	Gainsborough Sports Fields/Playground/Playground 2/Structure										
24737	KMC Works Depot/Carpark/Surface F01								79,744		
26146	KMC Works Depot/Carpark/Surface F02								17,544		
3839	Land & Building Assets/ LED Lighting								110,382		
3839	Land & Building Assets/ Rock Pools & Foreshore								250,000		
25812	Old School Park Reserve/Playground/Shade Sail								39,665		
26685	Pacific Avenue Reserve/Common Area/Full Body Multi Gym/Full Body Multi Gym (CapNew 2015)								20,531		
26684	Pacific Avenue Reserve/Common Area/Full Body Multi Gym/Softfall (CapNew 2015)								3,449		
25855	Rickets Reserve/Common Area/Picnic Shelter								17,440		
25708	Spring Creek Reserve/Wetlands/Bird Observation Shed								16,101		
26688	Werri Beach Reserve/Common Area/Bench/Handbike/Bench (CapNew 2015)								3,836		
26711	Werri Beach Reserve/Common Area/Bench/Handbike/Handbike (CapNew 2015)								4,089		
26687	Werri Beach Reserve/Common Area/Bench/Handbike/Softfall (CapNew 2015)								2,487		
26691	Werri Beach Reserve/Common Area/Dips And Leg Raise/Pull Up And Assisted Pull Up/Dips And Leg Raise (CapNew 2015)								4,890		
26712	Werri Beach Reserve/Common Area/Dips And Leg Raise/Pull Up And Assisted Pull Up/Pull Up And Assisted Pull Up								5,632		
26689	Werri Beach Reserve/Common Area/Dips And Leg Raise/Pull Up And Assisted Pull Up/Softfall (CapNew 2015)								6,560		
26714	Werri Beach Reserve/Common Area/Seated Row And Chest Press/Recurrent Bike/Recurrent Bike (CapNew 2015)								4,469		
26697	Werri Beach Reserve/Common Area/Seated Row And Chest Press/Recurrent Bike/Seated Row And Chest Press (CapNew 2015)								8,204		
26696	Werri Beach Reserve/Common Area/Seated Row And Chest Press/Recurrent Bike/Softfall (CapNew 2015)								3,626		

KIAMA MUNICIPAL COUNCIL – RECREATION and OPEN SPACE ASSET MANAGEMENT PLAN

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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Recreation and Open Space</b>											
26713	Werri Beach Reserve/Common Area/Ski Machine/Plyometric Boxes/Plyometric Boxes (CapNew 2015)	360,195	431,887	417,417	400,543	351,680	655,255	873,735	666,384 3,727	495,205	279,638
26694	Werri Beach Reserve/Common Area/Ski Machine/Plyometric Boxes/Ski Machine (CapNew 2015)								7,175		
26693	Werri Beach Reserve/Common Area/Ski Machine/Plyometric Boxes/Softfall (CapNew 2015)								5,641		
23724	Bland Place/Seg 01 Riverleigh Ave to End/StreetScape/Retaining									21,192	
24653	Kiama Showground/Showground/Carpark/Surface F01									3,297	
24654	Kiama Showground/Showground/Carpark/Surface F02									7,005	
26718	Kiama Showground/Showground/Grand Stand/Public Announcement System (CapNew 2015)									29,781	
3839	Land & Building Assets/ LED Lighting									113,142	
3839	Land & Building Assets/ Rock Pools & Foreshore									250,000	
26668	Surf Beach/Playground/Shade Sail (CapNew 2015)									62,311	
23714	Weston Place/Seg 01 Tanner Pl to End/StreetScape/Retaining									8,477	
17295	Birralee Reserve/Playground/Playground 20B/Softfall										163,667
17296	Birralee Reserve/Playground/Playground 20B/Structure										115,971
3839	Land & Building Assets/ LED Lighting										

KIAMA MUNICIPAL COUNCIL – RECREATION and OPEN SPACE ASSET MANAGEMENT PLAN

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**Appendix C Projected New/Upgrade 10 Year Capital Works Program**

Location	Asset	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Blowhole Point Tennis Courts	Retaining and stabilisation Stage 1	198,247	33,600	224,000	177,600	6,039	406,000	12,000	312,000	330,000	50,000
Blowhole Point Tennis Courts	Retaining and stabilisation Stage 2								300,000		
Bombo Headland & Quarry POM	Masterplan	50,000									
Bombo Headland & Quarry POM	Improvements Stage 1						150,000				
Bonaira Oval, Kiama	Construct Sealed Parking Area & Drainage	25,000									
Caravan & Boat Storage Facility	Bombo						250,000				
Fountaindale Dam	Structural Analysis			135,000							
Fountaindale Dam	Review Dam Safety Emergency Plan			25,000							
Fountaindale Dam	Preparation of Operation & Maint Manual			35,000							
Fountaindale Dam	Potential Loss of Life Study			10,000							
Kiama Coastal Walk Improvement	Access to Walkers Beach through golf course	30,000									
Kiama Memorial Arch Improvements	Eastern platform & power supply connn ctr to arch	30,000									
Kiama/Gerringong Cemeteries	Memorial gardens extension	30,000									
Minnamurra Boardwalk	Detailed design, investigation & QS				160,000						
Street & Reserve Furniture 17/18	Various	6,147									
Street & Reserve Furniture 18/19	Various		6,000								
Street & Reserve Furniture 19/20	Various			6,000							
Street & Reserve Furniture 20/21	Various				6,000						
Street & Reserve Furniture 21/22	Various					6,039					
Street & Reserve Furniture 22/23	Various						6,000				
Street & Reserve Furniture 23/24	Various							12,000			
Street & Reserve Furniture 24/25	Various								12,000		
Street & Reserve Furniture 25/26	Various									30,000	
Street & Reserve Furniture 26/27	Various										50,000
Water Bubbler Station	Coronation Park	5,200									
Water Bubbler Station	Old School Park Fern Street	8,200									

KIAMA MUNICIPAL COUNCIL – RECREATION and OPEN SPACE ASSET MANAGEMENT PLAN

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Location	Asset	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Water Bubbler Station	Black Beach Kiama	198,247	33,600	224,000	177,600	6,039	406,000	12,000	312,000	330,000	50,000
Water Bubbler Station	Little Blowhole Kiama	6,200									
Water Bubbler Station	Lloyd Rees Reserve Werri Beach	4,000									
Water Bubbler Station	Blowhole Point near Tourism Office	3,500	6,600								
Water Bubbler Station	Kendall Beach Reserve		3,500								
Water Bubbler Station	North Kiama Dr near K/Downs Surf Club		3,500								
Water Bubbler Station	North Bombo Beach		3,500								
Water Bubbler Station	James Oates Reserve, Minnamurra		3,500								
Water Bubbler Station	Burke Parade, Gerroa		3,500								
Water Bubbler Station	Pacific Avenue South Werri Beach		3,500								
Water Bubbler Station	South Headland Gerrringong			13,000							
Water Bubbler Station	West Terralong Street, Kiama				7,600						
Water Bubbler Station	Attunga Avenue Kiama Heights				4,000						

KIAMA MUNICIPAL COUNCIL – RECREATION and OPEN SPACE ASSET MANAGEMENT PLAN

**Appendix D Abbreviations**

<b>AAAC</b>	Average annual asset consumption
<b>AM</b>	Asset management
<b>AM Plan</b>	Asset management plan
<b>ARI</b>	Average recurrence interval
<b>ASC</b>	Annual service cost
<b>BOD</b>	Biochemical (biological) oxygen demand
<b>CRC</b>	Current replacement cost
<b>CWMS</b>	Community wastewater management systems
<b>DA</b>	Depreciable amount
<b>DRC</b>	Depreciated replacement cost
<b>EF</b>	Earthworks/formation
<b>IRMP</b>	Infrastructure risk management plan
<b>LCC</b>	Life Cycle cost
<b>LCE</b>	Life cycle expenditure
<b>LTFFP</b>	Long term financial plan
<b>MMS</b>	Maintenance management system
<b>PCI</b>	Pavement condition index
<b>RV</b>	Residual value
<b>SoA</b>	State of the Assets
<b>SS</b>	Suspended solids
<b>vph</b>	Vehicles per hour
<b>WDCRC</b>	Written down current replacement cost

**Appendix E Glossary****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**

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 hierarchy**

A framework for segmenting an asset base into appropriate classifications. The asset hierarchy can be based on asset function or asset type or a combination of the two.

**Asset management (AM)**

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 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.

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**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.

**Class of assets**

See asset class definition

**Component**

Specific parts of an asset having independent physical or functional identity and having specific attributes such as different life expectancy, maintenance regimes, risk or criticality.



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**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 cash flow 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, including any costs necessary to place the asset into service. This includes one-off design and project management costs.

**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.

**Deferred maintenance**

The shortfall in rehabilitation work undertaken relative to that required to maintain the service potential of an asset.

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

**Economic life**

See useful life definition.

**Expenditure**

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

**Expenses**

Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or increases in liabilities that result in decreases in equity, other than those relating to distributions to equity participants.

**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.

**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 that contribute to meeting the needs of organisations or the 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 separate 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.

**Key performance indicator**

A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or other target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.

**Level of service**

The defined service quality for a particular service/activity against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental impact, 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 average operations, maintenance and capital renewal expenditure accommodated in the long term financial plan over 10 years. Life Cycle Expenditure may be compared to average Life Cycle Cost to give an initial indicator of affordability of projected service levels when considered with asset age profiles.

**Loans / borrowings**

See borrowings.

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**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 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**

The notion of materiality guides the margin of error acceptable, the degree of precision required and the extent of the disclosure required when preparing general purpose financial reports. Information is material if its omission, misstatement or non-disclosure has the potential, individually or collectively, to influence the economic decisions of users taken on the basis of the financial report or affect the discharge of accountability by the management or governing body of the entity.

**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.

**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 to provide a service. In common use the term typically includes, eg power, fuel, staff, plant equipment, on-costs and overheads but excludes maintenance and depreciation. Maintenance and depreciation is on the other hand included in operating expenses.

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**Operating expense**

The gross outflow of economic benefits, being cash and non cash items, during the period arising in the course of ordinary activities of an entity when those outflows result in decreases in equity, other than decreases relating to distributions to equity participants.

**Operating expenses**

Recurrent expenses continuously required to provide a service, including power, fuel, staff, plant equipment, maintenance, depreciation, on-costs and overheads.

**Operations, maintenance and renewal financing ratio**

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

**Operations, maintenance and renewal gap**

Difference between budgeted expenditures in a long term financial plan (or estimated future budgets in absence of a long term financial plan) and projected expenditures for operations, maintenance and renewal of assets to achieve/maintain specified service levels, totalled over a defined time (e.g. 5, 10 and 15 years).

**Pavement management system (PMS)**

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

**PMS Score**

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

**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).

**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 operations and maintenance expenditure.

**Recurrent funding**

Funding to pay for recurrent expenditure.

**Rehabilitation**

See capital renewal expenditure definition above.

**Remaining useful life**

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

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**Renewal**

See capital renewal expenditure definition above.

**Residual value**

The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.

**Revenue generating investments**

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

**Risk management**

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

**Section or segment**

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

**Service potential**

The total future service capacity of an asset. It is normally determined by reference to the operating capacity and economic life of an asset. A measure of service potential is used in the not-for-profit sector/public sector to value assets, particularly those not producing a cash flow.

**Service potential remaining**

A measure of the future economic benefits remaining in assets. It may be expressed in dollar values (Fair Value) or as a percentage of total anticipated future economic benefits. It is also a measure of the percentage of the asset's potential to provide services that is still available for use in providing services (Depreciated Replacement Cost/Depreciable Amount).

**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.

**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.

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**Value in Use**

The present value of future cash flows expected to be derived from an asset or cash generating unit. 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 net cash inflows, where the entity would, if deprived of the asset, replace its remaining future economic benefits.

Source: IPWEA, 2009, Glossary

Additional and modified glossary items shown \*



# Asset Management Plan


## Roads



November 2016

Item 11.5

Enclosure 4

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Enclosure 4

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Enclosure 4

## 1. EXECUTIVE SUMMARY

### Context

The Kiama Municipal Council area is located on the south coast of NSW. This Roads asset management plan describes the services provided by Council to facilitate effective Roads Infrastructure to the community.

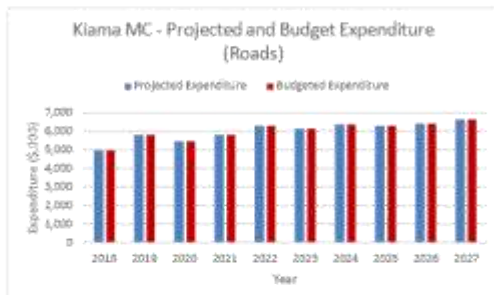
Councils Roads Infrastructure comprise of Regional, Urban, and Rural roads and includes Road Surfaces, Pavement & Formation, Bridges & Culverts, Traffic Control Devices, Bus Shelters and Street Furniture.

These Road infrastructure assets have a replacement value of \$166,340,966

### What does it Cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan (AM Plan) includes operations, maintenance, renewal and upgrade of existing assets over the 10 year planning period is \$60,380,934 or \$6,038,093 on average per year.

Estimated available funding for this period is \$60,380,934 or \$6,038,093 on average per year which is 100% of the cost to provide the service. Projected expenditure required to provide services in the AM Plan compared with planned expenditure currently included in the Long Term Financial Plan are shown in the graph below.



### What we will do

We plan to provide Road Infrastructure services as follows:

- Maintenance, renewal and upgrade of Roads Infrastructure to meet service levels set by Council in annual budgets.
- All required asset renewals have been incorporated into the 10 year financial plan.

- New and Upgraded Roads Infrastructure within the 10 year financial plan are contained in Appendix C

### What we cannot do

The Roads Asset Management Plan is aligned with Councils 10 year Financial Plan, accordingly we cannot Create New Roads Infrastructure or Upgrade existing Roads Infrastructure that have not been included in the current plans without additional funding.

### Managing the Risks

There are risks associated with providing the service and not being able to complete all identified activities and projects. We have identified major risks as:

- Public safety from unsafe structures
- Loss of service from Roads Infrastructure being closed due to defects
- Financial Loss due to Storm events that damage Roads Infrastructure

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

- Inspecting the Roads Infrastructure.
- Developing Scheduled Maintenance Plans to prevent defects.
- Insuring the Roads Infrastructure against Damage caused by events.

### Confidence Levels

This AM Plan is based on a medium level of confidence information.

### The Next Steps

The actions resulting from this asset management plan are:

- Conduct maintenance in accordance with the asset management plan.
- Conduct renewals in accordance with the asset management plan.
- Conduct enhancements in accordance with the asset management plan.

### Questions you may have

#### What is this plan about?

This asset management plan covers the Roads Infrastructure that serve the Kiama Municipal Council community. It does not cover private roads and driveways that are not owned by Kiama Municipal Council.

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**What is an Asset Management Plan?**

Asset management planning is a comprehensive process to ensure delivery of services from infrastructure is provided in a financially sustainable manner.

An asset management plan details information about infrastructure assets including actions required to provide an agreed level of service in the most cost effective manner. The plan defines the services to be provided, how the services are provided and what funds are required to provide the services.

**Why is there a funding shortfall?**

Most of the Council's Roads Infrastructure were constructed by developers, council funding and from government grants. Some Roads Infrastructure have been provided and accepted without consideration of ongoing operations, maintenance and replacement needs.

At the present time few of these assets are approaching the later years of their life and require structural replacement.

Our present funding levels are sufficient to continue to provide existing services at current levels in the medium term.

**What options do we have?**

Council will continue to resolve the requirements for Maintenance and inspection funding by:

1. Improving asset knowledge so that data accurately records the asset inventory, how assets are performing and when assets are not able to provide the required service levels,
2. Improving our efficiency in operating, maintaining, renewing and replacing existing assets to optimise life cycle costs,
3. Identifying and managing risks associated with providing services from infrastructure,
4. Making trade-offs between service levels and costs to ensure that the community receives the best return from infrastructure,
5. Identifying assets surplus to needs for disposal to make saving in future operations and maintenance costs,
6. Consulting with the community to ensure that Building Infrastructure and costs meet community needs and are affordable,
7. Developing partnership with other bodies, where available to provide services,
8. Seeking additional funding from governments and other bodies to better reflect a 'whole of government' funding approach to infrastructure services.

**What happens if we don't manage the shortfall?**

It is likely that we will not achieve the optimum lifecycle cost for Roads Infrastructure.

**What can we do?**

We can develop options, costs and priorities for future Roads Infrastructure, consult with the community to plan future services to match the community service needs with ability to pay for services and maximise community benefits against costs.

**What can you do?**

We will be pleased to consider community consultation on the issues raised in this asset management plan and suggestions on how we may change or reduce its Roads Infrastructure to ensure that the appropriate level of service can be provided to the community within available funding.

**2. INTRODUCTION**

**2.1 Background**

This asset management plan is to demonstrate responsive management of assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding needed to provide the required levels of service over a 10 year planning period.

The asset management plan follows the format for AM Plans recommended in Section 4.2.6 of the International Infrastructure Management Manual<sup>1</sup>.

The asset management plan is to be read with the organisation’s Asset Management Policy, Asset Management Strategy and the following associated planning documents:

- Community Strategic Plan
- Work Force Plan
- 10 Year Financial Plan
- Delivery Program
- Operational Plan

This infrastructure assets covered by this asset management plan are shown in Table 2.1. These assets are used to provide Roads Infrastructure to service the community.

**Table 2.1: Assets covered by this Plan**

<b>Asset Category</b>	<b>Quantity</b>	<b>Items</b>	<b>Replacement Value</b>
Road Surface Item		1110	24,626,795
Road Pavement Item		984	66,379,158
Road Formation Item		906	21,991,829
Road Kerb & Gutter Item		2002	34,413,528
Bridge Sub Structure		45	3,033,222
Bridge Super Structure		46	10,300,607
Road Traffic Control Item		408	2,639,370
Road Safety Barrier Item		122	1,522,752
Road Culvert Structure		161	914,087
Road Culvert Pit Item		249	95,534
Road Bus Shelter Item		34	378,168
Global Fence Item		1	2,356
Global Handrails		1	19,797
Global Landscape Item		5	19,818
Global Sign Item		1	3,943
<b>Total</b>			<b>166,340,966</b>

<sup>1</sup> IPWEA, 2011, Sec 4.2.6, *Example of an Asset Management Plan Structure*, pp 4|24 – 27.

Key stakeholders in the preparation and implementation of this asset management plan are: Shown in Table 2.1.1.

**Table 2.1.1: Key Stakeholders in the AM Plan**

Key Stakeholder	Role in Asset Management Plan
Councillors	<ul style="list-style-type: none"> <li>• Represent needs of community/shareholders,</li> </ul>
General Manager	<ul style="list-style-type: none"> <li>• Allocate resources to meet the organisation’s objectives in providing services while managing risks,</li> <li>• Ensure organisation is financial sustainable.</li> </ul>
Directors	<ul style="list-style-type: none"> <li>• Ensure the plans objectives and financial requirements are included in councils integrated planning and reporting documentation</li> </ul>
Manager Of Works	<ul style="list-style-type: none"> <li>• Delivery of the asset management plan objectives</li> </ul>

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



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## 2.2 Goals and Objectives of Asset Management

The organisation exists to provide services to its community. Some of these services are provided by infrastructure assets. We have acquired infrastructure assets by purchase, by contract, construction by our staff and by donation of assets constructed by developers and others to meet increased levels of service.

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.<sup>2</sup>

## 2.3 Plan Framework

Key elements of the plan are

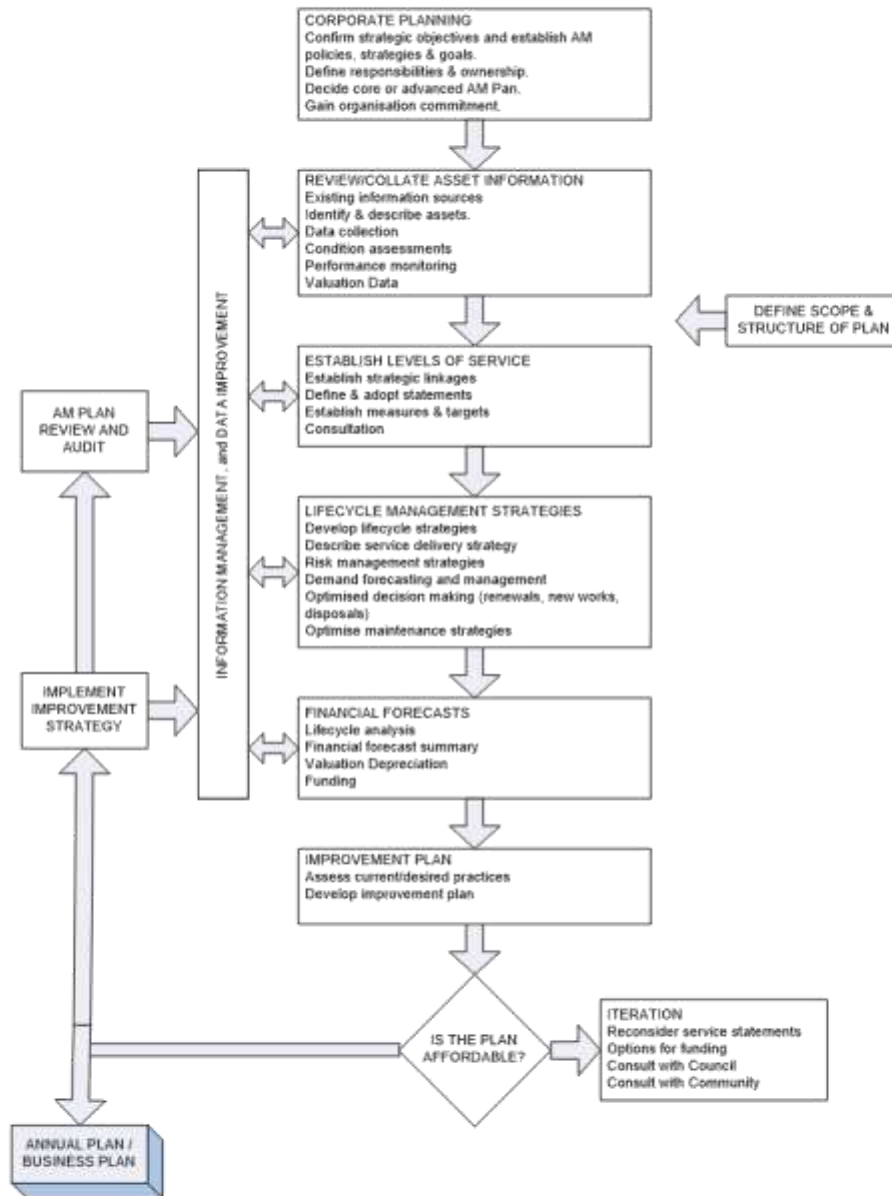
- Levels of service – specifies the services and levels of service to be provided by the organisation,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Life cycle management – how Council will manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices,
- Monitoring – how the plan will be monitored to ensure it is meeting organisation's objectives,
- Asset management improvement plan.

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

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<sup>2</sup> Based on IPWEA, 2011, IIMM, Sec 1.2 p 1|7.

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



Item 11.5

Enclosure 4



## 2.4 Core and Advanced Asset Management

This asset management plan is prepared as a 'core' asset management plan over a 20 year planning period in accordance with the International Infrastructure Management Manual<sup>3</sup>. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. Core asset management is a 'top down' approach where analysis is applied at the 'system' or 'network' level.

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

## 2.5 Community Consultation

This 'core' asset management plan is prepared to facilitate community consultation initially through feedback on public display of draft asset management plans prior to adoption by the Council. Future revisions of the asset management plan will incorporate community consultation on service levels and costs of providing the service. This will assist the Council and the community in matching the level of service needed by the community, service risks and consequences with the community's ability and willingness to pay for the service.

## 3. LEVELS OF SERVICE

### 3.1 Customer Research and Expectations

The organisation carries out an IRIS Survey prior to re-developing Community Strategic Plan on customer satisfaction and expectations from all infrastructure areas.

The organisation uses this information in developing its Strategic Plan and in allocation of resources in the budget.

### 3.2 Strategic and Corporate Goals

This asset management plan is prepared under the direction of the organisation's vision, mission, goals and objectives.

Our vision is:

***Working together for a healthy, sustainable and caring community***

Our mission is:

***Kiama Council will work to create a Municipality that has a healthy, vibrant lifestyle, beautiful environment and harmonious, connected and resilient community***

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<sup>3</sup> IPWEA, 2011, IIMM.

Relevant organisational goals and objectives and how these are addressed in this asset management plan are:

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

Plan Level	Plan No.	Plan Description	Measure's
CSP Strategy	2.10	Effectively manage the transport network of roads, footpaths and cycleways to cater for current and future generations	
DP Action	2.10.1	Manage road infrastructure for the community by the implementation of the Shared Pathway Asset Management Plan actions	Maintain or increase community satisfaction with the road network Optimal renewal of road infrastructure The Road Asset Management Plan is fully funded Capital works are delivered in accordance with Delivery Program
OP Activity	2.10.1.1	Manage road asset renewals	Percentage of renewal program completed Percentage of renewals updated in the Asset Management Information System Percentage of scheduled designs completed Renewal Budget YTD%
OP Activity	2.10.1.2	Manage road new asset creation	New Asset Budget v Actual expenditure percentage Percentage of new asset program completed Percentage of scheduled designs completed
OP Activity	2.10.1.3	Manage road asset maintenance and operation	Unscheduled Maintenance Budget YTD%
OP Activity	2.10.1.4	Maintain the Road Asset Management Plan	New Asset schedule created for following year Budget Renewal schedule created for following year Budget
CSP Strategy	4.11	Ensure Council owned buildings and infrastructure are planned and maintained with consideration to both current and future generations	
DP Action	4.11.1	Ensure the Strategic Asset Management Plan is maintained and funded in the 10 year financial plan	Strategic Asset Management Plan is funded to meet Community Strategic Plan objectives
OP Activity	4.11.1.1	Review and re-adopt the Asset Management Policy	Policy re-adopted within 12 months of newly elected Councillors
OP Activity	4.11.1.2	Maintain a Strategic Asset Management Plan (SAMP) aligned with individual Asset Management Plans	Percentage of plans aligned with SAMP
OP Activity	4.11.1.3	Ensure ongoing alignment of Asset Management with Councils 10 year financial Plan	Percentage of plans aligned with 10 year Financial Plan
OP Activity	4.11.1.4	Seek infrastructure funding from external sources	Value of grants secured

The organisation will exercise its duty of care to ensure public safety is accordance with the infrastructure risk management plan prepared in conjunction with this AM Plan. Management of infrastructure risks is covered in Section 5.2

**3.3 Legislative Requirements**

The organisation must meet many legislative requirements including Australian and State legislation and State regulations. These include:

**Table 3.3: Legislative Requirements**

Legislation	Requirement
Local Government Act 1993	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Protection of the Environment Operations Act 1997	To ensure that all reasonable and practicable measures are taken to protect, restore and enhance the quality of the environment having regard to the principles of ecologically sustainable development.
Australian Accounting Standards	Sets out the financial reporting standards relating to Infrastructure assets. Standards of particular relevance to Infrastructure Assets include: <ul style="list-style-type: none"> <li>• AASB116 Property, Plant &amp; Equipment – prescribes requirement for recognition and depreciation of property, plant and equipment assets</li> <li>• AASB136 Impairment of Assets - aims to ensure that assets are carried at amounts that are not in excess of their recoverable amounts</li> <li>• AASB1021 Depreciation of Non-Current Assets - specifies how depreciation is to be calculated</li> <li>• AAS1001 Accounting Policies - specifies the policies that Council is to have for recognition of assets and depreciation</li> <li>• AASB1041 Accounting for the reduction of Non-Current Assets - specifies the frequency and basis of calculation depreciation and revaluation basis used for assets</li> <li>• AAS1015 Accounting for acquisition of assets - method of allocating the value to new assets on acquisition</li> </ul>
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)
Civil Liability Act 2002	Protects the Council from civil action by requiring the courts to take into account the financial resources, the general responsibilities of the authority and the compliance with general practices and applicable standards.
Water Management Act 2000	The objects of this Act are to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations and, in particular: <ul style="list-style-type: none"> <li>• to apply the principles of ecologically sustainable development, and</li> <li>• to protect, enhance and restore water sources, their associated ecosystems, ecological processes and biological diversity and their water quality, and</li> <li>• to recognise and foster the significant social and economic benefits to the State that result from the sustainable and efficient use of water, including:                             <ul style="list-style-type: none"> <li>○ benefits to the environment, and</li> <li>○ benefits to urban communities, agriculture, fisheries, industry and recreation, and</li> <li>○ benefits to culture and heritage, and</li> <li>○ benefits to the Aboriginal people in relation to their spiritual, social, customary and economic use of land and water,</li> </ul> </li> <li>• to recognise the role of the community, as a partner with government, in resolving issues relating to the management of water sources,</li> <li>• to provide for the orderly, efficient and equitable sharing of water from water sources,</li> <li>• to integrate the management of water sources with the management of other aspects of the environment, including the land, its soil, its native vegetation and its native fauna,</li> <li>• to encourage the sharing of responsibility for the sustainable and efficient use of water between the Government and water users,</li> <li>• to encourage best practice in the management and use of water.</li> </ul>
Work Health And Safety Act 2011	To take a constructive role in promoting improvements in occupational health, safety and welfare practices and assisting in the preservation of public health and safety in all undertakings of Council

The organisation will exercise its duty of care to ensure public safety in accordance with the infrastructure risk management plan linked to this AM Plan. Management of risks is discussed in Section 5.2.

**3.4 Community Levels of Service**

Service levels are defined service levels in two terms, customer levels of service and technical levels of service.

Community Levels of Service measure how the community receives the service and whether the organisation is providing community value.

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?

The organisation's current and expected community service levels are detailed are aligned with the Community Strategic Plan and shown in Table 3.2. The agreed expected community levels of service based on resource levels in the current long-term financial plan and community consultation/engagement.

**3.5 Technical Levels of Service**

**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, mowing grass, energy, inspections, etc.
- Maintenance – the activities necessary to retain an asset 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).

Service and asset managers plan, implement and control technical service levels to influence the customer service levels.<sup>4</sup>

<sup>4</sup> IPWEA, 2011, IIMM, p 2.22

**4. FUTURE DEMAND**

**4.1 Demand Drivers**

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

**4.2 Demand Forecast**

The present position and projections for demand drivers that may impact future service delivery and utilisation of assets were identified and are documented in Table 4.3.

**4.3 Demand Impact on Assets**

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

**Table 4.3: Demand Drivers, Projections and Impact on Service**

Demand drivers	Present position	Projection	Impact on services
Population Growth	The estimated population is 21,314	The estimated annual population Growth is 1.37%	No impact on Services in the life of this plan apart from developer contributions from new subdivisions.
Climate Change	Infrastructure designed to suite current standards	Potentially Rising sea levels, additional rainfall and El Nino storm events.	No impact on Services in the life of this plan.

**4.4 Demand Management Plan**

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

Non-asset solutions focus on providing the required service without the need for the organisation to own the assets and management actions including reducing demand for the service, reducing the level of service (allowing some assets to deteriorate beyond current service levels) or educating customers to accept appropriate asset failures<sup>5</sup>. Examples of non-asset solutions include providing services from existing infrastructure such as aquatic centres and libraries that may be in another community area or public toilets provided in commercial premises.

Opportunities identified to date for demand management are shown in Table 4.4. Further opportunities will be developed in future revisions of this asset management plan.

**Table 4.4: Demand Management Plan Summary**

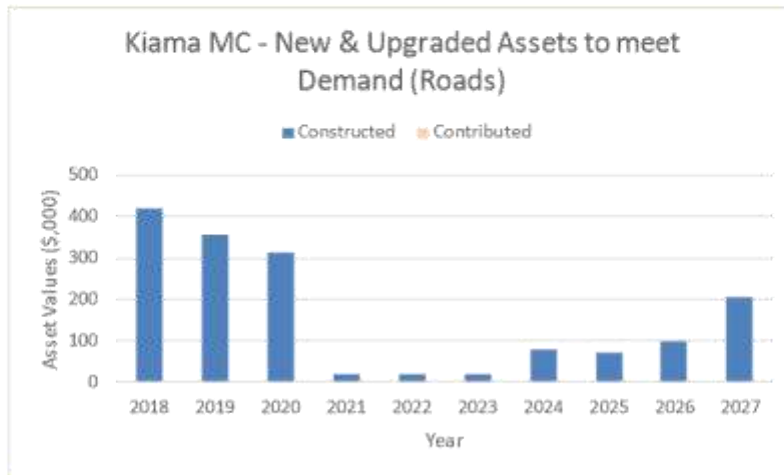
Demand Driver	Impact on Services	Demand Management Plan
Population Growth	No impact on Services in the life of this plan.	Additional assets are acquired as part of the developer contributions. Council will need to fully fund the life cycle costs of these new assets.
Climate Change	No impact on Services in the life of this plan.	No impact on Services in the life of this plan.

<sup>5</sup> IPWEA, 2011, IIMM, Table 3.4.1, p 3]58.

**4.5 Asset Programs to meet Demand**

The new assets required to meet growth will be acquired free of cost from land developments and constructed/acquired by the organisation. New assets constructed/acquired by the organisation are discussed in Section 5.5. The cumulative value of new contributed and constructed asset values are summarised in Figure 1.

**Figure 1: New & Upgraded Assets to meet Demand**



Acquiring these new assets will commit the organisation to fund ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs in Section 5.

**5. LIFECYCLE MANAGEMENT PLAN**

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

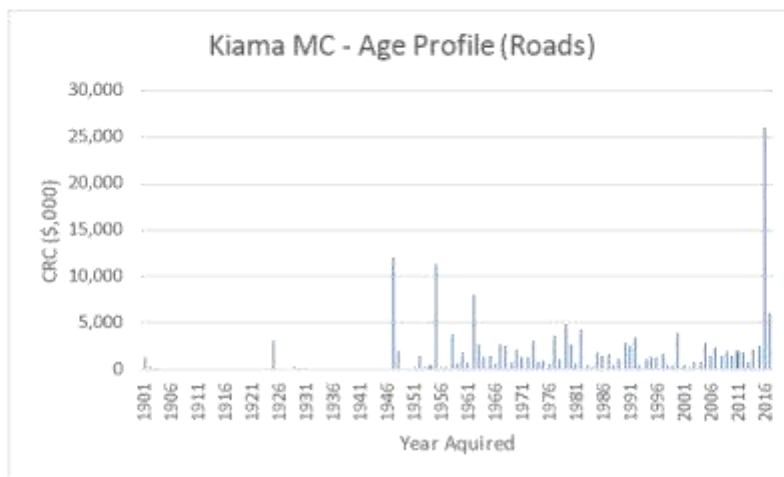
**5.1 Background Data**

**5.1.1 Physical parameters**

The assets covered by this asset management plan are shown in Table 2.1.

The age profile of the assets include in this AM Plan is shown in Figure 2.

**Figure 2: Asset Age Profile**



Plans showing the assets are:

- Work As Executed Drawings stored in the corporate document management system (Trim). These documents are linked to individual assets records in the corporate asset management system (Authority).
- Assets are geographically displayed on the corporate Geographic information system which is fully integrated to Council's Asset Management System.

5.1.2 Asset capacity and performance

The organisation’s services are generally provided to meet design standards where these are available.

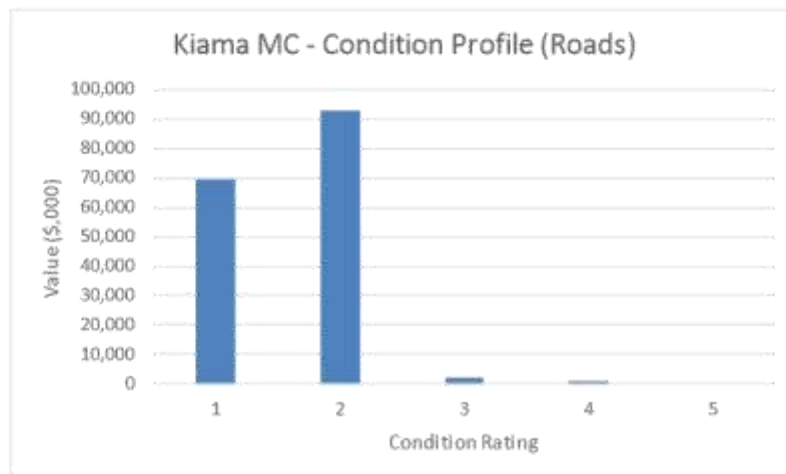
Council has an integrated approach to service delivery and where capacity or performance requirements of assets require a change the Funding Allocation Process is used to ensure that the lifecycle costs are incorporated into the Integrated Planning and Reporting framework including the 10 Year Financial Plan, Asset Management Plan and Workforce Plan.

5.1.3 Asset condition

Condition is monitored by inspecting the assets on a regular cycle. In addition all assets have condition inspections that align with the 5 year Financial Revaluation of Assets.

The condition profile of our assets is shown in Figure 3.

Fig 3: Asset Condition Profile



Condition is measured using a 1 – 5 grading system<sup>6</sup> as detailed in Table 5.1.3.

Table 5.1.3: Simple Condition Grading Model

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

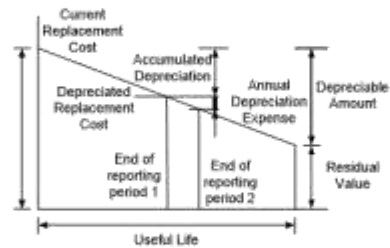
<sup>6</sup> IPWEA, 2011, IIMM, Sec 2.5.4, p 2|79.



5.1.4 Asset valuations

The value of assets recorded in the asset register as at 30/06/2015 covered by this asset management plan is shown below. Assets were last revalued at 30/06/2015. Assets are valued using the depreciated replacement cost methodology. This asset class is revalued every 5 years.

Current Replacement Cost	\$166,340,966
Depreciable Amount	\$144,306,535
Depreciated Replacement Cost <sup>7</sup>	\$109,791,178
Annual Depreciation Expense	\$2,184,910



Useful lives were reviewed in June 2016 by assessing the condition of assets.

Key assumptions made in preparing the valuations were:

- Unit rate of excavation assumed a common sub surface material type
- Condition assessment of the samples reflects the entire network
- Where the dimensional information was absent default dimensions were used

Various ratios of asset consumption and expenditure have been prepared to help guide and gauge asset management performance and trends over time.

Rate of Annual Asset Consumption (Depreciation/Depreciable Amount)	1.51%
Rate of Annual Asset Renewal (Capital renewal exp/Depreciable amount)	1.75%

In 2018 the organisation plans to renew assets at 115.28% of the rate they are being consumed and will be increasing its asset stock by 0.251% in the year. All future asset renewals are fully funded in councils LTFP.

5.1.5 Historical Data

All Roads Infrastructure asset data and financial data are stored in Councils Corporate Asset Management system.

5.2 Infrastructure Risk Management Plan

An assessment of risks<sup>3</sup> associated with service delivery from infrastructure assets has identified critical risks that will result in loss or reduction in service from infrastructure assets or a 'financial shock' to the organisation. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' - requiring immediate corrective action and 'High' - requiring prioritised corrective action identified in the Infrastructure Risk Management Plan, together with the estimated residual risk after the selected treatment plan is operational are summarised in Table 5.2. These risks are reported to management and Council.

<sup>7</sup> Also reported as Written Down Current Replacement Cost (WDCRC).

**Table 5.2: Critical Risks and Treatment Plans**

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Road Pavements	Damaged by water ingress thru Surface	H	Maintain seal quality via renewals and patching of defects	Low	

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

**5.3 Routine Operations and Maintenance Plan**

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

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

**5.3.1 Operations and Maintenance Plan**

Operations activities affect service levels including quality and function through street sweeping and grass mowing frequency, intensity and spacing of street lights and cleaning frequency and opening hours of building and other facilities.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating, eg road patching but excluding rehabilitation or renewal. Maintenance may be classified into reactive, planned and specific maintenance work activities.

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

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

Specific maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, replacing air conditioning units, etc. This work falls below the capital/maintenance threshold but may require a specific budget allocation.

Actual past maintenance expenditure is shown in Table 5.3.1.

**Table 5.3.1: Maintenance Expenditure Trends**

Year	Maintenance Expenditure	
	Planned and Specific	Unplanned
2014	\$0	\$1,627,826
2015	\$0	\$1,659,167
2016	\$0	\$1,869,415

Planned maintenance work is currently 0.00% of total maintenance expenditure.

Maintenance expenditure levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance expenditure levels are such that will result in a lesser level

of service, the service consequences and service risks have been identified and service consequences highlighted in this AM Plan and service risks considered in the Infrastructure Risk Management Plan.

Assessment and prioritisation of reactive maintenance is undertaken by Council staff using experience and judgement. In conjunction with response levels of service detailed in Appendix A.

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,
- 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.

Asset hierarchy

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

The organisation’s service hierarchy is shown in Table 5.3.2.

**Table 5.3.2: Asset Service Hierarchy**

Service Hierarchy	Service Level Objective
State Roads	Provide Road Network for commuting at high speed through the LGA.
Regional Roads	Provide Road Network on Regional Roads
Urban Roads	Provide Road network in Urban areas
Rural Roads	Provide Road network in non Urban areas
Unsealed Roads	Provide access to minimal traffic volumes
Access Roads and Carparks	Provide Change rooms, canteens, and club house facilities to sports field users.

Critical Assets

Critical assets are those assets which have a high consequence of failure but not necessarily a high likelihood of failure. By identifying critical assets and critical failure modes, organisations can target and refine investigative activities, maintenance plans and capital expenditure plans at the appropriate time.

Operations and maintenance activities may be targeted to mitigate critical assets failure and maintain service levels. These activities may include increased inspection frequency, higher maintenance intervention levels, etc. Critical assets failure modes and required operations and maintenance activities are detailed in Table 5.3.2.1.

**Table 5.3.2.1: Critical Assets and Service Level Objectives**

Critical Assets	Critical Failure Mode	Operations & Maintenance Activities
Bridge Structure	Loss of structural integrity	<ul style="list-style-type: none"> <li>• Inspection</li> <li>• Rectification of defects</li> </ul>
Road Surface	Cracking and pot holes	<ul style="list-style-type: none"> <li>• Inspection</li> <li>• Rectification of defects</li> </ul>
Kerb & gutter	Displacement or impact	<ul style="list-style-type: none"> <li>• Inspection</li> <li>• Rectification of defects</li> </ul>

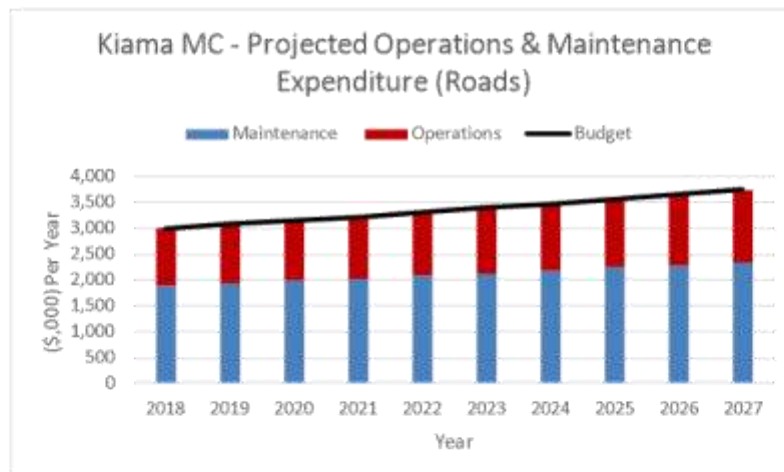
**Standards and specifications**

Maintenance work is carried out in accordance with relevant Standards and Specifications.

**5.3.3 Summary of future operations and maintenance expenditures**

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 4.

**Figure 4: Projected Operations and Maintenance Expenditure**



Deferred maintenance, ie works that are identified for maintenance and unable to be funded are to be included in the risk assessment and analysis in the infrastructure risk management plan.

Maintenance is funded from the operating budget where available. This is further discussed in Section 6.2.

**5.4 Renewal/Replacement Plan**

Renewal and replacement expenditure is major work which does not increase the asset’s design capacity but restores, rehabilitates, replaces or renews an existing asset to its original or lesser required service potential. Work over and above restoring an asset to original service potential is upgrade/expansion or new works expenditure.

#### 5.4.1 Renewal plan

Assets requiring renewal/replacement are identified from one of three methods provided in the 'Expenditure Template'.

- Method 1 uses Asset Register data to project the renewal costs using acquisition year and useful life to determine the renewal year, or
- Method 2 uses capital renewal expenditure projections from external condition modelling systems (such as Pavement Management Systems), or
- Method 3 uses a combination of average *network renewals plus defect repairs* in the *Renewal Plan* and *Defect Repair Plan* worksheets on the 'Expenditure template'.

Method 1 was used for this asset management plan.

The useful lives of assets used to develop projected asset renewal expenditures are shown in Table 5.4.1. Asset useful lives were last reviewed on June 2016.<sup>9</sup>

**Table 5.4.1: Useful Lives of Assets**

Asset Category	Useful Life
Road Surface Item	12 to 50 years
Road Pavement Item	100 years
Road Formation Item	Non Depreciable
Road Kerb & Gutter Item	100 years
Bridge Sub Structure	100 years
Bridge Super Structure	100 years
Road Traffic Control Item	15 to 75 years
Road Safety Barrier Item	50 years
Road Culvert Structure	100 years
Road Culvert Pit Item	100 years
Road Bus Shelter Item	20 to 30 years
Global Fence Item	25 years
Global Handrails	50 years
Global Landscape Item	10 years
Global Sign Item	10 years
Global Light Item	20 years
Global Litter Bin Item	10 years

#### 5.4.2 Renewal and Replacement Strategies

The organisation will plan capital renewal and replacement projects to meet level of service objectives and minimise infrastructure service risks by:

- Planning and scheduling renewal projects to deliver the defined level of service in the most efficient manner,
- Undertaking project scoping for all capital renewal and replacement projects to identify:
  - the service delivery 'deficiency', present risk and optimum time for renewal/replacement,

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- the project objectives to rectify the deficiency,
- the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
- and evaluate the options against evaluation criteria adopted by the organisation, and
- select the best option to be included in capital renewal programs,
- Using 'low cost' renewal methods (cost of renewal is less than replacement) wherever possible,
- Maintain a current infrastructure risk register for assets and 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,
- Review current and required skills base and implement workforce training and development to meet required construction and renewal needs,
- Maintain a current hierarchy of critical assets and capital renewal treatments and timings required ,
- Review management of capital renewal and replacement activities to ensure Council is obtaining best value for resources used.

#### Renewal ranking criteria

Asset renewal and replacement is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (eg replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (eg roughness of a road).<sup>10</sup>

It is possible to get some indication of capital renewal and replacement priorities by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have a high utilisation and subsequent impact on users would be greatest,
- The total value represents the greatest net value to the organisation,
- Have the highest average age relative to their expected lives,
- Are identified in the AM Plan as key cost factors,
- Have high operational or maintenance costs, and
- Where replacement with modern equivalent assets would yield material savings.<sup>11</sup>

Council has an integrated approach to service delivery and where capacity or performance requirements of assets require a change the Funding Allocation Process is used to ensure that the lifecycle costs are incorporated into the integrated Planning and Reporting framework including the 10 Year Financial Plan, Asset Management Plan and Workforce Plan.

The 10 year Renewal Plan is detailed in Appendix B.

#### Renewal and replacement standards

Renewal work is carried out in accordance with the relevant Standards and Specifications.

#### 5.4.3 Summary of future renewal and replacement expenditure

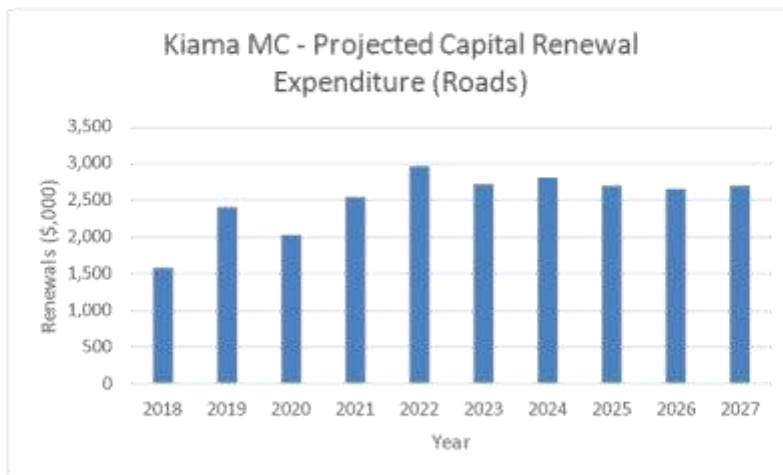
<sup>10</sup> IPWEA, 2011, IIMM, Sec 3.4.4, p 3|60.

<sup>11</sup> Based on IPWEA, 2011, IIMM, Sec 3.4.5, p 3|66.

Projected future renewal and replacement expenditures are forecast to increase over time as the asset stock increases from growth. The expenditure is summarised in Fig 5. Note that all amounts are shown in real values.

The projected capital renewal and replacement program is shown in Appendix B.

**Fig 5: Projected Capital Renewal and Replacement Expenditure**



Deferred renewal and replacement, ie those assets identified for renewal and/or replacement and not scheduled in capital works programs are to be included in the risk analysis process in the risk management plan.

Renewals and replacement expenditure in the organisation’s capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

**5.5 Creation/Acquisition/Upgrade Plan**

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

**5.5.1 Selection criteria**

New assets and upgrade/expansion of existing assets are identified from various sources such as councilor/director or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programs.

**5.5.2 Capital Investment Strategies**

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,

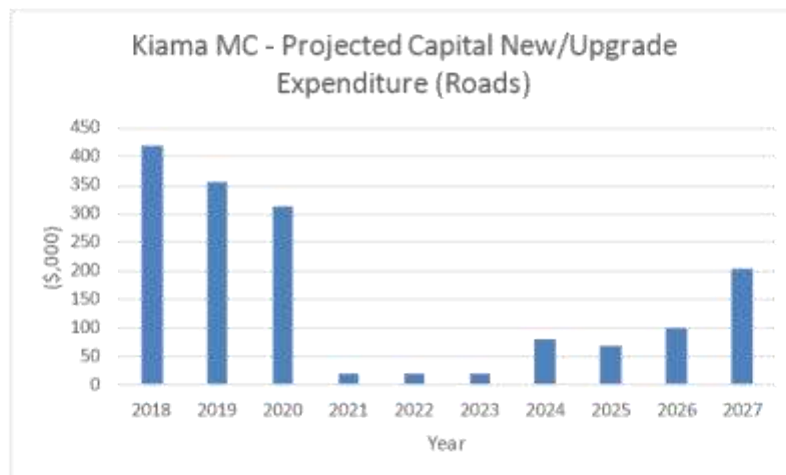
- the project objectives to rectify the deficiency including value management for major projects,
- the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
- management of risks associated with alternative options,
- and evaluate the options against evaluation criteria adopted by Council, 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.

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2.

5.5.3 Summary of future upgrade/new assets expenditure

Projected upgrade/new asset expenditures are summarised in Fig 6. The projected upgrade/new capital works program is shown in Appendix C. All amounts are shown in real values.

Fig 6: Projected Capital New/Upgrade Asset Expenditure



Expenditure on new assets and services in the organisation’s capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

5.6 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6, together with estimated annual savings from not having to fund operations and maintenance of the assets. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any. Any revenue gained from asset disposals is accommodated in Council’s long term financial plan.

Where cashflow projections from asset disposals are not available, these will be developed in future revisions of this asset management plan.

Table 5.6: Assets Identified for Disposal



Asset	Reason for Disposal	Timing	Disposal Expenditure	Operations & Maintenance Annual Savings
Nil	N/A	N/A	0	0

**5.7 Service Consequences and Risks**

The organisation has prioritised decisions made in adopting this AM Plan to obtain the optimum benefits from its available resources. Decisions were made based on the development of 3 scenarios of AM Plans.

**Scenario 1** - What we would like to do based on asset register data

**Scenario 2** – What we should do with existing budgets and identifying level of service and risk consequences (ie what are the operations and maintenance and capital projects we are unable to do, what is the service and risk consequences associated with this position). This may require several versions of the AM Plan.

**Scenario 3** – What we can do and be financially sustainable with AM Plans matching long-term financial plans.

The development of scenario 1 and scenario 2 AM Plans provides the tools for discussion with the Council/Board and community on trade-offs between what we would like to do (scenario 1) and what we should be doing with existing budgets (scenario 2) by balancing changes in services and service levels with affordability and acceptance of the service and risk consequences of the trade-off position (scenario 3).

**5.7.1 What we cannot do**

There are no identified operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years.

**5.7.2 Service consequences**

All Operations and maintenance activities and capital projects are funded in the 10 Year Financial Plan.

**5.7.3 Risk consequences**

There are no additional risk consequences based on section 5.7.1

Ongoing risks have been included with the Infrastructure Risk Management Plan summarised in Section 5.2 and risk management plans actions and expenditures included within projected expenditures.

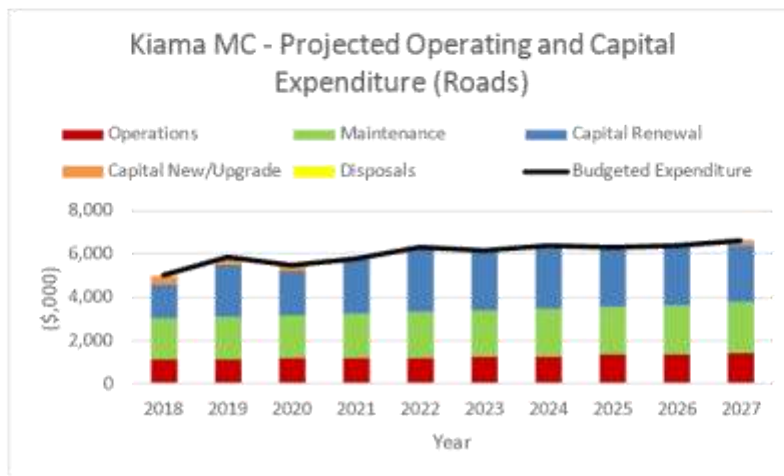
**6. FINANCIAL SUMMARY**

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

**6.1 Financial Statements and Projections**

The financial projections are shown in Fig 7 for projected operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets). Note that all costs are shown in real values.

**Fig 7: Projected Operating and Capital Expenditure**



**6.1.1 Sustainability of service delivery**

There are four key indicators for service delivery sustainability that have been considered in the analysis of the services provided by this asset category, these being the asset renewal funding ratio, long term life cycle costs/expenditures and medium term projected/budgeted expenditures over 5 and 10 years of the planning period.

**Asset Renewal Funding Ratio**

Asset Renewal Funding Ratio<sup>12</sup> 100.00%

The Asset Renewal Funding Ratio is the most important indicator and reveals that over the next 10 years, Council is forecasting that it will have 100.00% of the funds required for the optimal renewal and replacement of its assets.

**Long term - Life Cycle Cost**

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the asset life cycle. Life cycle costs include operations and maintenance expenditure and asset consumption (depreciation expense). The life cycle cost for the services covered in this asset management plan is \$5,555,429 per year (average operations and maintenance expenditure plus depreciation expense projected over 10 years).

<sup>12</sup> AIFMG, 2012, Version 1.3, Financial Sustainability Indicator 4, Sec 2.6, p 2.16

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Life cycle costs can be compared to life cycle expenditure to give an initial indicator of affordability of projected service levels when considered with age profiles. Life cycle expenditure includes operations, maintenance and capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure over the 10 year planning period is \$5,878,096 per year (average operations and maintenance plus capital renewal budgeted expenditure in LTFP over 10 years).

A shortfall between life cycle cost and life cycle expenditure is the life cycle gap. The life cycle gap for services covered by this asset management plan is \$322,667 per year (-ve = gap, +ve = surplus).

Life cycle expenditure is 105.81% of life cycle costs.

The life cycle costs and life cycle expenditure comparison highlights any difference between present outlays and the average cost of providing the service over the long term. Currently the life cycle expenditure is more than that life cycle cost due to provisions that have been made for Pavement rehabilitation. If these funds are not required the funds will be placed in an Infrastructure renewal reserve as Renewal outlays may need to be increased in the future when the assets are reaching the later stages of their useful lives.

Knowing the extent and timing of any required increase in outlays and the service consequences if funding is not available will assist organisations in providing services to their communities in a financially sustainable manner. This is the purpose of the asset management plans and long term financial plan.

#### Medium term – 10 year financial planning period

This asset management plan identifies the projected operations, maintenance and capital renewal expenditures required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

These projected expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall. In a core asset management plan, a gap is generally due to increasing asset renewals for ageing assets.

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is \$5,878,096 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$5,878,096. This indicates that Council expects to have 100.00% of the projected expenditures needed to provide the services documented in the asset management plan.

#### Medium Term – 5 year financial planning period

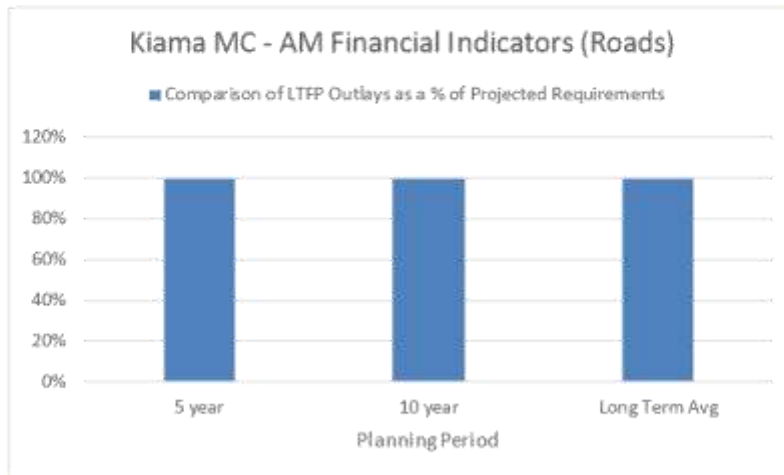
The projected operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is \$5,466,737 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$5,466,737 This indicates that Council expects to have 100.00% of projected expenditures required to provide the services shown in this asset management plan.

Asset management financial indicators

Figure 7A shows the asset management financial indicators over the 10 year planning period and for the long term life cycle.

Figure 7A: Asset Management Financial Indicators



Providing services from infrastructure in a sustainable manner requires the matching and managing of service levels, risks, projected expenditures and financing to achieve a financial indicator of approximately 100% for the first years of the asset management plan and ideally over the 10 year life of the Long Term Financial Plan.

Figure 8 shows the projected asset renewal and replacement expenditure over the 10 years of the AM Plan. The projected asset renewal and replacement expenditure is compared to renewal and replacement expenditure in the capital works program, which is accommodated in the long term financial plan

Figure 8: Projected and LTFP Budgeted Renewal Expenditure

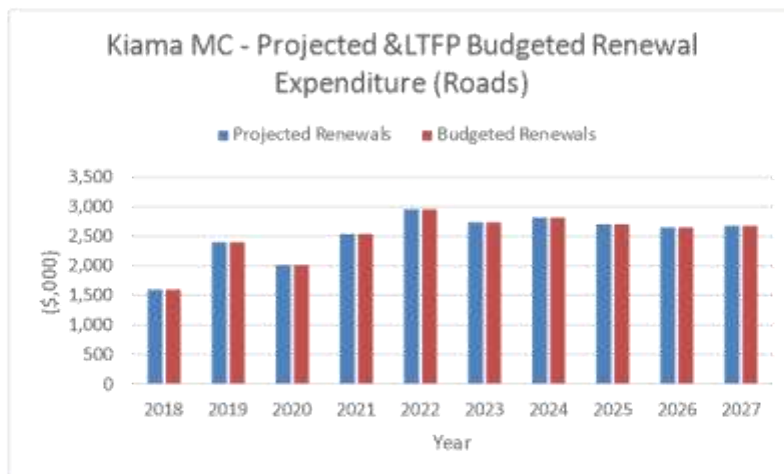


Table 6.1.1 shows the shortfall between projected renewal and replacement expenditures and expenditure accommodated in long term financial plan.

**Table 6.1.1: Projected and LTFP Budgeted Renewals and Financing Shortfall**

Year	Projected Renewals	LTFP Renewal Budget	Renewal Financing Shortfall (-ve Gap, +ve Surplus)	Cumulative Shortfall (-ve Gap, +ve Surplus)
2018	\$1,593	\$1,593	\$0	\$0
2019	\$2,417	\$2,417	\$0	\$0
2020	\$2,034	\$2,034	\$0	\$0
2021	\$2,549	\$2,549	\$0	\$0
2022	\$2,979	\$2,979	\$0	\$0
2023	\$2,731	\$2,731	\$0	\$0
2024	\$2,814	\$2,814	\$0	\$0
2025	\$2,707	\$2,707	\$0	\$0
2026	\$2,665	\$2,665	\$0	\$0
2027	\$2,698	\$2,698	\$0	\$0

All figures are in \$,000

Providing services in a sustainable manner will require matching of projected asset renewal and replacement expenditure to meet agreed service levels with **the corresponding** capital works program accommodated in the long term financial plan.

6.1.2 Projected expenditures for long term financial plan

Table 6.1.2 shows the projected expenditures for the 10 year long term financial plan.

**Table 6.1.2: Projected Expenditures for Long Term Financial Plan (\$000)**

Year	Operations	Maintenance	Capital Renewal	Capital New/Upgrade	Disposals
2018	\$1,117	\$1,882	\$1,593	\$418	\$0
2019	\$1,145	\$1,929	\$2,417	\$356	\$0
2020	\$1,173	\$1,977	\$2,034	\$313	\$0
2021	\$1,203	\$2,027	\$2,549	\$20	\$0
2022	\$1,233	\$2,077	\$2,979	\$20	\$0
2023	\$1,263	\$2,129	\$2,731	\$20	\$0
2024	\$1,295	\$2,182	\$2,814	\$80	\$0
2025	\$1,327	\$2,237	\$2,707	\$69	\$0
2026	\$1,361	\$2,293	\$2,665	\$100	\$0
2027	\$1,395	\$2,350	\$2,698	\$204	\$0

\* All figures are in \$,000

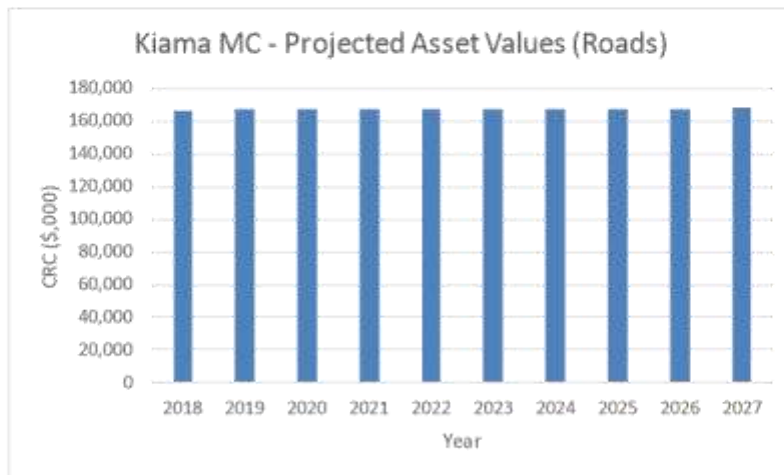
6.2 Funding Strategy

After reviewing service levels, as appropriate to ensure ongoing financial sustainability projected expenditures identified in Section 6.1.2 will be accommodated in the Council's 10 year long term financial plan.

**6.3 Valuation Forecasts**

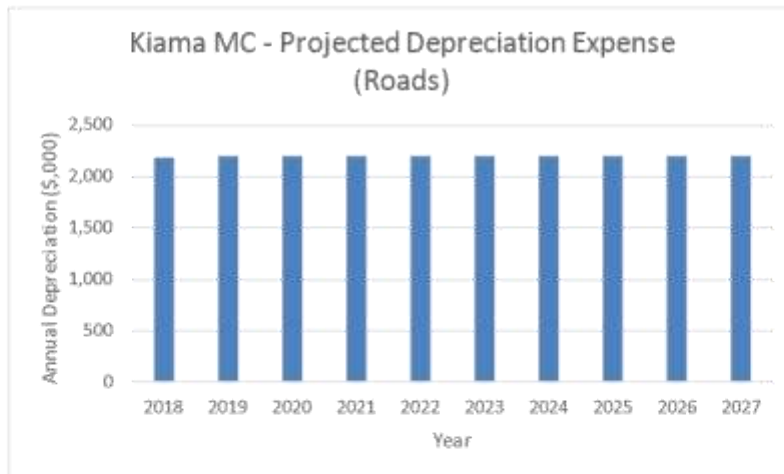
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Figure 9 shows the projected replacement cost asset values over the planning period in real values.

**Figure 9: Projected Asset Values**



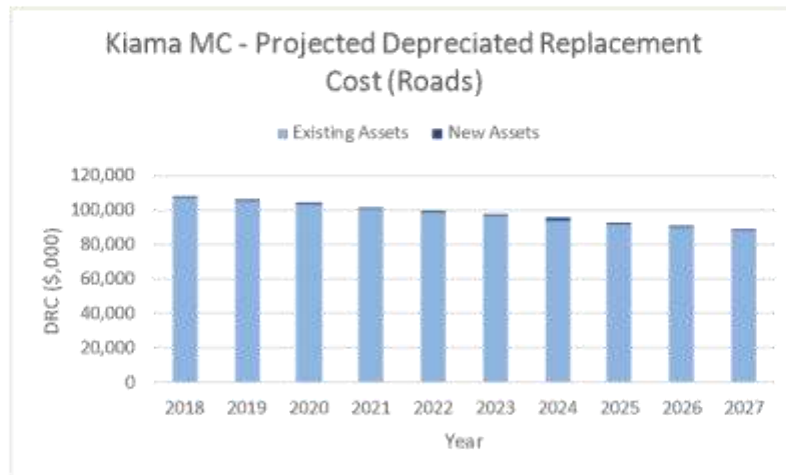
Depreciation expense values are forecast in line with asset values as shown in Figure 10.

**Figure 10: Projected Depreciation Expense**



The depreciated replacement cost will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets. Forecast of the assets' depreciated replacement cost is shown in Figure 11. The depreciated replacement cost of contributed and new assets is shown in the darker colour and in the lighter colour for existing assets.

Figure 11: Projected Depreciated Replacement Cost



**6.4 Key Assumptions made in Financial Forecasts**

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

Key assumptions made in this asset management plan and risks that these may change are shown in Table 6.4.

Table 6.4: Key Assumptions made in AM Plan and Risks of Change

Key Assumptions	Risks of Change to Assumptions
This asset class is fully funded in LTFP	Low
Future funding beyond the LTFP will remain fully funded	Low

**6.5 Forecast Reliability and Confidence**

The expenditure and valuations projections in this AM Plan are based on best available data. Currency and accuracy of data is critical to effective asset and financial management. Data confidence is classified on a 5 level scale<sup>13</sup> in accordance with Table 6.5.

<sup>13</sup> IPWEA, 2011, IIMM, Table 2.4.6, p 2|59.



Table 6.5: Data Confidence Grading System

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

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 6.5.1.

Table 6.5.1: Data Confidence Assessment for Data used in AM Plan

Data	Confidence Assessment	Comment
Demand drivers	A	The demand drivers utilised in this plan are currently the most effective way to forecast future requirements
Growth projections	A	The growth projections are based off population increase resulting in rezoning of land for future sub divisions
Operations expenditures	B	The operations expenditure budget is forecasted from data currently in the asset management system
Maintenance expenditures	B	The maintenance expenditure budget is forecasted from data currently in the asset management system
Projected Renewal exps. - Asset values	B	The revaluation of the assets in this plan occurred in June 2016
- Asset useful lives	B	The useful lives of the assets were based on Asset Type, Material and construction date.
- Condition modelling	C	Condition modelling were based on inspections and construction date
- Asset renewals	B	The projected renewals expenditure budget is forecasted from data currently in the asset management system
- Defect repairs	C	Further inspections are required
Upgrade/New expenditures	A	Contained in Appendix C and fully funded
Disposal expenditures	A	There are no disposals identified in the plan

Over all data sources the data confidence is assessed as Medium confidence level for data used in the preparation of this AM Plan.

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## 7. PLAN IMPROVEMENT AND MONITORING

### 7.1 Status of Asset Management Practices

#### 7.1.1 Accounting and financial systems

Kiama Municipal Council uses the Authority corporate information system. This system is used for financial management and reporting. The asset valuations are stored in the Capital Valuation Register of authority with a 1 to 1 match and integration to the Authority Asset Management Module.

Kiama Municipal Council has a documented Asset Accounting Policy.

#### Accountabilities for financial systems

Kiama Municipal Council's Finance Department is responsible for the data and processes pertaining to financial records in Authority. Kiama's Information Technology Department is responsible for system administration and technology infrastructure.

#### Accounting standards and regulations

Kiama Municipal Council adheres to the Australian Accounting Standards in conjunction with the Code of Accounting Practice for all the NSW Local Government Councils.

#### Capital/maintenance threshold

All assets are valued at their fair value. Expenditure on existing assets is considered maintenance where it does not increase the estimated remaining life of the asset.

#### Required changes to accounting financial systems arising from this AM Plan

Nil

#### 7.1.2 Asset management system

Kiama Municipal Council uses the Authority Asset Management System and Work Management System.

#### Asset registers

All registers are stored in the Authority Asset Management System. The system is integrated with Council's GIS system to provide a geographical representation and navigation to assets in the Asset Management System. Some assets are currently missing audited dimensional data.

#### Linkage from asset management to financial system

The Asset Management and Financial System are modules of the Authority Corporate Information System. These modules are fully integrated with a 1 to 1 relationship between assets and financial records.

#### Accountabilities for asset management system and data maintenance

Kiama Municipal Council's Engineering and Works Department are responsible for the configuration and data management of the Asset Management System.

Kiama Municipal Council's Information Technology Department is responsible for system administration and technology infrastructure.

#### Required changes to asset management system arising from this AM Plan

Audit dimensional attributes of asset records.

**7.2 Improvement Plan**

The asset management improvement plan generated from this asset management plan is shown in Table 7.2.

**Table 7.2: Improvement Plan**

Task No	Task	Responsibility	Resources Required	Timeline
1	Audit dimensional attributes of asset records	Engineering And Works Department	Works Crew	Completion 2020
2	Introduction of reactive work orders to manage unscheduled maintenance v scheduled maintenance	Engineering And Works Department	Asset Management & IT	Completion 2018
3	Inspection scheduling and rerecording via the AM system	Engineering And Works Department	Asset Management & IT	Completion 2018
4	Re-develop the roads hierarchy with differentiated operational plans including scheduled maintenance plan and service levels	Engineering And Works Department	Asset Management	Completion 2018
5	Transfer assets used by other Service delivery areas to Service based Asset Management plans eg Access roads and Carparks to Recreation.	Engineering And Works Department	Asset Management & Finance	Completion 2018

**7.3 Monitoring and Review Procedures**

This asset management plan will be reviewed during annual budget planning processes and amended to recognise any material changes in service levels and/or resources available to provide those services as a result of budget decisions.

The AM Plan will be updated annually to ensure it represents the current service level, asset values, projected operations, maintenance, capital renewal and replacement, capital upgrade/new and asset disposal expenditures and projected expenditure values incorporated into the organisation’s long term financial plan.

The AM Plan has a life of 4 years (Council election cycle) and is due for complete revision and updating before each Council election.

**7.4 Performance Measures**

The effectiveness of the asset management plan can be measured in the following ways:

- The degree to which the required projected expenditures identified in this asset management plan are incorporated into Council’s long term financial plan,
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the ‘global’ works program trends provided by the asset management plan,
- The degree to which the existing and projected service levels and service consequences (what we cannot do), risks and residual risks are incorporated into the Council’s Strategic Plan and associated plans,
- The Asset Renewal Funding Ratio achieving the target of 100%.

**8. REFERENCES**

IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/IIMM](http://www.ipwea.org/IIMM)

IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/namsplus](http://www.ipwea.org/namsplus).

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Kiama Municipal Council 'Operational Plan 2015-2016 And Delivery Program 2013-2017'

Kiama Municipal Council 'Strategic Asset Management Plan 2002'

**9. APPENDICES**

- Appendix A Maintenance Response Levels of Service
  
- Appendix B Projected 10 year Capital Renewal Program
  
- Appendix C Projected 10 year Capital New/Upgrade Program
  
- Appendix D Abbreviations
  
- Appendix E Glossary

**Appendix A Maintenance Response Levels of Service**

Maintenance Response Level Of Service		
Maintenance Type	Maintenance Activity	Required Maintenance Response
Roads	Surface Inspection	Minimum every 5 years in accordance with Revaluation requirements
	Inspections	Other inspections from customer complaints: 1. Within 5 working hours where an allegation of unsafe hazards exists 2. Within 2 weeks if not reported as unsafe hazards
Bus Shelters	Inspection	Minimum every 5 years in accordance with Revaluation requirements
	Cleaning	Monthly
	Defect Rectification	Within 4 weeks of identification
Street Furniture	Inspection	Every 2 years
	Defect Rectification	Within 3 months of identification
Bollards	Inspection	Only inspected when a complaint is received
	Defect Rectification	Within 3 months of identification
Car Parks	Inspection	Minimum every 5 years in accordance with Revaluation requirements
	Defect Rectification	Within 3 months of identification
Regulatory Signs	Inspection	Annually plus a reflectory inspection every 3 years
	Cleaning	Every 2 years
	Defect Rectification	Within 2 weeks of identification
Non Regulatory Signs	Inspection	Every 3 years
	Cleaning	Every 3 years
	Defect Rectification	Within 4 weeks of identification

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**Appendix B Projected 10 Year Capital Renewal Program**

Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>		<b>1,593,220</b>	<b>2,410,710</b>	<b>2,023,841</b>	<b>2,549,333</b>	<b>2,379,426</b>	<b>2,731,455</b>	<b>2,813,643</b>	<b>2,706,948</b>	<b>2,664,681</b>	<b>2,698,262</b>
13240	Allambie Crescent/Seg 01 Bonaira St to End/Surface	17,717									
24892	Allowrie St Carpark/Carpark/Surface	5,574									
24662	Barney St Quarry/Access Road/Surface	4,907									
13272	Bass Street/Seg 01 North Kiama Dr to End/Surface	19,387									
9484	Beach Street/Seg 01 Charles Ave to Railway Ave/Surface	17,832									
13273	Beattie Street/Seg 01 End to Young St/Surface	11,594									
13274	Beattie Street/Seg 02 Young St to Minnamurra La/Surface	39,752									
9540	Belinda Street/Seg 13 Fern St to Noble St/Surface	13,513									
13279	Belvedere Street/Seg 01 Noorinan St to Elimatta Pl/Surface	15,816									
13280	Belvedere Street/Seg 02 Elimatta Pl to Garden Ave/Surface	14,991									
9572	Bland Place/Seg 01 Riverleigh Ave to End/Surface	8,568									
9580	Boyd Street/Seg 01 Charles Ave to Railway Ave/Surface	23,437									
13315	Brighton Street/Seg 01 Thomson St to Adina Ave/Surface	10,480									
13316	Brighton Street/Seg 02 Adina Ave to Collins St/Surface	15,720									
9636	Burra Street/Seg 01 Fern St to End/Surface	19,598									
17726	Bush Bank/Seg 01 Princes Hwy to End/Surface	3,608									
13330	Cathedral Rocks Avenue/Seg 01 North Kiama Dr to Commissioner's La/Surface	82,978									
13331	Cathedral Rocks Avenue/Seg 02 Commissioner's La to Darlen Ave/Surface	3,436									
9744	Coal Street/Seg 01 Belinda St to Cooke Pl/Surface	17,505									
9748	Coal Street/Seg 02 Cooke Pl to Jupiter St/Surface	5,912									
13354	Collins Lane/Seg 01 Collins St to End/Surface	4,434									
13366	Commissioner's Lane/Seg 01 Cathedral Rocks Ave to End/Surface	18,535									
13370	Coryule Place/Seg 01 Bland St to Cul De Sac/Surface	10,868									
9768	Craig Place/Seg 01 Henry Lee Dr to End/Surface	5,674									
13380	Curramore Road/Seg 05 Rutledges Rd to End/Surface	27,764									
13391	Devonshire Street/Seg 01 Collins St to End/Surface	6,661									
13417	Farmer Street/Seg 01 Bourrool St to Taylor St/Surface	17,813									
13418	Farmer Street/Seg 02 Taylor St to Manning St/Surface	8,599									
9880	Fightree Lane/Seg 01 Greta St to Standen La/Surface	13,820									
13429	Fitzroy Street/Seg 01 Collins St to Gura St/Surface	5,854									
13430	Flinders Avenue/Seg 01 North Kiama Dr to North Kiama Dr/Surface	45,798									

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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>											
10132	Foxground Road/Seg 02 Bridge 6582/Surface	1,593,220	2,410,710	2,023,841	2,549,333	2,979,426	2,731,455	2,813,643	2,706,948	2,664,681	2,698,262
13450	Gipps Street/Seg 03 Brown St to Princes Hwy Nth/Surface	188									
13451	Gipps Street/Seg 04 Brown St to Princes Hwy Sth/Surface	4,964									
13458	Golden Valley Road/Seg 03 Macquarie St to End/Surface	4,696									
13467	Gura Street/Seg 01 End to Fitzroy St/Surface	12,166									
13468	Gura Street/Seg 02 Fitzroy St to Devonshire St/Surface	5,470									
13508	Hughes Crescent/Seg 01 Meehan Dr to Meehan Dr/Surface	6,910									
27182	Jubilee Park/Main Access Road/Surface	68,524									
24639	Kendalls Beach Reserve/Carpark/Surface	8,652									
24642	Klama Cemetery/Carpark/Surface	1,948									
10020	Links Street/Seg 01 Charles Ave to Railway Ave/Surface	6,927									
24664	Little Blowhole Reserve/Carpark/Surface	26,508									
13629	Merindah Avenue/Seg 01 Karama Ave to Talinga Ave/Surface	1,443									
13630	Merindah Avenue/Seg 02 Talinga Ave to Johnson St/Surface	5,528									
13631	Merindah Avenue/Seg 03 Johnson St to Kurrawa Ave/Surface	9,828									
13632	Merindah Avenue/Seg 04 Kurrawa Ave to North Klama Dr/Surface	7,486									
10032	Miller Street/Seg 01 Pacific Ave to Renfrew Rd/Surface	5,643									
24729	Minnamurra Headland/Sanctuary Pl Quarry/Access Road/Surface	12,400									
24622	Minnamurra River Foreshore Reserve/James Holt Reserve/Carpark/Surface	4,221									
13646	Minnamurra Street/Seg 01 Shoalhaven St Intersection/Surface	2,778									
13648	Minnamurra Street/Seg 03 Collins St to Pacific St/Surface	11,824									
13652	Misty Lane/Seg 00 Jamberoo Mountain Rd to End/Surface	14,358									
13656	Moona Avenue/Seg 01 Karama Ave to Talinga Ave/Surface	2,764									
13657	Moona Avenue/Seg 02 Talinga Ave to Kurrawa Ave/Surface	7,006									
13658	Moona Avenue/Seg 03 Kurrawa Ave to North Kiama Dr/Surface	8,849									
10036	Moore Street/Seg 01 Pacific Ave to Renfrew Rd/Surface	7,486									
13660	Morton Street/Seg 01 Manning St to Council Park/Surface	10,672									
13664	Noorinan Street/Seg 01 Eddy St to Shoalhaven St/Surface	9,732									
13665	Noorinan Street/Seg 02 Shoalhaven St to Sommerville Cl/Surface	29,176									
13666	Noorinan Street/Seg 03 Sommerville Cl to Belvedere St/Surface	24,799									
13667	Noorinan Street/Seg 04 Belvedere St to End/Surface	4,882									
13698	Orana Avenue/Seg 01 Taylor St to Holden Ave/Surface	21,920									
10084	Osborne Street/Seg 01 Geering St to Barclay St/Surface	27,275									
		24,550									

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Asset Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>	<b>1,593,220</b>	<b>2,410,710</b>	<b>2,023,841</b>	<b>2,549,333</b>	<b>2,979,426</b>	<b>2,731,455</b>	<b>2,813,643</b>	<b>2,706,948</b>	<b>2,664,681</b>	<b>2,698,262</b>
13699 Owen Street/Seg 01 Minnamurra La to Golden Valley Rd/Surface	34,416									
13711 Pheasant Point Drive/Seg 01 Minnamurra St to Collins St/Surface	67,680									
10184 River Street/Seg 01 Charles Ave to Railway Ave/Surface	20,308									
10200 Robinson Avenue/Seg 01 Carson Pl to Sanctuary Pl/Surface	31,396									
10204 Robinson Avenue/Seg 02 Sanctuary Pl to Charles Ave/Surface	6,709									
29521 Rose Valley Road/Seg 12 Bridge 8/Surface	166									
26854 Rose Valley Road/Seg 13 Bridge 8 to Taballa Rd/Surface	1,595									
13745 Rosebank Place/Seg 01 Collins St to Terralong St/Surface	9,885									
26141 Saddleback Mountain Reserve/Access Road/Surface	3,139									
10276 Sharwood Place/Seg 01 Geering St to End/Surface	27,237									
13769 Sommerville Close/Seg 01 Noorinan St to Cul De Sac/Surface	11,363									
26725 South Kiama Drive/Seg 01 Princes Hwy to Attunga Ave/Surface R01	606									
26812 South Kiama Drive/Seg 02 Attunga Ave to David Smith Pl/Surface R01	6,314									
17788 Swamp Road/Seg 04 Bridge 6593/Surface	1,137									
13809 Tharkinna Avenue/Seg 01 Girrawheen Ave to End/Surface	26,738									
10328 The Village/Seg 01 Riverside Dr to End/Surface	16,450									
13824 Toolijooa Road/Seg 01 Princes Hwy to Millers Ln/Surface	8,316									
13825 Toolijooa Road/Seg 02 Millers La to Sharpes La/Surface	2,262									
13827 Toolijooa Road/Seg 06 Spay Seal Start to Kmc Boundary/Surface	36,495									
3881 Transport/ Pavements	150,000									
3881 Transport/ Kerb Replacement	75,000									
3881 Transport/ Road Furniture	30,000									
3881 Transport/ Road Signs	94,892									
13865 Unnamed La/Seg 01 Morton St to Bong Bong St/Surface	10,135									
24726 Warri Beach Reserve/Lloyd Rees Reserve/Carpark/Surface	1,263									
13232 Akuna Street/Seg 01 Collins St to End/Surface	33,497									
13437 Albion Park Rd/Seg 05 Bridge 6572/Surface	4,126									
9440 Aine Bank Lane/Seg 01 Sims Rd to End/Surface	8,964									
13247 Anderson Place/Seg 01 Ironbark Cr to End/Surface	8,712									
9444 Archibald Road/Seg 01 Greta St to Croft Pl/Surface	21,454									
9448 Archibald Road/Seg 02 Croft Pl to End/Surface	21,847									
13537 Austral Park Rd/Seg 01 Broughton Creek to End/Surface	11,727									

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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>		<b>1,593,220</b>	<b>2,410,710</b>	<b>2,023,841</b>	<b>2,549,333</b>	<b>2,979,426</b>	<b>2,731,455</b>	<b>2,813,643</b>	<b>2,706,948</b>	<b>2,664,681</b>	<b>2,698,262</b>
29545	Barney Street/Seg 02 Bridge 6602/Lower Greenacres Creek/Structure		180,000								
13321	Browns Lane/Seg 03 Bridge 6574 to End/Surface		917								
13323	Burra Creek Road/Seg 01 Jamberoo Mountain Rd to Seal End/Surface		13,284								
9648	Campbell Street/Seg 01 Belinda St to Parkes St/Surface		23,615								
13344	Clarke Street/Seg 01 Carberry Ave to Hoolong Ave/Surface		15,483								
13372	Crooked River Road/Seg 06 Crooked River Bridge to Scc Boundary/Surface		85,408								
13396	Dooley Road/Seg 02 Rail Crossing to End/Surface		19,119								
13397	Downes Place/Seg 01 Drualla Rd to End/Surface		17,589								
13546	Fountaindale Road/Seg 02 Bridge 6578/Surface		385								
13436	Foxground Road/Seg 01 Princes Hwy to Bridge 6582/Surface		33,782								
13438	Foxground Road/Seg 04 End Concrete Seal to Free Selectors Rd/Surface		19,223								
13439	Foxground Road/Seg 05 Free Selectors Rd to Bridge 6583/Surface		3,495								
13440	Foxground Road/Seg 07 Bridge 6583 to Bridge 6587/Surface		10,895								
13441	Foxground Road/Seg 09 Bridge 6587 to Hoddles Rd/Surface		14,711								
13442	Foxground Road/Seg 10 Hoddles Rd to Seal End/Surface		9,186								
13446	Garden Avenue/Seg 01 Belvedere St to End/Surface		24,695								
13459	Golfers Parade/Seg 01 Hoolong Ave to Samuels La/Surface		39,800								
9932	Greta Street/Seg 01 Blackwood St to Fightree La/Surface		22,133								
9936	Greta Street/Seg 02 Fightree La to Belinda St/Surface		18,887								
13475	Havelock Place/Seg 01 Henry Parkes Dr to End/Surface		10,609								
13481	Henry Parkes Drive/Seg 01 Meehan Dr to Newing Cct/Surface		35,088								
13482	Henry Parkes Drive/Seg 02 Newing Cct to Havelock Pl/Surface		19,882								
13483	Henry Parkes Drive/Seg 03 Havelock Pl to End/Surface		10,373								
13484	Hillingdon Crescent/Seg 01 Collins St to Cul De Sac/Surface		8,912								
13485	Hillview Circuit/Seg 01 South Kiama Dr to Hillview Cct/Surface		9,627								
13496	Holt Street/Seg 01 Johnson St to Eureka Ave/Surface		21,366								
13509	Hutchinson Street/Seg 01 Old Princes Hwy to Dundas St/Surface		16,211								
13510	Hutchinson Street/Seg 02 Dundas St to End/Surface		2,656								
9980	Illoura Place/Seg 01 Burnett Ave to End/Surface		8,821								
13553	Jerrara Road/Seg 01 Jamberoo Rd to Long Brush Rd/Surface		22,274								
13554	Jerrara Road/Seg 02 Long Brush Rd to Mount Brandon Rd/Surface		29,370								

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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>											
9984	Jubilee Avenue/Seg 01 Blackwood St to End/Surface	1,593,220	2,410,710	2,023,841	2,549,333	2,979,426	2,731,455	2,813,643	2,706,948	2,664,681	2,698,262
13563	Kaleula Crescent/Seg 01 Marsden St to Marsden St/Surface		23,477								
13596	Marks Street/Seg 01 South Kiama Dr to Railway Bridge/Surface		33,642								
17783	Marks Street/Seg 02 Railway Bridge/Surface		5,167								
13604	Marsden Street/Seg 04 Kaleula Cr to Tombonda Dr/Surface		6,758								
13609	McFaul Place/Seg 01 Shoalhaven St to End/Surface		38,836								
13633	Michael Crescent/Seg 01 Ironbark Cres to End/Surface		11,431								
13634	Millers Lane/Seg 01 Toolijooa Rd to End/Surface		29,568								
13639	Minnamurra Lane/Seg 01 Macquarie St to Beattie St/Surface		8,831								
13640	Minnamurra Lane/Seg 02 Beattie St to Owen St/Surface		14,874								
13641	Minnamurra Lane/Seg 03 Owen St to Allowrie St/Surface		7,220								
13689	Ocean Street/Seg 01 Wilson St to End/Surface		7,653								
10088	Osborne Street/Seg 02 Barclay St to Tasman Dr/Surface		23,137								
24682	Pacific Avenue/Seg 01 Geering St to Bridges Rd/Carpark/Surface R01		31,473								
			740								
25398	Pacific Avenue/Seg 01 Geering St to Bridges Rd/Carpark/Surface R02		407								
25405	Pacific Avenue/Seg 03 Park Rd to Sandy Wha Rd/Carpark/Surface R01		814								
25408	Pacific Avenue/Seg 04 Sandy Wha Rd to Moore St/Carpark/Surface R01		1,072								
25410	Pacific Avenue/Seg 04 Sandy Wha Rd to Moore St/Carpark/Surface R02		740								
25413	Pacific Avenue/Seg 05 Moore St to Miller St/Carpark/Surface R01		370								
25415	Pacific Avenue/Seg 05 Moore St to Miller St/Carpark/Surface R02		370								
25418	Pacific Avenue/Seg 06 Miller St to Renfrew Rd/Carpark/Surface R01		370								
13707	Pacific Street/Seg 01 Minnamurra St to Antrim St/Surface		9,542								
10116	Park Lane/Seg 01 Pacific Ave to Renfrew Rd/Surface		5,981								
13717	Pullen Place/Seg 01 Irvine St to End/Surface		4,322								
13723	Riversdale Avenue/Seg 01 Oxley Ave to Hoolong Ave/Surface		29,668								
13724	Riversdale Road/Seg 01 Jamberoo Rd to End/Surface		26,334								
13549	Riversdale Road/Seg 02 Riversdale Rd to Seal/Surface		1,294								
13542	Riversdale Road/Seg 04 Seal End to Jamberoo Rd/Surface		7,093								
10208	Robson Place/Seg 01 Armstrong Ave to End/Surface		5,697								

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Asset Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>	<b>1,593,220</b>	<b>2,410,710</b>	<b>2,023,841</b>	<b>2,549,333</b>	<b>2,979,426</b>	<b>2,731,455</b>	<b>2,813,643</b>	<b>2,706,948</b>	<b>2,664,681</b>	<b>2,698,262</b>
13748 Saddleback Mountain Road/Seg 02 Princes Hwy Overpass/Surface		2,078								
13754 Samuels Lane/Seg 01 Hoolong Ave to Golfers Pde/Surface		10,919								
10244 Sandy Wha Road/Seg 01 Pacific Ave to Renfrew Rd/Surface		31,537								
10268 Sharpe Place/Seg 01 Rowilns Rd to Hindmarsh St/Surface		33,890								
10272 Sharpe Place/Seg 02 Hindmarsh St to End/Surface		5,167								
10280 Sims Road/Seg 04 End AC to Aline Bank La/Surface		4,012								
10284 Sims Road/Seg 05 Aline Bank La to End/Surface		6,627								
13785 Tallinga Avenue/Seg 01 North Kiama Dr to Moona Ave/Surface		30,593								
13786 Tallinga Avenue/Seg 02 Moona Ave to Merindah Ave/Surface		25,556								
10332 Toorak Place/Seg 01 Carinya Way to End/Surface		4,676								
3881 Transport/ Pavements		560,302								
3881 Transport/ Reseal Provision		192,041								
3881 Transport/ Kerb Replacement		76,875								
3881 Transport/ Road Furniture		30,750								
3881 Transport/ Road Signs		97,265								
13831 Weir Street/Seg 01 South Kiama Dr to End/Surface		16,979								
10376 Wells Street/Seg 01 Short St to Campbell St/Surface		14,617								
10380 Wells Street/Seg 02 Campbell St to End East/Surface		9,921								
13840 Wilson Street/Seg 01 Marks St to Marsden St/Surface		21,228								
13841 Wilson Street/Seg 02 Marsden St to Ocean St/Surface		16,743								
13849 Yellow Rock Road/Seg 00 Scc Boundary to End/Surface		24,430								
13231 Adina Avenue/Seg 01 Brighton St to End/Surface			3,665							
9476 Barclay Street/Seg 01 Osborne St to Geering St/Surface			27,951							
13258 Barney Street/Seg 01 Bourrool St to Bridge 6602/Surface			17,923							
13259 Barney Street/Seg 03 Bridge 6602 to Manning St/Surface			14,217							
13260 Barney Street/Seg 04 Manning St to Railway Bridge/Surface			11,499							
13443 Barney Street/Seg 05 Railway Bridge/Surface			4,934							
13261 Barney Street/Seg 06 Railway Bridge to Shoalhaven St/Surface			30,472							
13262 Barney Street/Seg 07 Shoalhaven St to Belvedere St/Surface			57,837							
9680 Charles Avenue/Seg 01 Railway Ave to Boyd St/Surface			54,893							
9692 Charles Avenue/Seg 02 Boyd St to River St/Surface			17,585							
9696 Charles Avenue/Seg 03 River St to Beach St/Surface			15,226							
9700 Charles Avenue/Seg 04 Beach St to Links St/Surface			17,242							
9704 Charles Avenue/Seg 05 Links St to North St/Surface			44,850							
13416 Factory Lane/Seg 03 Bridge 6607 to End/Surface			39,345							
24215 Gerry Emery Reserve/Carpark/Surface			4,041							
			4,299							

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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>											
13551	James Lane/Seg 01 Colley Dr to Cul De Sac/Surface	1,593,220	2,410,710	2,023,841	2,549,333	2,979,426	2,731,455	2,813,643	2,706,948	2,664,681	2,698,262
10004	Jupiter Street/Seg 05 Fern St to Greta St/Surface		9,143	36,763							
10040	Morrow Street/Seg 01 Jupiter St to Belinda St/Surface		15,649	15,649							
23849	Pacific Avenue/Seg 06 Miller St to Renfrew Rd/TCD/Speedhump		15,766	15,766							
13750	Saddleback Mountain Road/Seg 04 Old Saddleback Rd to Wilsons Rd/Surface		50,757	50,757							
13751	Saddleback Mountain Road/Seg 05 Wilsons Rd to Williams Rd/Surface		16,656	16,656							
13752	Saddleback Mountain Road/Seg 06 Williams Rd to Fountaindale Rd/Surface		8,889	8,889							
13753	Saddleback Mountain Road/Seg 07 Fountaindale Rd to End/Surface		9,738	9,738							
10236	Sanctuary Place/Seg 01 Robinson Ave to Ritchie Pl/Surface		10,190	10,190							
10240	Sanctuary Place/Seg 02 Ritchie Pl to End/Surface		23,239	23,239							
23867	Sandy Wha Road/Seg 01 Pacific Ave to Renfrew Rd/TCD/Speedhump		13,976	13,976							
13757	Shoalhaven Street/Seg 01 Minnamurra St to Terralong St/Surface		96,421	96,421							
13760	Shoalhaven Street/Seg 04 Bong Bong St to Noorinan St/Surface		91,104	91,104							
13762	Shoalhaven Street/Seg 06 Barney St to Seaview St/Surface		30,710	30,710							
13763	Shoalhaven Street/Seg 07 Seaview St to Farmer St/Surface		37,336	37,336							
13764	Shoalhaven Street/Seg 08 Farmer St to Bridge 6615/Surface		8,116	8,116							
17787	Shoalhaven Street/Seg 09 Bridge 6615/Surface		2,960	2,960							
13765	Shoalhaven Street/Seg 10 Bridge 6615 to McFaul Pl/Surface		32,181	32,181							
13767	Shoalhaven Street/Seg 12 Bland St to Tanner Pl/Surface		20,400	20,400							
13768	Shoalhaven Street/Seg 13 Tanner Pl to End/Surface		44,465	44,465							
13784	Swan Place/Seg 01 Colley Dr to Cul De Sac/Surface		4,974	4,974							
13787	Tanner Place/Seg 01 Shoalhaven St to Weston Pl/Surface		9,868	9,868							
13788	Tanner Place/Seg 02 Weston Pl to End/Surface		18,728	18,728							
13814	Thomson Street/Seg 02 Bong Bong St to Brighton St/Surface		23,320	23,320							
13815	Thomson Street/Seg 03 Brighton St to Irvine St/Surface		7,169	7,169							
13816	Thornett Way/Seg 01 Meehan Dr to End/Surface		39,083	39,083							
13823	Tomlins Road/Seg 01 Princes Hwy to End/Surface		12,471	12,471							
3881	Transport/ Pavements		166,491	166,491							
3881	Transport/ Reseal Provision		537,201	537,201							
3881	Transport/ Kerb Replacement		78,797	78,797							
3881	Transport/ Road Furniture		31,519	31,519							

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Asset Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>	<b>1,593,220</b>	<b>2,410,710</b>	<b>2,023,841</b>	<b>2,549,333</b>	<b>2,979,426</b>	<b>2,731,455</b>	<b>2,813,643</b>	<b>2,706,948</b>	<b>2,664,681</b>	<b>2,698,262</b>
3881 Transport/ Road Signs			99,696							
10388 Willawa Avenue/Seg 01 Sandy Wha Rd to Boona Ave/Surface			35,795	38,612						
13835 William Street/Seg 01 Bonaira St to Orana Ave/Surface			18,291	15,957						
9452 Armstrong Avenue/Seg 01 Geering St to Myamba St/Surface				16,640						
9456 Armstrong Avenue/Seg 02 Myamba St to Robson Pl/Surface				14,242						
9460 Armstrong Avenue/Seg 03 Robson Pl to Watkins Cl/Surface				17,508						
9464 Armstrong Avenue/Seg 04 Watkins Cl to Fuller St/Surface				9,805						
9468 Armstrong Avenue/Seg 05 Fuller St to End/Surface				14,118						
9616 Burnett Avenue/Seg 01 Fern St to Henry Lee Dr/Surface				9,660						
9620 Burnett Avenue/Seg 02 Henry Lee Dr to Coolangatta Ave/Surface				28,629						
13322 Burnett Avenue/Seg 03 Coolangatta Ave to Kareela Pl/Surface				76,434						
9624 Burnett Avenue/Seg 04 Kareela Pl to Carinya Way/Surface				21,467						
9628 Burnett Avenue/Seg 05 Carinya Way to Barremma Pl/Surface				7,307						
9632 Burnett Avenue/Seg 06 Barremma Pl to Illoura Pl/Surface				11,864						
13337 Charmian Clift Place/Seg 01 Whitton Pl to End/Surface				48,011						
23625 Cloonty Road/Seg 02 Bridge 6608 to End/St/Furniture/BusShelter				21,054						
9772 Croft Place/Seg 01 Archibald Rd to End/Surface				43,160						
9968 Henry Lee Drive/Seg 01 Burnett Ave to Craig Pl/Surface				30,303						
9972 Henry Lee Drive/Seg 02 Craig Pl to Carinya Way/Surface				25,776						
13511 Hyam Place/Seg 01 Golden Valley Rd to End/Surface				8,309						
13575 Kurrawa Avenue/Seg 01 Moona Ave to Merindah Ave/Surface				91,151						
10024 Margaret Street/Seg 01 Victoria St to End/Surface				15,563						
13663 Newing Circuit/Seg 01 Meehan Dr to Henry Parkes Dr/Surface				36,367						
10080 O'Connell Place/Seg 01 Willowbank Pl to End/Surface				12,051						
13718 Quarter Sessions Road/Seg 01 Minnamurra Falls Rd to End/Surface				14,407						
10140 Railway Avenue/Seg 02 Links St to Beach St/Surface				13,849						
10144 Railway Avenue/Seg 03 Beach St to River St/Surface				14,262						
10148 Railway Avenue/Seg 04 River St to Boyd St/Surface				28,237						
10152 Railway Avenue/Seg 05 Boyd St to Charles Ave/Surface				136,726						
13725 Riverside Drive/Seg 01 Hutchinson St to Freeway Underpass/Surface				79,509						
13726 Riverside Drive/Seg 02 Freeway Underpass to Darien Ave/Surface				51,582						
13727 Riverside Drive/Seg 03 Darien Ave to North Klama Dr/Surface										
13728 Riverside Drive/Seg 04 North Klama Dr to Princes Hwy/Surface										

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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>											
13729	Riverside Drive/Seg 05 Princes Hwy Intersection/Surface	1,593,220	2,410,710	2,023,841	2,549,333	2,979,426	2,731,455	2,813,643	2,706,948	2,664,681	2,698,262
13730	Riverside Drive/Seg 06 Princes Hwy to Iluka Cr/Surface				35,090						
3881	Transport/ Pavements				145,974						
3881	Transport/ Reseal Provision				1,000,000						
3881	Transport/ Kerb Replacement				192,132						
3881	Transport/ Road Furniture				80,767						
3881	Transport/ Road Signs				32,307						
10420	Wingeevah Road/Seg 01 Fern St to End/Surface				102,188						
9480	Barreemma Place/Seg 01 Burnett Ave to End/Surface				8,315	4,718					
9488	Belmfels Lane/Seg 01 Crooked River Rd to End/Surface					6,746					
13275	Bele Place/Seg 01 Cedar Ridge Rd to Cul De Sac/Surface					27,124					
13276	Bele Place/Seg 02 Cul De Sac to Dead End/Surface					17,984					
9544	Bergin Street/Seg 01 Gray St to End/Surface					952					
9576	Boona Avenue/Seg 01 Sandy Wha Rd to Willawa Ave/Surface					19,704					
13859	Bourrool La/Seg 01 Bourrool St to End/Surface					6,610					
13314	Bourrool Street/Seg 04 Bourrool La to Barney St/Surface					14,725					
9644	Camira Avenue/Seg 01 Sandy Wha Rd to Willawa Ave/Surface					19,005					
9652	Campbell Street/Seg 02 Parkes St to Wells St/Surface					14,746					
9656	Campbell Street/Seg 03 Wells St to End/Surface					7,543					
9660	Carinya Way/Seg 01 Burnett Ave to Toorak Pl/Surface					21,792					
9664	Carinya Way/Seg 02 Toorak Pl to Henry Lee Dr/Surface					11,425					
9668	Carinya Way/Seg 03 Henry Lee Dr to End/Surface					8,082					
13332	Cedar Ridge Road/Seg 01 Bland St to Bele Pl/Surface					27,377					
13333	Cedar Ridge Road/Seg 02 Bele Pl to End/Surface					84,057					
19320	Charles Avenue/Seg 08 Ringoon Rd to Federal St/TCD/Speed Hump					20,866					
13346	Cloonty Road/Seg 02 Bridge 6608 to End/Surface					45,919					
9756	Coolangatta Avenue/Seg 01 Burnett Ave to Cambewarra Pl/Surface					15,699					
9760	Coolangatta Avenue/Seg 02 Cambewarra Pl to End/Surface					15,233					
13444	Free Selectors Road/Seg 01 End to Foxground Rd/Surface					114,761					
9888	Fuller Street/Seg 01 Armstrong Ave to Belinda St/Surface					13,200					
13521	Isabella Place/Seg 01 Barney St to End/Surface					23,844					
13530	Jamberoo Mountain Road/Seg 10 Budderoo Fire Trail to Knights Hill Rd/Surface					51,307					
13531	Jamberoo Mountain Road/Seg 11 Knights Hill Rd to Pheasant Ground Rd/Surface					83,538					

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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>											
13532	Jamberoo Mountain Road/Seg 12 Pheasant Ground Rd to Bridge 6592/Surface	1,593,220	2,410,710	2,023,841	2,549,333	2,979,426	2,731,455	2,813,643	2,706,948	2,664,681	2,698,262
10316	Jamberoo Mountain Road/Seg 13 Bridge 6592/Surface					239					
10008	Kareela Place/Seg 01 Burnett Ave to End/Surface					14,175					
10012	Kilburnie Place/Seg 01 Belinda St to End/Surface					6,749					
13570	King Street/Seg 01 Bland St to End/Surface					21,462					
13572	Knights Hill Road/Seg 01 Jamberoo Mountain Rd to Knights Hill Rd End/Surface					32,378					
13573	Knights Hill Road/Seg 02 Knights Hill Rd to End North/Surface					10,749					
13574	Knights Hill Road/Seg 03 Knights Hill Rd to End South/Surface					23,712					
13867	Knights Hill Road/Seg 04 Knights Hill Rd to East End/Surface					10,514					
10068	Noble Street/Seg 01 Fern St to Myamba St/Surface					6,643					
10072	Noble Street/Seg 02 Myamba St to Belinda St/Surface					36,454					
10160	Renfrew Road/Seg 01 Park Rd to Sandy Wha Rd/Surface					39,323					
10164	Renfrew Road/Seg 02 Sandy Wha Rd to Moore St/Surface					80,087					
10168	Renfrew Road/Seg 03 Moore St to Miller St/Surface					67,989					
10172	Renfrew Road/Seg 04 Miller St to Werri St/Surface					11,738					
10176	Renfrew Road/Seg 05 Werri St to Pacific Ave/Surface					44,133					
13739	Rose Valley Road/Seg 05 AC End to Bridge 6579/Surface					1,235					
17785	Rose Valley Road/Seg 06 Bridge 6579/Surface					163					
13740	Rose Valley Road/Seg 07 Bridge 6579 to Bridge 5/Surface					25,512					
17786	Rose Valley Road/Seg 10 Bridge 6580/Surface					219					
13741	Rose Valley Road/Seg 11 Bridge 6580 to Bridge 8/Surface					5,185					
13746	Rutledges Road/Seg 01 Curramore Rd to End/Surface					15,325					
3881	Transport/ Pavements					1,150,000					
3881	Transport/ Reseal Provision					353,070					
3881	Transport/ Kerb Replacement					82,786					
3881	Transport/ Road Furniture					33,115					
3881	Transport/ Road Signs					104,743					
10384	Werri Street/Seg 01 Renfrew Rd to Pacific Ave/Surface					85,786					
13842	Wilson's Road/Seg 01 Saddleback Mountain Rd to End/Surface					12,294					
13255	Baileys Road/Seg 04 End AC to End/Surface						1,678				
13309	Bong Bong Street/Seg 06 Shoalhaven St to Collins St/Surface						42,288				
13317	Brown Street/Seg 01 Terralong St to Cutting/Surface						35,045				
13318	Brown Street/Seg 02 Cutting/Surface						5,725				
13319	Brown Street/Seg 03 Cutting to Gipps St/Surface						34,698				
13343	Claremont Place/Seg 01 Irvine St to End/Surface						8,111				
13392	Dido Street/Seg 01 Jamberoo Rd to Glenbrook Dr/Surface						17,870				

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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>											
13393	Dido Street/Seg 02 Glenbrook Dr to Keppel St/Surface	1,593,220	2,410,710	2,023,841	2,549,333	2,979,426	2,731,455	2,813,643	2,706,948	2,664,681	2,698,262
13394	Dido Street/Seg 03 Keppel St to End/Surface						26,783				
13407	Elouera Place/Seg 01 Irvine St to End/Surface						9,173				
9824	Fern Street/Seg 07 Bridge 7 to Sandy Wha Rd/Surface 2						10,583				
9860	Fern Street/Seg 11 Burra St to Bridges Rd/Surface						62,110				
9864	Fern Street/Seg 12 Bridges Rd Intersection/Surface						6,788				
9868	Fern Street/Seg 13 Bridges Rd to Geering St/Surface						13,576				
9872	Fern Street/Seg 14 Geering St to Blackwood St/Surface						78,635				
24634	Jerrara Reserve/Carpark/Surface						49,293				
13556	Johnson Street/Seg 01 Merindah Ave to North Kiama Dr/Surface						3,266				
13635	Minnamurra Falls Road/Seg 01 Jamberoo Mountain Rd to Bridge 6598/Surface						38,493				
13638	Minnamurra Falls Road/Seg 06 Bridge 6626 to End/Surface						12,512				
13661	Mount Brandon Road/Seg 01 Jerrara Rd to End/Surface						17,390				
13691	Old Saddleback Road/Seg 01 Cul De Sac to Bland St/Surface						67,568				
13692	Old Saddleback Road/Seg 02 Bland St to Danube St/Surface						23,812				
13693	Old Saddleback Road/Seg 03 Danube St to Greyleigh Dr/Surface						46,647				
13694	Old Saddleback Road/Seg 04 Greyleigh Dr to Long Brush Rd/Surface						52,958				
13695	Old Saddleback Road/Seg 05 Long Brush Rd to Saddleback Mountain Rd/Surface						17,467				
13709	Panama Street/Seg 03 Riverside Dr to End/Surface						9,867				
10124	Parkes Street/Seg 01 End West to Campbell St/Surface						84,957				
10128	Parkes Street/Seg 02 Campbell St to End East/Surface						10,098				
13756	Sharpes Lane/Seg 01 Toolijooa Rd to End/Surface						10,207				
13780	Stockyard Mountain Road/Seg 00 Soc Boundary to End/Surface						17,700				
13781	Stockyard Mountain Road/Seg 00/Surface						9,062				
3881	Transport/ Pavements						13,941				
3881	Transport/ Reseal Provision						1,250,000				
3881	Transport/ Kerb Replacement						316,606				
3881	Transport/ Road Furniture						84,856				
3881	Transport/ Road Signs						33,943				
10392	Willawa Avenue/Seg 02 Booma Ave to Camira Ave/Surface						107,362				
10396	Willawa Avenue/Seg 03 Camira Ave to Fern St/Surface						17,913				
10400	Willowbank Place/Seg 01 Bridges Rd to Cope Pl/Surface						3,665				
10404	Willowbank Place/Seg 02 Cope Pl to Govan Pl/Surface						34,525				
							13,771				

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Asset Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>	<b>1,593,220</b>	<b>2,410,710</b>	<b>2,023,841</b>	<b>2,549,333</b>	<b>2,979,426</b>	<b>2,731,455</b>	<b>2,813,643</b>	<b>2,706,948</b>	<b>2,664,681</b>	<b>2,698,262</b>
10408 Willowbank Place/Seg 03 Gowen Pl to O'Connell Pl/Surface						13,164				
10412 Willowbank Place/Seg 04 O'Connell Pl to End/Surface						17,349	10,336			
13290 Bland Street/Seg 05 Eugene St Intersection/Surface							22,318			
13291 Bland Street/Seg 06 Eugene St to Old Saddleback Rd/Surface							33,699			
13292 Bland Street/Seg 08 Old Saddleback Rd to Cedar Ridge Rd/Surface										
13293 Bland Street/Seg 09 Cedar Ridge Rd to Greyleigh Dr/Surface							19,650			
13294 Bland Street/Seg 10 Greyleigh Dr to End/Surface							11,581			
9736 Chisholm Road/Seg 01 Blackwood St to Brook St/Surface							14,182			
13379 Curramore Road/Seg 04 North Curramore Rd to Rutledges Rd/Surface							12,615			
13402 Eastern View Place/Seg 01 Glenbrook Dr to Cul De Sac/Surface							3,846			
13414 Evans Place/Seg 01 Keppel St to Cul De Sac/Surface							5,691			
13421 Farmer Street/Seg 06 Shoalhaven St to Cooinda Pl/Surface							31,743			
13431 Fountaindale Road/Seg 01 Jamberoo Rd to Bridge 6578/Surface							28,934			
13454 Glenbrook Drive/Seg 01 Dido St to Eastern View Pl/Surface							41,946			
13455 Glenbrook Drive/Seg 02 Eastern View Pl to Keppel St/Surface							25,852			
13478 Henry Kendall Place/Seg 01 Hillview Cct to Henry Kendall Pl/Surface							10,781			
13479 Henry Kendall Place/Seg 02 Henry Kendall Pl to End Left/Surface							5,335			
13480 Henry Kendall Place/Seg 03 Henry Kendall Pl to End Right/Surface							8,847			
9976 Hindmarsh Street/Seg 01 Bridges Rd to Sharpe Pl/Surface							8,314			
13516 Irvine Street/Seg 01 Thomson St to Claremont Pl/Surface							51,504			
13517 Irvine Street/Seg 02 Claremont Pl to Pullen Pl/Surface							15,316			
13518 Irvine Street/Seg 03 Pullen Pl to Barney St/Surface							21,784			
13519 Irvine Street/Seg 04 Barney St to Elouera Pl/Surface							23,007			
13520 Irvine Street/Seg 05 Elouera Pl to End/Surface							6,002			
10312 Jamberoo Mountain Road/Seg 04 Bridge 6591/Surface							1,336			
13528 Jamberoo Mountain Road/Seg 08 Daltons Rd to Misty La/Surface							22,302			
13555 Jerrara Road/Seg 03 Mount Brandon Rd to Jamberoo Rd/Surface							41,708			
13565 Keppel Street/Seg 01 Dido St to Evans Pl/Surface							13,737			
13566 Keppel Street/Seg 02 Evans Pl to End/Surface							6,780			
13610 Meares Place/Seg 01 Terralong St to Cul De Sac/Surface							59,951			

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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>											
13642	Minnamurra Lane/Seg 04 Allowrie St to Bridge 6594/Surface	1,593,220	2,410,710	2,023,841	2,549,333	2,979,426	2,731,455	2,813,643	2,706,948	2,664,681	2,698,262
13643	Minnamurra Lane/Seg 06 Bridge 6594 to Bridge 6595/Surface							10,695			
13644	Minnamurra Lane/Seg 08 Bridge 6595 to Seal End/Surface							2,008			
13659	Moreton Bay Place/Seg 01 Alexander Ave to End/Surface							72,002			
13662	Myuna Place/Seg 01 Belvedere St to Cul De Sac/Surface							6,846			
13775	South Kiama Drive/Seg 06 Hillview Ct to Saddleback Mountain Rd/Surface R01							6,002			
								47,769			
13776	South Kiama Drive/Seg 07 Saddleback Mountain Rd to Railway Bridge/Surface							27,475			
13795	Terralong Street/Seg 02 Blowhole Point Rd to Manning St/Surface							21,073			
13796	Terralong Street/Seg 03 Manning St Intersection/Surface							22,118			
3881	Transport/ Pavements							1,328,495			
3881	Transport/ Reseal Provision							373,199			
3881	Transport/ Kerb Replacement							86,977			
3881	Transport/ Road Furniture							34,792			
3881	Transport/ Road Signs							110,046			
25927	Wallaby Hill Road/Seg 01 Wyalla Rd to End/Surface							68,860			
13832	Weston Place/Seg 01 Tanner Pl to End/Surface							22,407	13,096		
13834	Whitton Place/Seg 02 Charmian Clift Pl to End/Surface							13,782			
23606	Allowrie Street/Seg 02 Churchill St to Young St/StFurniture/BusShelter								13,096		
23610	Belinda Street/Seg 12 Greta St to Fern St/StFurniture/BusShelter								13,096		
13283	Belvedere Street/Seg 05 Seaview St to Cooinda Pl/Surface							13,351			
13284	Belvedere Street/Seg 06 Cooinda Pl to Myuna Pl/Surface							58,191			
13285	Belvedere Street/Seg 07 Myuna Pl to End/Surface							24,721			
13298	Bonaira Street/Seg 01 Manning St to Reid St/Surface							25,427			
13299	Bonaira Street/Seg 02 Reid St to Taylor St/Surface							14,764			
13300	Bonaira Street/Seg 03 Taylor St to William St/Surface							34,176			
13301	Bonaira Street/Seg 04 William St to Holden Ave/Surface							36,637			
13302	Bonaira Street/Seg 05 Holden Ave to O'Keefe Pl/Surface							34,996			
13303	Bonaira Street/Seg 06 O'Keefe Pl to Girrawheen Ave/Surface							45,112			
13307	Bong Bong Street/Seg 04 Railway Bridge to Railway Pde/Surface							12,896			
23622	Bridges Road/Seg 03 Fern St to Willowbank Pl/StFurniture/BusShelter								13,096		
13320	Browns Lane/Seg 01 Jamberoo Rd to Bridge 6574/Surface										4,057

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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>											
9640	Cambewarra Place/Seg 01 Cooliangatta Ave to End/Surface								2,706,948	2,664,681	2,698,262
23624	Charles Avenue/Seg 06 North St to Rangoon Rd/StFurniture/BusShelter	1,593,220	2,410,710	2,023,841	2,549,333	2,979,426	2,731,455	2,813,643	29,756		
13347	Clower Hill Road/Seg 01 Fountaindale Rd to End/Surface								13,096		
13364	Collins Street/Seg 10 Bong Bong St to Brighton St/Surface								22,606		
13365	Collins Street/Seg 11 Brighton St to End/Surface								29,027		
13655	Curramore Road/Seg 02 Bridge 6597/Surface								5,354		
13384	Danube Street/Seg 01 Greyleigh Dr to Dudgeon St/Surface								257		
13389	David Smith Place/Seg 01 South Kiama Dr to End/Surface								8,567		
23630	Drualla Road/Seg 01 Churchill St to O'Mara Pl/StFurniture/BusShelter								66,438		
									13,096		
13401	Dundas Street/Seg 01 Hutchinson St to End/Surface								2,024		
13422	Farmer Street/Seg 07 Cooinda Pl to End/Surface								8,612		
9828	Fern Street/Seg 16 Belinda St Intersection/Surface								9,660		
13432	Fountaindale Road/Seg 03 Bridge 6578 to Clover Hill Rd/Surface								24,176		
13697	Fountaindale Road/Seg 05 Bridge 6600/Surface								420		
23633	Gibraltar Avenue/Seg 01 Riverside Dr to North Kiama Dr/StFurniture/BusShelter								13,096		
23636	Jamberoo Road/Seg 06 Bridge 6588 to Riversdale Rd/StFurniture/BusShelter								13,096		
13544	Jamberoo Road/Seg 12 Browns La to Fountaindale Rd/Surface								108,771		
13547	Jamberoo Road/Seg 15 Bridge 6570 to Factory La/Surface								89,792		
13550	Jamberoo Road/Seg 18 Bridge 6571 to Jamberoo Boundary/Surface								61,722		
24624	James Oates Reserve/Carpark/Surface								51,264		
13552	Jerrara Avenue/Seg 01 Marks St to Marsden St/Surface								19,412		
23638	Meehan Drive/Seg 05 Barton Dr to Hughes Cr/StFurniture/BusShelter								13,096		
25882	Minnamurra Falls Road/Seg 03 Bridge 6598 to Quarter Sessions Rd/Surface								12,952		
10048	Nelson Street/Seg 01 Rowllins Rd to End/Surface								2,492		
24667	North Street Reserve/Carpark/Surface								1,372		
13687	North Street/Seg 02 Charles Ave to End/Surface								2,449		
23640	Railway Parade/Seg 01 Terralong St to Bong Bong St/StFurniture/BusShelter								13,096		
23642	Riverside Drive/Seg 12 Federal St to The Village/StFurniture/BusShelter								13,096		

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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>											
23644	Sandy Wha Road/Seg 02 Renfrew Rd to Willawa Ave/StFurniture/BusShelter	1,593,220	2,410,710	2,023,841	2,549,333	2,979,426	2,731,455	2,813,643	2,706,948	2,664,681	2,698,262
13790	Tate Place/Seg 01 Churchill St to Cul De Sac/Surface								13,096		
13791	Taylor Street/Seg 01 Farmer St to Chapman St/Surface								76,965		
13792	Taylor Street/Seg 02 Chapman St to Orana Ave/Surface								35,452		
13793	Taylor Street/Seg 03 Orana Ave to Bonaira St/Surface								16,086		
23647	Terralong Street/Seg 11 Thomson St to Meares Pl/StFurniture/BusShelter								20,004		
3881	Transport/ Pavements								13,096		
3881	Transport/ Kerb Replacement								1,261,913		
3881	Transport/ Road Furniture								89,151		
3881	Transport/ Road Signs								35,662		
25928	Williams Road/Seg 01 Saddleback Mountain Rd to End/Surface								112,797		
13843	Wyalla Road/Seg 01 Churchill St to Macquarie St/Surface								22,645		
25929	Wyalla Road/Seg 02 Macquarie St to Wallaby Hill Rd/Surface								6,772	11,428	
24204	Akuna St North Carpark/Carpark/Surface								10,898	4,286	
24207	Akuna St South Carpark/Carpark/Surface									6,527	
24577	Black Head Reserve/Carpark South/Surface									505	
24218	Brown Street/Seg 01 Terralong St to Cutting/Carpark/Surface									7,252	
24742	Gerringong Tennis Club/Carpark/Surface									2,769	
24740	Hindmarsh Park/Carpark/Surface									12,527	
24581	Kiama Sports Complex/Kiama Netball Club/Carpark Netball Courts/Surface									549	
24589	Manning Street/Seg 07 Farmer St to Bonaira St/Carpark/Surface									765	
24698	Shoalhaven Street/Seg 01 Minnamurra St to Terralong St/Carpark/Surface									5,714	
24583	Stead Reserve/Kiama Tennis Centre/Carpark/Surface									2,426	
24735	Tingira Crescent/Seg 01 Tombonda Dr to Boanyo Ave/Carpark/Surface									1,294,709	
3881	Transport/ Pavements									1,068,201	
3881	Transport/ Reseal Provision									91,380	
3881	Transport/ Kerb Replacement									36,554	
3881	Transport/ Road Furniture									115,617	
3881	Transport/ Road Signs									3,472	
24673	Werrri Beach Carpark South/South Carpark/Surface										

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Asset Description	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Roads and Bridges</b>									
26058 Blowhole Point Rd/Seg 01 Terralong St to Blowhole Point Rd/Surface (CapRen 2015)	1,593,220	2,023,841	2,549,333	2,979,426	2,731,455	2,813,643	2,706,948	2,664,681	2,698,262
26060 Blowhole Point Rd/Seg 02 Blowhole Point Rd to Carpark/Surface (CapRen 2015)									43,632
9780 Crooked River Road/Seg 02 Beinriels La to Headland Dr/Surface									30,444
13813 Thomson Street/Seg 01 Terralong St to Bong Bong St/Surface									69,074
3881 Transport/ Pavements									49,448
3881 Transport/ Reseal Provision									1,116,051
3881 Transport/ Kerb Replacement									1,139,973
3881 Transport/ Road Furniture									93,665
3881 Transport/ Road Signs									37,468
									118,507

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**Appendix C Projected New/Upgrade 10 Year Capital Works Program**

Location	Asset	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Ambulance Station Kiama	Car Park	100,000									
Charles/Oxley Avenue, Kiama Downs	Pedestrian Refuge Crossing	27,500									
Fern/Noble Streets, Gerringong	Landscaping & Improvements	180,000									
Gainsborough Shops	Lighting behind shops	20,000									
Kiama High School (Northside)	Drop off zone			33,000							
Kiama High School (Southside)	Drop off zone			250,000							
Kiama Tennis Club	Car Park	20,000									
Kiama Avenue, Kiama Downs	Additional street lighting		25,000								
Meehan Drive (East)	LATM/linemarking	40,000									
Mount Brandon Road, Jamberoo	Causeway upgrade		310,000								
Shoalhaven/Bong Bong Streets	Pedestrian Access Management Plan	10,000									
Shoalhaven/Bong Bong Streets	Pedestrian refuge crossing from PAMP Sig 1		10,000								
Shoalhaven/Bong Bong Streets	Pedestrian refuge crossing from PAMP Sig 2			10,000							
Shoalhaven/Bong Bong Streets	Pedestrian refuge crossing from PAMP Sig 3				10,000						
Street Lighting 17/18	Various	20,000									
Street Lighting 18/19	Various		11,103								
Street Lighting 19/20	Various			20,000							
Street Lighting 20/21	Various				10,000						
Street Lighting 21/22	Various					20,000					
Street Lighting 22/23	Various						20,000				
Street Lighting 23/24	Various							80,000			
Street Lighting 24/25	Various								68,394		
Street Lighting 25/26	Various									100,000	
Street Lighting 26/27	Various										203,973

KIAMA MUNICIPAL COUNCIL – ROAD ASSET MANAGEMENT PLAN

**Appendix D Abbreviations**

<b>AAAC</b>	Average annual asset consumption
<b>AM</b>	Asset management
<b>AM Plan</b>	Asset management plan
<b>ARI</b>	Average recurrence interval
<b>ASC</b>	Annual service cost
<b>BOD</b>	Biochemical (biological) oxygen demand
<b>CRC</b>	Current replacement cost
<b>CWMS</b>	Community wastewater management systems
<b>DA</b>	Depreciable amount
<b>DRC</b>	Depreciated replacement cost
<b>EF</b>	Earthworks/formation
<b>IRMP</b>	Infrastructure risk management plan
<b>LCC</b>	Life Cycle cost
<b>LCE</b>	Life cycle expenditure
<b>LTFP</b>	Long term financial plan
<b>MMS</b>	Maintenance management system
<b>PCI</b>	Pavement condition index
<b>RV</b>	Residual value
<b>SoA</b>	State of the Assets
<b>SS</b>	Suspended solids
<b>vph</b>	Vehicles per hour
<b>WDCRC</b>	Written down current replacement cost



## Appendix E Glossary

### 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

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 hierarchy

A framework for segmenting an asset base into appropriate classifications. The asset hierarchy can be based on asset function or asset type or a combination of the two.

### Asset management (AM)

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 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.

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**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.

**Class of assets**

See asset class definition

**Component**

Specific parts of an asset having independent physical or functional identity and having specific attributes such as different life expectancy, maintenance regimes, risk or criticality.

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**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 cash flow 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, including any costs necessary to place the asset into service. This includes one-off design and project management costs.

**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.

**Deferred maintenance**

The shortfall in rehabilitation work undertaken relative to that required to maintain the service potential of an asset.

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

**Economic life**

See useful life definition.

**Expenditure**

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

**Expenses**

Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or increases in liabilities that result in decreases in equity, other than those relating to distributions to equity participants.

**Fair value**

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

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**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.

**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 that contribute to meeting the needs of organisations or the 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 separate 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.

**Key performance indicator**

A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or other target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.

**Level of service**

The defined service quality for a particular service/activity against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental impact, 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 average operations, maintenance and capital renewal expenditure accommodated in the long term financial plan over 10 years. Life Cycle Expenditure may be compared to average Life Cycle Cost to give an initial indicator of affordability of projected service levels when considered with asset age profiles.

**Loans / borrowings**

See borrowings.

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**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 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**

The notion of materiality guides the margin of error acceptable, the degree of precision required and the extent of the disclosure required when preparing general purpose financial reports. Information is material if its omission, misstatement or non-disclosure has the potential, individually or collectively, to influence the economic decisions of users taken on the basis of the financial report or affect the discharge of accountability by the management or governing body of the entity.

**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.

**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 to provide a service. In common use the term typically includes, eg power, fuel, staff, plant equipment, on-costs and overheads but excludes maintenance and depreciation. Maintenance and depreciation is on the other hand included in operating expenses.

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**Operating expense**

The gross outflow of economic benefits, being cash and non cash items, during the period arising in the course of ordinary activities of an entity when those outflows result in decreases in equity, other than decreases relating to distributions to equity participants.

**Operating expenses**

Recurrent expenses continuously required to provide a service, including power, fuel, staff, plant equipment, maintenance, depreciation, on-costs and overheads.

**Operations, maintenance and renewal financing ratio**

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

**Operations, maintenance and renewal gap**

Difference between budgeted expenditures in a long term financial plan (or estimated future budgets in absence of a long term financial plan) and projected expenditures for operations, maintenance and renewal of assets to achieve/maintain specified service levels, totalled over a defined time (e.g. 5, 10 and 15 years).

**Pavement management system (PMS)**

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

**PMS Score**

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

**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).

**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 operations and maintenance expenditure.

**Recurrent funding**

Funding to pay for recurrent expenditure.

**Rehabilitation**

See capital renewal expenditure definition above.

**Remaining useful life**

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

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**Renewal**

See capital renewal expenditure definition above.

**Residual value**

The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.

**Revenue generating investments**

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

**Risk management**

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

**Section or segment**

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

**Service potential**

The total future service capacity of an asset. It is normally determined by reference to the operating capacity and economic life of an asset. A measure of service potential is used in the not-for-profit sector/public sector to value assets, particularly those not producing a cash flow.

**Service potential remaining**

A measure of the future economic benefits remaining in assets. It may be expressed in dollar values (Fair Value) or as a percentage of total anticipated future economic benefits. It is also a measure of the percentage of the asset's potential to provide services that is still available for use in providing services (Depreciated Replacement Cost/Depreciable Amount).

**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.

**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.

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**Value in Use**

The present value of future cash flows expected to be derived from an asset or cash generating unit. 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 net cash inflows, where the entity would, if deprived of the asset, replace its remaining future economic benefits.

Source: IPWEA, 2009, Glossary

Additional and modified glossary items shown \*





# Asset Management Plan


## Stormwater



November 2016

Item 11.5

Enclosure 5

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## 1. EXECUTIVE SUMMARY

### Context

The Kiama Municipal Council area is a mountainous region located on the south coast of NSW. This stormwater asset management plan describes the services provided by Council to facilitate the flow of stormwater within the municipality resulting in the discharge to the ocean whilst minimising the impact of storm events to the community and the environment.

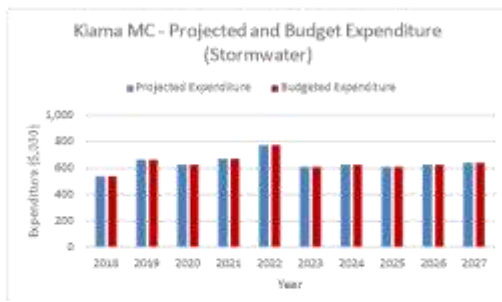
The stormwater network comprises of five catchment areas that discharge into the ocean. Each catchment is divided into sub catchments comprising of creeks and overland flow integrated into the constructed drainage network comprising of pipes, drainage pits, open channels and gross pollutant traps.

These infrastructure assets have a replacement value of \$34,116,181

### What does it Cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan (AM Plan) includes operations, maintenance, renewal and upgrade of existing assets over the 10 year planning period is \$6,386,297 or \$638,630 on average per year.

Estimated available funding for this period is \$6,386,297 or \$638,630 on average per year which is 100% of the cost to provide the service. Projected expenditure required to provide services in the AM Plan compared with planned expenditure currently included in the Long Term Financial Plan are shown in the graph below.



### What we will do

We plan to provide stormwater services for the following:

- Maintenance, renewal and upgrade of the Pipes, Pits, Open Channels and Gross Pollutant Traps to meet service levels set by Council in annual budgets.
- All required asset renewals have been incorporated into the 10 year financial plan.
- New and Upgraded Stormwater Assets within the 10 year financial plan are contained in Appendix C.

### What we cannot do

We do **not** have enough funding to provide all services at the desired service levels or provide new services. Works and services that cannot be provided under present funding levels are:

- Comprehensive visual inspection and condition assessment of the pipe network.
- Comprehensive inspection schedule and condition assessment of the pits.

### Managing the Risks

There are risks associated with providing the service and not being able to complete all identified activities and projects. We have identified major risks as:

- Unidentified blockage of pits and pipes from asset failure resulting in unplanned overland flow.
- Unidentified blockage of pits and pipes from debris resulting in unplanned overland flow.

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

- Inspecting key areas of the network that pose the highest risk as a result of overland flow.
- Inspecting reported blockages where overland flow has occurred

### Confidence Levels

This AM Plan is based on medium level of confidence information.

### The Next Steps

The actions resulting from this asset management plan are:

- Conduct maintenance in accordance with the asset management plan.
- Conduct renewals in accordance with the asset management plan.
- Conduct enhancements in accordance with the asset management plan.

**Questions you may have**

**What is this plan about?**

This asset management plan covers the infrastructure assets that serve the Kiama Municipal Council community’s storm water drainage needs. The assets include Pipes, Pits, Concrete Cell Structures, Open Channels, Headwalls and Gross Pollutant Traps throughout the community to minimize the impact of overland flow as a result of minor and major storm events.

**What is an Asset Management Plan?**

Asset management planning is a comprehensive process to ensure delivery of services from infrastructure is provided in a financially sustainable manner.

An asset management plan details information about infrastructure assets including actions required to provide an agreed level of service in the most cost effective manner. The plan defines the services to be provided, how the services are provided and what funds are required to provide the services.

**Why is there a funding shortfall?**

Most of the Council’s Stormwater network was constructed by developers and from government grants, often provided and accepted without consideration of ongoing operations, maintenance and replacement needs.

At the present time few of these assets are approaching the later years of their life and require replacement. As a result there is minimal requirement for asset renewal in this plan.

Our present funding levels are sufficient to continue to provide existing services at current levels in the medium term.

**What options do we have?**

Resolving the Maintenance and inspection funding shortfall involves several steps:

1. Improving asset knowledge so that data accurately records the asset inventory, how assets are performing and when assets are not able to provide the required service levels,
2. Improving our efficiency in operating, maintaining, renewing and replacing existing assets to optimise life cycle costs,
3. Identifying and managing risks associated with providing services from infrastructure,

4. Making trade-offs between service levels and costs to ensure that the community receives the best return from infrastructure,
5. Identifying assets surplus to needs for disposal to make saving in future operations and maintenance costs,
6. Consulting with the community to ensure that Stormwater services and costs meet community needs and are affordable,
7. Developing partnership with other bodies, where available to provide services,
8. Seeking additional funding from governments and other bodies to better reflect a ‘whole of government’ funding approach to infrastructure services.

**What happens if we don’t manage the shortfall?**

It is likely that we will not achieve the optimum lifecycle cost for the Stormwater, and unplanned overland flows will occur due to blockages and network failure.



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**What can we do?**

We can develop options, costs and priorities for future Stormwater services, consult with the community to plan future services to match the community service needs with ability to pay for services and maximise community benefits against costs.

**What can you do?**

We will be pleased to consider community consultation on the issues raised in this asset management plan and suggestions on how we may change or reduce its Stormwater mix of services to ensure that the appropriate level of service can be provided to the community within available funding.

**2. INTRODUCTION**

**2.1 Background**

This asset management plan is to demonstrate responsive management of assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding needed to provide the required levels of service over a 10 year planning period.

The asset management plan follows the format for AM Plans recommended in Section 4.2.6 of the International Infrastructure Management Manual<sup>1</sup>.

The asset management plan is to be read with the organisation’s Asset Management Policy, Asset Management Strategy and the following associated planning documents:

- Community Strategic Plan
- Work Force Plan
- 10 Year Financial Plan
- Delivery Program
- Operational Plan

This infrastructure assets covered by this asset management plan are shown in Table 2.1. These assets are used to provide a stormwater network to service the community.

**Table 2.1: Assets covered by this Plan**

<b>Asset Category</b>	<b>Quantity</b>	<b>Items</b>	<b>Replacement Value</b>
Pits		3971	8,745,658
Pipes	80.371 Km	3702	25,211,987
Open Channel	0.130 Km	1	27,265
Gross Pollutant Traps		11	131,272
<b>Total</b>			<b>34,116,181</b>

Key stakeholders in the preparation and implementation of this asset management plan are: Shown in Table 2.1.1.

**Table 2.1.1: Key Stakeholders in the AM Plan**

<b>Key Stakeholder</b>	<b>Role in Asset Management Plan</b>
Councillors	<ul style="list-style-type: none"> <li>• Represent needs of community/shareholders,</li> </ul>
General Manager	<ul style="list-style-type: none"> <li>• Allocate resources to meet the organisation’s objectives in providing services while managing risks,</li> <li>• Ensure organisation is financial sustainable.</li> </ul>
Directors	<ul style="list-style-type: none"> <li>• Ensure the plans objectives and financial requirements are included in councils integrated planning and reporting documentation</li> </ul>
Manager Of Works	<ul style="list-style-type: none"> <li>• Delivery of the asset management plan objectives</li> </ul>

<sup>1</sup> IPWEA, 2011, Sec 4.2.6, *Example of an Asset Management Plan Structure*, pp 4|24 – 27.

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



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## 2.2 Goals and Objectives of Asset Management

The organisation exists to provide services to its community. Some of these services are provided by infrastructure assets. We have acquired infrastructure assets by purchase, by contract, construction by our staff and by donation of assets constructed by developers and others to meet increased levels of service.

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.<sup>2</sup>

## 2.3 Plan Framework

Key elements of the plan are

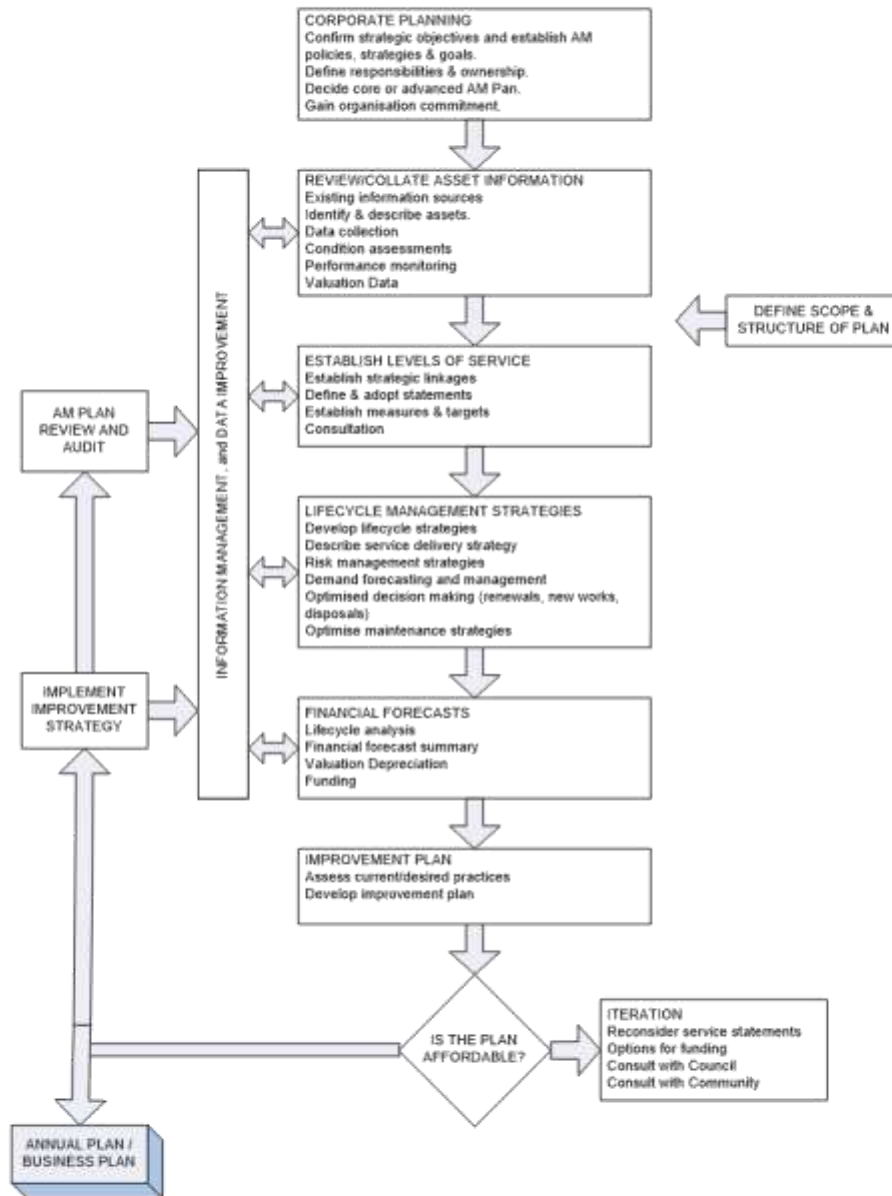
- Levels of service – specifies the services and levels of service to be provided by the organisation,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Life cycle management – how Council will manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices,
- Monitoring – how the plan will be monitored to ensure it is meeting organisation’s objectives,
- Asset management improvement plan.

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

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<sup>2</sup> Based on IPWEA, 2011, IIMM, Sec 1.2 p 1|7.

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



## 2.4 Core and Advanced Asset Management

This asset management plan is prepared as a 'core' asset management plan over a 20 year planning period in accordance with the International Infrastructure Management Manual<sup>3</sup>. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. Core asset management is a 'top down' approach where analysis is applied at the 'system' or 'network' level.

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

## 2.5 Community Consultation

This 'core' asset management plan is prepared to facilitate community consultation initially through feedback on public display of draft asset management plans prior to adoption by the Council. Future revisions of the asset management plan will incorporate community consultation on service levels and costs of providing the service. This will assist the Council and the community in matching the level of service needed by the community, service risks and consequences with the community's ability and willingness to pay for the service.

## 3. LEVELS OF SERVICE

### 3.1 Customer Research and Expectations

The organisation has carried out an IRIS Survey prior to developing a Community Strategic Plan on customer satisfaction and expectations. However storm water was not raised as an issue. In preparation of the next Community Strategic Plan the public will be surveyed for their opinions on their expectations and satisfaction.

The organisation uses this information in developing its Strategic Plan and in allocation of resources in the budget.

### 3.2 Strategic and Corporate Goals

This asset management plan is prepared under the direction of the organisation's vision, mission, goals and objectives.

Our vision is:

***Working together for a healthy, sustainable and caring community***

Our mission is:

***Kiama Council will work to create a Municipality that has a healthy, vibrant lifestyle, beautiful environment and harmonious, connected and resilient community***

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<sup>3</sup> IPWEA, 2011, IIMM.

Relevant organisational goals and objectives and how these are addressed in this asset management plan are:

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

Plan Level	Plan No.	Plan Description	Measure's
CSP Strategy	2.11	Effectively manage the drainage network to cater for current and future generations	
DP Action	2.12.1	Manage drainage infrastructure for the community by the implementation of the Drainage Asset Management Plan actions	Maintain or increase community satisfaction with the Drainage Network
			Optimal renewal of Drainage Network infrastructure
			The Stormwater Asset Management Plan is fully funded
			Capital works are delivered in accordance with Delivery Program
OP Activity	2.12.1.1	Manage drainage asset renewals	Percentage of renewal program completed
			Percentage of renewals updated in the Asset Management Information System
			Percentage of scheduled designs completed
			Renewal Budget YTD%
OP Activity	2.12.1.2	Manage drainage new asset creation	New Asset Budget v Actual expenditure percentage
			Percentage of new asset program completed
			Percentage of scheduled designs completed
OP Activity	2.12.1.3	Manage drainage asset maintenance and operation	Unscheduled Maintenance Budget YTD%
OP Activity	2.12.1.4	Create a Stormwater Asset Management Plan	New Asset schedule created for following year Budget
			Renewal schedule created for following year Budget
OP Activity	2.12.1.5	Undertake the preparation of Flood Studies for identified catchments	Number of scheduled studies completed
CSP Strategy	4.11	Ensure Council owned buildings and infrastructure are planned and maintained with consideration to both current and future generations	
DP Action	4.11.1	Ensure the Strategic Asset Management Plan is maintained and funded in the 10 year financial plan	Strategic Asset Management Plan is funded to meet Community Strategic Plan objectives
OP Activity	4.11.1.1	Review and re-adopt the Asset Management Policy	Policy re-adopted within 12 months of newly elected Councillors
OP Activity	4.11.1.2	Maintain a Strategic Asset Management Plan (SAMP) aligned with individual Asset Management Plans	Percentage of plans aligned with SAMP
OP Activity	4.11.1.3	Ensure ongoing alignment of Asset Management with Councils 10 year financial Plan	Percentage of plans aligned with 10 year Financial Plan
OP Activity	4.11.1.4	Seek infrastructure funding from external sources	Value of grants secured

The organisation will exercise its duty of care to ensure public safety is accordance with the infrastructure risk management plan prepared in conjunction with this AM Plan. Management of infrastructure risks is covered in Section 5.2

**3.3 Legislative Requirements**

The organisation has to meet many legislative requirements including Australian and State legislation and State regulations. These include:

**Table 3.3: Legislative Requirements**

Legislation	Requirement
Local Government Act 1993	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Protection of the Environment Operations Act 1997	To ensure that all reasonable and practicable measures are taken to protect, restore and enhance the quality of the environment having regard to the principles of ecologically sustainable development.
Australian Accounting Standards	Sets out the financial reporting standards relating to Infrastructure assets. Standards of particular relevance to Infrastructure Assets include: <ul style="list-style-type: none"> <li>• AASB116 Property, Plant &amp; Equipment – prescribes requirement for recognition and depreciation of property, plant and equipment assets</li> <li>• AASB136 Impairment of Assets - aims to ensure that assets are carried at amounts that are not in excess of their recoverable amounts</li> <li>• AASB1021 Depreciation of Non-Current Assets - specifies how depreciation is to be calculated</li> <li>• AAS1001 Accounting Policies - specifies the policies that Council is to have for recognition of assets and depreciation</li> <li>• AASB1041 Accounting for the reduction of Non-Current Assets - specifies the frequency and basis of calculation depreciation and revaluation basis used for assets</li> <li>• AAS1015 Accounting for acquisition of assets - method of allocating the value to new assets on acquisition</li> </ul>
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)
Civil Liability Act 2002	Protects the Council from civil action by requiring the courts to take into account the financial resources, the general responsibilities of the authority and the compliance with general practices and applicable standards.
Water Management Act 2000	The objects of this Act are to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations and, in particular: <ul style="list-style-type: none"> <li>• to apply the principles of ecologically sustainable development, and</li> <li>• to protect, enhance and restore water sources, their associated ecosystems, ecological processes and biological diversity and their water quality, and</li> <li>• to recognise and foster the significant social and economic benefits to the State that result from the sustainable and efficient use of water, including:                             <ul style="list-style-type: none"> <li>○ benefits to the environment, and</li> <li>○ benefits to urban communities, agriculture, fisheries, industry and recreation, and</li> <li>○ benefits to culture and heritage, and</li> <li>○ benefits to the Aboriginal people in relation to their spiritual, social, customary and economic use of land and water,</li> </ul> </li> <li>• to recognise the role of the community, as a partner with government, in resolving issues relating to the management of water sources,</li> <li>• to provide for the orderly, efficient and equitable sharing of water from water sources,</li> <li>• to integrate the management of water sources with the management of other aspects of the environment, including the land, its soil, its native vegetation and its native fauna,</li> <li>• to encourage the sharing of responsibility for the sustainable and efficient use of water between the Government and water users,</li> <li>• to encourage best practice in the management and use of water.</li> </ul>
Work Health And Safety Act 2011	To take a constructive role in promoting improvements in occupational health, safety and welfare practices and assisting in the preservation of public health and safety in all undertakings of Council

The organisation will exercise its duty of care to ensure public safety in accordance with the infrastructure risk management plan linked to this AM Plan. Management of risks is discussed in Section 5.2.

**3.4 Community Levels of Service**

Service levels are defined service levels in two terms, customer levels of service and technical levels of service.

Community Levels of Service measure how the community receives the service and whether the organisation is providing community value.

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?

The organisation's current and expected community service levels are detailed in Tables 3.4 and 3.5. Table 3.4 shows the agreed expected community levels of service based on resource levels in the current long-term financial plan and community consultation/engagement.

**Table 3.4: Community Level of Service**

Service Attribute	Service Objective	Performance Measure Process	Current Performance	Expected position in 10 years based on current LTFP
<b>COMMUNITY OUTCOMES</b>				
To provide an effective stormwater network with minimal flooding and water discharge of adequate quality				
<b>COMMUNITY LEVELS OF SERVICE</b>				
Quality	Provide a network discharge of adequate water quality	Customer service request relating to water quality	10/Year	Pollution reduced in water ways and surrounding ocean
	Organisational measure Confidence levels Medium			
Function	Ensure storm events have minimal flooding	Customer service request relating to accessibility and flooding	14/Year	Reduced customer service request relating to accessibility and flooding
	Organisational measure Confidence levels Medium			
Capacity/Utilisation	Provide an effective stormwater network	Customer service request relating to blocked drainage	43/Year	Reduced customer service request relating to flooding
	Organisational measure Confidence levels Medium			

### 3.5 Technical Levels of Service

**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, mowing grass, energy, inspections, etc.
- Maintenance – the activities necessary to retain an asset 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).

Service and asset managers plan, implement and control technical service levels to influence the customer service levels.<sup>4</sup>

Table 3.5 shows the technical level of service expected to be provided under this AM Plan. The agreed sustainable position in the table documents the position agreed by the Council following community consultation and trade-off of service levels performance, costs and risk within resources available in the long-term financial plan.

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<sup>4</sup> IPWEA, 2011, IIMM, p 2.22

Table 3.5: Technical Levels of Service

Service Attribute	Service Objective	Activity Measure Process	Current Performance *	Desired for Optimum Lifecycle Cost **	Agreed Sustainable Position ***
<b>TECHNICAL LEVELS OF SERVICE</b>					
Operations	Inspect stormwater pits and surroundings	Pits inspected on a 2 year schedule	Unknown	100%	100%
	Stormwater pit litter capture device cleaning	Annually serviced	100% Compliance	100%	100%
Maintenance	Respond to stormwater related customer service requests	Budget \$15,000 Inspect and assess defect complaints and make safe within 5 business hours	100% Compliance	100%	100%
	Respond to customer service requests for damaged Pit lids or Frames	Damage repaired within 30 days of customer service request receipt	100% Compliance	100%	100%
	Respond to customer service requests for blocked drains	Remove blockage within 30 days of customer service request receipt	100% Compliance	100%	100%
Renewal	Plan for the renewal of stormwater network components when the condition of the components is rated at 4 or below (Condition ratios are at 1-5)	Budget \$114,000 All required renewals included in Asset Management and Long Term Financial Plans	100% Compliance	100%	100%
Upgrade/New	Plan for Upgrades and additions to the stormwater network.	Budget as required included in LTP All required upgrades and additions included in Asset Management and Long Term Financial Plans	100% Compliance	100%	100%

Note: \* Current activities and costs (currently funded).  
 \*\* Desired activities and costs to sustain current service levels and achieve minimum life cycle costs (not currently funded).  
 \*\*\* Activities and costs communicated and agreed with the community as being sustainable (funded position following trade-offs, managing risks and delivering agreed service levels).



**4. FUTURE DEMAND**

**4.1 Demand Drivers**

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

**4.2 Demand Forecast**

The present position and projections for demand drivers that may impact future service delivery and utilisation of assets were identified and are documented in Table 4.3.

**4.3 Demand Impact on Assets**

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

**Table 4.3: Demand Drivers, Projections and Impact on Service**

Demand drivers	Present position	Projection	Impact on services
Population Growth	The estimated population is 21,314	The estimated annual population Growth is 1.37%	It is estimated that 1.37% of new asset are annually required
Climate Change	Infrastructure designed to suite current standards	Potentially Rising sea levels, additional rainfall and El Nino storm events.	Potentially services need to be upgraded to deliver an effective stormwater network

**4.4 Demand Management Plan**

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

Non-asset solutions focus on providing the required service without the need for the organisation to own the assets and management actions including reducing demand for the service, reducing the level of service (allowing some assets to deteriorate beyond current service levels) or educating customers to accept appropriate asset failures<sup>5</sup>. Examples of non-asset solutions include providing services from existing infrastructure such as aquatic centres and libraries that may be in another community area or public toilets provided in commercial premises.

Opportunities identified to date for demand management are shown in Table 4.4. Further opportunities will be developed in future revisions of this asset management plan.

**Table 4.4: Demand Management Plan Summary**

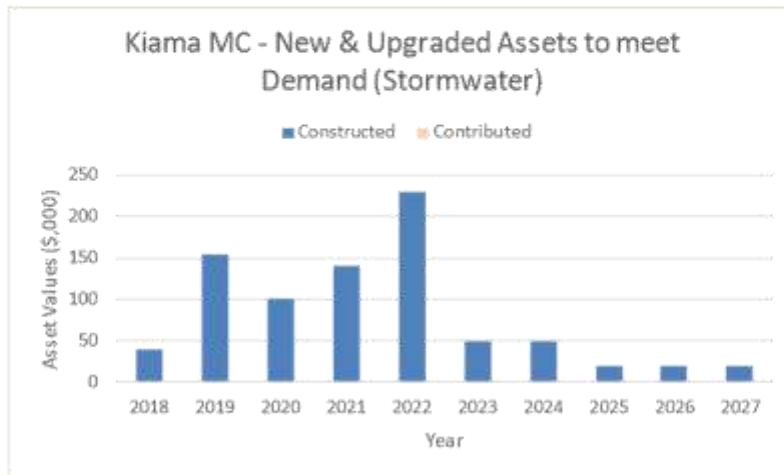
Demand Driver	Impact on Services	Demand Management Plan
Population Growth	It is estimated that 1.37% of new asset are annually required	Additional stormwater assets are required within sub divisions to accommodate the growth demand
Climate Change	Potentially services need to be upgraded to deliver an effective stormwater network which would require further funding.	Upgrade stormwater assets when required to accommodate the demand.

<sup>5</sup> IPWEA, 2011, IIMM, Table 3.4.1, p 3]58.

**4.5 Asset Programs to meet Demand**

The new assets required to meet growth will be acquired free of cost from land developments and constructed/acquired by the organisation. New assets constructed/acquired by the organisation are discussed in Section 5.5. The cumulative value of new contributed and constructed asset values are summarised in Figure 1.

**Figure 1: New & Upgraded Assets to meet Demand**



Acquiring these new assets will commit the organisation to fund ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs in Section 5.

**5. LIFECYCLE MANAGEMENT PLAN**

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

**5.1 Background Data**

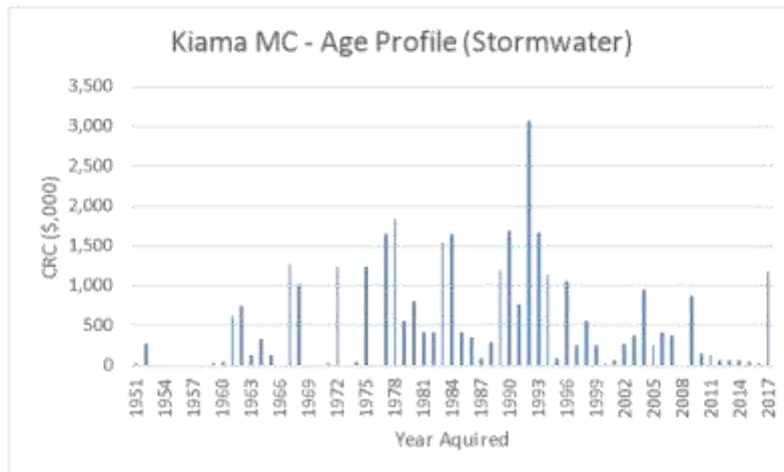
**5.1.1 Physical parameters**

The assets covered by this asset management plan are shown in Table 2.1.

The Stormwater Network comprises of Pipe, Pit, Open Channel and Gross Pollutant Trap assets that require regular reactive and planned maintenance to provide an effective system.

The age profile of the assets include in this AM Plan is shown in Figure 2.

**Figure 2: Asset Age Profile**



Plans showing the Stormwater Network assets are:

- Work As Executed Drawings stored in the corporate document management system (Trim). These documents are linked to individual assets records in the corporate asset management system (Authority).
- All Stormwater assets are geographically displayed on the corporate Geographic information system Stormwater layer which is fully integrated to Council's asset management system.

5.1.2 Asset capacity and performance

The organisation’s services are generally provided to meet design standards where these are available.

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

**Table 5.1.2: Known Service Performance Deficiencies**

Location	Service Deficiency
Collins Street, Kiama	Pipe Collapse
Colley Drive, Kiama	Pipe Collapse
Belvedere Street, Kiama	Pipe Radial Displacement
Bridges Road, Gerringong	Pipe Collapse
Flinders Avenue, Kiama Downs	Pipe Radial Displacement
Henry Lee Drive, Gerringong	Pipe Radial Displacement
Cunningham Street, Kiama Downs	Pipe Radial Displacement
Kiarama Avenue, Kiama Downs	Pipe Radial Displacement
Johnson Street, Kiama Downs	Pipe Radial Displacement
North Kiama Drive, Kiama Downs	Pipe Radial Displacement
Shoalhaven Street, Kiama	Pipe Radial Displacement
Charles Avenue, Kiama Downs	Pipe Radial Displacement
Minnamurra Street, Kiama	Pipe Radial Displacement
Terralong Street, Kiama	Pipe Radial Displacement
Holden Avenue, Kiama	Pipe Radial Displacement
Summerville Place, Kiama	Pipe Radial Displacement
Garden Avenue, Kiama	Pipe Radial Displacement
Burnett Avenue, Gerringong	Pipe Radial Displacement
Rowlins Road, Gerringong	Pipe Radial Displacement
South Kiama Drive, Kiama	Pipe Radial Displacement
Chapman Street	Pipe Radial Displacement

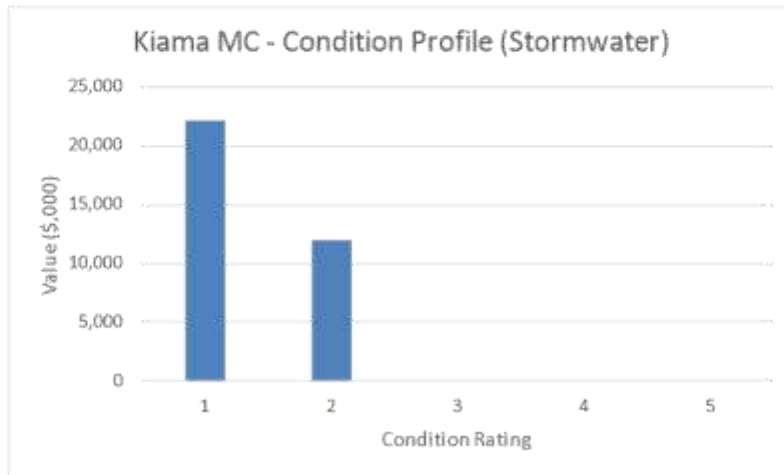
The above service deficiencies were identified from CCTV condition inspections.

5.1.3 Asset condition

Condition is monitored by inspecting Pit surrounds every 2 years and CCTV inspections on a reactive maintenance schedule.

The condition profile of our assets is shown in Figure 3.

Fig 3: Asset Condition Profile



Condition is measured using a 1 – 5 grading system<sup>6</sup> as detailed in Table 5.1.3.

Table 5.1.3: Simple Condition Grading Model

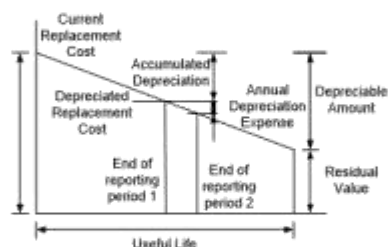
Condition Grading	Description of Condition
1	<b>Very Good:</b> only planned maintenance required
2	<b>Good:</b> minor maintenance required plus planned maintenance
3	<b>Fair:</b> significant maintenance required
4	<b>Poor:</b> significant renewal/rehabilitation required
5	<b>Very Poor:</b> physically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

<sup>6</sup> IPWEA, 2011, IIMM, Sec 2.5.4, p 2|79.

5.1.4 Asset valuations

The value of assets recorded in the asset register as at 30/06/2015 covered by this asset management plan is shown below. Assets were last revalued at 30/06/2015. Assets are valued using the depreciated replacement cost methodology. This asset class is revalued every 5 years.

Current Replacement Cost	\$34,116,181
Depreciable Amount	\$34,116,181
Depreciated Replacement Cost <sup>7</sup>	\$25,148,352
Annual Depreciation Expense	\$274,561



Useful lives were reviewed in June 2016 by assessing the condition of assets using sample areas of the network.

Key assumptions made in preparing the valuations were:

- Unit rate of excavation assumed a common sub surface material type and pipe depth
- Condition assessment of the samples reflects the entire network
- Pits where the dimensional information was absent used default dimensions

Major changes from previous valuations are due to an increase in the estimated life of Pits and Pipes from 100 years to 120 years.

Various ratios of asset consumption and expenditure have been prepared to help guide and gauge asset management performance and trends over time.

Rate of Annual Asset Consumption (Depreciation/Depreciable Amount)	0.80%
Rate of Annual Asset Renewal (Capital renewal exp/Depreciable amount)	0.66%

In 2018 the organisation plans to renew assets at 81.61% of the rate they are being consumed and will be increasing its asset stock by 0.117% in the year. All future asset renewals are fully funded in councils LTFP.

5.1.5 Historical Data

All Stormwater asset data and financial data are stored in Councils corporate Asset Management system.

5.2 Infrastructure Risk Management Plan

An assessment of risks<sup>8</sup> associated with service delivery from infrastructure assets has identified critical risks that will result in loss or reduction in service from infrastructure assets or a 'financial shock' to the organisation. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' - requiring immediate corrective action and 'High' - requiring prioritised corrective action identified in the Infrastructure Risk Management Plan, together with the estimated

<sup>7</sup> Also reported as Written Down Current Replacement Cost (WDCRC).

residual risk after the selected treatment plan is operational are summarised in Table 5.2. These risks are reported to management and Council.

**Table 5.2: Critical Risks and Treatment Plans**

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Pits	Blockage	High	<ul style="list-style-type: none"> <li>Scheduled Pit Cleaning Maintenance</li> <li>Condition inspections</li> <li>Maintenance where required</li> </ul>	Low	\$85,000
Gross Pollutant Traps	Blockage	High	<ul style="list-style-type: none"> <li>Condition inspections</li> <li>Maintenance where required</li> </ul>	Low	\$8,000

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

**5.3 Routine Operations and Maintenance Plan**

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

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

**5.3.1 Operations and Maintenance Plan**

Operations activities affect service levels including quality and function through street sweeping and grass mowing frequency, intensity and spacing of street lights and cleaning frequency and opening hours of building and other facilities.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating, eg road patching but excluding rehabilitation or renewal. Maintenance may be classified into reactive, planned and specific maintenance work activities.

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

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

Specific maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, replacing air conditioning units, etc. This work falls below the capital/maintenance threshold but may require a specific budget allocation.

Actual past maintenance expenditure is shown in Table 5.3.1.

**Table 5.3.1: Maintenance Expenditure Trends**

Year	Maintenance Expenditure	
	Planned and Specific	Unplanned
2014	\$0	\$88,918
2015	\$0	\$113,735
2016	\$0	\$75,805

Planned maintenance work is currently 0.00% of total maintenance expenditure.

Maintenance expenditure levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance expenditure levels are such that will result in a lesser level of service, the service consequences and service risks have been identified and service consequences highlighted in this AM Plan and service risks considered in the Infrastructure Risk Management Plan.

Assessment and prioritisation of reactive maintenance is undertaken by Council staff using experience and judgement. In conjunction with response levels of service detailed in Appendix A.

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,
- 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.

Asset hierarchy

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

The organisation’s service hierarchy is shown in Table 5.3.2.

Table 5.3.2: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
Catchment	Identify sources of stormwater specific to an ocean outfall
Sub catchment	Identify localised sources of stormwater within the catchment

Critical Assets

Critical assets are those assets which have a high consequence of failure but not necessarily a high likelihood of failure. By identifying critical assets and critical failure modes, organisations can target and refine investigative activities, maintenance plans and capital expenditure plans at the appropriate time.

Operations and maintenance activities may be targeted to mitigate critical assets failure and maintain service levels. These activities may include increased inspection frequency, higher maintenance intervention levels, etc. Critical assets failure modes and required operations and maintenance activities are detailed in Table 5.3.2.1.

Table 5.3.2.1: Critical Assets and Service Level Objectives



Critical Assets	Critical Failure Mode	Operations & Maintenance Activities
Pits	Blockage	<ul style="list-style-type: none"> <li>Scheduled Pit cleaning</li> <li>Repair damaged Pits</li> </ul>
GPT	Blockage	<ul style="list-style-type: none"> <li>Gross Pollutant Traps to be cleaned when required</li> </ul>

Standards and specifications

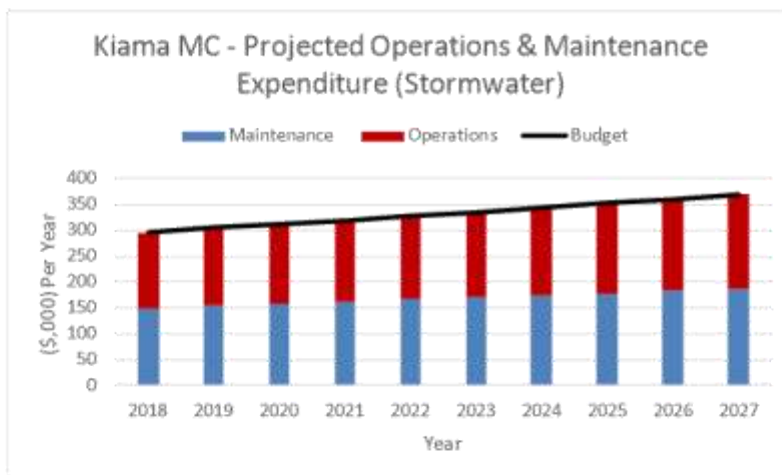
Maintenance work is carried out in accordance with the following Standards and Specifications.

- Work Health And Safety Act 2011
- Protection of the Environment Operations Act 1997
- Water Management Act 2000

5.3.3 Summary of future operations and maintenance expenditures

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 4. Note that all costs are shown in current 2016 dollar values (ie real values).

Figure 4: Projected Operations and Maintenance Expenditure



Deferred maintenance, ie works that are identified for maintenance and unable to be funded are to be included in the risk assessment and analysis in the infrastructure risk management plan.

Maintenance is funded from the operating budget where available. This is further discussed in Section 6.2.

5.4 Renewal/Replacement Plan

Renewal and replacement expenditure is major work which does not increase the asset’s design capacity but restores, rehabilitates, replaces or renews an existing asset to its original or lesser required service potential. Work over and above restoring an asset to original service potential is upgrade/expansion or new works expenditure.

5.4.1 Renewal plan

Assets requiring renewal/replacement are identified from one of three methods provided in the 'Expenditure Template'.

- Method 1 uses Asset Register data to project the renewal costs using acquisition year and useful life to determine the renewal year, or
- Method 2 uses capital renewal expenditure projections from external condition modelling systems (such as Pavement Management Systems), or
- Method 3 uses a combination of average *network renewals* plus *defect repairs* in the *Renewal Plan* and *Defect Repair Plan* worksheets on the 'Expenditure template'.

Method 1 was used for this asset management plan.

The useful lives of assets used to develop projected asset renewal expenditures are shown in Table 5.4.1. Asset useful lives were last reviewed on June 2016.<sup>9</sup>

**Table 5.4.1: Useful Lives of Assets**

<b>Asset Category</b>	<b>Useful Life</b>
Pits	120 years
Pipes	120 years
Open Channel	100 years
Gross Pollutant Traps	60 to 120 years

**5.4.2 Renewal and Replacement Strategies**

The organisation will plan capital renewal and replacement projects to meet level of service objectives and minimise infrastructure service risks by:

- Planning and scheduling renewal projects to deliver the defined level of service in the most efficient manner,
- Undertaking project scoping for all capital renewal and replacement projects to identify:
  - the service delivery 'deficiency', present risk and optimum time for renewal/replacement,
  - the project objectives to rectify the deficiency,
  - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
  - and evaluate the options against evaluation criteria adopted by the organisation, and
  - select the best option to be included in capital renewal programs,
- Using 'low cost' renewal methods (cost of renewal is less than replacement) wherever possible,
- Maintain a current infrastructure risk register for assets and 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,
- Review current and required skills base and implement workforce training and development to meet required construction and renewal needs,
- Maintain a current hierarchy of critical assets and capital renewal treatments and timings required ,
- Review management of capital renewal and replacement activities to ensure Council is obtaining best value for resources used.

Renewal ranking criteria

Asset renewal and replacement is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (eg replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (eg roughness of a road).<sup>10</sup>

It is possible to get some indication of capital renewal and replacement priorities by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have a high utilisation and subsequent impact on users would be greatest,
- The total value represents the greatest net value to the organisation,
- Have the highest average age relative to their expected lives,
- Are identified in the AM Plan as key cost factors,
- Have high operational or maintenance costs, and
- Where replacement with modern equivalent assets would yield material savings.<sup>11</sup>

The ranking criteria used to determine priority of identified renewal and replacement proposals is detailed in Table 5.4.2.

**Table 5.4.2: Renewal and Replacement Priority Ranking Criteria**

Criteria	Weighting
Colley Drive	10
Belvedere Street, Kiama	9
Bridges Road, Gerringong	9
Flinders Avenue, Kiama Downs	8
Henry Lee Drive, Gerringong	8
Cunningham Street, Kiama Downs	7
Kiarama Avenue, Kiama Downs	6
Johnson Street, Kiama Downs	5
North Kiama Drive, Kiama Downs	5
Shoalhaven Street, Kiama	4
Charles Avenue, Kiama Downs	4
Minnamurra Street, Kiama	4
Terralong Street, Kiama	4
Holden Avenue, Kiama	3
Summerville Place, Kiama	3
Garden Avenue, Kiama	3
Burnett Avenue, Gerringong	2
Rowlins Road, Gerringong	2
South Kiama Drive, Kiama	2
Chapman Street	2
<b>Total</b>	<b>100%</b>

<sup>10</sup> IPWEA, 2011, IIMM, Sec 3.4.4, p 3|60.

<sup>11</sup> Based on IPWEA, 2011, IIMM, Sec 3.4.5, p 3|66.

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**Renewal and replacement standards**

Renewal work is carried out in accordance with the following Standards and Specifications.

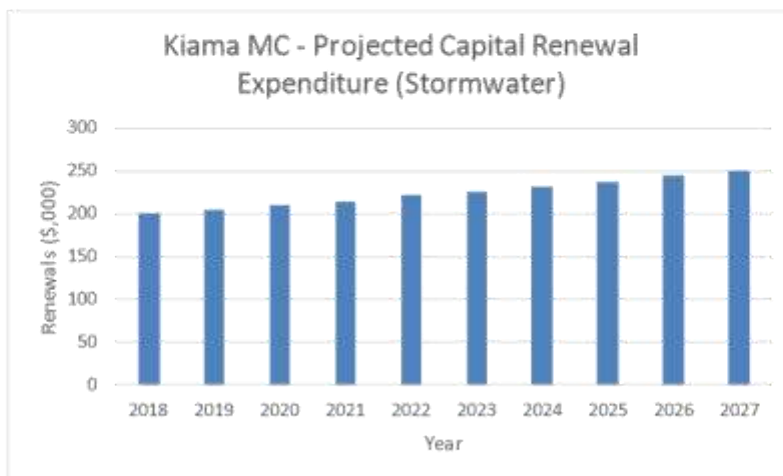
- Development Design Specification D04 Subsurface Drainage Design
- Development Design Specification D05 Stormwater Drainage Design
- Development Design Specification D07 Soil And Water Management
- Development Design Specification DQS Design Quality Assurance
- Development Construction Specification C201 Traffic Control
- Development Construction Specification C211 Control Of Erosion And Sedimentation
- Development Construction Specification C212 Clearing And Grubbing
- Development Construction Specification C213 Earthworks
- Development Construction Specification C220 Stormwater Drainage General
- Development Construction Specification C221 Pipe Drainage
- Development Construction Specification C222 Pre Cast Box Culverts
- Development Construction Specification C223 Drainage Structures
- Development Construction Specification C224 Open Drains
- Development Construction Specification C230 Subsurface Drainage General
- Development Construction Specification C231 Subsoil And Foundation Drains
- Development Construction Specification C232 Pavement Drains
- Development Construction Specification C233 Drainage Mats
- Development Construction Specification C241 Stabilisation
- Development Construction Specification C271 Minor Concrete Works
- Development Construction Specification C273 Landscaping
- Development Construction Specification 274 Masonry Walls
- Development Construction Specification 276 Crib Retaining Walls
- Development Construction Specification CQC Quality Control Requirements
- Development Construction Specification CQS Quality System Requirements
- Development Construction Specification CQSC Quality System Requirements Annexure
- New South Wales Specification 306U Road Openings And Restorations
- Water Management Act 2000
- Protection of the Environment Operations Act 1997
- Work Health And Safety Act 2011

5.4.3 Summary of future renewal and replacement expenditure

Projected future renewal and replacement expenditures are forecast to increase over time as the asset stock increases from growth. The expenditure is summarised in Fig 5. Note that all amounts are shown in real values.

The projected capital renewal and replacement program is shown in Appendix B.

Fig 5: Projected Capital Renewal and Replacement Expenditure



Deferred renewal and replacement, ie those assets identified for renewal and/or replacement and not scheduled in capital works programs are to be included in the risk analysis process in the risk management plan.

Renewals and replacement expenditure in the organisation’s capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

5.5 Creation/Acquisition/Upgrade Plan

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

5.5.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as councilor/director or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programs. The priority ranking criteria is detailed below.

Table 5.5.1: New Assets Priority Ranking Criteria

Criteria	Weighting
Collins Street, Kiama	100
<b>Total</b>	<b>100%</b>

5.5.2 Capital Investment Strategies

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

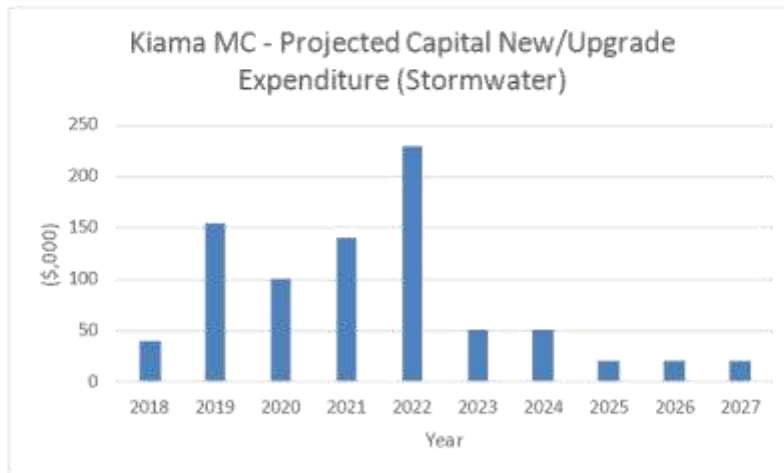
- Planning and scheduling capital upgrade and new projects to deliver the defined level of service in the most efficient manner,
- Undertake project scoping for all capital upgrade/new projects to identify:
  - the service delivery 'deficiency', present risk and required timeline for delivery of the 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, 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.

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2.

5.5.3 Summary of future upgrade/new assets expenditure

Projected upgrade/new asset expenditures are summarised in Fig 6. The projected upgrade/new capital works program is shown in Appendix C. All amounts are shown in real values.

Fig 6: Projected Capital New/Upgrade Asset Expenditure



Expenditure on new assets and services in the organisation’s capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

5.6 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6, together with estimated annual savings from not having to fund operations and maintenance of the assets. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any. Any revenue gained from asset disposals is accommodated in Council’s long term financial plan.

Where cashflow projections from asset disposals are not available, these will be developed in future revisions of this asset management plan.

**Table 5.6: Assets Identified for Disposal**

Asset	Reason for Disposal	Timing	Disposal Expenditure	Operations & Maintenance Annual Savings
No non renewal disposals	N/A	N/A	0	0

**5.7 Service Consequences and Risks**

The organisation has prioritised decisions made in adopting this AM Plan to obtain the optimum benefits from its available resources. Decisions were made based on the development of 3 scenarios of AM Plans.

**Scenario 1** - What we would like to do based on asset register data

**Scenario 2** – What we should do with existing budgets and identifying level of service and risk consequences (ie what are the operations and maintenance and capital projects we are unable to do, what is the service and risk consequences associated with this position). This may require several versions of the AM Plan.

**Scenario 3** – What we can do and be financially sustainable with AM Plans matching long-term financial plans.

The development of scenario 1 and scenario 2 AM Plans provides the tools for discussion with the Council/Board and community on trade-offs between what we would like to do (scenario 1) and what we should be doing with existing budgets (scenario 2) by balancing changes in services and service levels with affordability and acceptance of the service and risk consequences of the trade-off position (scenario 3).

**5.7.1 What we cannot do**

There are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years. These include:

- Comprehensive visual inspection and condition assessment of the pipe network
- Comprehensive inspection schedule and condition assessment of the pits.

**5.7.2 Service consequences**

Operations and maintenance activities and capital projects that cannot be undertaken will maintain or create service consequences for users. These include:

- Potential asset failures resulting in unplanned overland flows

**5.7.3 Risk consequences**

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

- Unplanned overland flows

These risks have been included with the Infrastructure Risk Management Plan summarised in Section 5.2 and risk management plans actions and expenditures included within projected expenditures.



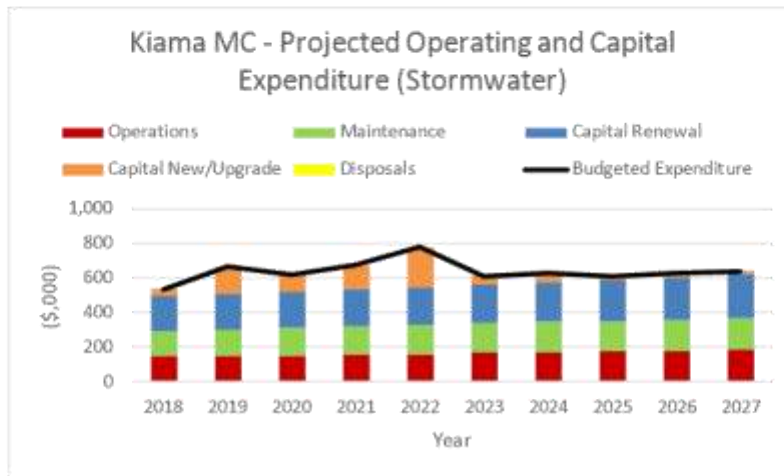
**6. FINANCIAL SUMMARY**

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

**6.1 Financial Statements and Projections**

The financial projections are shown in Fig 7 for projected operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets). Note that all costs are shown in real values.

**Fig 7: Projected Operating and Capital Expenditure**



**6.1.1 Sustainability of service delivery**

There are four key indicators for service delivery sustainability that have been considered in the analysis of the services provided by this asset category, these being the asset renewal funding ratio, long term life cycle costs/expenditures and medium term projected/budgeted expenditures over 5 and 10 years of the planning period.

**Asset Renewal Funding Ratio**

Asset Renewal Funding Ratio<sup>12</sup> 100.00%

The Asset Renewal Funding Ratio is the most important indicator and reveals that over the next 10 years, Council is forecasting that it will have 100.00% of the funds required for the optimal renewal and replacement of its assets.

**Long term - Life Cycle Cost**

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the asset life cycle. Life cycle costs include operations and maintenance expenditure and asset consumption (depreciation expense). The life cycle cost for the services covered in this asset management plan is \$612,148 per year (average operations and maintenance expenditure plus depreciation expense projected over 10 years).

<sup>12</sup> AIFMG, 2012, Version 1.3, Financial Sustainability Indicator 4, Sec 2.6, p 2.16

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Life cycle costs can be compared to life cycle expenditure to give an initial indicator of affordability of projected service levels when considered with age profiles. Life cycle expenditure includes operations, maintenance and capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure over the 10 year planning period is \$556,130 per year (average operations and maintenance plus capital renewal budgeted expenditure in LTFP over 10 years).

A shortfall between life cycle cost and life cycle expenditure is the life cycle gap. The life cycle gap for services covered by this asset management plan is **-\$56,018** per year (-ve = gap, +ve = surplus).

Life cycle expenditure is 90.85% of life cycle costs.

The life cycle costs and life cycle expenditure comparison highlights any difference between present outlays and the average cost of providing the service over the long term. Currently the life cycle expenditure is less than that life cycle cost due to the majority of the stormwater infrastructure being in the early to mid stages of their useful lives. Renewal outlays will need to be increased in the future when the assets are reaching the later stages of their useful lives.

Knowing the extent and timing of any required increase in outlays and the service consequences if funding is not available will assist organisations in providing services to their communities in a financially sustainable manner. This is the purpose of the asset management plans and long term financial plan.

#### Medium term – 10 year financial planning period

This asset management plan identifies the projected operations, maintenance and capital renewal expenditures required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

These projected expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall. In a core asset management plan, a gap is generally due to increasing asset renewals for ageing assets.

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is \$556,130 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$556,130. This indicates that Council expects to have 100.00% of the projected expenditures needed to provide the services documented in the asset management plan.

#### Medium Term – 5 year financial planning period

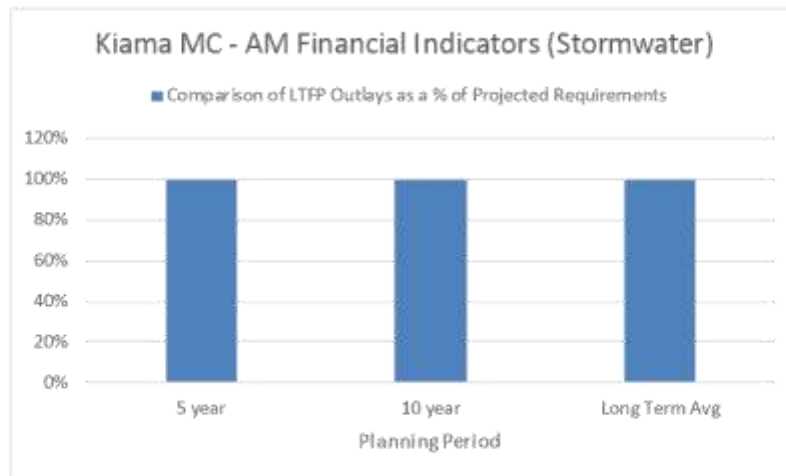
The projected operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is \$521,843 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$521,843 This indicates that Council expects to have 100.00% of projected expenditures required to provide the services shown in this asset management plan.

#### Asset management financial indicators

Figure 7A shows the asset management financial indicators over the 10 year planning period and for the long term life cycle.

**Figure 7A: Asset Management Financial Indicators**



Providing services from infrastructure in a sustainable manner requires the matching and managing of service levels, risks, projected expenditures and financing to achieve a financial indicator of approximately 100% for the first years of the asset management plan and ideally over the 10 year life of the Long Term Financial Plan.

Figure 8 shows the projected asset renewal and replacement expenditure over the 10 years of the AM Plan. The projected asset renewal and replacement expenditure is compared to renewal and replacement expenditure in the capital works program, which is accommodated in the long term financial plan

**Figure 8: Projected and LTFP Budgeted Renewal Expenditure**

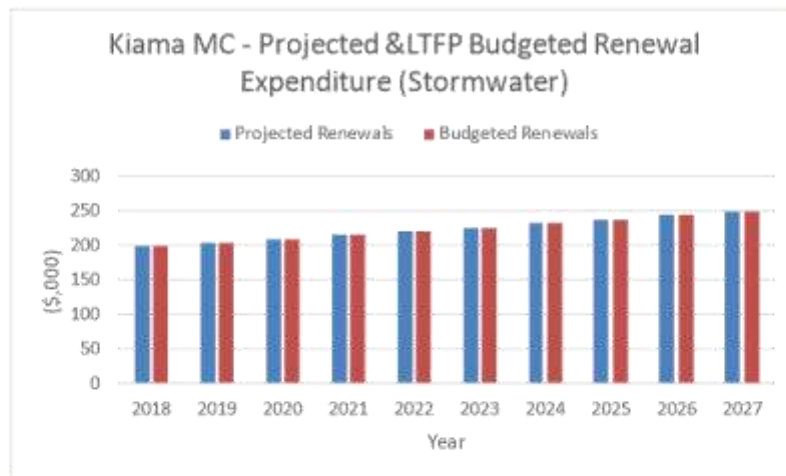


Table 6.1.1 shows the shortfall between projected renewal and replacement expenditures and expenditure accommodated in long term financial plan.

**Table 6.1.1: Projected and LTFP Budgeted Renewals and Financing Shortfall**

Year	Projected Renewals	LTFP Renewal Budget	Renewal Financing Shortfall (-ve Gap, +ve Surplus)	Cumulative Shortfall (-ve Gap, +ve Surplus)
2018	\$200	\$200	\$0	\$0
2019	\$205	\$205	\$0	\$0
2020	\$210	\$210	\$0	\$0
2021	\$215	\$215	\$0	\$0
2022	\$221	\$221	\$0	\$0
2023	\$226	\$226	\$0	\$0
2024	\$232	\$232	\$0	\$0
2025	\$238	\$238	\$0	\$0
2026	\$244	\$244	\$0	\$0
2027	\$250	\$250	\$0	\$0

All figures are in \$,000

Providing services in a sustainable manner will require matching of projected asset renewal and replacement expenditure to meet agreed service levels with **the corresponding** capital works program accommodated in the long term financial plan.

6.1.2 Projected expenditures for long term financial plan

Table 6.1.2 shows the projected expenditures for the 10 year long term financial plan.

**Table 6.1.2: Projected Expenditures for Long Term Financial Plan (\$000)**

Year	Operations	Maintenance	Capital Renewal	Capital New/Upgrade	Disposals
2018	\$146	\$150	\$200	\$40	\$0
2019	\$150	\$154	\$205	\$155	\$0
2020	\$154	\$158	\$210	\$100	\$0
2021	\$158	\$162	\$215	\$140	\$0
2022	\$162	\$166	\$221	\$230	\$0
2023	\$166	\$170	\$226	\$50	\$0
2024	\$170	\$174	\$232	\$50	\$0
2025	\$174	\$178	\$238	\$20	\$0
2026	\$178	\$183	\$244	\$20	\$0
2027	\$183	\$187	\$250	\$20	\$0

\* All figures are in \$,000

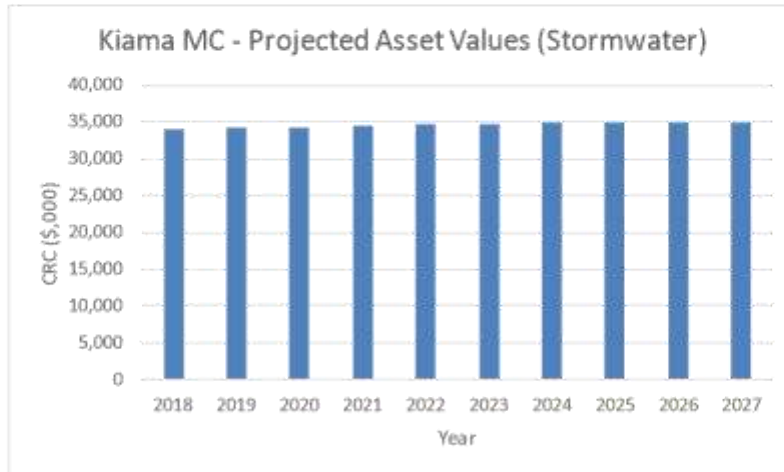
6.2 Funding Strategy

After reviewing service levels, as appropriate to ensure ongoing financial sustainability projected expenditures identified in Section 6.1.2 will be accommodated in the Council's 10 year long term financial plan.

**6.3 Valuation Forecasts**

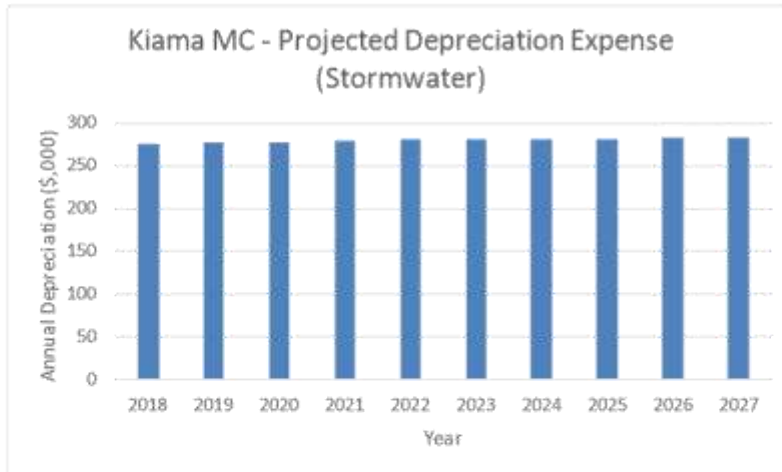
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Figure 9 shows the projected replacement cost asset values over the planning period in real values.

**Figure 9: Projected Asset Values**



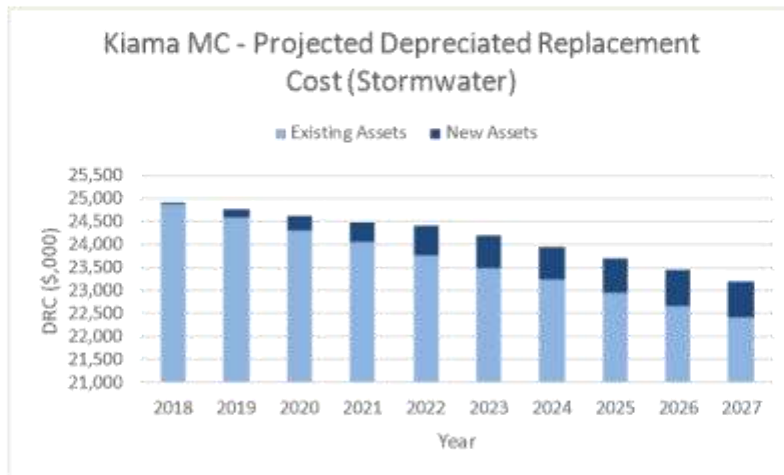
Depreciation expense values are forecast in line with asset values as shown in Figure 10.

**Figure 10: Projected Depreciation Expense**



The depreciated replacement cost will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets. Forecast of the assets' depreciated replacement cost is shown in Figure 11. The depreciated replacement cost of contributed and new assets is shown in the darker colour and in the lighter colour for existing assets.

Figure 11: Projected Depreciated Replacement Cost



**6.4 Key Assumptions made in Financial Forecasts**

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

Key assumptions made in this asset management plan and risks that these may change are shown in Table 6.4.

Table 6.4: Key Assumptions made in AM Plan and Risks of Change

Key Assumptions	Risks of Change to Assumptions
This asset class is fully funded in LTFP	Low
Future funding beyond the LTFP will remain fully funded	Low

**6.5 Forecast Reliability and Confidence**

The expenditure and valuations projections in this AM Plan are based on best available data. Currency and accuracy of data is critical to effective asset and financial management. Data confidence is classified on a 5 level scale<sup>13</sup> in accordance with Table 6.5.

<sup>13</sup> IPWEA, 2011, IIMM, Table 2.4.6, p 2|59.

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Table 6.5: Data Confidence Grading System

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

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 6.5.1.

Table 6.5.1: Data Confidence Assessment for Data used in AM Plan

Data	Confidence Assessment	Comment
Demand drivers	A	The demand drivers utilised in this plan are currently the most effective way to forecast future stormwater requirements
Growth projections	A	The growth projections are based off population increase resulting in rezoning of land for future sub divisions
Operations expenditures	B	The operations expenditure budget is forecasted from data currently in the asset management system
Maintenance expenditures	B	The maintenance expenditure budget is forecasted from data currently in the asset management system
Projected Renewal exps. - Asset values	B	The revaluation of the stormwater network accrued in 2015
- Asset useful lives	B	The useful lives of the stormwater network were based on construction date and sampling of the network
- Condition modelling	C	Condition modelling of the stormwater network were based on sampling of the network and construction date
- Network renewals	B	The projected renewals expenditure budget is forecasted from data currently in the asset management system
- Defect repairs	C	There are no defect repairs identified in the current budget
Upgrade/New expenditures	A	The Collins Street upgrade is the only identified additional requirement
Disposal expenditures	A	There is no disposals identified in the plan

Over all data sources the data confidence is assessed as Medium confidence level for data used in the preparation of this AM Plan.



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## 7. PLAN IMPROVEMENT AND MONITORING

### 7.1 Status of Asset Management Practices

#### 7.1.1 Accounting and financial systems

Kiama Municipal Council uses the Authority corporate information system. This system is used for financial management and reporting. The asset valuations are stored in the Capital Valuation Register of authority with a 1 to 1 match and integration to the Authority Asset Management Module.

Kiama Municipal Council does not currently have a documented Asset Accounting Policy.

#### Accountabilities for financial systems

Kiama Municipal Council's Finance Department is responsible for the data and processes pertaining to financial records in Authority. Kiama's Information Technology Department is responsible for system administration and technology infrastructure.

#### Accounting standards and regulations

Kiama Municipal Council adheres to the Australian Accounting Standards in conjunction with the Code of Accounting Practice for all the NSW Local Government Councils.

#### Capital/maintenance threshold

All Pits and Pipes are valued at their fair value regardless of their value. Expenditure on existing assets is considered maintenance where it does not increase the estimated remaining life of the asset.

#### Required changes to accounting financial systems arising from this AM Plan

The creation of an Asset Accounting Policy.

#### 7.1.2 Asset management system

Kiama Municipal Council uses the Authority Asset Management System and Work Management System.

#### Asset registers

All registers are stored in the Authority Asset Management System. The system is integrated with Council's GIS system to provide a geographical representation and navigation to assets in the Asset Management System. Some assets are currently missing audited dimensional data and catchments and sub catchments have not been linked to asset records.

#### Linkage from asset management to financial system

The Asset Management and Financial System are modules of the Authority Corporate Information System. These modules are fully integrated with a 1 to 1 relationship between assets and financial records.

#### Accountabilities for asset management system and data maintenance

Kiama Municipal Council's Engineering and Works Department are responsible for the configuration and data management of the Asset Management System.

Kiama Municipal Council's Information Technology Department is responsible for system administration and technology infrastructure.

#### Required changes to asset management system arising from this AM Plan

Update asset records with catchment and sub catchment attributes and audit dimensional attributes of asset records.

**7.2 Improvement Plan**

The asset management improvement plan generated from this asset management plan is shown in Table 7.2.

**Table 7.2: Improvement Plan**

Task No	Task	Responsibility	Resources Required	Timeline
1	Update Asset details with catchment and sub catchment attributes	Engineering And Works Department	Current Catchment Information	Completion 2017
2	Audit dimensional attributes of asset records	Engineering And Works Department	Works Crew	Completion 2020
3	Introduction of reactive work orders to manage unscheduled maintenance v scheduled maintenance	Engineering And Works Department	Asset Management & IT	Completion 2018
4	Inspection scheduling and rerecording via the AM system	Engineering And Works Department	Asset Management & IT	Completion 2018

**7.3 Monitoring and Review Procedures**

This asset management plan will be reviewed during annual budget planning processes and amended to recognise any material changes in service levels and/or resources available to provide those services as a result of budget decisions.

The AM Plan will be updated annually to ensure it represents the current service level, asset values, projected operations, maintenance, capital renewal and replacement, capital upgrade/new and asset disposal expenditures and projected expenditure values incorporated into the organisation’s long term financial plan.

The AM Plan has a life of 4 years (Council election cycle) and is due for complete revision and updating before each Council election.

**7.4 Performance Measures**

The effectiveness of the asset management plan can be measured in the following ways:

- The degree to which the required projected expenditures identified in this asset management plan are incorporated into Council’s long term financial plan,
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the ‘global’ works program trends provided by the asset management plan,
- The degree to which the existing and projected service levels and service consequences (what we cannot do), risks and residual risks are incorporated into the Council’s Strategic Plan and associated plans,
- The Asset Renewal Funding Ratio achieving the target of 100%.

**8. REFERENCES**

IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/IIMM](http://www.ipwea.org/IIMM)

IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/namsplus](http://www.ipwea.org/namsplus).

IPWEA, 2009, 'Australian Infrastructure Financial Management Guidelines', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/AIFMG](http://www.ipwea.org/AIFMG).

IPWEA, 2011, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/IIMM](http://www.ipwea.org/IIMM)

Kiama Municipal Council 'Operational Plan 2015-2016 And Delivery Program 2013-2017'

Kiama Municipal Council 'Strategic Asset Management Plan 2002'

**9. APPENDICES**

Appendix A Maintenance Response Levels of Service

Appendix B Projected 10 year Capital Renewal and Replacement Works Program

Appendix C Projected 10 year Capital Upgrade/New Works Program

Appendix D Abbreviations

Appendix E Glossary

**Appendix A Maintenance Response Levels of Service**

Maintenance Response Level Of Service		
Maintenance Type	Maintenance Activity	Required Maintenance Response
Operations	Inspect stormwater pits and surrounds	Pits inspected on a 2 year schedule
	Stormwater pit litter capture device cleaning	Annually serviced
Maintenance	Respond to stormwater related customer service requests	Inspect and assess defect complaints and make safe within 5 business hours
	Respond to customer service requests for damaged Pit lids or Frames	Damage repaired within 30 days of customer service request receipt
	Respond to customer service requests for blocked drains	Remove blockage within 30 days of customer service request receipt

**Appendix B Projected 10 year Capital Renewal and Replacement Works Program**

Asset Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Stormwater</b>										
3888 Stormwater Assets/ Stormwater	200,000	205,000	210,126	215,378	220,762	226,282	231,938	237,736	243,680	249,772
3888 Stormwater Assets/ Stormwater		205,000	210,126	215,378	220,762	226,282	231,938	237,736	243,680	249,772
3888 Stormwater Assets/ Stormwater										
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3888 Stormwater Assets/ Stormwater										

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**Appendix C Projected New/Upgrade 10 year Capital Works Program**

Location	Asset	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Allowrite Street/Jamberoo School of Arts	Design & Investigation (Drainage Upgrade)	40,000	155,000	100,000	140,000	230,000	50,000	50,000	20,000	20,000	20,000
Barney Street, Kiama	Box culverts			50,000		180,000					
Cnr Churchill & Chapel Streets Jamberoo	Drainage reconstruction	20,000									
Hillview Circuit, Kiama (No. 65)	Drainage upgrade due to flooding				100,000						
Minnamurra River	Flood Study			30,000							
Minnamurra River	Flood Study				30,000						
Minnamurra River	Flood Study					30,000					
Minnamurra River	Flood Study						30,000				
Minnamurra River	Flood Study							30,000			
Minnamurra River Catchment 17/18	Upgrade	20,000									
Minnamurra River Catchment 18/19	Upgrade		20,000								
Minnamurra River Catchment 19/20	Upgrade			20,000							
Minnamurra River Catchment 20/21	Upgrade				10,000						
Minnamurra River Catchment 21/22	Upgrade					20,000					
Minnamurra River Catchment 22/23	Upgrade						20,000				
Minnamurra River Catchment 23/24	Upgrade							20,000			
Minnamurra River Catchment 24/25	Upgrade								20,000		
Minnamurra River Catchment 25/26	Upgrade									20,000	
Minnamurra River Catchment 26/27	Upgrade										20,000
Coaree Creek	Risk Management Plan		135,000								

KIAMA MUNICIPAL COUNCIL – STORMWATER ASSET MANAGEMENT PLAN

**Appendix D Abbreviations**

<b>AAAC</b>	Average annual asset consumption
<b>AM</b>	Asset management
<b>AM Plan</b>	Asset management plan
<b>ARI</b>	Average recurrence interval
<b>ASC</b>	Annual service cost
<b>BOD</b>	Biochemical (biological) oxygen demand
<b>CRC</b>	Current replacement cost
<b>CWMS</b>	Community wastewater management systems
<b>DA</b>	Depreciable amount
<b>DRC</b>	Depreciated replacement cost
<b>EF</b>	Earthworks/formation
<b>IRMP</b>	Infrastructure risk management plan
<b>LCC</b>	Life Cycle cost
<b>LCE</b>	Life cycle expenditure
<b>LTFFP</b>	Long term financial plan
<b>MMS</b>	Maintenance management system
<b>PCI</b>	Pavement condition index
<b>RV</b>	Residual value
<b>SoA</b>	State of the Assets
<b>SS</b>	Suspended solids
<b>vph</b>	Vehicles per hour
<b>WDCRC</b>	Written down current replacement cost



## Appendix E Glossary

### 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

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 hierarchy

A framework for segmenting an asset base into appropriate classifications. The asset hierarchy can be based on asset function or asset type or a combination of the two.

### Asset management (AM)

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 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.

### 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.

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**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.

**Class of assets**

See asset class definition

**Component**

Specific parts of an asset having independent physical or functional identity and having specific attributes such as different life expectancy, maintenance regimes, risk or criticality.

**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 cash flow 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, including any costs necessary to place the asset into service. This includes one-off design and project management costs.

**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 non-critical 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.

**Deferred maintenance**

The shortfall in rehabilitation work undertaken relative to that required to maintain the service potential of an asset.

**Depreciable amount**

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

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**Depreciated replacement cost (DRC)**

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

**Depreciation / amortisation**

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

**Economic life**

See useful life definition.

**Expenditure**

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

**Expenses**

Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or increases in liabilities that result in decreases in equity, other than those relating to distributions to equity participants.

**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.

**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 that contribute to meeting the needs of organisations or the 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 separate 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.

**Key performance indicator**

A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or other target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.

**Level of service**

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

**Life Cycle Cost \***

- Total LCC** The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs.
- 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.

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**Life Cycle Expenditure**

The Life Cycle Expenditure (LCE) is the average operations, maintenance and capital renewal expenditure accommodated in the long term financial plan over 10 years. Life Cycle Expenditure may be compared to average Life Cycle Cost to give an initial indicator of affordability of projected service levels when considered with asset age profiles.

**Loans / borrowings**

See borrowings.

**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 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**

The notion of materiality guides the margin of error acceptable, the degree of precision required and the extent of the disclosure required when preparing general purpose financial reports. Information is material if its omission, misstatement or non-disclosure has the potential, individually or collectively, to influence the economic decisions of users taken on the basis of the financial report or affect the discharge of accountability by the management or governing body of the entity.

**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.

**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 to provide a service. In common use the term typically includes, eg power, fuel, staff, plant equipment, on-costs and overheads but excludes maintenance and depreciation. Maintenance and depreciation is on the other hand included in operating expenses.

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**Operating expense**

The gross outflow of economic benefits, being cash and non cash items, during the period arising in the course of ordinary activities of an entity when those outflows result in decreases in equity, other than decreases relating to distributions to equity participants.

**Operating expenses**

Recurrent expenses continuously required to provide a service, including power, fuel, staff, plant equipment, maintenance, depreciation, on-costs and overheads.

**Operations, maintenance and renewal financing ratio**

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

**Operations, maintenance and renewal gap**

Difference between budgeted expenditures in a long term financial plan (or estimated future budgets in absence of a long term financial plan) and projected expenditures for operations, maintenance and renewal of assets to achieve/maintain specified service levels, totalled over a defined time (e.g. 5, 10 and 15 years).

**Pavement management system (PMS)**

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

**PMS Score**

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

**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).

**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 operations and maintenance expenditure.

**Recurrent funding**

Funding to pay for recurrent expenditure.

**Rehabilitation**

See capital renewal expenditure definition above.

**Remaining useful life**

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

**Renewal**

See capital renewal expenditure definition above.

**Residual value**

The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.

**Revenue generating investments**

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

**Risk management**

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

**Section or segment**

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

**Service potential**

The total future service capacity of an asset. It is normally determined by reference to the operating capacity and economic life of an asset. A measure of service potential is used in the not-for-profit sector/public sector to value assets, particularly those not producing a cash flow.

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**Service potential remaining**

A measure of the future economic benefits remaining in assets. It may be expressed in dollar values (Fair Value) or as a percentage of total anticipated future economic benefits. It is also a measure of the percentage of the asset's potential to provide services that is still available for use in providing services (Depreciated Replacement Cost/Depreciable Amount).

Source: IPWEA, 2009, Glossary

Additional and modified glossary items shown \*

**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.

**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.

**Value in Use**

The present value of future cash flows expected to be derived from an asset or cash generating unit. 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 net cash inflows, where the entity would, if deprived of the asset, replace its remaining future economic benefits.





# Asset Management Plan

## Other Assets



November 2016

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## 1. EXECUTIVE SUMMARY

### Context

The Kiama Municipal Council area is located on the south coast of NSW. This Other Assets asset management plan describes the services provided by Council to facilitate effective service delivery of infrastructure to the community that is not covered by other plans.

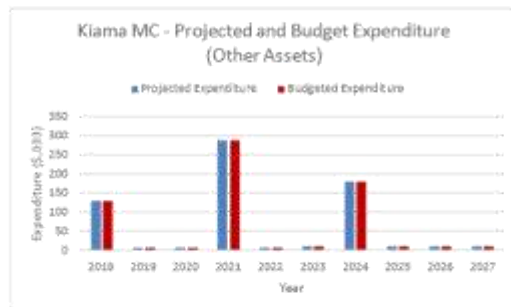
Councils Other Assets comprise Dams and CCTV networks.

These infrastructure assets have a replacement value of \$10,099,977

### What does it Cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan (AM Plan) includes operations, maintenance, renewal and upgrade of existing assets over the 10 year planning period is \$665,885 or \$66,589 on average per year.

Estimated available funding for this period is \$665,885 or \$66,589 on average per year which is 100% of the cost to provide the service. Projected expenditure required to provide services in the AM Plan compared with planned expenditure currently included in the Long Term Financial Plan are shown in the graph below.



### What we will do

We plan to provide Other Assets services as follows:

- Maintenance, renewal and upgrade of Other Assets to meet service levels set by Council in annual budgets.
- All required asset renewals have been incorporated into the 10 year financial plan.

- New and Upgraded Other Assets within the 10 year financial plan are contained in Appendix C

### What we cannot do

The Other Assets Asset Management Plan is aligned with Councils 10 year Financial Plan, accordingly we cannot Create New Buildings or Upgrade existing Other Assets that have not been included in the current plans without additional funding.

### Managing the Risks

There are risks associated with providing the service and not being able to complete all identified activities and projects. We have identified major risks as:

- Public safety from unsafe structures

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

- Inspecting the Dams
- Developing Scheduled Maintenance Plans to prevent defects.
- Use technology to monitor water levels and dam wall movement

### Confidence Levels

This AM Plan is based on a high level of confidence information.

### The Next Steps

The actions resulting from this asset management plan are:

- Conduct maintenance in accordance with the asset management plan.
- Conduct renewals in accordance with the asset management plan.
- Conduct enhancements in accordance with the asset management plan.

### Questions you may have

#### What is this plan about?

This asset management plan covers the Other Assets infrastructure that serve the Kiama Municipal Council community. It does not cover Other Assets that are not owned by Kiama Municipal Council.

#### What is an Asset Management Plan?

Asset management planning is a comprehensive process to ensure delivery of services from infrastructure is provided in a financially sustainable manner.

An asset management plan details information about infrastructure assets including actions required to

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provide an agreed level of service in the most cost effective manner. The plan defines the services to be provided, how the services are provided and what funds are required to provide the services.

#### **Why is there a funding shortfall?**

Most of the Council's Other Assets were constructed by developers, council funding and from government grants. Some Other Assets have been provided and accepted without consideration of ongoing operations, maintenance and replacement needs.

At the present time few of these assets are approaching the later years of their life and require structural replacement.

Our present funding levels are sufficient to continue to provide existing services at current levels in the medium term.

#### **What options do we have?**

Council will continue to resolve the requirements for Maintenance and inspection funding by:

1. Improving asset knowledge so that data accurately records the asset inventory, how assets are performing and when assets are not able to provide the required service levels,
2. Improving our efficiency in operating, maintaining, renewing and replacing existing assets to optimise life cycle costs,
3. Identifying and managing risks associated with providing services from infrastructure,
4. Making trade-offs between service levels and costs to ensure that the community receives the best return from infrastructure,
5. Identifying assets surplus to needs for disposal to make saving in future operations and maintenance costs,
6. Consulting with the community to ensure that Other Assets Infrastructure and costs meet community needs and are affordable,
7. Developing partnership with other bodies, where available to provide services,
8. Seeking additional funding from governments and other bodies to better reflect a 'whole of government' funding approach to infrastructure services.

#### **What happens if we don't manage the shortfall?**

It is likely that we will not achieve the optimum lifecycle cost for Other Assets Infrastructure.

#### **What can we do?**

We can develop options, costs and priorities for future Other Assets Infrastructure, consult with the community to plan future services to match the

community service needs with ability to pay for services and maximise community benefits against costs.

#### **What can you do?**

We will be pleased to consider community consultation on the issues raised in this asset management plan and suggestions on how we may change or reduce its Other Assets to ensure that the appropriate level of service can be provided to the community within available funding.

**2. INTRODUCTION**

**2.1 Background**

This asset management plan is to demonstrate responsive management of assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding needed to provide the required levels of service over a 10 year planning period.

The asset management plan follows the format for AM Plans recommended in Section 4.2.6 of the International Infrastructure Management Manual<sup>1</sup>.

The asset management plan is to be read with the organisation’s Asset Management Policy, Asset Management Strategy and the following associated planning documents:

- Community Strategic Plan
- Work Force Plan
- 10 Year Financial Plan
- Delivery Program
- Operational Plan

This infrastructure assets covered by this asset management plan are shown in Table 2.1. These assets are used to provide Other Assets Infrastructure to service the community.

**Table 2.1: Assets covered by this Plan**

<b>Asset Category</b>	<b>Quantity</b>	<b>Replacement Value</b>
CCTV	49	834,452
DAMS	1	9,235,672
Other Assets	4	29,852
<b>Total</b>		<b>10,099,977</b>

Key stakeholders in the preparation and implementation of this asset management plan are: Shown in Table 2.1.1.

**Table 2.1.1: Key Stakeholders in the AM Plan**

<b>Key Stakeholder</b>	<b>Role in Asset Management Plan</b>
Councillors	<ul style="list-style-type: none"> <li>• Represent needs of community/shareholders,</li> </ul>
General Manager	<ul style="list-style-type: none"> <li>• Allocate resources to meet the organisation’s objectives in providing services while managing risks,</li> <li>• Ensure organisation is financial sustainable.</li> </ul>
Directors	<ul style="list-style-type: none"> <li>• Ensure the plans objectives and financial requirements are included in councils integrated planning and reporting documentation</li> </ul>
Manager Of Works	<ul style="list-style-type: none"> <li>• Delivery of the asset management plan objectives</li> </ul>

<sup>1</sup> IPWEA, 2011, Sec 4.2.6, *Example of an Asset Management Plan Structure*, pp 4|24 – 27.

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



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## 2.2 Goals and Objectives of Asset Management

The organisation exists to provide services to its community. Some of these services are provided by infrastructure assets. We have acquired infrastructure assets by purchase, by contract, construction by our staff and by donation of assets constructed by developers and others to meet increased levels of service.

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.<sup>2</sup>

## 2.3 Plan Framework

Key elements of the plan are

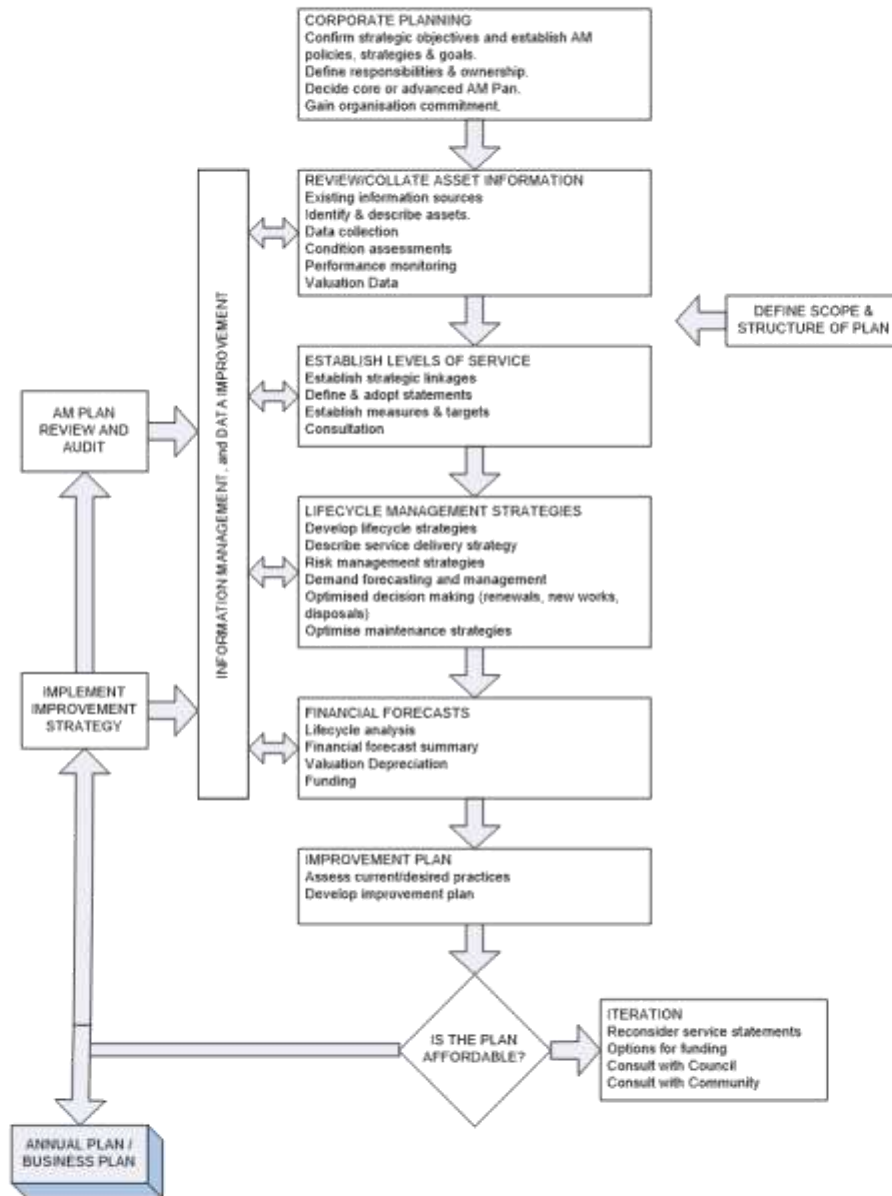
- Levels of service – specifies the services and levels of service to be provided by the organisation,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Life cycle management – how Council will manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices,
- Monitoring – how the plan will be monitored to ensure it is meeting organisation's objectives,
- Asset management improvement plan.

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

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<sup>2</sup> Based on IPWEA, 2011, IIMM, Sec 1.2 p 1|7.

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



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## 2.4 Core and Advanced Asset Management

This asset management plan is prepared as a 'core' asset management plan over a 20 year planning period in accordance with the International Infrastructure Management Manual<sup>3</sup>. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. Core asset management is a 'top down' approach where analysis is applied at the 'system' or 'network' level.

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

## 2.5 Community Consultation

This 'core' asset management plan is prepared to facilitate community consultation initially through feedback on public display of draft asset management plans prior to adoption by the Council. Future revisions of the asset management plan will incorporate community consultation on service levels and costs of providing the service. This will assist the Council and the community in matching the level of service needed by the community, service risks and consequences with the community's ability and willingness to pay for the service.

## 3. LEVELS OF SERVICE

### 3.1 Customer Research and Expectations

The organisation carries out an IRIS Survey prior to re-developing Community Strategic Plan on customer satisfaction and expectations from all infrastructure areas.

The organisation uses this information in developing its Strategic Plan and in allocation of resources in the budget.

### 3.2 Strategic and Corporate Goals

This asset management plan is prepared under the direction of the organisation's vision, mission, goals and objectives.

Our vision is:

***Working together for a healthy, sustainable and caring community***

Our mission is:

***Kiama Council will work to create a Municipality that has a healthy, vibrant lifestyle, beautiful environment and harmonious, connected and resilient community***

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<sup>3</sup> IPWEA, 2011, IIMM.



Relevant organisational goals and objectives and how these are addressed in this asset management plan are:

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

Plan Level	Plan No.	Plan Description	Measure's
CSP Strategy	2.13	Effectively manage other assets to cater for current and future generations (including car parks, community buildings, cemeteries and dams)	
DP Action	2.13.1	Manage community buildings by the creation and implementation of the Community Buildings Asset Management Plan actions	Maintain or increase community satisfaction with community buildings Optimal renewal of community buildings infrastructure The community buildings Asset Management Plan is fully funded Capital works are delivered in accordance with Delivery Program
OP Activity	2.13.1.1	Manage community asset renewals	Percentage of renewal program completed Percentage of renewals updated in the Asset Management Information System Percentage of scheduled designs completed Renewal Budget YTD%
OP Activity	2.13.1.2	Manage community buildings new asset creation	New Asset Budget v Actual expenditure percentage Percentage of new asset program completed Percentage of scheduled designs completed
OP Activity	2.13.1.3	Manage community buildings asset maintenance and operation	Unscheduled Maintenance Budget YTD%
OP Activity	2.13.1.4	Create a Community Buildings Asset Management Plan	New Asset schedule created for following year Budget Renewal schedule created for following year Budget
CSP Strategy	4.11	Ensure Council owned buildings and infrastructure are planned and maintained with consideration to both current and future generations	
DP Action	4.11.1	Ensure the Strategic Asset Management Plan is maintained and funded in the 10 year financial plan	Strategic Asset Management Plan is funded to meet Community Strategic Plan objectives
OP Activity	4.11.1.1	Review and re-adopt the Asset Management Policy	Policy re-adopted within 12 months of newly elected Councillors
OP Activity	4.11.1.2	Maintain a Strategic Asset Management Plan (SAMP) aligned with individual Asset Management Plans	Percentage of plans aligned with SAMP
OP Activity	4.11.1.3	Ensure ongoing alignment of Asset Management with Councils 10 year financial Plan	Percentage of plans aligned with 10 year Financial Plan
OP Activity	4.11.1.4	Seek infrastructure funding from external sources	Value of grants secured

The organisation will exercise its duty of care to ensure public safety in accordance with the infrastructure risk management plan prepared in conjunction with this AM Plan. Management of infrastructure risks is covered in Section 5.2

**3.3 Legislative Requirements**

The organisation has to meet many legislative requirements including Australian and State legislation and State regulations. These include:

**Table 3.3: Legislative Requirements**

Legislation	Requirement
Local Government Act 1993	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Protection of the Environment Operations Act 1997	To ensure that all reasonable and practicable measures are taken to protect, restore and enhance the quality of the environment having regard to the principles of ecologically sustainable development.
Australian Accounting Standards	Sets out the financial reporting standards relating to Infrastructure assets. Standards of particular relevance to Infrastructure Assets include: <ul style="list-style-type: none"> <li>• AASB116 Property, Plant &amp; Equipment – prescribes requirement for recognition and depreciation of property, plant and equipment assets</li> <li>• AASB136 Impairment of Assets - aims to ensure that assets are carried at amounts that are not in excess of their recoverable amounts</li> <li>• AASB1021 Depreciation of Non-Current Assets - specifies how depreciation is to be calculated</li> <li>• AAS1001 Accounting Policies - specifies the policies that Council is to have for recognition of assets and depreciation</li> <li>• AASB1041 Accounting for the reduction of Non-Current Assets - specifies the frequency and basis of calculation depreciation and revaluation basis used for assets</li> <li>• AAS1015 Accounting for acquisition of assets - method of allocating the value to new assets on acquisition</li> </ul>
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)
Civil Liability Act 2002	Protects the Council from civil action by requiring the courts to take into account the financial resources, the general responsibilities of the authority and the compliance with general practices and applicable standards.
Water Management Act 2000	The objects of this Act are to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations and, in particular: <ul style="list-style-type: none"> <li>• to apply the principles of ecologically sustainable development, and</li> <li>• to protect, enhance and restore water sources, their associated ecosystems, ecological processes and biological diversity and their water quality, and</li> <li>• to recognise and foster the significant social and economic benefits to the State that result from the sustainable and efficient use of water, including:                             <ul style="list-style-type: none"> <li>○ benefits to the environment, and</li> <li>○ benefits to urban communities, agriculture, fisheries, industry and recreation, and</li> <li>○ benefits to culture and heritage, and</li> <li>○ benefits to the Aboriginal people in relation to their spiritual, social, customary and economic use of land and water,</li> </ul> </li> <li>• to recognise the role of the community, as a partner with government, in resolving issues relating to the management of water sources,</li> <li>• to provide for the orderly, efficient and equitable sharing of water from water sources,</li> <li>• to integrate the management of water sources with the management of other aspects of the environment, including the land, its soil, its native vegetation and its native fauna,</li> <li>• to encourage the sharing of responsibility for the sustainable and efficient use of water between the Government and water users,</li> <li>• to encourage best practice in the management and use of water.</li> </ul>
Work Health And Safety Act 2011	To take a constructive role in promoting improvements in occupational health, safety and welfare practices and assisting in the preservation of public health and safety in all undertakings of Council

The organisation will exercise its duty of care to ensure public safety in accordance with the infrastructure risk management plan linked to this AM Plan. Management of risks is discussed in Section 5.2.

**3.4 Community Levels of Service**

Service levels are defined service levels in two terms, customer levels of service and technical levels of service.

Community Levels of Service measure how the community receives the service and whether the organisation is providing community value.

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?

The organisation's current and expected community service levels are detailed are aligned with the Community Strategic Plan and shown in Table 3.2. The agreed expected community levels of service based on resource levels in the current long-term financial plan and community consultation/engagement.

**3.5 Technical Levels of Service**

**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, mowing grass, energy, inspections, etc.
- Maintenance – the activities necessary to retain an asset 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).

Service and asset managers plan, implement and control technical service levels to influence the customer service levels.<sup>4</sup>

<sup>4</sup> IPWEA, 2011, IIMM, p 2.22

**4. FUTURE DEMAND**

**4.1 Demand Drivers**

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

**4.2 Demand Forecast**

The present position and projections for demand drivers that may impact future service delivery and utilisation of assets were identified and are documented in Table 4.3.

**4.3 Demand Impact on Assets**

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

**Table 4.3: Demand Drivers, Projections and Impact on Service**

Demand drivers	Present position	Projection	Impact on services
Population Growth	The estimated population is 21,314	The estimated annual population Growth is 1.37%	No impact on Services in the life of this plan apart from developer contributions from new subdivisions.
Climate Change	Infrastructure designed to suite current standards	Potentially Rising sea levels, additional rainfall and El Nino storm events.	No impact on Services in the life of this plan.

**4.4 Demand Management Plan**

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

Non-asset solutions focus on providing the required service without the need for the organisation to own the assets and management actions including reducing demand for the service, reducing the level of service (allowing some assets to deteriorate beyond current service levels) or educating customers to accept appropriate asset failures<sup>5</sup>. Examples of non-asset solutions include providing services from existing infrastructure such as aquatic centres and libraries that may be in another community area or public toilets provided in commercial premises.

Opportunities identified to date for demand management are shown in Table 4.4. Further opportunities will be developed in future revisions of this asset management plan.

**Table 4.4: Demand Management Plan Summary**

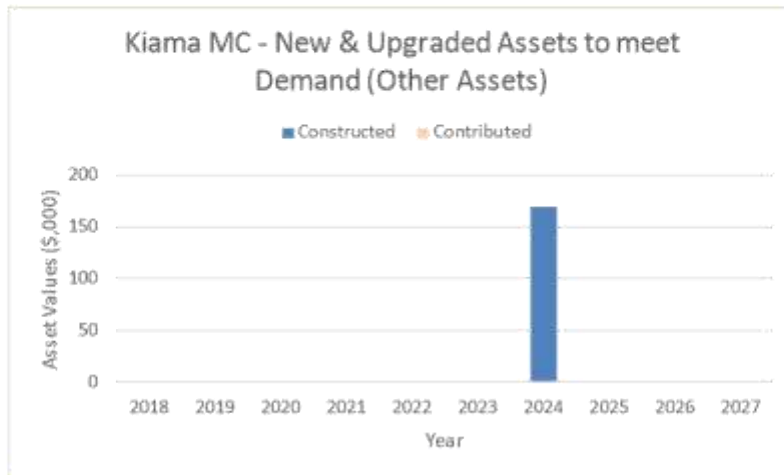
Demand Driver	Impact on Services	Demand Management Plan
Population Growth	No impact on Services in the life of this plan.	Additional assets are acquired as part of the developer contributions. Council will need to fully fund the life cycle costs of these new assets.
Climate Change	No impact on Services in the life of this plan.	No impact on Services in the life of this plan.

<sup>5</sup> IPWEA, 2011, IIMM, Table 3.4.1, p 3]58.

**4.5 Asset Programs to meet Demand**

The new assets required to meet growth will be acquired free of cost from land developments and constructed/acquired by the organisation. New assets constructed/acquired by the organisation are discussed in Section 5.5. The cumulative value of new contributed and constructed asset values are summarised in Figure 1.

**Figure 1: New & Upgraded Assets to meet Demand**



Acquiring these new assets will commit the organisation to fund ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs in Section 5.

**5. LIFECYCLE MANAGEMENT PLAN**

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

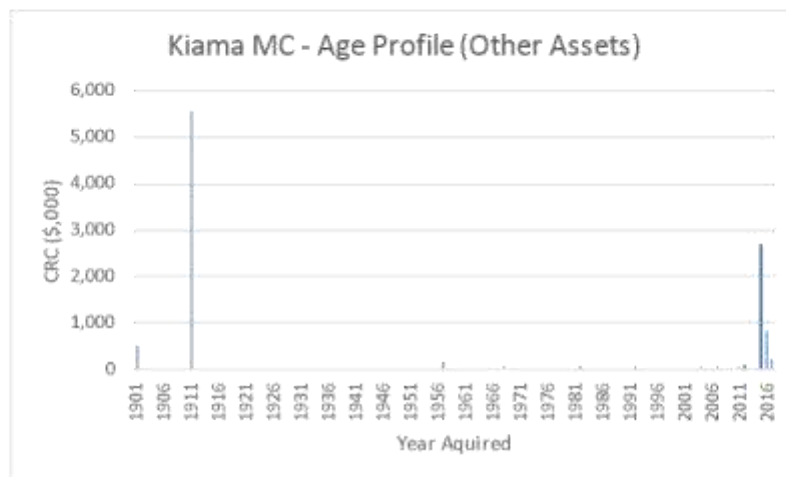
**5.1 Background Data**

**5.1.1 Physical parameters**

The assets covered by this asset management plan are shown in Table 2.1.

The age profile of the assets include in this AM Plan is shown in Figure 2.

*Figure 2: Asset Age Profile*



Plans showing the assets are:

- Work As Executed Drawings stored in the corporate document management system (Trim). These documents are linked to individual assets records in the corporate asset management system (Authority).
- Assets are geographically displayed on the corporate Geographic information system which is fully integrated to Council's Asset Management System.

5.1.2 Asset capacity and performance

The organisation’s services are generally provided to meet design standards where these are available.

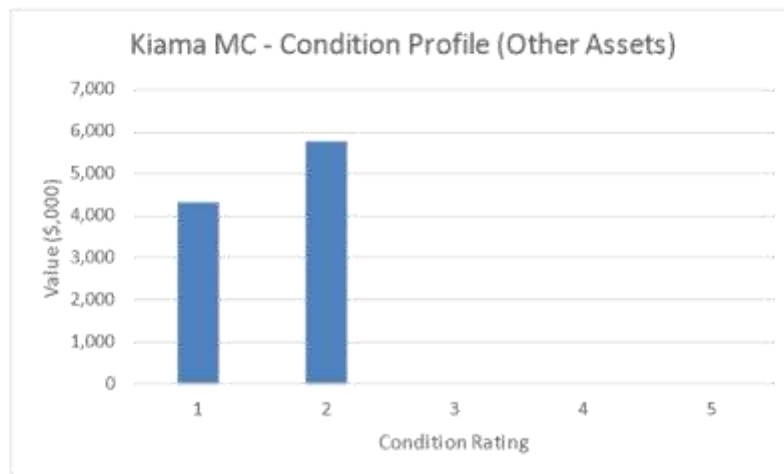
Council has an integrated approach to service delivery and where capacity or performance requirements of assets require a change the Funding Allocation Process is used to ensure that the lifecycle costs are incorporated into the Integrated Planning and Reporting framework including the 10 Year Financial Plan, Asset Management Plan and Workforce Plan.

5.1.3 Asset condition

Condition is monitored by inspecting the assets on a regular cycle. In addition all assets have condition inspections that align with the 5 year Financial Revaluation of Assets.

The condition profile of our assets is shown in Figure 3.

Fig 3: Asset Condition Profile



Condition is measured using a 1 – 5 grading system<sup>6</sup> as detailed in Table 5.1.3.

Table 5.1.3: Simple Condition Grading Model

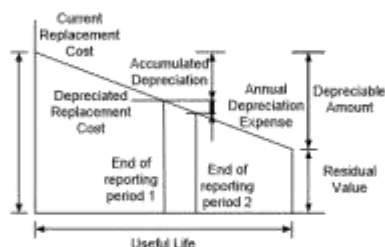
Condition Grading	Description of Condition
1	<b>Very Good:</b> only planned maintenance required
2	<b>Good:</b> minor maintenance required plus planned maintenance
3	<b>Fair:</b> significant maintenance required
4	<b>Poor:</b> significant renewal/rehabilitation required
5	<b>Very Poor:</b> physically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

<sup>6</sup> IPWEA, 2011, IIMM, Sec 2.5.4, p 2|79.

5.1.4 Asset valuations

The value of assets recorded in the asset register as at 30/06/2015 covered by this asset management plan is shown below. Assets were last revalued at 30/06/2015. Assets are valued using the depreciated replacement cost methodology. This asset class is revalued every 5 years.

Current Replacement Cost	\$10,099,977
Depreciable Amount	\$6,723,829
Depreciated Replacement Cost <sup>7</sup>	\$5,974,135
Annual Depreciation Expense	\$174,943



Useful lives were reviewed in June 2016 by assessing the condition of assets.

Key assumptions made in preparing the valuations were:

- Unit rate of excavation assumed a common sub surface material type
- Condition assessment of the samples reflects the entire network
- Where the dimensional information was absent default dimensions were used

Various ratios of asset consumption and expenditure have been prepared to help guide and gauge asset management performance and trends over time.

Rate of Annual Asset Consumption (Depreciation/Depreciable Amount)	2.60%
Rate of Annual Asset Renewal (Capital renewal exp/Depreciable amount)	0.59%

In 2018 the organisation plans to renew assets at 22.84% of the rate they are being consumed and will be increasing its asset stock by 0.000% in the year. All future asset renewals are fully funded in councils LTFFP.

5.1.5 Historical Data

All Other Assets asset data and financial data are stored in Councils Corporate Asset Management system.

5.2 Infrastructure Risk Management Plan

An assessment of risks<sup>3</sup> associated with service delivery from infrastructure assets has identified critical risks that will result in loss or reduction in service from infrastructure assets or a 'financial shock' to the organisation. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' - requiring immediate corrective action and 'High' - requiring prioritised corrective action identified in the Infrastructure Risk Management Plan, together with the estimated residual risk after the selected treatment plan is operational are summarised in Table 5.2. These risks are reported to management and Council.

<sup>7</sup> Also reported as Written Down Current Replacement Cost (WDCRC).



**Table 5.2: Critical Risks and Treatment Plans**

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Dams	Dam wall failure	VH	Real; time water level and wall movement monitors and alarms	Low	

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

**5.3 Routine Operations and Maintenance Plan**

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

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

**5.3.1 Operations and Maintenance Plan**

Operations activities affect service levels including quality and function through street sweeping and grass mowing frequency, intensity and spacing of street lights and cleaning frequency and opening hours of building and other facilities.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating, eg road patching but excluding rehabilitation or renewal. Maintenance may be classified into reactive, planned and specific maintenance work activities.

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

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

Specific maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, replacing air conditioning units, etc. This work falls below the capital/maintenance threshold but may require a specific budget allocation.

Actual past maintenance expenditure is shown in Table 5.3.1.

**Table 5.3.1: Maintenance Expenditure Trends**

Year	Maintenance Expenditure	
	Planned and Specific	Unplanned
2014	\$0	\$19,792
2015	\$0	\$14,953
2016	\$0	\$6,041

Planned maintenance work is currently 0.00% of total maintenance expenditure.

Maintenance expenditure levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance expenditure levels are such that will result in a lesser level of service, the service consequences and service risks have been identified and service consequences highlighted in this AM Plan and service risks considered in the Infrastructure Risk Management Plan.

Assessment and prioritisation of reactive maintenance is undertaken by Council staff using experience and judgement. In conjunction with response levels of service detailed in Appendix A.

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,
- 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.

Asset hierarchy

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

The organisation’s service hierarchy is shown in Table 5.3.2.

Table 5.3.2: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
Dams	Manage dam infrastructure to ensure public safety
CCTV Networks	Improve public safety in community spaces
Other	Manage other assets to meet community requirements.

Critical Assets

Critical assets are those assets which have a high consequence of failure but not necessarily a high likelihood of failure. By identifying critical assets and critical failure modes, organisations can target and refine investigative activities, maintenance plans and capital expenditure plans at the appropriate time.

Operations and maintenance activities may be targeted to mitigate critical assets failure and maintain service levels. These activities may include increased inspection frequency, higher maintenance intervention levels, etc. Critical assets failure modes and required operations and maintenance activities are detailed in Table 5.3.2.1.

Table 5.3.2.1: Critical Assets and Service Level Objectives

Critical Assets	Critical Failure Mode	Operations & Maintenance Activities
Dams	Loss of structural integrity	• Inspection

		<ul style="list-style-type: none"> <li>Monitoring systems</li> <li>Rectification of defects</li> </ul>
CCTV	Vandalism	<ul style="list-style-type: none"> <li>Inspection</li> <li>Rectification of defects</li> </ul>

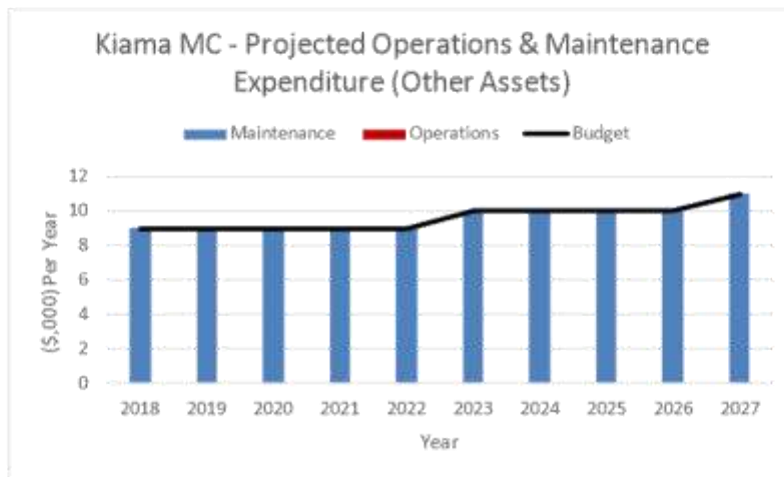
**Standards and specifications**

Maintenance work is carried out in accordance with relevant Standards and Specifications.

**5.3.3 Summary of future operations and maintenance expenditures**

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 4.

**Figure 4: Projected Operations and Maintenance Expenditure**



Deferred maintenance, ie works that are identified for maintenance and unable to be funded are to be included in the risk assessment and analysis in the infrastructure risk management plan.

Maintenance is funded from the operating budget where available. This is further discussed in Section 6.2.

**5.4 Renewal/Replacement Plan**

Renewal and replacement expenditure is major work which does not increase the asset’s design capacity but restores, rehabilitates, replaces or renews an existing asset to its original or lesser required service potential. Work over and above restoring an asset to original service potential is upgrade/expansion or new works expenditure.

**5.4.1 Renewal plan**

Assets requiring renewal/replacement are identified from one of three methods provided in the ‘Expenditure Template’.

- Method 1 uses Asset Register data to project the renewal costs using acquisition year and useful life to determine the renewal year, or
- Method 2 uses capital renewal expenditure projections from external condition modelling systems (such as Pavement Management Systems), or
- Method 3 uses a combination of average *network renewals plus defect repairs* in the *Renewal Plan* and *Defect Repair Plan* worksheets on the 'Expenditure template'.

Method 1 was used for this asset management plan.

The useful lives of assets used to develop projected asset renewal expenditures are shown in Table 5.4.1. Asset useful lives were last reviewed on June 2016.<sup>9</sup>

**Table 5.4.1: Useful Lives of Assets**

<i>Asset Category</i>	<i>Useful Life</i>
CCTV	5 to 15 years
DAMS	200 years
Other Assets	10 to 75 years

5.4.2 Renewal and Replacement Strategies

The organisation will plan capital renewal and replacement projects to meet level of service objectives and minimise infrastructure service risks by:

- Planning and scheduling renewal projects to deliver the defined level of service in the most efficient manner,
- Undertaking project scoping for all capital renewal and replacement projects to identify:
  - the service delivery 'deficiency', present risk and optimum time for renewal/replacement,
  - the project objectives to rectify the deficiency,
  - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
  - and evaluate the options against evaluation criteria adopted by the organisation, and
  - select the best option to be included in capital renewal programs,
- Using 'low cost' renewal methods (cost of renewal is less than replacement) wherever possible,
- Maintain a current infrastructure risk register for assets and 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,
- Review current and required skills base and implement workforce training and development to meet required construction and renewal needs,
- Maintain a current hierarchy of critical assets and capital renewal treatments and timings required ,
- Review management of capital renewal and replacement activities to ensure Council is obtaining best value for resources used.

Renewal ranking criteria

Asset renewal and replacement is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (eg replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (eg roughness of a road).<sup>10</sup>

It is possible to get some indication of capital renewal and replacement priorities by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have a high utilisation and subsequent impact on users would be greatest,
- The total value represents the greatest net value to the organisation,
- Have the highest average age relative to their expected lives,
- Are identified in the AM Plan as key cost factors,
- Have high operational or maintenance costs, and
- Where replacement with modern equivalent assets would yield material savings.<sup>11</sup>

Council has an integrated approach to service delivery and where capacity or performance requirements of assets require a change the Funding Allocation Process is used to ensure that the lifecycle costs are incorporated into the Integrated Planning and Reporting framework including the 10 Year Financial Plan, Asset Management Plan and Workforce Plan.

The 10 year Renewal Plan is detailed in Appendix B.

Renewal and replacement standards

Renewal work is carried out in accordance with the relevant Standards and Specifications.

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<sup>10</sup> IPWEA, 2011, IIMM, Sec 3.4.4, p 3|60.

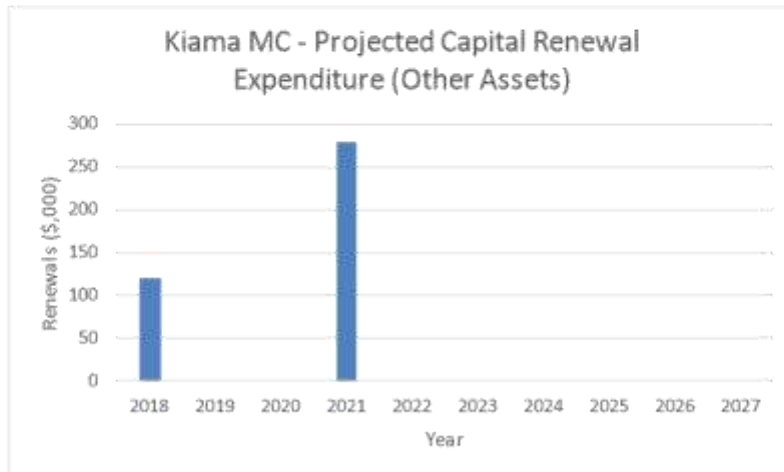
<sup>11</sup> Based on IPWEA, 2011, IIMM, Sec 3.4.5, p 3|66.

5.4.3 Summary of future renewal and replacement expenditure

Projected future renewal and replacement expenditures are forecast to increase over time as the asset stock increases from growth. The expenditure is summarised in Fig 5. Note that all amounts are shown in real values.

The projected capital renewal and replacement program is shown in Appendix B.

Fig 5: Projected Capital Renewal and Replacement Expenditure



Deferred renewal and replacement, ie those assets identified for renewal and/or replacement and not scheduled in capital works programs are to be included in the risk analysis process in the risk management plan.

Renewals and replacement expenditure in the organisation’s capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

5.5 Creation/Acquisition/Upgrade Plan

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

5.5.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as councilor/director or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programs.

5.5.2 Capital Investment Strategies

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:

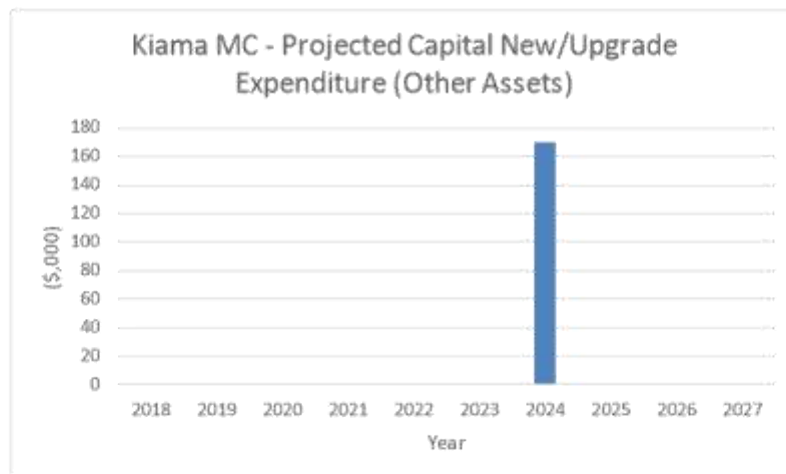
- the service delivery 'deficiency', present risk and required timeline for delivery of the upgrade/new asset,
- the project objectives to rectify the deficiency including value management for major projects,
- the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
- management of risks associated with alternative options,
- and evaluate the options against evaluation criteria adopted by Council, 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.

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2.

**5.5.3 Summary of future upgrade/new assets expenditure**

Projected upgrade/new asset expenditures are summarised in Fig 6. The projected upgrade/new capital works program is shown in Appendix C. All amounts are shown in real values.

**Fig 6: Projected Capital New/Upgrade Asset Expenditure**



Expenditure on new assets and services in the organisation’s capital works program will be accommodated in the long term financial plan. This is further discussed in Section 6.2.

**5.6 Disposal Plan**

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6, together with estimated annual savings from not having to fund operations and maintenance of the assets. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any. Any revenue gained from asset disposals is accommodated in Council’s long term financial plan.

Where cashflow projections from asset disposals are not available, these will be developed in future revisions of this asset management plan.

**Table 5.6: Assets Identified for Disposal**

Asset	Reason for Disposal	Timing	Disposal Expenditure	Operations & Maintenance Annual Savings
Nil	N/A	N/A	0	0

**5.7 Service Consequences and Risks**

The organisation has prioritised decisions made in adopting this AM Plan to obtain the optimum benefits from its available resources. Decisions were made based on the development of 3 scenarios of AM Plans.

**Scenario 1** - What we would like to do based on asset register data

**Scenario 2** – What we should do with existing budgets and identifying level of service and risk consequences (ie what are the operations and maintenance and capital projects we are unable to do, what is the service and risk consequences associated with this position). This may require several versions of the AM Plan.

**Scenario 3** – What we can do and be financially sustainable with AM Plans matching long-term financial plans.

The development of scenario 1 and scenario 2 AM Plans provides the tools for discussion with the Council/Board and community on trade-offs between what we would like to do (scenario 1) and what we should be doing with existing budgets (scenario 2) by balancing changes in services and service levels with affordability and acceptance of the service and risk consequences of the trade-off position (scenario 3).

**5.7.1 What we cannot do**

There are no identified operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years.

**5.7.2 Service consequences**

All Operations and maintenance activities and capital projects are funded in the 10 Year Financial Plan.

**5.7.3 Risk consequences**

There are no additional risk consequences based on section 5.7.1

Ongoing risks have been included with the Infrastructure Risk Management Plan summarised in Section 5.2 and risk management plans actions and expenditures included within projected expenditures.



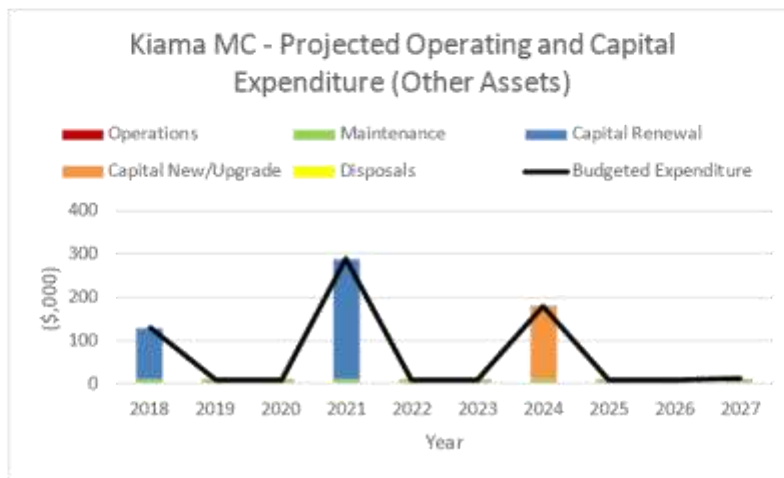
**6. FINANCIAL SUMMARY**

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

**6.1 Financial Statements and Projections**

The financial projections are shown in Fig 7 for projected operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets). Note that all costs are shown in real values.

**Fig 7: Projected Operating and Capital Expenditure**



**6.1.1 Sustainability of service delivery**

There are four key indicators for service delivery sustainability that have been considered in the analysis of the services provided by this asset category, these being the asset renewal funding ratio, long term life cycle costs/expenditures and medium term projected/budgeted expenditures over 5 and 10 years of the planning period.

**Asset Renewal Funding Ratio**

Asset Renewal Funding Ratio<sup>12</sup> 100.00%

The Asset Renewal Funding Ratio is the most important indicator and reveals that over the next 10 years, Council is forecasting that it will have 100.00% of the funds required for the optimal renewal and replacement of its assets.

**Long term - Life Cycle Cost**

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the asset life cycle. Life cycle costs include operations and maintenance expenditure and asset consumption (depreciation expense). The life cycle cost for the services covered in this asset management plan is \$185,257 per year (average operations and maintenance expenditure plus depreciation expense projected over 10 years).

<sup>12</sup> AIFMG, 2012, Version 1.3, Financial Sustainability Indicator 4, Sec 2.6, p 2.16

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Life cycle costs can be compared to life cycle expenditure to give an initial indicator of affordability of projected service levels when considered with age profiles. Life cycle expenditure includes operations, maintenance and capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure over the 10 year planning period is \$49,589 per year (average operations and maintenance plus capital renewal budgeted expenditure in LTFP over 10 years).

A shortfall between life cycle cost and life cycle expenditure is the life cycle gap. The life cycle gap for services covered by this asset management plan is **-\$135,669** per year (-ve = gap, +ve = surplus).

Life cycle expenditure is 26.77% of life cycle costs.

The life cycle costs and life cycle expenditure comparison highlights any difference between present outlays and the average cost of providing the service over the long term. Currently the life cycle expenditure is less than that life cycle cost due to the majority of the Other Assets infrastructure being in the early to mid stages of their useful lives. Renewal outlays will need to be increased in the future when the assets are reaching the later stages of their useful lives.

Knowing the extent and timing of any required increase in outlays and the service consequences if funding is not available will assist organisations in providing services to their communities in a financially sustainable manner. This is the purpose of the asset management plans and long term financial plan.

#### Medium term – 10 year financial planning period

This asset management plan identifies the projected operations, maintenance and capital renewal expenditures required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

These projected expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall. In a core asset management plan, a gap is generally due to increasing asset renewals for ageing assets.

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is \$49,589 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$49,589. This indicates that Council expects to have 100.00% of the projected expenditures needed to provide the services documented in the asset management plan.

#### Medium Term – 5 year financial planning period

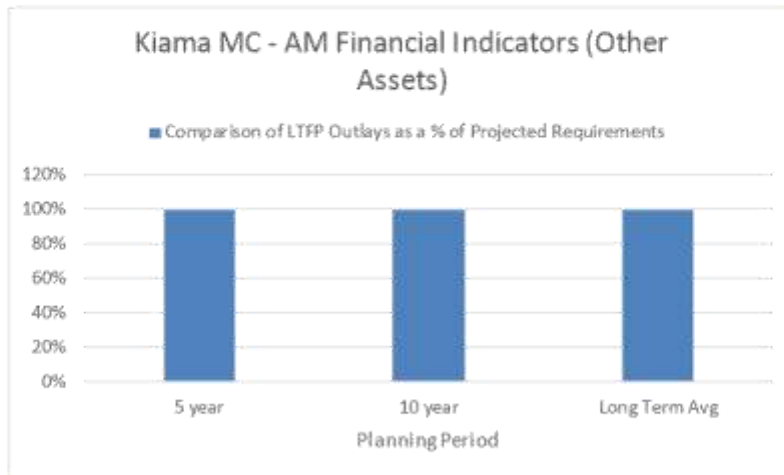
The projected operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is \$88,948 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$88,948 This indicates that Council expects to have 100.00% of projected expenditures required to provide the services shown in this asset management plan.

Asset management financial indicators

Figure 7A shows the asset management financial indicators over the 10 year planning period and for the long term life cycle.

**Figure 7A: Asset Management Financial Indicators**



Providing services from infrastructure in a sustainable manner requires the matching and managing of service levels, risks, projected expenditures and financing to achieve a financial indicator of approximately 100% for the first years of the asset management plan and ideally over the 10 year life of the Long Term Financial Plan.

Figure 8 shows the projected asset renewal and replacement expenditure over the 10 years of the AM Plan. The projected asset renewal and replacement expenditure is compared to renewal and replacement expenditure in the capital works program, which is accommodated in the long term financial plan

**Figure 8: Projected and LTFP Budgeted Renewal Expenditure**

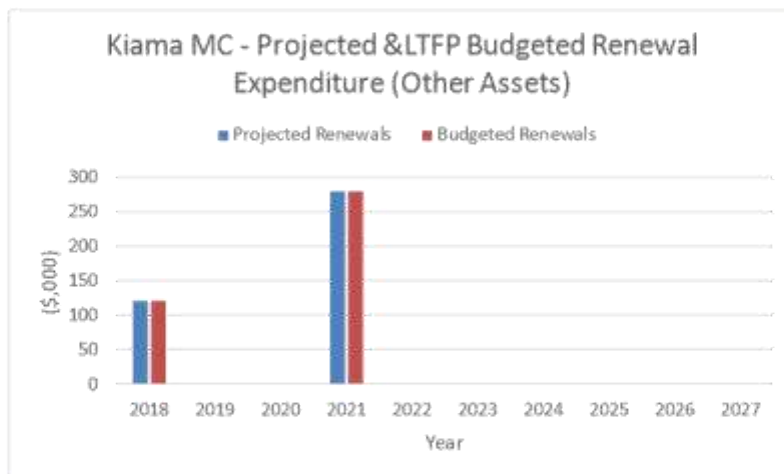


Table 6.1.1 shows the shortfall between projected renewal and replacement expenditures and expenditure accommodated in long term financial plan.

**Table 6.1.1: Projected and LTFP Budgeted Renewals and Financing Shortfall**

Year	Projected Renewals	LTFP Renewal Budget	Renewal Financing Shortfall (-ve Gap, +ve Surplus)	Cumulative Shortfall (-ve Gap, +ve Surplus)
2018	\$120	\$120	\$0	\$0
2019	\$0	\$0	\$0	\$0
2020	\$0	\$0	\$0	\$0
2021	\$280	\$280	\$0	\$0
2022	\$0	\$0	\$0	\$0
2023	\$0	\$0	\$0	\$0
2024	\$0	\$0	\$0	\$0
2025	\$0	\$0	\$0	\$0
2026	\$0	\$0	\$0	\$0
2027	\$0	\$0	\$0	\$0

All figures are in \$,000

Providing services in a sustainable manner will require matching of projected asset renewal and replacement expenditure to meet agreed service levels with **the corresponding** capital works program accommodated in the long term financial plan.

6.1.2 Projected expenditures for long term financial plan

Table 6.1.2 shows the projected expenditures for the 10 year long term financial plan.

**Table 6.1.2: Projected Expenditures for Long Term Financial Plan (\$000)**

Year	Operations	Maintenance	Capital Renewal	Capital New/Upgrade	Disposals
2018	\$0	\$9	\$120	\$0	\$0
2019	\$0	\$9	\$0	\$0	\$0
2020	\$0	\$9	\$0	\$0	\$0
2021	\$0	\$9	\$280	\$0	\$0
2022	\$0	\$9	\$0	\$0	\$0
2023	\$0	\$10	\$0	\$0	\$0
2024	\$0	\$10	\$0	\$170	\$0
2025	\$0	\$10	\$0	\$0	\$0
2026	\$0	\$10	\$0	\$0	\$0
2027	\$0	\$11	\$0	\$0	\$0

\* All figures are in \$,000

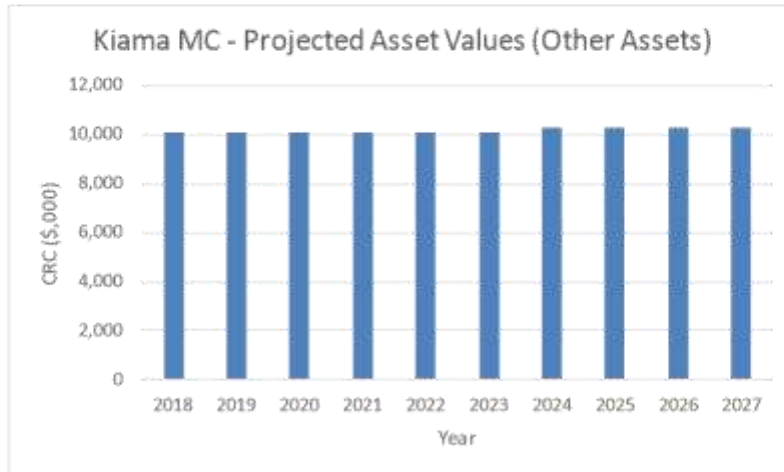
6.2 Funding Strategy

After reviewing service levels, as appropriate to ensure ongoing financial sustainability projected expenditures identified in Section 6.1.2 will be accommodated in the Council's 10 year long term financial plan.

**6.3 Valuation Forecasts**

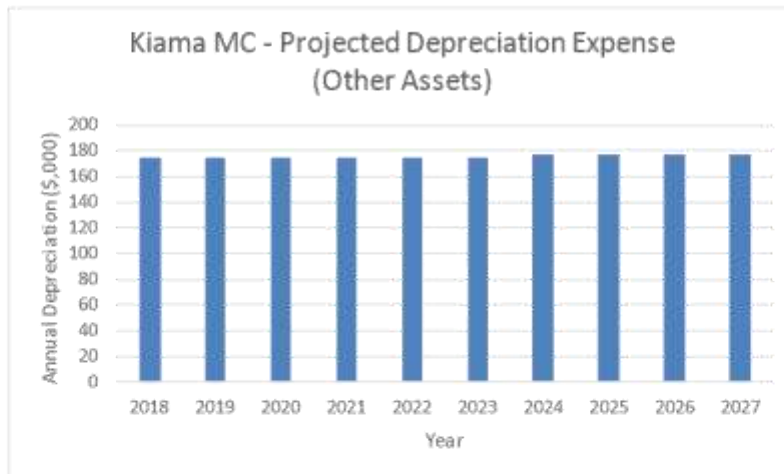
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Figure 9 shows the projected replacement cost asset values over the planning period in real values.

**Figure 9: Projected Asset Values**



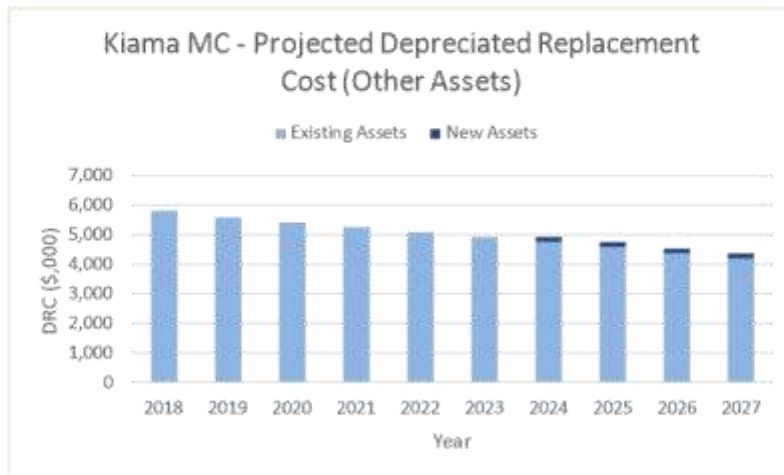
Depreciation expense values are forecast in line with asset values as shown in Figure 10.

**Figure 10: Projected Depreciation Expense**



The depreciated replacement cost will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets. Forecast of the assets' depreciated replacement cost is shown in Figure 11. The depreciated replacement cost of contributed and new assets is shown in the darker colour and in the lighter colour for existing assets.

Figure 11: Projected Depreciated Replacement Cost



**6.4 Key Assumptions made in Financial Forecasts**

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

Key assumptions made in this asset management plan and risks that these may change are shown in Table 6.4.

Table 6.4: Key Assumptions made in AM Plan and Risks of Change

Key Assumptions	Risks of Change to Assumptions
This asset class is fully funded in LTFP	Low
Future funding beyond the LTFP will remain fully funded	Low

**6.5 Forecast Reliability and Confidence**

The expenditure and valuations projections in this AM Plan are based on best available data. Currency and accuracy of data is critical to effective asset and financial management. Data confidence is classified on a 5 level scale<sup>13</sup> in accordance with Table 6.5.

<sup>13</sup> IPWEA, 2011, IIMM, Table 2.4.6, p 2|59.

**Table 6.5: Data Confidence Grading System**

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

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 6.5.1.

**Table 6.5.1: Data Confidence Assessment for Data used in AM Plan**

Data	Confidence Assessment	Comment
Demand drivers	A	The demand drivers utilised in this plan are currently the most effective way to forecast future requirements
Growth projections	A	The growth projections are based off population increase resulting in rezoning of land for future sub divisions
Operations expenditures	A	The operations expenditure budget is forecasted from data currently in the asset management system
Maintenance expenditures	A	The maintenance expenditure budget is forecasted from data currently in the asset management system
Projected Renewal exps. - Asset values	B	The revaluation of the assets in this plan occurred in June 2016
- Asset useful lives	B	The useful lives of the assets were based on Asset Type, Material and construction date.
- Condition modelling	A	Condition modelling were based on inspections and construction date
- Asset renewals	A	The projected renewals expenditure budget is forecasted from data currently in the asset management system
- Defect repairs	A	Further inspections are required
Upgrade/New expenditures	A	Contained in Appendix C and fully funded
Disposal expenditures	A	There are no disposals identified in the plan

Over all data sources the data confidence is assessed as High confidence level for data used in the preparation of this AM Plan.



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## 7. PLAN IMPROVEMENT AND MONITORING

### 7.1 Status of Asset Management Practices

#### 7.1.1 Accounting and financial systems

Kiama Municipal Council uses the Authority corporate information system. This system is used for financial management and reporting. The asset valuations are stored in the Capital Valuation Register of authority with a 1 to 1 match and integration to the Authority Asset Management Module.

Kiama Municipal Council has a documented Asset Accounting Policy.

#### Accountabilities for financial systems

Kiama Municipal Council's Finance Department is responsible for the data and processes pertaining to financial records in Authority. Kiama's Information Technology Department is responsible for system administration and technology infrastructure.

#### Accounting standards and regulations

Kiama Municipal Council adheres to the Australian Accounting Standards in conjunction with the Code of Accounting Practice for all the NSW Local Government Councils.

#### Capital/maintenance threshold

All assets are valued at their fair value. Expenditure on existing assets is considered maintenance where it does not increase the estimated remaining life of the asset.

#### Required changes to accounting financial systems arising from this AM Plan

Nil

#### 7.1.2 Asset management system

Kiama Municipal Council uses the Authority Asset Management System and Work Management System.

#### Asset registers

All registers are stored in the Authority Asset Management System. The system is integrated with Council's GIS system to provide a geographical representation and navigation to assets in the Asset Management System. Some assets are currently missing audited dimensional data.

#### Linkage from asset management to financial system

The Asset Management and Financial System are modules of the Authority Corporate Information System. These modules are fully integrated with a 1 to 1 relationship between assets and financial records.

#### Accountabilities for asset management system and data maintenance

Kiama Municipal Council's Engineering and Works Department are responsible for the configuration and data management of the Asset Management System.

Kiama Municipal Council's Information Technology Department is responsible for system administration and technology infrastructure.

#### Required changes to asset management system arising from this AM Plan

Audit dimensional attributes of asset records.

## 7.2 Improvement Plan

The asset management improvement plan generated from this asset management plan is shown in Table 7.2.

**Table 7.2: Improvement Plan**

Task No	Task	Responsibility	Resources Required	Timeline
1	Introduction of reactive work orders to better manage scheduled v unscheduled maintenance	Engineering And Works Department	Works Crew	Completion 2018
2	Inspection scheduling and recording via the AM system	Engineering And Works Department	Asset Management & IT	Completion 2018
3	Introduction of Internal Charges for Other Assets to facilitate Activity Based Costing	Engineering And Works Department Finance Department	Asset Management, Management Accountant	Completion 2017

## 7.3 Monitoring and Review Procedures

This asset management plan will be reviewed during annual budget planning processes and amended to recognise any material changes in service levels and/or resources available to provide those services as a result of budget decisions.

The AM Plan will be updated annually to ensure it represents the current service level, asset values, projected operations, maintenance, capital renewal and replacement, capital upgrade/new and asset disposal expenditures and projected expenditure values incorporated into the organisation's long term financial plan.

The AM Plan has a life of 4 years (Council election cycle) and is due for complete revision and updating before each Council election.

## 7.4 Performance Measures

The effectiveness of the asset management plan can be measured in the following ways:

- The degree to which the required projected expenditures identified in this asset management plan are incorporated into Council's long term financial plan,
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the 'global' works program trends provided by the asset management plan,
- The degree to which the existing and projected service levels and service consequences (what we cannot do), risks and residual risks are incorporated into the Council's Strategic Plan and associated plans,
- The Asset Renewal Funding Ratio achieving the target of 100%.

**8. REFERENCES**

IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/IIMM](http://www.ipwea.org/IIMM)

IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/namsplus](http://www.ipwea.org/namsplus).

IPWEA, 2009, 'Australian Infrastructure Financial Management Guidelines', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/AIFMG](http://www.ipwea.org/AIFMG).

IPWEA, 2011, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/IIMM](http://www.ipwea.org/IIMM)

Kiama Municipal Council 'Operational Plan 2015-2016 And Delivery Program 2013-2017'

Kiama Municipal Council 'Strategic Asset Management Plan 2002'

**9. APPENDICES**

- Appendix A Maintenance Response Levels of Service
  
- Appendix B Projected 10 year Capital Renewal Program
  
- Appendix C Projected 10 year Capital New/Upgrade Program
  
- Appendix D Abbreviations
  
- Appendix E Glossary

**Appendix A Maintenance Response Levels of Service**

Maintenance Response Level Of Service		
Maintenance Type	Maintenance Activity	Required Maintenance Response

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**Appendix B Projected 10 Year Capital Renewal Program**

Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Other Assets</b>		<b>120,000</b>	<b>0</b>	<b>0</b>	<b>279,538</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
3839	Land & Building Assets/ Water	120,000									
28875	Bong Bong Street/Seg 01 End to Manning St/CCTV/Hardware				7,654						
28877	Bong Bong Street/Seg 01 End to Manning St/CCTV/L01 Camera				4,465						
26041	Collins Street/Seg 06 Collins La to Terralong St/CCTV/Hardware				129,658						
28845	Collins Street/Seg 06 Collins La to Terralong St/CCTV/L01 Camera				4,465						
28879	Fern Street/Seg 15 Blackwood St to Belinda St/CCTV/Hardware				10,056						
28881	Fern Street/Seg 15 Blackwood St to Belinda St/CCTV/L01 Camera				16,753						
28882	Fern Street/Seg 15 Blackwood St to Belinda St/CCTV/Software				3,471						
28870	Manning Street/Seg 01 Terralong St to Morton St/CCTV/Hardware				7,654						
28873	Manning Street/Seg 01 Terralong St to Morton St/CCTV/R01 Camera				4,465						
28871	Manning Street/Seg 01 Terralong St to Morton St/CCTV/Software				20,093						
28857	Railway Parade/Seg 01 Terralong St to Bong Bong St/CCTV/Hardware				7,654						
28859	Railway Parade/Seg 01 Terralong St to Bong Bong St/CCTV/R01 Camera				2,233						
28861	Railway Parade/Seg 01 Terralong St to Bong Bong St/CCTV/R02 Camera				4,465						
28864	Terralong Street/Seg 04 Manning St to Railway Pde/CCTV/R01 Camera				6,698						
28865	Terralong Street/Seg 04 Manning St to Railway Pde/CCTV/R02 Hardware				7,654						
28868	Terralong Street/Seg 04 Manning St to Railway Pde/CCTV/R03 Camera				6,698						
28853	Terralong Street/Seg 05 Railway Pde to Shoalhaven St/CCTV/Hardware				7,654						
28855	Terralong Street/Seg 05 Railway Pde to Shoalhaven St/CCTV/R01 Camera				6,698						
28847	Terralong Street/Seg 06 Shoalhaven St to Collins St/CCTV/Hardware				7,654						

KIAMA MUNICIPAL COUNCIL – OTHER ASSETS ASSET MANAGEMENT PLAN

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Asset	Description	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Other Assets</b>		<b>120,000</b>	<b>0</b>	<b>0</b>	<b>279,538</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
28849	Terralong Street/Seg 06 Shoalhaven St to Collins St/CCTV/R01 Camera				6,698						
28851	Terralong Street/Seg 06 Shoalhaven St to Collins St/CCTV/R03 Camera				6,698						

KIAMA MUNICIPAL COUNCIL – OTHER ASSETS ASSET MANAGEMENT PLAN

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**Appendix C Projected New/Upgrade 10 Year Capital Works Program**

Location	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Asset	0	0	0	0	0	0	170,000	0	0	0
Water Main Replacement							170,000			

KIAMA MUNICIPAL COUNCIL – OTHER ASSETS ASSET MANAGEMENT PLAN



**Appendix D Abbreviations**

<b>AAAC</b>	Average annual asset consumption
<b>AM</b>	Asset management
<b>AM Plan</b>	Asset management plan
<b>ARI</b>	Average recurrence interval
<b>ASC</b>	Annual service cost
<b>BOD</b>	Biochemical (biological) oxygen demand
<b>CRC</b>	Current replacement cost
<b>CWMS</b>	Community wastewater management systems
<b>DA</b>	Depreciable amount
<b>DRC</b>	Depreciated replacement cost
<b>EF</b>	Earthworks/formation
<b>IRMP</b>	Infrastructure risk management plan
<b>LCC</b>	Life Cycle cost
<b>LCE</b>	Life cycle expenditure
<b>LTFP</b>	Long term financial plan
<b>MMS</b>	Maintenance management system
<b>PCI</b>	Pavement condition index
<b>RV</b>	Residual value
<b>SoA</b>	State of the Assets
<b>SS</b>	Suspended solids
<b>vph</b>	Vehicles per hour
<b>WDCRC</b>	Written down current replacement cost

## Appendix E Glossary

### 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

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 hierarchy

A framework for segmenting an asset base into appropriate classifications. The asset hierarchy can be based on asset function or asset type or a combination of the two.

### Asset management (AM)

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 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.

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**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.

**Class of assets**

See asset class definition

**Component**

Specific parts of an asset having independent physical or functional identity and having specific attributes such as different life expectancy, maintenance regimes, risk or criticality.

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**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 cash flow 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, including any costs necessary to place the asset into service. This includes one-off design and project management costs.

**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.

**Deferred maintenance**

The shortfall in rehabilitation work undertaken relative to that required to maintain the service potential of an asset.

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

**Economic life**

See useful life definition.

**Expenditure**

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

**Expenses**

Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or increases in liabilities that result in decreases in equity, other than those relating to distributions to equity participants.

**Fair value**

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

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**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.

**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 that contribute to meeting the needs of organisations or the 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 separate 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.

**Key performance indicator**

A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or other target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.

**Level of service**

The defined service quality for a particular service/activity against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental impact, 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 average operations, maintenance and capital renewal expenditure accommodated in the long term financial plan over 10 years. Life Cycle Expenditure may be compared to average Life Cycle Cost to give an initial indicator of affordability of projected service levels when considered with asset age profiles.

**Loans / borrowings**

See borrowings.

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**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 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**

The notion of materiality guides the margin of error acceptable, the degree of precision required and the extent of the disclosure required when preparing general purpose financial reports. Information is material if its omission, misstatement or non-disclosure has the potential, individually or collectively, to influence the economic decisions of users taken on the basis of the financial report or affect the discharge of accountability by the management or governing body of the entity.

**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.

**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 to provide a service. In common use the term typically includes, eg power, fuel, staff, plant equipment, on-costs and overheads but excludes maintenance and depreciation. Maintenance and depreciation is on the other hand included in operating expenses.

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**Operating expense**

The gross outflow of economic benefits, being cash and non cash items, during the period arising in the course of ordinary activities of an entity when those outflows result in decreases in equity, other than decreases relating to distributions to equity participants.

**Operating expenses**

Recurrent expenses continuously required to provide a service, including power, fuel, staff, plant equipment, maintenance, depreciation, on-costs and overheads.

**Operations, maintenance and renewal financing ratio**

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

**Operations, maintenance and renewal gap**

Difference between budgeted expenditures in a long term financial plan (or estimated future budgets in absence of a long term financial plan) and projected expenditures for operations, maintenance and renewal of assets to achieve/maintain specified service levels, totalled over a defined time (e.g. 5, 10 and 15 years).

**Pavement management system (PMS)**

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

**PMS Score**

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

**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).

**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 operations and maintenance expenditure.

**Recurrent funding**

Funding to pay for recurrent expenditure.

**Rehabilitation**

See capital renewal expenditure definition above.

**Remaining useful life**

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

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**Renewal**

See capital renewal expenditure definition above.

**Residual value**

The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.

**Revenue generating investments**

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

**Risk management**

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

**Section or segment**

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

**Service potential**

The total future service capacity of an asset. It is normally determined by reference to the operating capacity and economic life of an asset. A measure of service potential is used in the not-for-profit sector/public sector to value assets, particularly those not producing a cash flow.

**Service potential remaining**

A measure of the future economic benefits remaining in assets. It may be expressed in dollar values (Fair Value) or as a percentage of total anticipated future economic benefits. It is also a measure of the percentage of the asset's potential to provide services that is still available for use in providing services (Depreciated Replacement Cost/Depreciable Amount).

**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.

**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.



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**Value in Use**

The present value of future cash flows expected to be derived from an asset or cash generating unit. 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 net cash inflows, where the entity would, if deprived of the asset, replace its remaining future economic benefits.

Source: IPWEA, 2009, Glossary

Additional and modified glossary items shown \*



# **Kiama Council**

# **Crime Prevention Plan**

**July 2013**

**Item 13.2**

**Enclosure 1**

Kiama Municipality Crime Prevention Plan

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Kiama Municipality Crime Prevention Plan

**1.0 Introduction**

The Kiama Municipality covers an area of approximately 259 square kilometres, with the main commercial centre being the seaside township of Kiama which is located 120kms south of Sydney in the Illawarra, New South Wales. The municipality has several separate villages, being Jamberoo, Gerringong, Gerroa and Kiama Downs. The Estimated Resident Population (ERP) as determined by Australian Bureau of Statistics (ABS) [which is considered as the official population statistic] of the Local Government Area (LGA) is 20,843 as of the 30 June 2012. Kiama features several popular surfing beaches, caravan parks and numerous alfresco cafes and restaurants and attracts a large number of day trippers from Sydney.

It is Kiama's proximity to Australia's largest city that contributes to the complex blend of social and economic dynamics that create a unique mix of challenges for managing and ameliorating crime within the LGA, where offending behaviour is at its highest levels during the peak tourism seasons.

Some recent incidents (including 2 armed robberies in or very near the Kiama Central Business District [CBD]) have brought a renewed focus on the need to implement strategies and install key infrastructure that can assist with reducing the likelihood of offending behaviour, while increasing the ability to identify those committing offences. It is generally accepted that the majority of crime is opportunistic in nature and if people see an opportunity to commit a crime and believe that they are unlikely to be caught, they are more likely to commit it. Therefore, reducing opportunities to commit crime, and increasing the likelihood of being caught, are the two single most effective strategies to reduce crime.

Gerringong, Jamberoo and Kiama Downs have also experienced an armed robbery each over the past twelve months, and it is recognised that strategies need to address the incidence of crime throughout the whole Municipality; however, statistically the highest crime area is in the vicinity of the Kiama township. Gerringong has also experienced peaks in crimes such as break and enter and stealing, and residents have advocated over a long period of time for a permanent police presence in the town as a crime prevention measure. This plan seeks to identify crime trends and priorities and develop a range of responses to minimise offending behaviour. A widely adopted approach to addressing crime prevention is Crime Prevention Through Environmental Design (CPTED), which attempts to reduce the likelihood of crime through better design principles. This will be a consideration for Council in this Plan. Activities from the Crime Prevention Plan (CPP) will also be incorporated into Councils overall planning framework of Integrated Planning and Reporting.

Kiama Municipality Crime Prevention Plan

2.0 CRIME PROFILE

2.1 Kiama Crime Statistics and Trends

Kiama deservedly does not have a reputation as having a particular crime problem. However there are some key areas where crime is having a negative impact and overall is contributing to a reduced perception of safety; therefore needs to be addressed.

For the 12 month period from January through to December 2012, the four most recorded incidents were:

- 1) Steal from motor vehicle - 138 recorded incidences
- 2) Malicious damage to property – 82 recorded incidences
- 3) Break and enter dwelling – 71 recorded incidences
- 4) Break and enter non dwelling – 46 recorded incidences

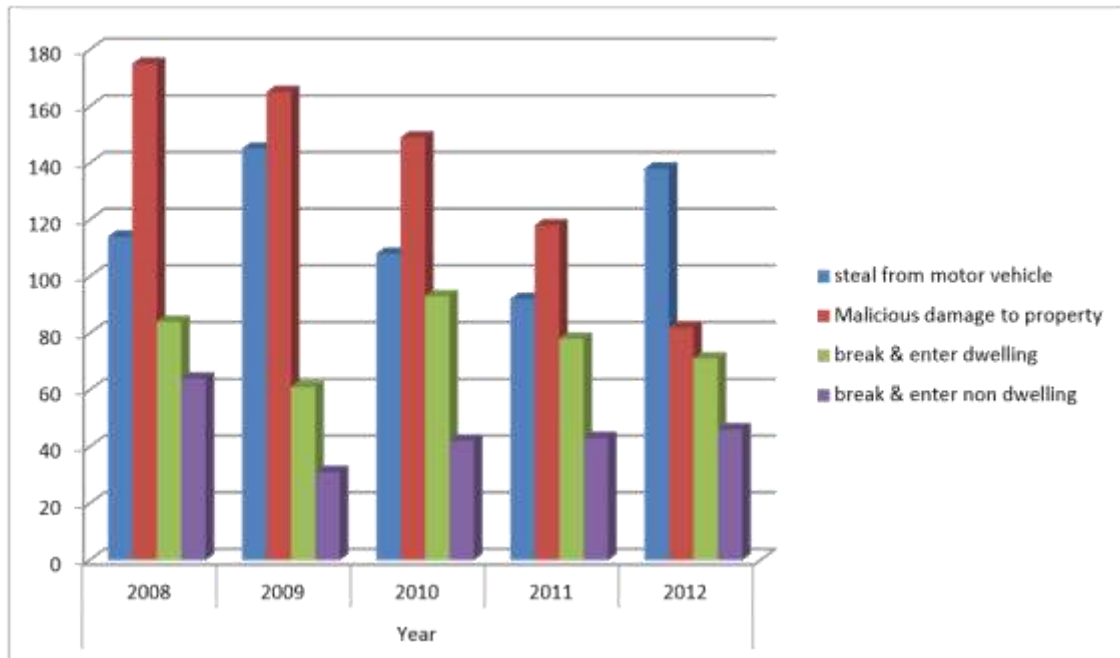


Figure 1. – 4 most prominent offences over last five years

From these statistics in Figure 1, it can be seen that although malicious damage to property is trending down, steal from motor vehicle and break and enter dwelling & non dwelling, are either trending up or remaining stable overall at unacceptable levels.

Part of Kiama’s unique challenge is managing crime during peak holiday periods. From the below chart (Figure 2), it can be seen that the highest levels of offending behaviour takes place during key holiday periods, in particular January and December with ‘Robbery’ being significantly higher during the month of December .

Kiama Municipality Crime Prevention Plan

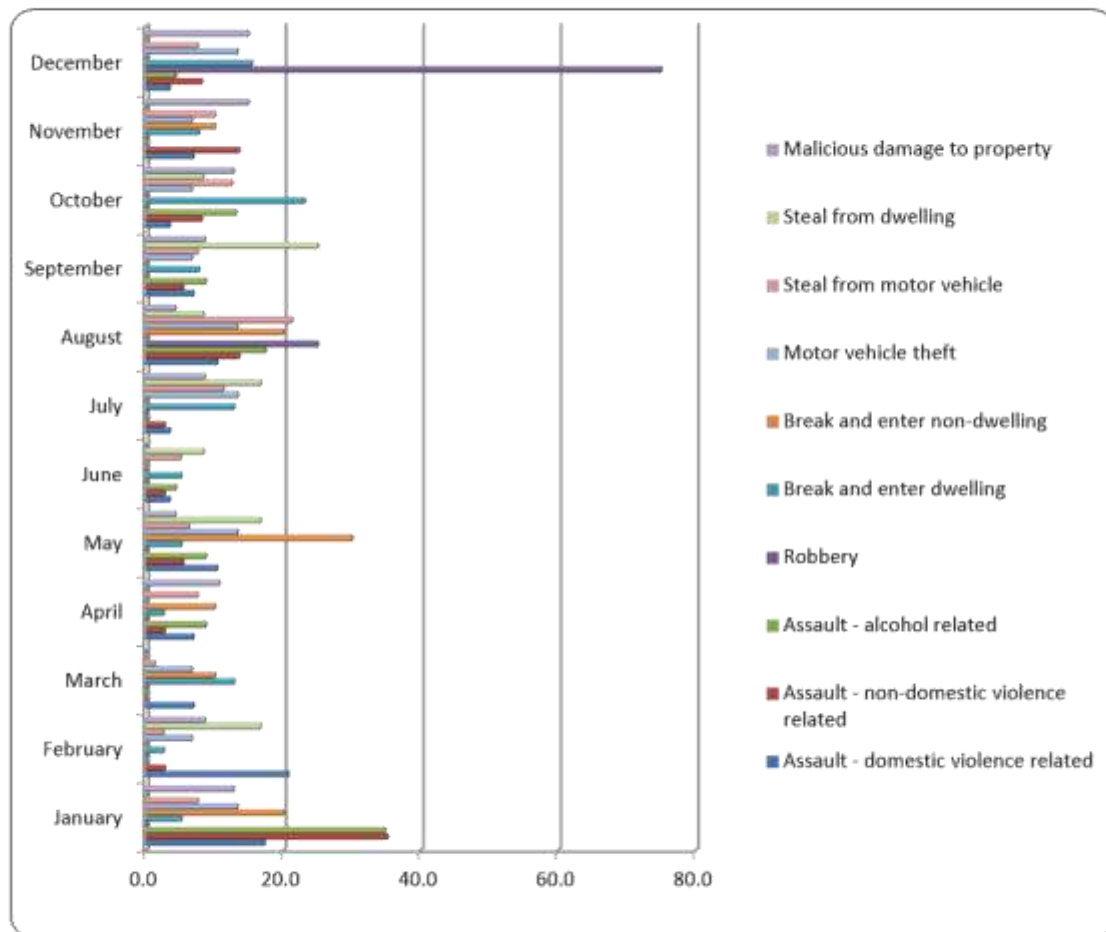


Figure 2. – Offences over 12 months January 2012 to December 2012

2.2 Local Crime Priorities

Priority Area 1: Offences committed within the Kiama CBD

Priority Area 2: Steal from motor vehicle

Offence	Hot Spot	Priority times	Victims
Offences committed within the Kiama CBD	Kiama Central Business District	Outside standard business hours	Local businesses
Steal from motor vehicle	Holiday parks and other tourist hot spots	Peak holiday periods	Tourists & residents

Kiama Municipality Crime Prevention Plan

Figure 3 (below) shows that Kiama CBD experienced more than 2.5 times as many offences (268) than any other Kiama LGA suburb (Gerringong 115), and just under half of all offences committed (582) within the Kiama LGA over the 12 month period of May 2012 to May 2013.

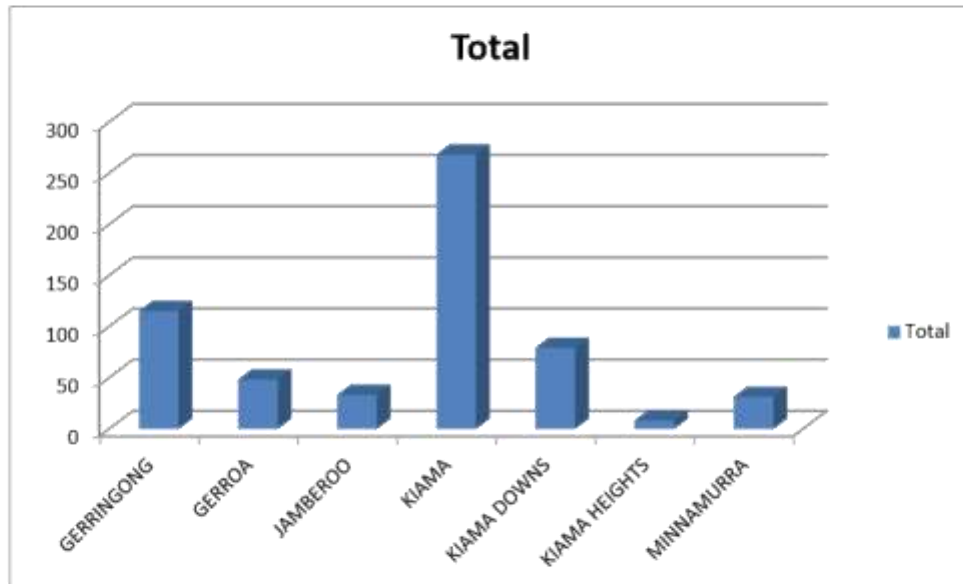


Figure 3. – Breakdown of total offences committed by suburb for period May 2012 to May 2013.

### 2.3 Capacity

Kiama LGA has a unique and complex blend of social and economic dynamics that create a unique mix of challenges for managing and ameliorating crime within the LGA. This mix means Council's greatest capacity lies in its ability to implement targeted strategies aimed at 'hot spots' in the most economically efficient and timely manner.

The majority of crime in the Municipality is considered to be opportunistic. That is, if people see an opportunity to commit a crime and believe that they are unlikely to be caught, they are more likely to commit an offence. Council's most effective strategies to reduce crime are best targeted at reducing opportunity through CPTED, and increasing deterrent factors.

The installation of key infrastructure, such as CCTV cameras in targeted locations, will increase deterrent factors, while implementing planning and control measures based on CPTED, will reduce opportunities to commit crimes in the first place.

Council has limited financial resources, therefore it is seen as prudent to concentrate on areas of greatest need first, and then roll out further strategies over time to other areas of the Municipality based on what is learnt from initial strategy implementation.

Kiama Municipality Crime Prevention Plan

**2.4 Situation Analysis**

Kiama has two key 'Hot Spot's': the CBD in general, and Holiday Parks during peak holiday periods. The CBD includes licensed venues that also experience unacceptable levels of alcohol related incidents at times, however, these venues are already monitored by CCTV. Therefore the strategies contained in this plan are seen as complimentary to the measures these venues already have in place.

**2.5 Stakeholders**

It is recognised that there are a range of stakeholders in any Crime Prevention Plan and it is intended that stakeholders will be consulted on an ongoing basis as strategies are developed and implemented over the life of this plan.

Kiama Council has established a Community Safety Committee and part of the role of this Committee will be to engage with stakeholders including: Kiama Council, local businesses, Chamber of Commerce, NSW Police, local tourism operators, Kiama Liquor Accord, local & regional transport operators, and Kiama residents.

**2.6 Monitoring and Evaluation**

The Community Safety Committee will have responsibility for the monitoring and evaluation of the Crime Prevention Plan. Strategies implemented in this plan will be reviewed each 12 months, with the overall plan to be reviewed in 3 years time, then each Council term thereafter. The evaluation process will consider crime statistics and trends for the Municipality as well as community perception around the issue of safety.

Based on these reviews, successful strategies will be rolled out to other areas of the Municipality such as Jamberoo and Gerringong villages, with any appropriate modification to suit the needs of the different communities and subject to available resources. Further initiatives will also be developed as required to address any emerging trends, and identification of funding sources and other resources will be carried out on an ongoing basis by the Crime Safety Committee.



Kiama Municipality Crime Prevention Plan

### 1. Crime Prevention Action Plan

**Target Offence:** Offences committed within the Central Business District  
**Project:** Installation of CCTV Camera's  
**Rationale:** Contribute to reducing incidence of crime through increased deterrent factors  
**Objective:** Crime reduction  
**Lead Agency & Partners:** Kiama Municipal Council  
**Expected Outcome:** Reduction in offences committed with in the Kiama CBD

Action	Performance Measures	Time Frames	Funding required	Milestones
1.1 Investigate the requirements for installation of CCTV in Kiama CBD, develop plan for implementation, and pursue funding for installation.	Completion of Investigation Plan developed	3 months	In-kind	Investigation completed, plan developed, with funding secured.
1.2 Installation of CCTV cameras according to plan	Cameras installed. Evidence of an overall reduction of crimes committed within the Kiama CBD Evidence of the effectiveness of CCTV as a deterrent factor.	12 months	\$130 000	Cameras installed.
1.3 Development of a Code of Practice for the use of CCTV by Kiama Council in Kiama CBD, with proposed passive	- Code of Practice Developed, - Code of Practice adopted by Kiama Council	Prior to installation	Nil	Code of Practice adopted by Council MOU developed and

July 2013

Kiama Municipality Crime Prevention Plan

monitoring by Lake Illawarra Police Command. Development of a Memorandum of Understanding (MOU) with NSW Police in regards to recording and storage of images including consideration of Privacy and Security requirements.	- MOU developed			signed by both parties
1.4 Review the strategy to address the other towns and suburbs as soon as practicable, subject to funding.	Review undertaken	As soon as practicable	In-kind	Key learning's identified.
1.5 Advocate for increased police presence in LGA to contribute to deterrent measures.	Increased police presence	ongoing	n/a	Increased police presence

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Kiama Municipality Crime Prevention Plan

## 2. Crime Prevention Action Plan

**Target Offence:**

Opportunistic offences

**Project:**

Crime Prevention Through Environmental Design (CPTED) Policy and Program

**Rationale:**

Research demonstrates that CPTED can reduce the opportunity for malicious damage and other crimes and enhance perceptions of safety. Incorporation of CPTED principles into Council's planning controls, policies and maintenance program can 'design out' the opportunity for crime.

**Objective:**

Consideration of CPTED to be demonstrated in future development applications as well as Council's maintenance regime.

**Lead Agency & Partners:**

Council, Illawarra Local Area Command, Government agencies

**Expected Outcome:**

Reduced opportunity for malicious damage and other crimes in future and redesigned developments in Kiama

Action	Performance Measures	Time Frames	Funding required	Milestones
2.1 Investigate the establishment of a CPTED Development Control Guidelines and Development Consent Conditions that establishes a minimum standard design to minimise the opportunity for crime in the design of buildings, parks, walkways, laneways, car parks, transport interchanges, bus shelters, shopping centres, retail premises and licensed premises.	Evidence of increased awareness of crime prevention principles across planners, architects, Council officers and community through identification of CPTED in development applications.	2013/14	Within existing resources	- Identification of best practice design for key development types - Develop policy to address malicious damage issues in new developments - Drafting of CPTED guidelines - Consultation with Police and other stakeholders

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Kiama Municipality Crime Prevention Plan

<p><b>2.2</b> Development of a formal CPTED assessment process for relevant DA in partnership with NSW Police.</p>	<p>- Policy developed and implemented - Number of DA's CPTED assessed</p>	<p>2014/15</p>	<p>Within existing resources</p>	<p>Development of assessment tools - Establishment of timely assessment process - Develop policy to address malicious damage issues in new developments</p>
<p><b>2.3</b> Conduct a Street Lighting Audit (Safety audit) &amp; visual audit (day time) in Kiama CBD to assess these environmental factors.</p>	<p>Audits conducted</p>	<p>6 mths</p>	<p>In-kind</p>	<p>Any issues identified and strategies to ameliorate enacted.</p>

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Kiama Municipality Crime Prevention Plan

### 3. Crime Prevention Action Plan

- Target Offence:** Breaches of Alcohol Free Zones.
- Project:** Education of public in regards to Alcohol Free Zones in Kiama LGA
- Rationale:** Lack of understanding of laws around Alcohol Free Zones resulting in conflict when police enforce the laws
- Objective:** Increase public knowledge, understanding and compliance with Alcohol Free Zone laws
- Lead Agency & Partners:** Kiama Council, NSW Police
- Expected Outcome:** Increased knowledge, understanding & compliance of Alcohol Free Zones laws amongst public

Action	Performance Measures	Time Frames	Funding required	Milestones
3.1 Develop/secure resources that help educate public on what Alcohol Free Zone laws are and how they are enforced	Resources being utilised	6 mths	In kind	Resources identified
3.2 Work with Council's Communications Team to develop a strategy to promote awareness & understanding around Alcohol Free Zones	Strategy implemented	12 mths	In kind	Strategy developed
3.3 Network & liaise with other community groups & other Councils in the region to share resources, understanding and strategies to address this issue	Network meetings attended and resources and ideas shared.	ongoing	nil	n/a

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Kiama Municipality Crime Prevention Plan

3.4 Review current Alcohol Free Zones and potentially expand dependent on review findings	Review Conducted	12 mths	Nil	Review conducted
3.5 Advocate for increased police presence in LGA to contribute to education and enforcement	Increased police presence	ongoing	n/a	Increased police presence

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Kiama Municipality Crime Prevention Plan

#### 4. Crime Prevention Action Plan

**Target Offence:** Anti-social behaviour and offences committed shortly after leaving a licensed venue at closing time

**Project:** Coordination of late night transport options

**Rationale:** Patrons experiencing delays in getting home after leaving licensed venues are vulnerable to committing offences, or being assaulted by other patrons also waiting to secure transport home

**Objective:** Reduce the number of patrons congregating in public space after leaving venues by improving coordination of late night transport options in order to encourage safe and efficient dispersal out of the CBD

**Lead Agency & Partners:** Kiama Council, Kiama Liquor Accord, Transport operators in the Kiama region

**Expected Outcome:** Increase in late night transport options

Action	Performance Measures	Time Frames	Funding required	Milestones
4.1 Liaise with Kiama Liquor Accord and ensure best utilisation of and/or increase in late night transport options	Reduced number of patrons having to wait long periods to secure transport home	12 mths	To be identified	Reduction in late night incidents in Kiama CBD
4.2 Licensed venues within CBD continue to have staggered lockout & closing times to assist with reducing the likelihood of large numbers of patrons requiring public transport all at once.	Venues continue staggered lockout and closing times	Ongoing	Nil	n/a

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Kiama Municipality Crime Prevention Plan

<p><b>4.3</b> Liaise with Kiama Liquor Accord to identify opportunities to educate licensed venue patrons to better plan for getting home.</p>	<p>Education opportunities identified</p>	<p>12 mths</p>	<p>To be identified</p>	<p>Education plan developed and enacted.</p>
<p><b>4.4</b> Advocate for increased police presence in LGA, particularly around venue closing times.</p>	<p>Increased police presence</p>	<p>ongoing</p>	<p>n/a</p>	<p>Increased police presence</p>

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Kiama Municipality Crime Prevention Plan

### 5. Crime Prevention Action Plan

**Target Offence:** **Graffiti**  
**Project:** Investigate suitable graffiti reduction & removal programs  
**Rationale:** Although Kiama LGA does not have a major issue with graffiti compared to some Councils, if not managed well, it could escalate.  
**Objective:** Manage and overall reduce the number of incidents of graffiti in the LGA  
**Lead Agency & Partners:** Kiama Council, Kiama residents  
**Expected Outcome:** Decrease in number of incidents of graffiti

Action	Performance Measures	Time Frames	Funding required	Milestones
5.1 Review Council current policies & procedures around graffiti in the LGA	Policies & procedures reviewed	6 mths	nil	Policies & procedures reviewed
5.2 Investigate other graffiti reduction & removal programs from other LGAs	Other council programs reviewed	6 mths	nil	Other council programs reviewed
5.3 Assess other relevant programs against Council's current processes for managing graffiti and update our policies & procedures where necessary	Assessment against Kiama Council policies & procedures completed	12 mths	Nil	Kiama Council policies & procedures updated where required
5.4 encourage residents to download and utilise "snap send solve" graffiti	Council receive reports of graffiti via Snap Send Solve	ongoing	nil	Council receive reports of graffiti via Snap Send

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Kiama Municipality Crime Prevention Plan

reporting app that council has registered with.				Solve
5.5 Advocate for increased police presence in LGA as a deterrent against graffiti production.	Increased police presence	ongoing	n/a	Increased police presence

July 2013

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KIAMA MUNICIPAL COUNCIL

Phone Enquiries:

Mr Phil Costello  
4232 0444

Reference:

(17/2100)

11 January 2017

Department of Primary Industries  
Locked Bag 21  
ORANGE NSW 2800

Dear Sir/Madam

Council has recently considered a Planning Proposal requesting the rezoning of currently zoned rural land to residential. As part of their assessment, Council sought information in regard to the agricultural value of the land in question.

It is noted that, whilst mapping of Biophysical Strategic Agricultural Land (BSAL) indicates land with high quality soil and water resources capable of sustaining high levels of productivity, it does not capture all lands that have high agricultural value, and as a result Council resolved as follows:

*"Council write to the Department of Primary Industries requesting that the Kiama LGA be a priority when undertaking this (Agricultural suitability) mapping."*

Council is aware of works carried out to map highly suitable lands for each leading agricultural industry in six case study local government areas, generally in the western areas of NSW.

This Council is of a view that the resultant Agricultural industry maps and associated profiles would be very valuable to inform:

- local government strategic land use planning, in particular the development of Local Environmental Plans and accompanying strategies
- strategies for local/regional economic development and industry development strategies, and
- strategies for natural resource investment and catchment management.

The above have both a local and regional benefit and accordingly Council requests your advice in regard to the timing of having Agricultural Industry Mapping carried out in the Illawarra and particularly Kiama LGA.

Yours faithfully

  
Phil Costello  
Director of Environmental Services

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GENERAL MANAGER

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ABN: 22 379679 101

your council  
your community



Poster

Media Wall including KMC logo

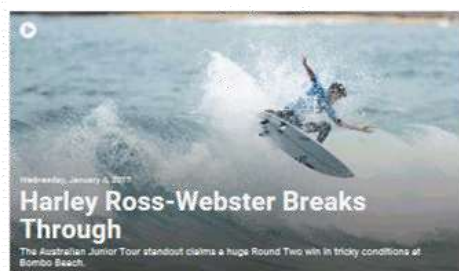


Final Branding on Marquees



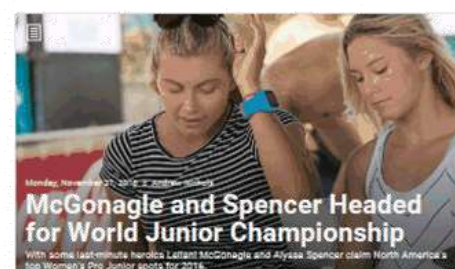
Media Posts during the 2016 WSL World Junior Championships

<http://www.worldsurfleague.com/?hubId=231514>



Item 14.16

Enclosure 1

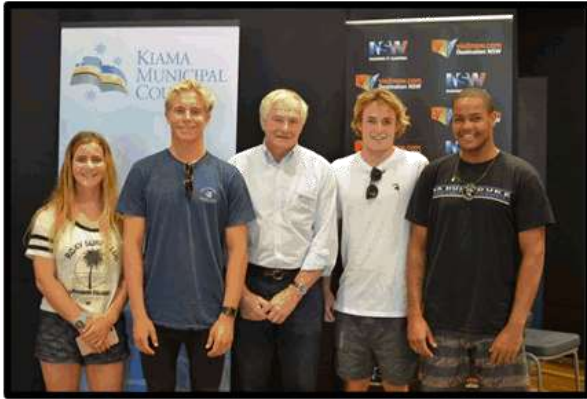


Item 14.16

Enclosure 1



Opening Ceremony - 3 January 2017 – Pavilion Kiama



Werri Boardriders – Micro Groms with Athletes



Panel Session with Ethan Ewing and Macy Callaghan (Male & Female Overall Winners)



39 Athletes in Attendance



Closing Ceremony - Day 5 – 9 January 2017



Mayor Honey presented the runner's up with their trophies. After the main presentation he presented the winners Ethan Ewing and Macy Callaghan with a book.





# Tourism Impact Summary Report for Kiama (A) (Tourism Activity: 10 days)

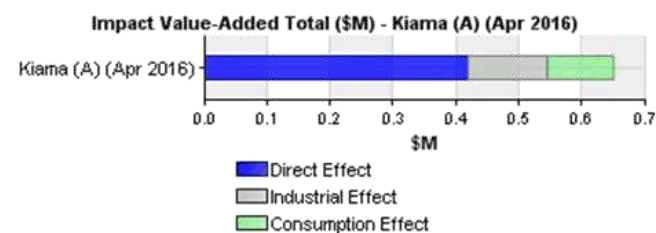
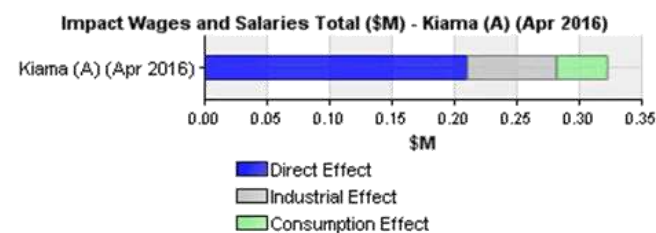
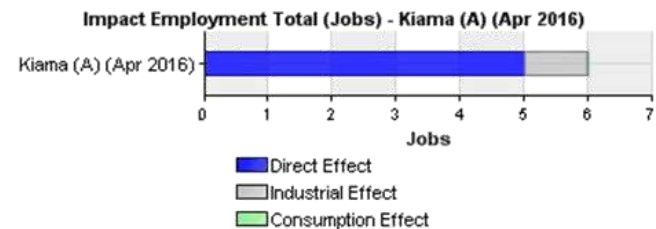
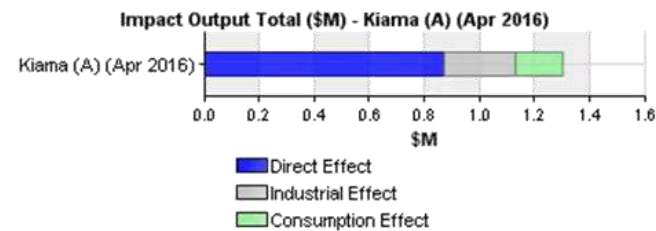
## Tourism Impact Scenario

Name World Surfing Championships

Duration 10 days

Direct Impact	Domestic Day	Domestic Overnight	International	Total
Number of Visitors	500	350	150	1,000
Number of Nights	n/a	14.00	14.00	
Estimated Expenditure per Visitor (\$)	\$70	\$2,058	\$756	
Total Estimated Expenditure (\$)	\$35,000	\$720,300	\$113,400	\$868,700

## Tourism Impacts



crease in output of \$0.869 million, 5 additional jobs, \$0.210 million more in wages and salaries and a boost in value-added of \$0.418 million. From this direct expansion in the economy, flow-on industrial effects in terms of local purchases of goods and services are anticipated, and it is estimated that these indirect impacts would result in a further increase to output valued at \$0.261 million, 1 more job, \$0.072 million more paid wages and salaries, and a gain of \$0.127 million in terms of value-added.

These industrial effects represent the following Type 1 economic multipliers:

Impact	Type 1 Multipliers
Output	1.300
Long Term Employment	1.200
Wages and Salaries	1.341
Value-added	1.303

The increase in direct and indirect output and the corresponding creation of jobs in the economy are expected to result in an increase in the wages and salaries paid to employees. A proportion of these wages and salaries are typically spent on consumption and a proportion of this expenditure is captured in the local economy. The consumption effects under the scenario are expected to further boost output by \$0.172 million, employment by 0 jobs, wages and salaries by \$0.041 million, and value-added by \$0.105 million.

Under this scenario, total output is expected to rise by \$1.301 million. Corresponding to this are anticipated increases in employment of 6 jobs, \$0.322 million wages and salaries, and \$0.650 million in terms of value-added.

The total changes to economic activity represent the following Type 2 economic multipliers:

Impact	Type 2 Multipliers
Output	1.498
Long Term Employment	1.200
Wages and Salaries	1.535
Value-added	1.555

**Tourism Impact Summary (Tourism Activity: 10 days)**

Impact	Direct Effect	Industrial Effect	Consumption Effect	Total Effect	Type 1 Multiplier	Type 2 Multiplier
Output (\$M)	\$0.869	\$0.261	\$0.172	\$1.301	1.300	1.498
Long Term Employment (Jobs)	5	1	0	6	1.200	1.200
Wages and Salaries (\$M)	\$0.210	\$0.072	\$0.041	\$0.322	1.341	1.535
Value-added (\$M)	\$0.418	\$0.127	\$0.105	\$0.650	1.303	1.555