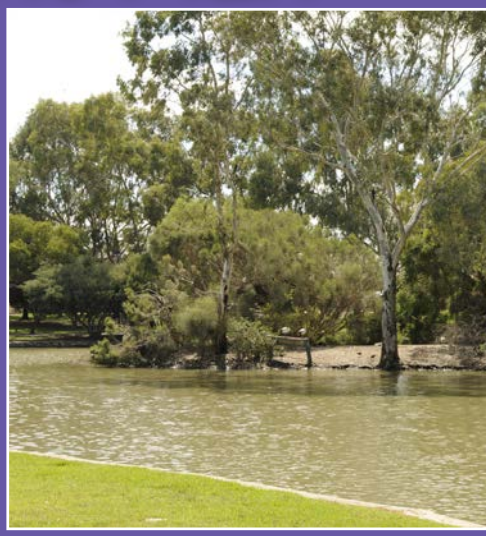
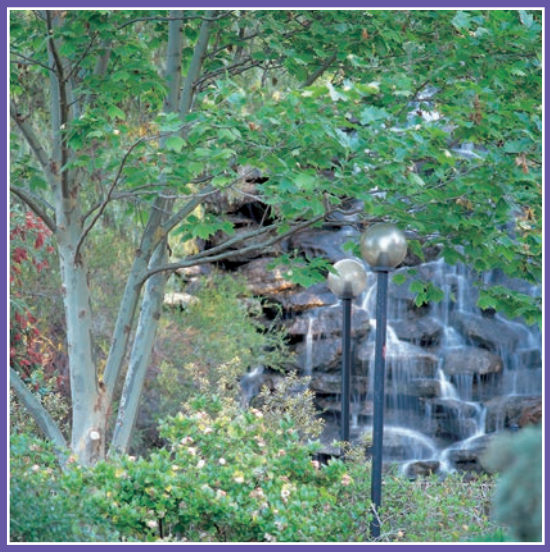
CITY OF
Port Adelaide Enfield

Asset Management Plan





2016

Parks & Gardens

'A City confident in its leaders'

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TABLE OF CONTENTS

1. EXECUTIVE SUMMARY 1
   Context 1
   What does it Cost? 1
2. INTRODUCTION 3
   2.1 Background 3
   2.2 Goals and Objectives of Asset Management 7
   2.3 Plan Framework 7
   2.4 Core and Advanced Asset Management 9
   2.5 Community Consultation 9
3. LEVELS OF SERVICE 9
   3.1 Legislative Requirements 9
   3.2 Strategic and Corporate Goals 9
   3.3 Customer Research and Expectations 10
   3.4 Levels of Service 14
   3.5 Community and Technical Levels of Service 15
4. FUTURE DEMAND 19
   4.1 Demand Drivers 19
   4.2 Demand Forecast 19
   4.3 Demand Impact on Assets 19
   4.4 Demand Management Plan 20
   4.5 Asset Programs to meet Demand 22
5. LIFECYCLE MANAGEMENT PLAN 23
   5.1 Asset Valuations 23
   5.2 Infrastructure Risk Management Plan 23
   5.3 Routine Operations and Maintenance Plan 25
   5.4 Renewal/Replacement Plan 29
   5.5 Creation/Acquisition/Upgrade Plan 33
6. FINANCIAL SUMMARY 34
   6.1 Financial Statements and Projections 35
   6.2 Funding Strategy 40
   6.3 Valuation Forecasts 40
   6.4 Key Assumptions made in Financial Forecasts 42
   6.5 Forecast Reliability and Confidence 43
7. PLAN IMPROVEMENT AND MONITORING 44
   7.1 Status of Asset Management Practices 44
   7.2 Improvement Plan 46
   7.3 Monitoring and Review Procedures 47
   7.4 Performance Measures 47
8. REFERENCES 48
9. APPENDICES 49
   Appendix A Projected 10 year Capital Works Program 50
   Appendix B Budgeted Expenditures Accommodated in LTFP 51
   Appendix C Abbreviations 52
   Appendix D Glossary 53

1. EXECUTIVE SUMMARY

Context

The goal of asset management is to provide a financially sustainable level of service at an acceptable level of risk, within Statutory and Legislative requirements, to present and future customers.

Asset Management Plan covers the parks and gardens assets under the care and control of the Council. The assets for this plan can be considered as consisting of the following components;

Reserve Type	Description
Active Reserves & Golf Courses	Structured sports and recreational activities
Passive Reserves	Leisure and family areas, including linear park, and wetlands
Coastal	The coastal area on the western side of the LeFevre Peninsula

This Asset Management Plan only considers the financial management of physical infrastructure, and does not include any land values.

These infrastructure assets have a replacement value of **$73,159,564**.

What does it Cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan (AM Plan) includes maintenance, renewal and upgrade of existing assets over the 10 year planning period is $133.5M or $13.3M on average per year.

Estimated available funding for this period is $141.5M or $14M on average per year which is 106% of the cost to provide the service. This is a funding shortfall of $801,000 on average per year. 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.

Executive Summary - What does it cost?	($000)
10 year total cost [10 yr Maint, Renewal & Upgrade Proj Exp]	**$133,561**
10 year average cost	**$13,356**
10 year total LTFP budget [10 yr Maint, Renewal & Upgrade LTFP Budget]	**$141,572**
10 year average LTFP budget	**$14,157**
10 year AM financial indicator	**106%**
10 year average funding surplus	**$801**

Questions you may have

What is this plan about?

This asset management plan covers the infrastructure assets that serve the Port Adelaide Enfield community's Parks, Reserves, and outdoor recreational needs. These assets include all physical infrastructure that is required for maintenance needs as well as servicing the requirements of the community .

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.

How can this Council continue to improve?

1. Strive to improve our 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. Improve our efficiency in operating, maintaining, renewing and replacing existing assets to optimise life cycle costs,
3. Identify and manage risks associated with providing services from infrastructure,
4. Make trade-offs between service levels and costs to ensure that the community receives the best return from infrastructure,
5. Consult with the community to ensure that all associated services and costs meet community needs and are affordable,
6. Develop partnership with other bodies, where available to provide services,
7. Seek additional funding from governments and other bodies to better reflect a 'whole of government' funding approach to infrastructure services.

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 20 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[1].

The infrastructure assets covered by this asset management plan are shown in Table 2.1. These assets are used to provide parks, reserves, and outdoor recreational services to the community.

Table 2.1: Assets covered by this Plan

Asset Types	
Shelters	Exercise Equipment
BBQ's	Bridges
Playgrounds	Fences
Shade Sails	Courts / Nets
Irrigation	Bins
Flood Lights / Light Poles	Sheds
Turf Pitches / Greens	Pump Equipment
Park furniture	Retaining Structures

Various asset types

[1] IPWEA, 2011, Sec 4.2.6, *Example of an Asset Management Plan Structure*, pp 4|24 – 27.

This Infrastructure and Asset Management Plan covers the parks and gardens assets under the care and control of the Council. The assets for this plan can be considered as consisting of the following components;

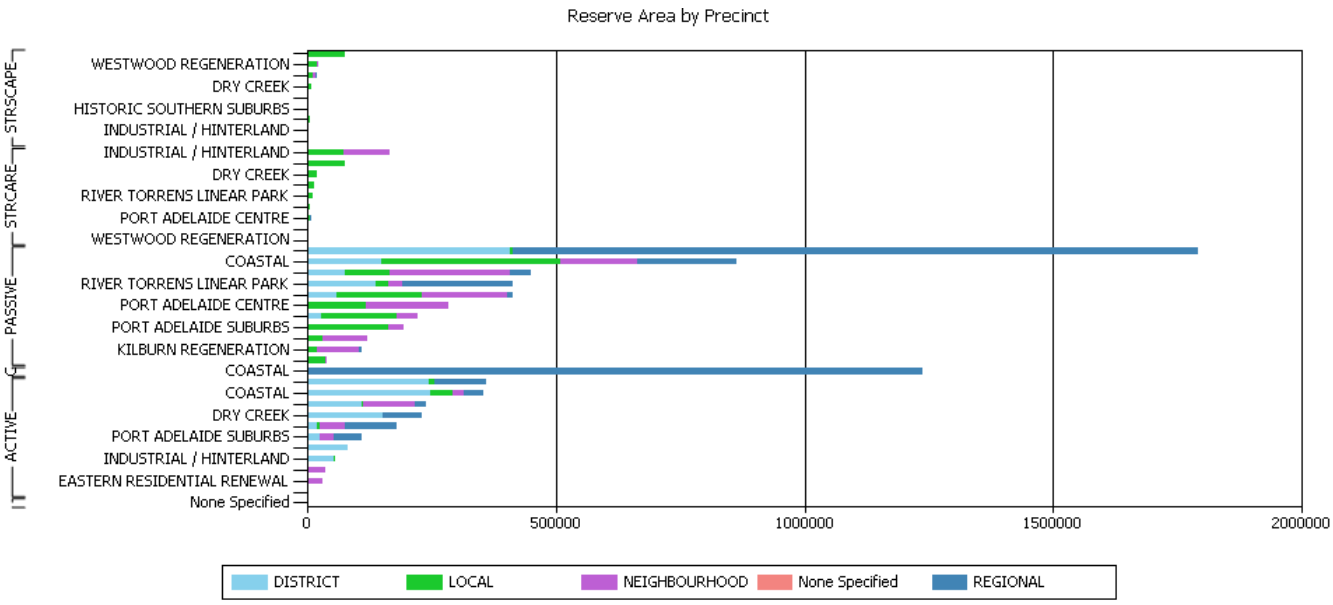
Reserve Type	Description
Active Reserves	Structured sports and recreational activities
Passive Reserves	Leisure and family areas, including linear park, and wetlands
Coastal	The coastal area on the western side of the LeFevre Peninsula

Street Care / Streetscape	Activities within the Council road reserve

Council divides all of its open space into 4 separate categories being Active Reserves, Passive Reserves, Coastal, and Streetscape / Street care, which are managed separately.

		LOCAL		NEIGHBOURHOOD		DISTRICT		REGIONAL		NOT SPECIFIED	TOTAL	
		#	sqm	#	sqm	#	sqm	#	sqm	#	#	sqm
ACTIVE	COASTAL	2	44482	1	21302	15	247604	1	41126	0	19	354513
	DRY CREEK	0		0		5	151856	1	77931	0	6	229787
	EASTERN RESIDENTIAL RENEW	0		1	30291	0		0		0	1	30291
	HISTORIC CENTRAL SUBURBS	1	917	9	106177	8	109228	2	23132	0	20	239454
	HISTORIC SOUTHERN SUBURB	0		3	36031	0		0		0	3	36031
	INDUSTRIAL / HINTERLAND	1	2071	0		2	51162	0		0	3	53233
	None Specified	0		0		0		0		2	2	0
	PORT ADELAIDE CENTRE	0		0		4	80442	0		0	4	80442
	PORT ADELAIDE SUBURBS	0		1	26378	2	24870	3	57750	0	6	108999
	RIVER TORRENS LINEAR PARK	2	4525	1	51915	5	19438	7	104054	0	15	179932
	WESTWOOD REGENERATION	1	11250	0		4	243527	4	103213	0	9	357990
	TOTAL FOR ACTIVE	**7**	**63245**	**16**	**272093**	**45**	**928129**	**18**	**407206**	**2**	**88**	**1670673**
PASSIVE	COASTAL	62	359186	11	154320	8	148744	7	201859	0	88	864109
	DRY CREEK	9	29894	9	89009	0		0		0	18	118904
	EASTERN RESIDENTIAL RENEW	44	172982	12	171705	2	57170	3	10636	0	61	412492
	HISTORIC CENTRAL SUBURBS	34	89125	14	244342	5	74323	1	40854	0	54	448645
	HISTORIC SOUTHERN SUBURB	7	35389	1	1022	0		0		0	8	36411
	INDUSTRIAL / HINTERLAND	3	6409	0		2	406524	2	1379562	0	7	1792495
	KILBURN REGENERATION	6	19047	4	84735	0		1	3489	0	11	107271
	PORT ADELAIDE CENTRE	16	117218	6	166549	0		0		0	22	283767
	PORT ADELAIDE SUBURBS	14	162281	4	30490	0		0		0	18	192770
	RIVER TORRENS LINEAR PARK	13	26277	4	27783	3	136052	2	223679	0	22	413790

	WESTWOOD REGENERATION	17	150958	5	44007	1	27546	0		0	23	222512
	TOTAL FOR PASSIVE	**225**	**1168767**	**70**	**1013962**	**21**	**850359**	**16**	**1860079**	**0**	**332**	**4893167**
STREET CARE	COASTAL	11	74022	0		0		0		0	11	74022
	DRY CREEK	2	17659	0		0		0		0	2	17659
	HISTORIC CENTRAL SUBURBS	4	5397	0		0		0		0	4	5397
	INDUSTRIAL / HINTERLAND	3	71191	1	92881	0		0		0	4	164071
	KILBURN REGENERATION	1	1183	0		0		0		0	1	1183
	PORT ADELAIDE CENTRE	1	703	0		1	2636	1	443	0	3	3782
	PORT ADELAIDE SUBURBS	3	11791	0		0		0		0	3	11791
	RIVER TORRENS LINEAR PARK	3	9673	0		0		0		0	3	9673
	WESTWOOD REGENERATION	1	520	0		0		0		0	1	520
	TOTAL FOR STREETSCARE	**29**	**192138**	**1**	**92881**	**1**	**2636**	**1**	**443**	**0**	**32**	**288097**
STREETSCAPE	COASTAL	5	75214	0		0		0		0	5	75214
	DRY CREEK	2	7581	0		0		0		0	2	7581
	HISTORIC CENTRAL SUBURBS	2	492	0		1	300	0		0	3	792
	HISTORIC SOUTHERN SUBURBS	1	1632	0		0		0		0	1	1632
	INDUSTRIAL / HINTERLAND	1	747	0		0		0		0	1	747
	RIVER TORRENS LINEAR PARK	2	2500	0		0		0		0	2	2500
	WESTWOOD REGENERATION	8	17317	1	378	0		0		0	9	17695
	TOTAL FOR STREETCAPE	**25**	**115442**	**2**	**6768**	**1**	**300**	**2**	**712**	**0**	**30**	**123223**
COASTAL	COASTAL	0		0		0		5	1236781	0	5	1236781
	TOTAL FOR COASTAL	**0**		**0**		**0**		**5**	**1236781**	**0**	**5**	**1236781**
Total		**286**	**1539592**	**89**	**1385705**	**68**	**1781424**	**42**	**3505220**	**4**	**489**	**8211941**



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	• Represent needs of community/shareholders. • Allocate resources to meet the organisation's objectives in providing services while managing risks. • Ensures the organisation is financially sustainable. • Adopt Service Standards which have bearing on timeframes and maintenance budget. The Service Standards further have a bearing on the Level of Service devoted to the community.
CEO	• Represents the needs of community/shareholders. • Manages resources to achieve the organisation's objectives in providing services while managing risks. • Ensures the strategic planning direction of the Council • Ensures the organisation is financially sustainable.
Director Technical Services	• Ensures Asset Management Plans are completed and reports to the CEO and Council. • Ensures the capital works programs are achieved. • Ensures maintenance programs are active and achieving service standards.
Manager Parks and Gardens	• Manages the review of Asset Management and the delivery of improvement strategies. • Coordinates maintenance programs to ensure they are active and achieving service standards.
Parks and Gardens Project Coordinator	• Coordinates the capital works programs. • Manages the construction program for Capital Works.
Asset Management Team	• Responsible for advancing Asset Management within the organisation. • Update and review the data requirements within the Asset Management System and supporting GIS applications. • Perform condition audits of infrastructure. • Drive capital works and pro-active maintenance programs. • Review valuation of infrastructure.
Finance Section	• Use the Asset Management Plans to annually prepare and review the organisations Long Term Financial Plan. • Review valuation of infrastructure. • Ensures the organisation is financially sustainable.
Field Team Leaders	• Undertake maintenance of pro-active and re-active maintenance works • Construct infrastructure as per capital works programs • Report upon maintenance issues
Residents	• The user of the asset – requiring safe and serviceable infrastructure. • Report maintenance issues associated to the asset. • The stakeholder to which the Levels of Service are designed for. • The stakeholder who largely finance the maintenance and capital work programs.

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.[2]

2.3 Plan Framework

Key elements of the plan are

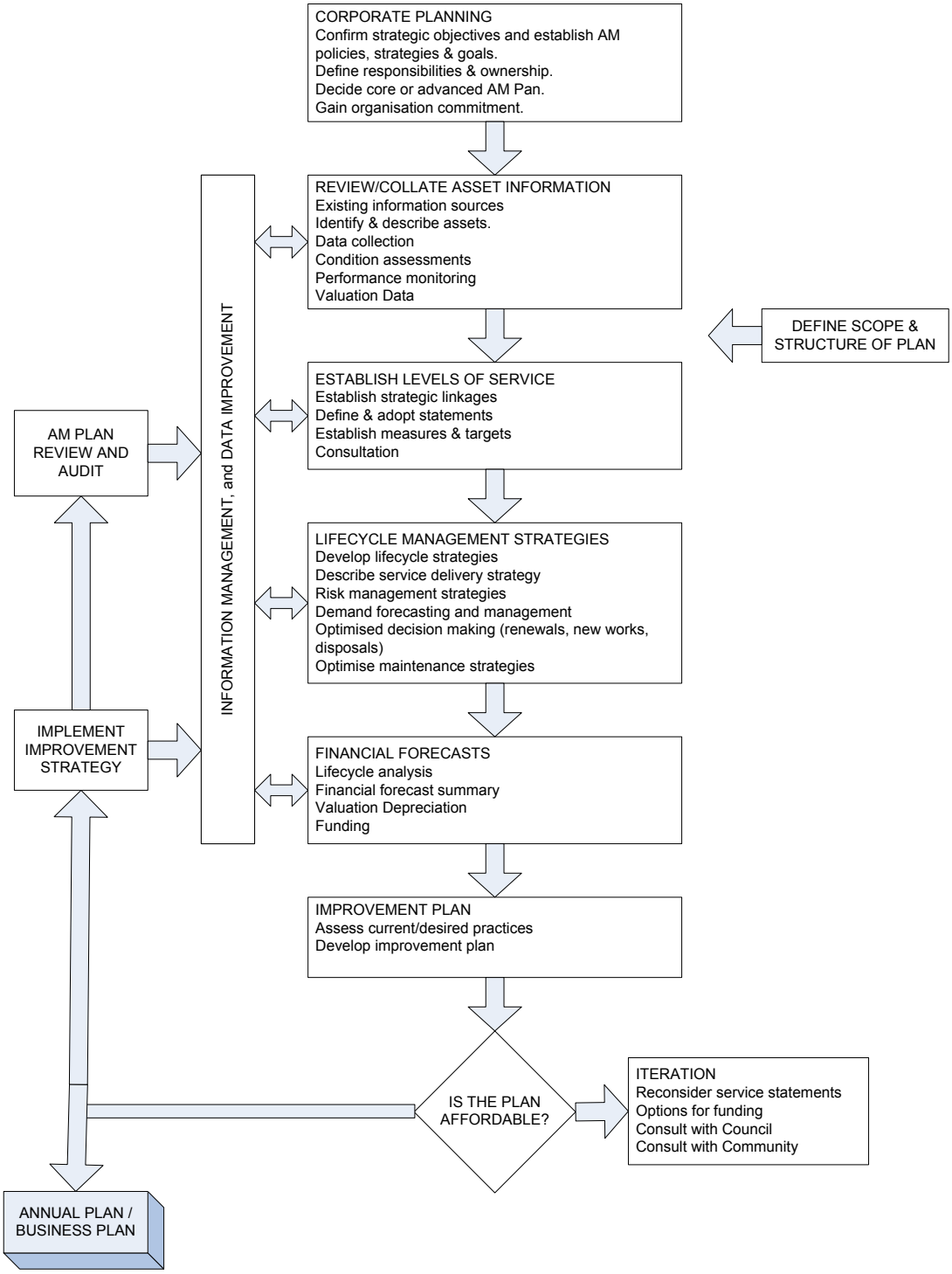
- Levels of service – specifies the services and levels of service to be provided by the organisation,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Life cycle management – how Council will manage its existing and future assets to provide defined levels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

[2] 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[3]. 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 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	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.
Development Act 1993	Defines and regulates Significant Tree damaging activity as development.
Disability Discrimination Act 1992	Sets out standards to ensure that new infrastructure is designed and constructed to provide safe and equitable access to those with a disability.
Australian Accounting Standards	Sets out the financial reporting standards relating for the valuation and depreciation of Councils infrastructure assets.
Environment Protection Act 1993	Sets out the requirements to sustainably protect the environment during both the construction and life of the asset.
River Torrens Linear Park Act 2006	Provides Protection for the Linear Park as a world class asset to be preserved as an urban park for present and future generations.

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.

3.2 Strategic and Corporate Goals

This asset management plan is prepared under the direction of the organisation's themes and outcomes of the City Plan 2030.

> "A city that values its diverse community and embraces change through innovation, resilience and community leadership"

[3] 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

Theme	Outcome	How Theme and Outcomes are addressed in this AM Plan
Leadership	Strategic	To measure the organisations performance through key financial indicators and accuracy of data, and to advance Council's Asset Management Plan with a strategic improvement plan.
Leadership	Accountable	To justify current levels of expenditure, and to validate projected funding requirements for future projects that will deliver sustainable infrastructure for the community.
Leadership	Engaged	Through Public Consultation and Community Survey, to connect this Asset Management Plan with the people, relevant organisations and businesses that make up the Port Adelaide Enfield community.
Place making	Access and Safety	To ensure that the infrastructure provided under this Asset Management Plan is delivering a safe environment for the community – ensuring access and linkage for people to conduct their life and business activities.
Community	Cohesive	To ensure that the infrastructure provided under this Asset Management Plan is achieving a Level of Service that is expected by the community and it's Elected Members.
Economy	Prosperous	That the infrastructure provided under this Asset Management Plan is successfully connecting business and industry to opportunity and prosperity.

3.3 Customer Research and Expectations

In 2016, a survey was undertaken to measure Community Perception of the varying services provided by Council. The survey requested participants to advise the level of importance of services, and then advise their level of satisfaction with how Council provides this service.

In order to collect the data, 401 households were invited to partake in a telephone interview. The survey targeted an equal number of households in each of the five SLA's (Statistical Local Area) in the Council area. These SLA's included:

East = 81 Inner = 80 Coast=80

Parks = 80 Port = 80

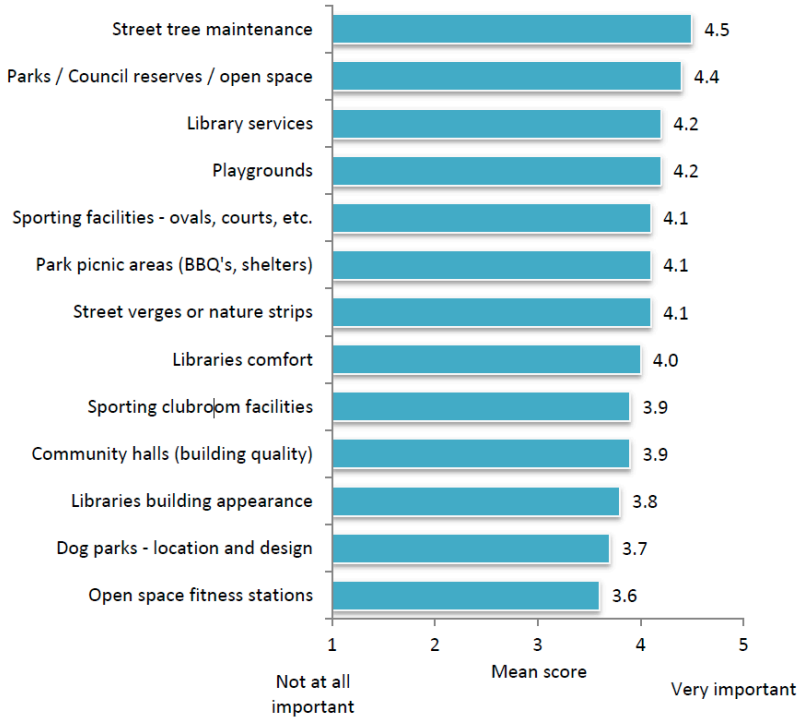
The following table is a snapshot of the range of services presented within the survey, with the communities resulting consideration for level of importance and associated satisfaction scores.

Service	Importance Rating	Satisfaction Rating
Household waste collection	4.8	4.5
Recycled materials collection	4.7	4.5
The condition of the footpaths	4.7	3.1
Green waste collection	4.6	4.5
Stormwater drainage	4.6	3.6
Road surface condition	4.6	3.5
Hard waste collection	4.5	4.2
Street tree maintenance	4.5	3.4
Traffic signs	4.5	3.9
Parks / Council reserves / open space	4.4	4.0
Street Signs	4.4	3.9
Road traffic volumes and speed	4.4	3.4
The brightness/quality of the road marking	4.4	3.6
Stormwater pollutant traps	4.5	3.6
Footpath crossing points/pram ramps	4.3	3.6
Playgrounds	4.2	4.0
Street verges / nature strips	4.1	3.5
Library services	4.2	4.1
Street sweeping	4.1	3.7
Park picnic areas - BBQ's, shelters	4.1	3.8
Sporting facilities - ovals, courts, etc	4.1	3.9
Libraries comfort	4.0	4.1
Sporting clubroom facilities	3.9	3.7
Community halls building quality	3.9	3.8
Libraries building appearance	3.8	4.0
Dog parks - location and design	3.7	3.4
Open space fitness stations	3.6	3.6

The survey respondents were further asked which three of these services were most important to them. The following is a list of the top 6 scores received. Parks and Gardens ranked fourth.

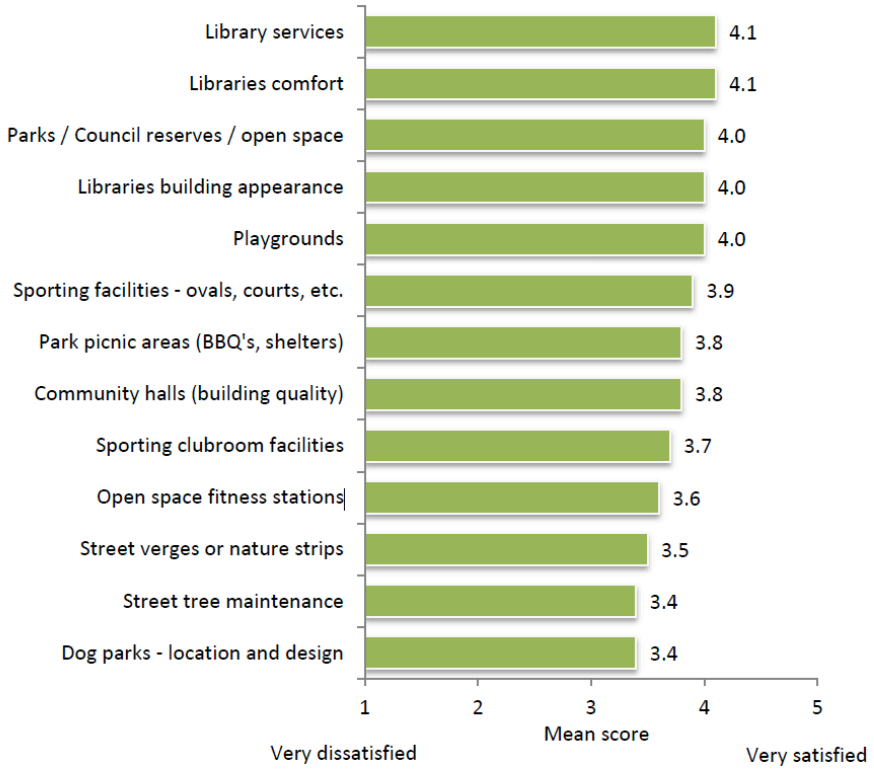
- Rubbish collection (65%)
- Footpaths (47%)
- Roads (39%)
- Parks and gardens (28%)
- Library services (21%)
- Stormwater (18%)

The following column graph indicates the ranking of importance that the community deem for each service, with a further breakdown per SLA.



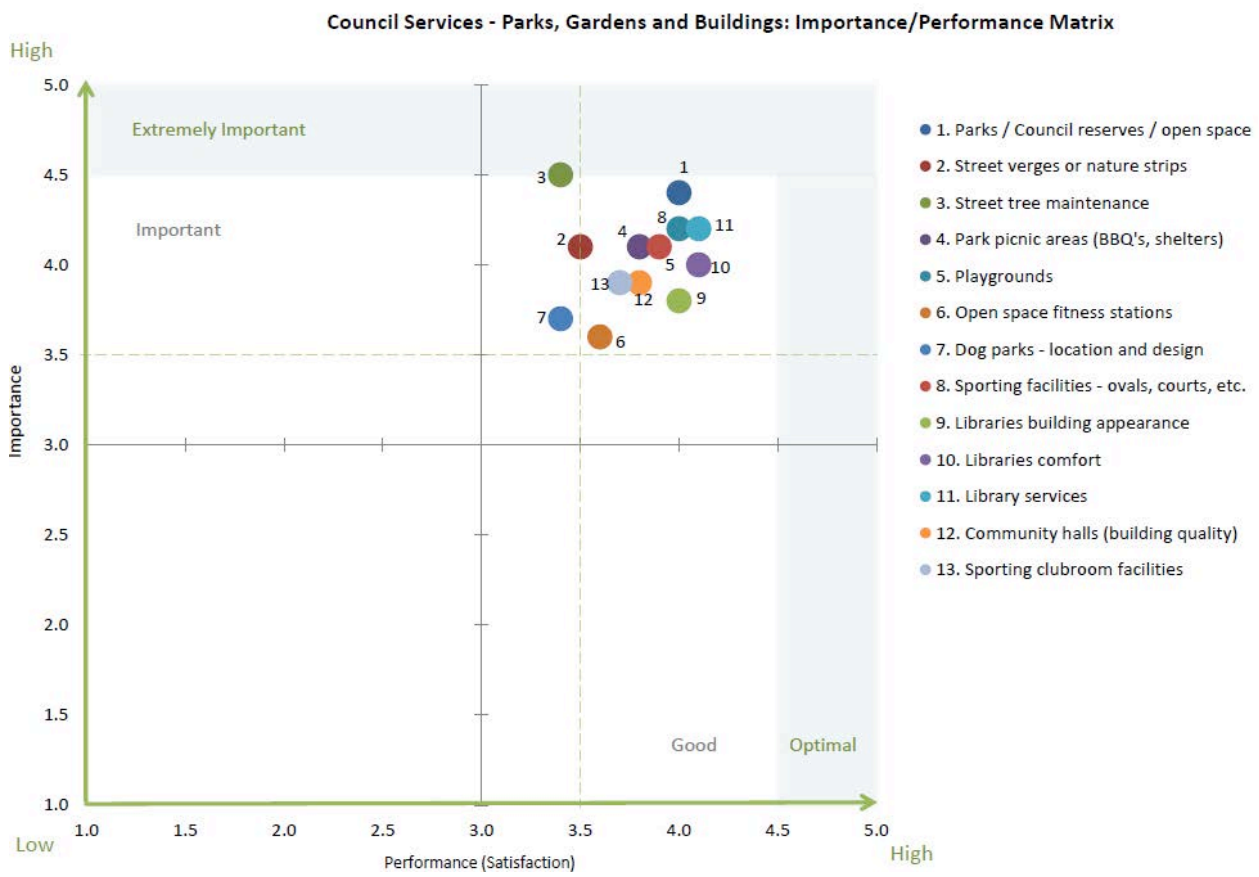
Service	East	Inner	Coast	Park	Port	Total
Street tree maintenance	4.6	4.3	4.5	4.6	4.4	4.5
Parks/Council reserves/open space	4.5	4.1	4.5	4.5	4.4	4.4
Library services	4.2	4.1	4.1	4.3	4.3	4.2
Playgrounds	4.3	3.9	4.3	4.3	4.3	4.2
Sporting facilities – ovals, courts etc.	4.3	3.8	4.1	4.3	4.2	4.1
Park picnic areas – BBQ's, shelters	4.3	3.7	4.2	4.2	4.2	4.1
Street verges or nature strips	4.2	4.1	4.1	4.3	4.1	4.1
Libraries' comfort	4.1	3.8	4.0	4.2	4.2	4.0
Sporting clubroom facilities	3.9	3.7	3.9	4.0	3.9	3.9
Community halls building quality	4.0	3.6	4.1	3.9	4.2	3.9
Libraries building appearance	3.9	3.5	3.9	4.0	3.7	3.8
Dog parks – location and design	3.8	3.2	3.8	3.8	3.7	3.7
Open space fitness stations	3.7	3.1	3.7	3.8	3.7	3.6

The following column graph indicates the ranking of community satisfaction for each service, with a further breakdown per SLA.



Service	East	Inner	Coast	Park	Port	Total
Library services	4.4	4.1	4.3	3.6	4.1	4.1
Libraries' comfort	4.2	3.9	4.2	4.1	4.0	4.1
Parks/Council reserves/open space	4.3	3.9	3.9	4.1	3.9	4.0
Libraries' building appearance	4.2	3.9	4.0	4.1	3.8	4.0
Playgrounds	4.3	3.8	4.1	3.8	3.9	4.0
Sporting facilities – ovals, courts etc.	4.2	3.7	3.9	4.1	3.7	3.9
Park picnic areas – BBQ's, shelters	4.2	3.4	3.9	3.9	3.7	3.8
.Community halls building quality	4.1	3.7	3.7	3.9	3.5	3.8
Sporting clubroom facilities	3.9	3.4	3.8	3.9	3.6	3.7
Open space fitness stations	4.0	3.0	3.9	3.6	3.6	3.6
Street verges or nature strips	3.8	3.3	3.5	3.6	3.3	3.5
Street tree maintenance	3.7	3.3	3.5	3.4	3.2	3.4
Dog parks – location and design	3.8	3.4	3.5	3.5	3.1	3.4

Having regard to the entire list of Parks and Gardens services considered within the survey, the community has indicated that all services are reasonably important to their day to day lives, and the community is reasonably satisfied with the overall levels of service provided across all categories. This is depicted in the following quadrant graph, where all services are clustered towards the top right of the graph. This is a valuable tool as it demonstrates that the community considers all these services to be important, and are also satisfied with the overall standard of these items.



3.4 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?

Technical Levels of Service - Supporting the community service levels are 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:

- Maintenance – the activities necessary to retain an asset as near as practicable to an appropriate service condition (eg tree pruning, mowing, playground repairs),
- Renewal – the activities that return the service capability of an asset up to that which it had originally (eg shelter replacement),
- Upgrade – the activities to provide a higher level of service (eg new playground) or a new service that did not exist previously (eg. new BBQ and Shelter).

3.5 Community and Technical Levels of Service

The Council aims to provide the following levels of service in terms of scheduled maintenance to reserves to meet the community's expectations for their visual presentation and upkeep, as well as safety and suitability for use (such as keeping the ground soft and suitable for sports for active reserves). Note the watering schedule below is based on the current water restrictions in place and is subject to change based on the restrictions.

Reserve	Mowing Frequency	Litter Removal	Watering
Active	Weekly	Weekly	3 Times per Week
Passive	Fortnightly / Monthly	Weekly	Once a Week
Foreshore	Fortnightly	Weekly	Once a Week

The operational levels of services include the following scheduled tasks;

Reserve	Park Inspection	Weed Spraying	Fertilising	Provide Mulch
Active	Annually	Six Weeks	Annual	As Required
Passive	Annually	Six Weeks	As Required	As Required
Foreshore	Annually	Six Weeks	As Required	As Required

Levels of Service for Street Trees

To ensure that street trees meet the expectations of the community, Council has the following technical service standards in place;

- Pruning undertaken biennially, which includes street tree inspections
- Watering undertaken seasonally as required (spring/summer)

Levels of Service for Playgrounds and Furniture

Council has the following standards in place for playgrounds and reserve furniture;

- Playgrounds, park furniture and structures to be inspected monthly
- BBQs to be cleaned weekly

Response Time to Customer Requests

Council has defined a number of service standard targets for responding to and completing customer requests for maintenance. Generally these tasks will occur when a customer notifies Council of an issue. Council aims to achieve at least 85% of the following;

- Fallen trees and limbs removed within 5 days
- Broken irrigation repaired within 1 day
- Weeds poisoned within 5 days
- Weeds removed within 5 days
- Weeds removed where poison cannot be used within 30 days
- Tree stumps removed within 25 days
- Staking of street trees where needed within 10 days
- Rubbish Dumped – Hazardous within 3 days
- Rubbish Dumped – Non Hazardous within 7 days

Council measures each service standard through its Customer Request System, with the 2015/16 results provided below:

Service	Tasks	Average Days	Percent Complete within Timeframe
Fallen Trees & Limbs (5 days)	1005	2	96.6%
Broken Irrigation (1 day)	101	2.5	71.3%
Weed Poisoning (5 days)	113	2.09	99.12%
Weed Removal (10 days)	76	2.5	100%
Weed Removal No Poison (30 days)	50	2.3	100%
Tree Stump Removal (25 days)	82	2.2	98.8%
Staking of Street Tree (10 days)	23	5.8	100%
Rubbish Dumped – Hazardous (3 Days)	77	1.28	97.4%
Rubbish Dumped – Non Hazardous (7 Days)	2101	1.46	99.95%

Non Hazardous Illegal dumping.

Service Levels during Water Restrictions

Increasingly Adelaide is forced to undergo water restrictions due to insufficient rainfall and potable water supply. Subsequently there is increased pressure on Council to reduce its water usage and improve its current practices. Plant species selections to better suite the climate and watering regimes is also an important strategy.

When water restrictions are enforced, Council reviews the operation and needs of each reserve (active and passive) on a case by case basis, and then modifies its watering schedule to suit. Reserves are also being modified to reduce the amount of turf and areas that require high water consumption, and replacing them with more areas of mulch and drought resistant species.

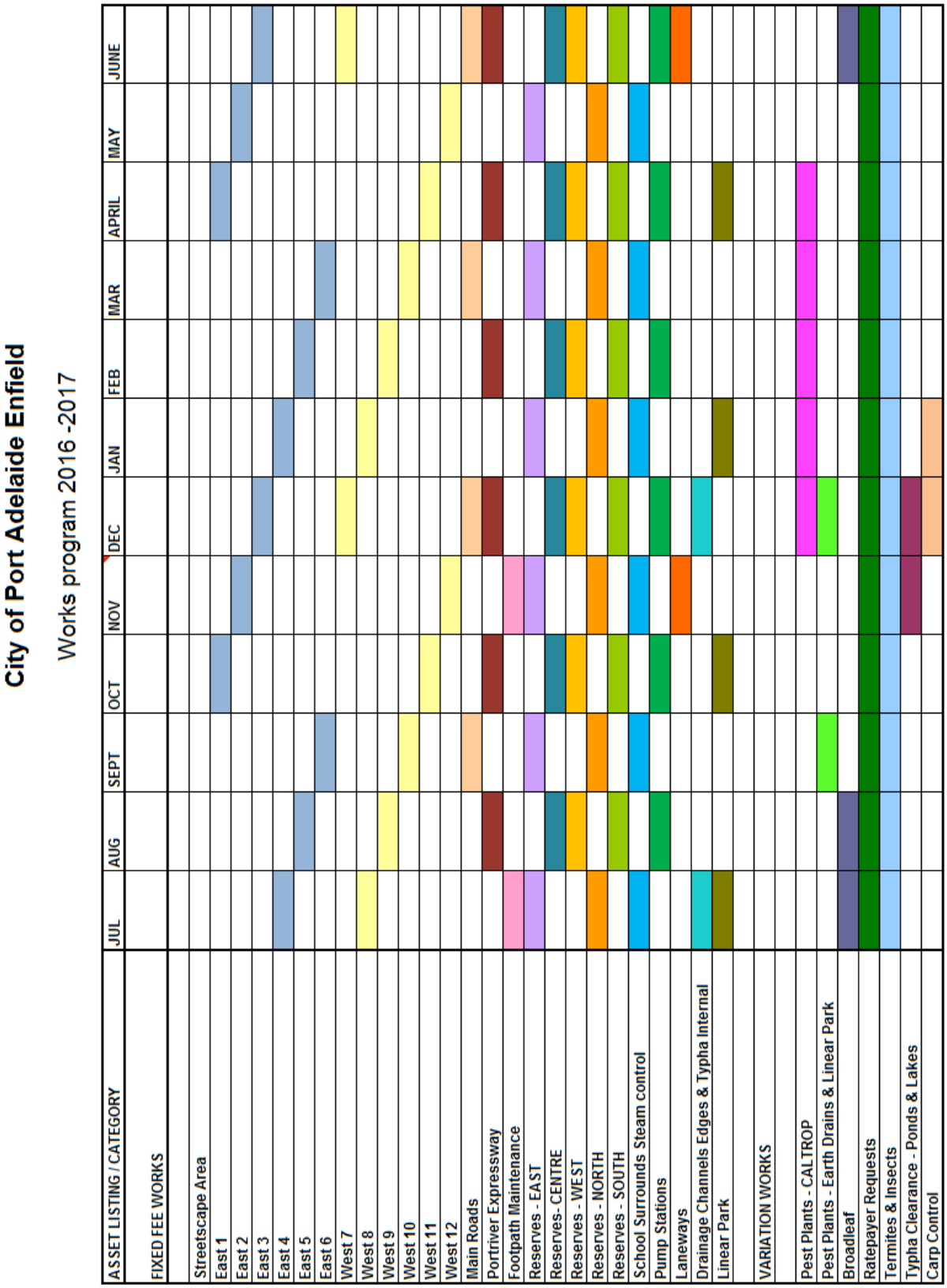
There are some functional limitations in reducing water to reserves where infrastructure can be compromised (i.e. golf courses, playing surfaces). Due to the expansive nature of clay soils when exposed to moisture, changing the watering patterns can result in excessive drying out of the soil, subsequent shrinkage, and then differential movement and large trip hazards in footpaths and adjoining roads and kerbs. This then involves careful review during the case by case evaluation to ensure there are no detrimental side effects, and if so how they can be best managed or minimised.

All irrigation is conducted in accordance with the Irrigated Public Open Space (IPOS) code of practice.

Service Levels for Weed Spraying

Council undertakes scheduled weed spraying to ensure that open space meets customer expectations for visual appearance.

The 2016/17 programmed schedule for the weed spraying is shown as follows:



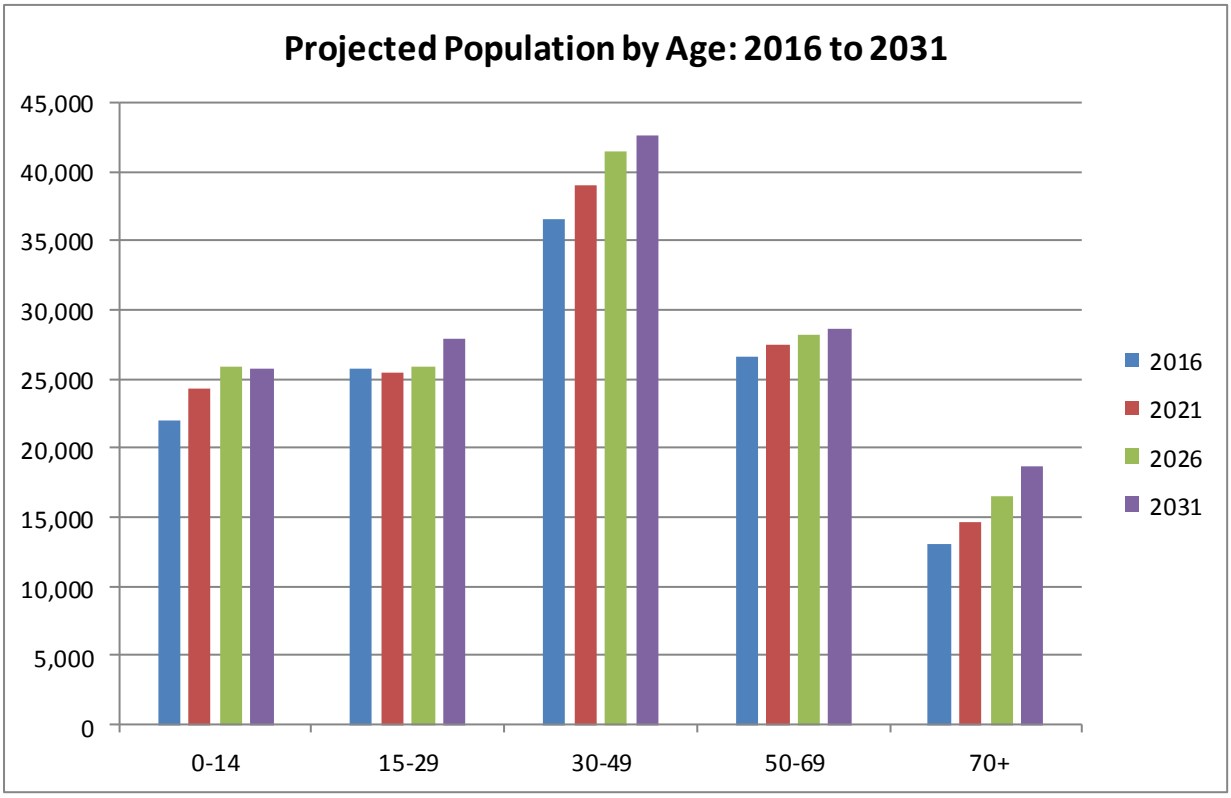
2016/17 programmed schedule for the weed spraying

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.

The following graph depicts the projected population growth within the Port Adelaide Enfield Council area. As expected, there is growth in all of the age brackets – with the most significant growth in the brackets 30-49 and 70+.



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 Services

Demand drivers	Present position	Projection	Impact on services
Population Increase	2016 = 124,053 people	2021 = 131,143 2026 = 138,013 2031 = 143,565	Greater demand for open space due to an increase in population – which is a further product of infill development. Future housing will have reduced backyard space, which will increase demand for public open space . Potentially an increase in Customer Requests, which again increases maintenance requirements.
Demographic by Age	**2016** **0-14** 22,010 **15-29** 25,745 **30-49** 36,528 **50-69** 26,684 **70+** 13,086	**2021 / 2026 / 2031** **0-14** 24360 / 25863 / 25754 **15-29** 25479 / 25968 / 27867 **30-49** 39091 / 41442 / 42648 **50-69** 27507 / 28173 / 28588 **70+** 14706 / 16567 / 18708	With the 70+ age group representing the largest growth from 2016 to 2031 – there may be a need to consider an increase in passive reserve space with an increased consideration of access. There is also a predicted increase in 15 – 50 age, which may increase demand for active spaces Overall, Open space with recreational and social aspects (such as BBQ,s and shelters) will be in demand.
Disability Data: People with a profound or severe core activity limitation	2006 = 6186 2011 = 7353 Increase = 1167 people	Projection for 2016 = 8063 (@ 6.5% of pop) Projection for 2021 = 8866 (@6.5% of pop) *Note- 6.5% assumed growth rate based on 2011 growth.*	If projections are correct, there is a potential for an extra 2000+ people requiring access assistance. This figure could be higher given the higher growth rate of the 70+ age group.

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

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

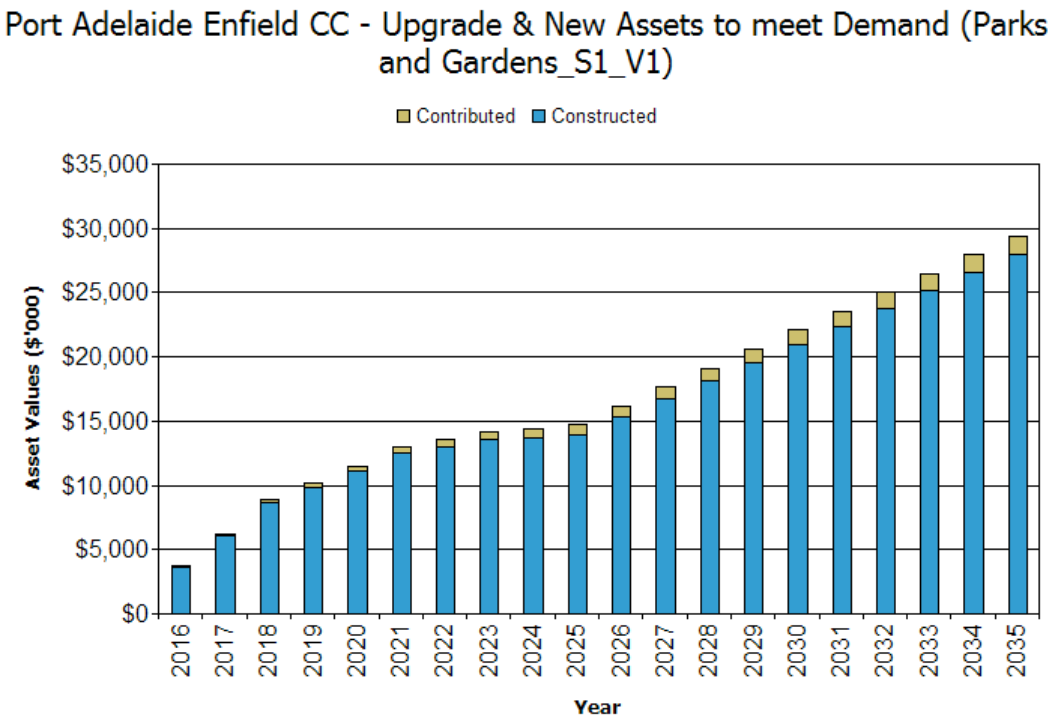
Demand Driver	Impact on Services	Demand Management Plan
Greater demand for open space due to an increase in population – which is a further product of infill development. Future housing will have reduced backyard space, which will increase demand for public open space.	Competition for park facilities. Increase service levels particularly with regard to access and movement. Greater usage will cause increase in wear and tear, therefore greater requirement for maintenance. Potential reduced useful lives, which will impact depreciation amount for varying asset classes.	To monitor usage with intent to manage resource levels to ensure a balanced maintenance plan. Continually review individual reserve facility usage, with intent to increase furniture or facilities where required. Such works will need to be carefully planned through projected capital works programs

Infrastructure for all age groups

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: Upgrade and New 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.

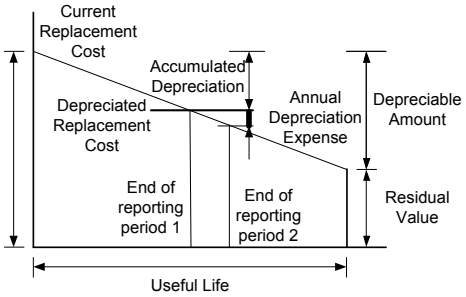
5. LIFECYCLE MANAGEMENT PLAN

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 Asset Valuations

The value of assets recorded in the asset register as at 30 June 2015 covered by this asset management plan is shown below. Assets were last re-valued at 30 June 2015. Assets are valued at Fair Value for financial purposes in accordance with AASB 116.

Current Replacement Cost	$73,159,000
Depreciable Amount	$73,120,000
Depreciated Replacement Cost[4]	$44,647,000
Annual Depreciation Expense	$2,317,000



Useful lives are reviewed annually (most recently: June 2015) by the Asset Management section in consultation with members of both the Engineering and Finance teams. The valuation review also has input from external consultants, and through discussions with neighbouring Councils.

Key assumptions made in preparing the valuations were:

- Useful Lives
- Unit Rates
- Condition

Changes from previous valuations are due to network growth and unit rate variations.

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)	3.2%
Rate of Annual Asset Renewal (Capital renewal exp/Depreciable amount)	0.6%

In 2016 the organisation plans to renew assets at 18.4% of the rate they are being consumed and will be increasing its asset stock by 5.1% in the year.

5.2 Infrastructure Risk Management Plan

An assessment of risks associated with service delivery from infrastructure assets has identified critical risks that will result in public injury, 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

[4] 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

Asset at Risk	What can Happen	Likelihood of Occurrence	Consequence of Occurrence	Level of Risk	Risk Treatment Plan
Plants and Trees in Verge	Overgrowth of the plants or trees can lead to injury by people walking into branches	Likely	Minor	Medium	Ensure the programmed maintenance schedule for verge pruning is at suitable intervals, and to an appropriate standard.
Plants and Trees in Verge	Limbs can fall from trees and damage fences and cars.	Likely	Insignificant	Medium	Ensure the programmed maintenance schedule for verge pruning is at suitable intervals, and to an appropriate standard. Select tree species that minimise the likelihood of falling limbs.
Plants and Trees in Verge	Tree roots can lift footpaths creating trip hazards to pedestrians	Almost certain	Moderate	High	Respond to reports of raised footpaths to eliminate the hazard. Select tree species that minimise the likelihood of footpath and kerb damage. Provide adequate clearance between trees and footpaths and kerbs in new developments. Utilise appropriate planting techniques to reduce surface faults.
Active Reserves	Improper watering can lead to injuries due to poor playing surface	Possible	Minor	Low	Ensure watering is undertaken to schedule. If water restrictions are in place and cannot water to required level required then limit reserve use for sports. Audit irrigation systems annually, check weekly.
Playgrounds	Injuries due to poorly maintained equipment or equipment failures	Likely	Minor	Medium	Undertake a quarterly inspection program for all playground equipment and ensure all existing equipment complies with AS 4685.

Playgrounds	Puncture injury from sharps in soft fall material	Possible	Moderate	Medium	Inspect soft fall areas weekly during routine maintenance. Replace soft fall with a rubber base.
Active Reserves – Sports equipment failure	Injury resulting from sports equipment failure (i.e. goalposts falling)	Possible	Moderate	Medium	Inspect equipment during weekly maintenance. Upgrade remaining timber posts to aluminium.
Active Reserve Lights don't work	Sports clubs unable to use facilities	Possible	Moderate	Medium	Undertake lighting inspections bi-monthly. Some reserve lighting audited by a lighting engineer to ensure compliance with relevant association requirements.
Reserve Footpaths	Injury sustained from trip hazard in path.	Possible	Moderate	Medium	Maintenance staff to report hazard when identified. Hazard to be made safe until repaired by maintenance staff. Reserve footpaths to be included in a wider footpath inspection program.
Reserve Infrastructure (seats, shelters, tables etc.)	Injury sustained from faulty infrastructure	Possible	Minor	Medium	Inspect infrastructure annually
Reserve lights don't work	Injury sustained from poor visibility	Possible	Moderate	Medium	Lighting inspected bi-monthly
BBQ's,	BBQ's don't work when required	Possible	Minor	Low	BBQ operation checked weekly when cleaned.
Reserves	Poor presentation due to watering and general maintenance	Unlikely	Minor	Low	Monitor through maintenance programs.

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.

Actual past operations expenditure is shown in Table 5.3.1.

Table 5.3.1: Operational Expenditure Trends

	2012/13	2013/14	2014/15
Streetcare - Tree Planting	$539,495	$565,628	$619,923
Streetcare - Tree Maintenance	$2,114,804	$2,406,224	$2,231,122
Streetcare - Grass Cutting	$1,756,920	$1,938,576	$1,974,830
Streetcare – Street sweeping	$2,191,793	$2,244,869	$2,393,486
	$6,603,012	**$7,155,297**	**$7,219,361**

The above operational expenditure has not been included in the financial modelling for this Asset Management Plan, as they do not impact on assets that are capitalised within Parks and Gardens.

These values have been provided to provide insight to the level of expenditure required for programmed Street Care works.

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 and planned works.

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.

Actual past maintenance expenditure is shown in Table 5.3.2.

Table 5.3.2: Maintenance Expenditure Trends

Year	Maintenance Expenditure	
	Planned and Specific	Unplanned
2014/15	$7,884,316	$1,971,079
2013/14	$6,974,114	$1,743,528
2012/13	$7,447,039	$1,861,760

Planned maintenance work is currently 80% 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.

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:

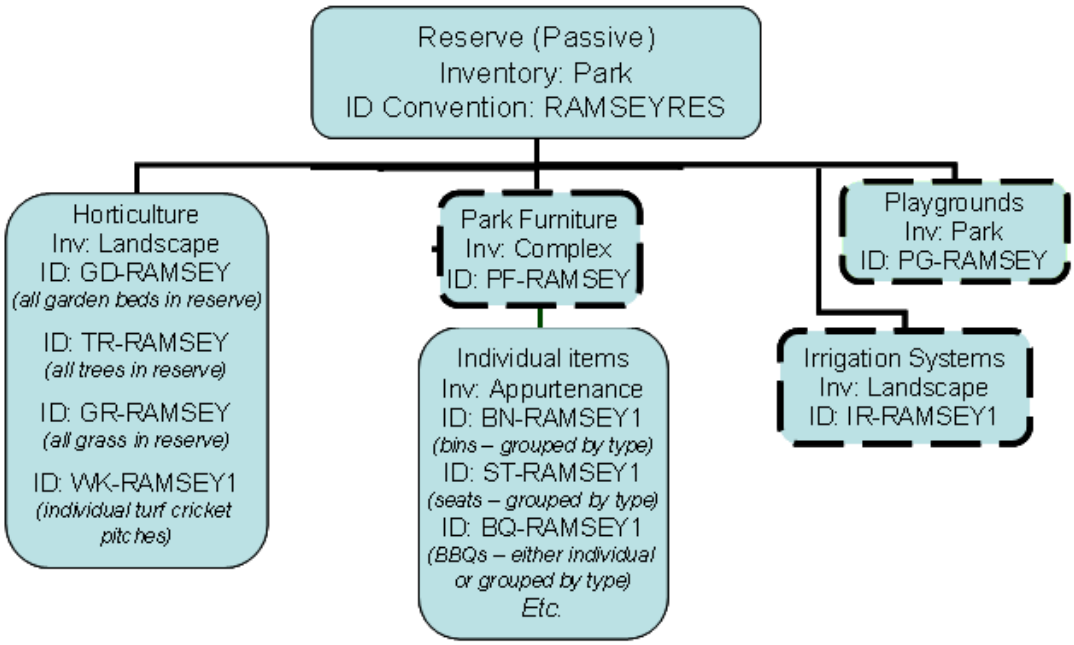
- Scheduling operations activities to deliver the defined level of service in the most efficient manner,
- Undertaking maintenance activities through a planned maintenance system to reduce maintenance costs and improve maintenance outcomes. Undertake cost-benefit analysis to determine the most cost-effective 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 is Table 5.3.3.

Table 5.3.3: Asset Service Hierarchy



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 5.3.3.1: Critical Assets and Service Level Objectives

Critical Assets	Critical Failure Mode	Operations & Maintenance Activities
Bridges	Substructure deterioration or failure / superstructure collapse	Ongoing maintenance and condition inspections
Playgrounds	Structure Collapse	3 month Inspections to identify maintenance requirements
Tree Pruning	Structural Integrity assessment Path and road access obstrution	Inspection program involving 2 year Council cycle.

Standards and specifications

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

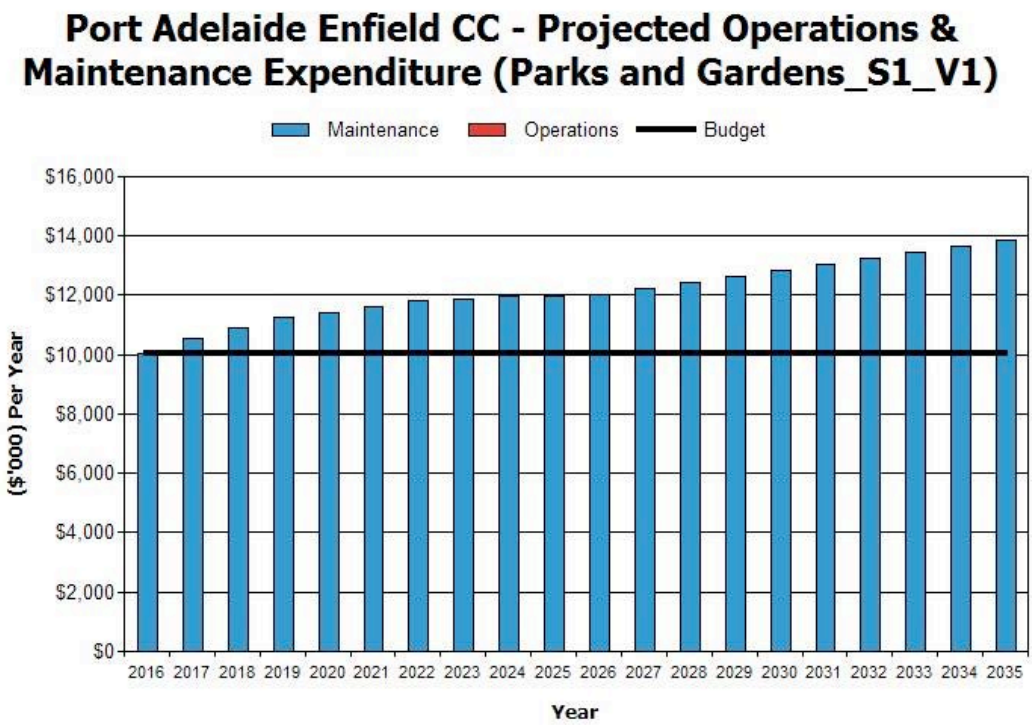
- AS1924 – Safety requirements and test methods.
- AS 4685 – Current safety requirements and test methods.
- ASNZ 4422:1996 – Impact attenuating surfaces.
- The Code of Practice for Irrigated Public Open Space (IPOS).
- Natural Resources Management Act 2004.
- Local Government Act.
- Occupational Health, Safety and Welfare Act & Regulations.
- Disability Discrimination Act 1992.
- AS4373 –Pruning of Trees

Tree failure

5.3.3 Summary of future maintenance expenditures

Future maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 4. Note that all costs are shown in current 2016 dollar values (ie real values).

Figure 4: Projected Operations and Maintenance Expenditure



Please note that the operations expenditure amounts discussed in section 5.3.1 have not been included in this graph as the streetcare services do not impact on assets that are capitalised within Parks and Gardens.

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 30 June 2016.

Table 5.4.1: Useful Lives of Assets

Asset	Useful life
Playground	20 years
Flood lighting	25 years
Retaining (concrete)	60 years
Courts	20 years
Irrigation	25 years
Coaches boxes	50 years
Sports grounds	25 years
Gazebo / Shelter	30 years
BBQ	25 years
Flagpole	40 years
Windmills	60 years
Skate Park	60 years
Shed	30 - 50 years
Cricket Nets	25 years

Cricket Nets: Klemzig Reserve

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).[5]

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.[6]

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
Condition rating	35%
Requests from residents with special access needs	15%
Customer request	10%
Land uses – type of reserve	25%
Placemaking	15%

[5] IPWEA, 2011, IIMM, Sec 3.4.4, p 3|60.
[6] Based on IPWEA, 2011, IIMM, Sec 3.4.5, p 3|66.

Renewal and replacement standards

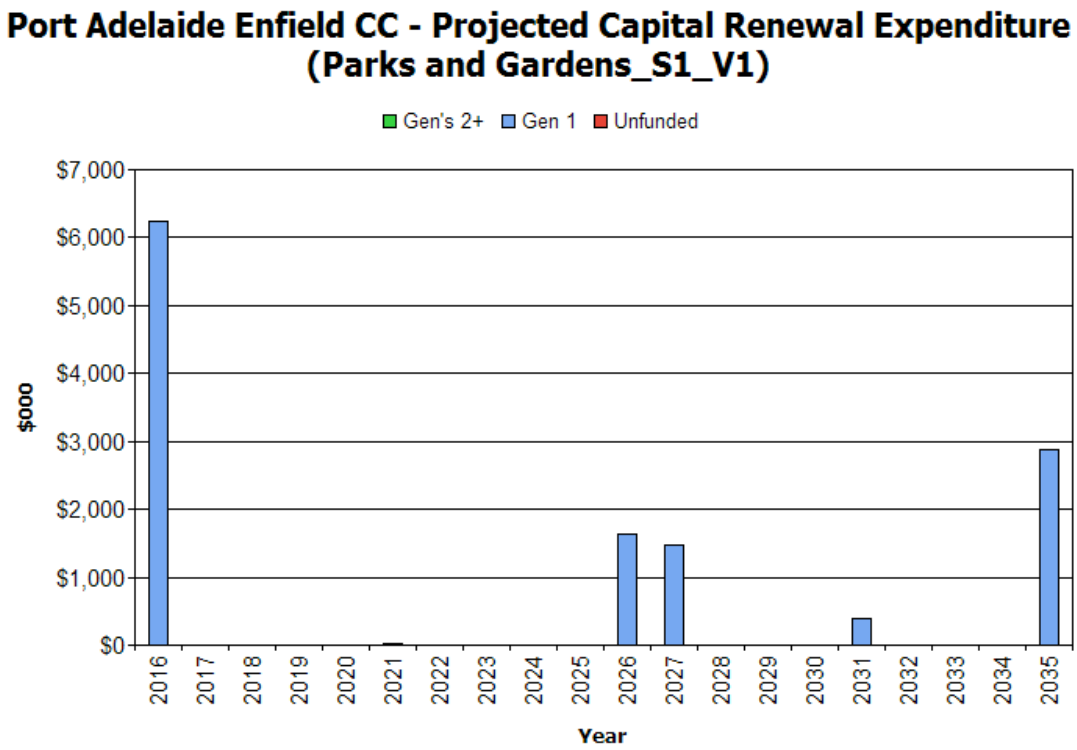
Renewal work is carried out in accordance with the following Standards and Specifications.

- AS1924 – Safety requirements and test methods.
- AS 4685 – Current safety requirements and test methods.
- ASNZ 4422:1996 – Impact attenuating surfaces.
- The Code of Practice for Irrigated Public Open Space (IPOS).
- Disability Discrimination Act 1992.

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.

Fig 5: Projected Capital Renewal and Replacement Expenditure



The future renewal and projected year of works in the above graph have been calculated on the current useful lives of all parks and gardens asset types. This graph varies considerably to the projected funding requirements by administration, which forms the future funding requests within the Long Term Financial Plan. Staff are planning the replacement of irrigation and other structural assets that have not achieved their assigned / registered useful lives.

The Improvement Strategies in Section 7 recognises the need to identify each asset independently within the valuation data. This will result in spreading the works across the 20 year period by having better recognition of individual useful lives.

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 councillor/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 programmes.

5.5.2 Capital Investment Strategies

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

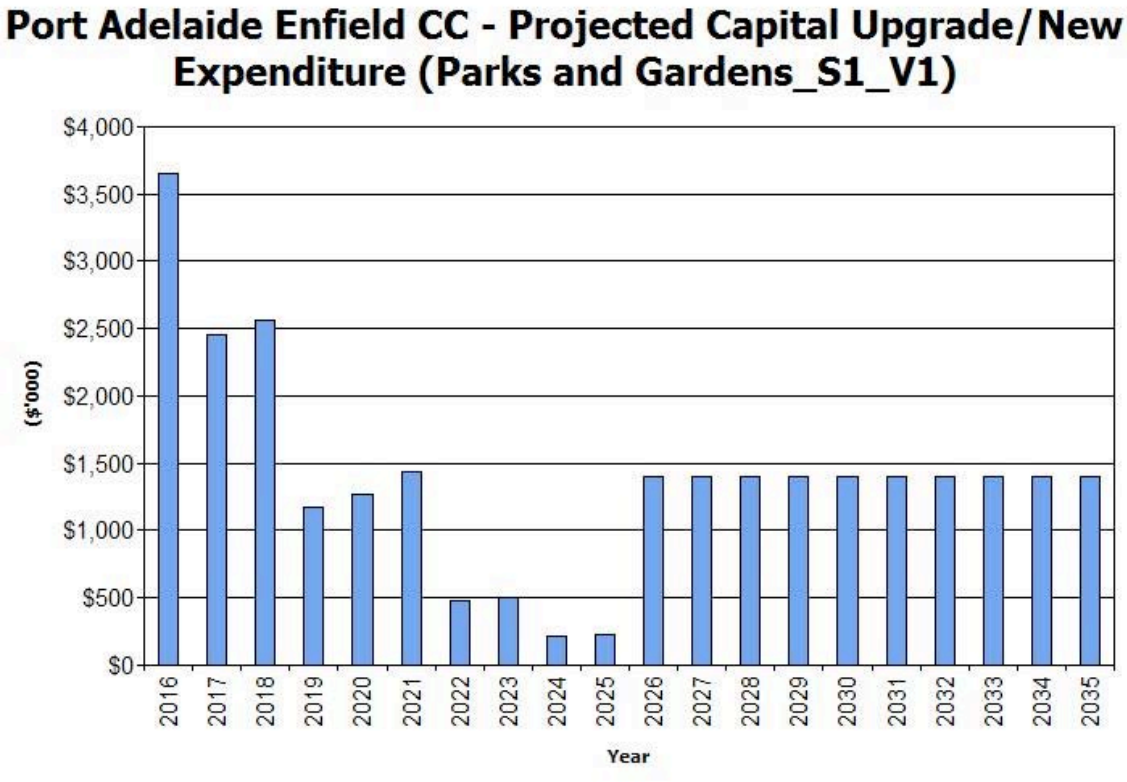
- Planning and scheduling capital upgrade and new projects to deliver the defined level of service in the most efficient manner,
- Undertake project scoping for all capital upgrade/new projects to identify:
    - the service delivery 'deficiency', present risk and required timeline for delivery of the 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.

Fig 6: Projected Capital Upgrade/New Asset Expenditure



The works depicted in Fig. 6 fluctuate from year to year based on resource capacity, continuation of previous project stages, and potential income.

The significant amount of work to be performed in the first 5 years relates to the following projects –

- Taperoo development
- Roy Martin Reserve Upgrade
- Hanson Reserve Upgrade.

Due to knowledge of external funding opportunities it is difficult to plan further beyond the initial 5 years period. The above graph indicates a consistent spend from 2026, however it must be noted that these years are the average of the first ten years planned 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.

6. FINANCIAL SUMMARY

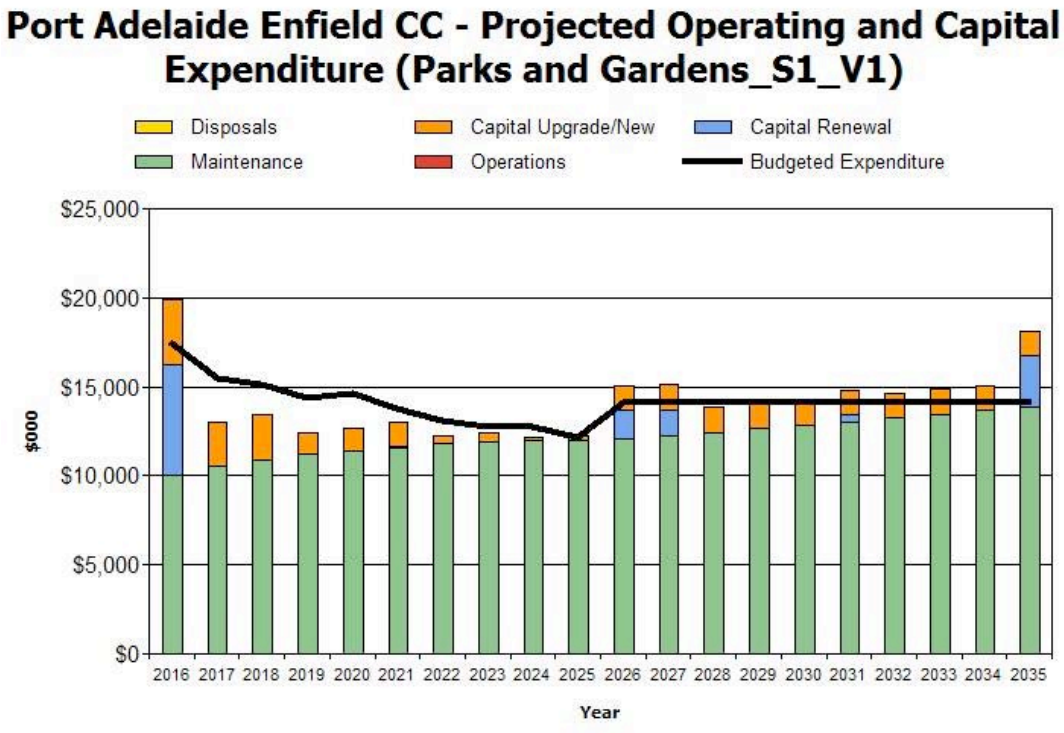
This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset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

6.1 Financial Statements and Projections

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

Please note that the operations expenditure amounts discussed in section 5.3.1 have not been included in this graph as the streetcare services do not impact on assets that are capitalised within Parks and Gardens.

Fig 7: Projected Operating and Capital Expenditure



The maintenance budget in green is considered in the LTFP projections, and has a growth factor applied through the anticipated maintenance required for future assets received free of charge from major greenfield developments. The Capital Upgrade/New bars depicted in orange is set on anticipated projects justified by various master plan projects. The blue sections for Renewal of assets is works calculated on useful lives.

It is the variation in renewal expenditure between the LTFP (Black line) and the NAMS template that is the reason for the assumed funding surplus that appears in the initial section of the graph.

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[7] 313%

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 313% of the funds required for the optimal renewal and replacement of its assets.

[7] AIFMG, 2012, Version 1.3, Financial Sustainability Indicator 4, Sec 2.6, p 2.16

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 includes maintenance expenditure and asset consumption (depreciation expense). The life cycle cost for the services covered in this asset management plan is $13,649,000 per year (average maintenance expenditure plus depreciation expense projected over 10 years).

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 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 $12,364,000 per year (average 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 $-1,285,000 per year (-ve = gap, +ve = surplus).

Life cycle expenditure is 91% 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. If the life cycle expenditure is less than that life cycle cost, it is most likely that outlays will need to be increased or cuts in services made in the future.

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 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 maintenance and capital renewal expenditure required over the 10 year planning period is $11,958,000 on average per year.

Estimated (budget) maintenance and capital renewal funding is $12,364,000 on average per year giving a 10 year funding shortfall of $406,000 per year. This indicates that Council expects to have 103% of the projected expenditures needed to provide the services documented in the asset management plan.

Medium Term – 5 year financial planning period

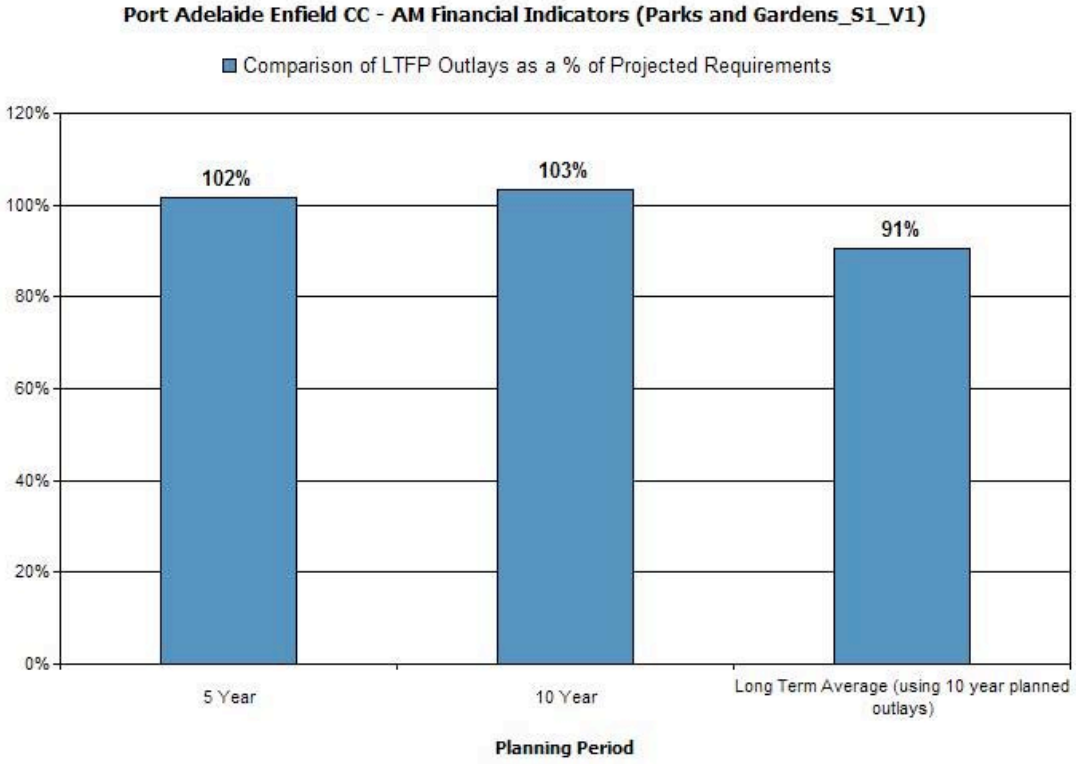
The projected maintenance and capital renewal expenditure required over the first 5 years of the planning period is $12,068,000 on average per year.

Estimated (budget) maintenance and capital renewal funding is $12,249,000 on average per year giving a 5 year funding shortfall of $181,000. This indicates that Council expects to have 102% 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 1.0 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 20 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

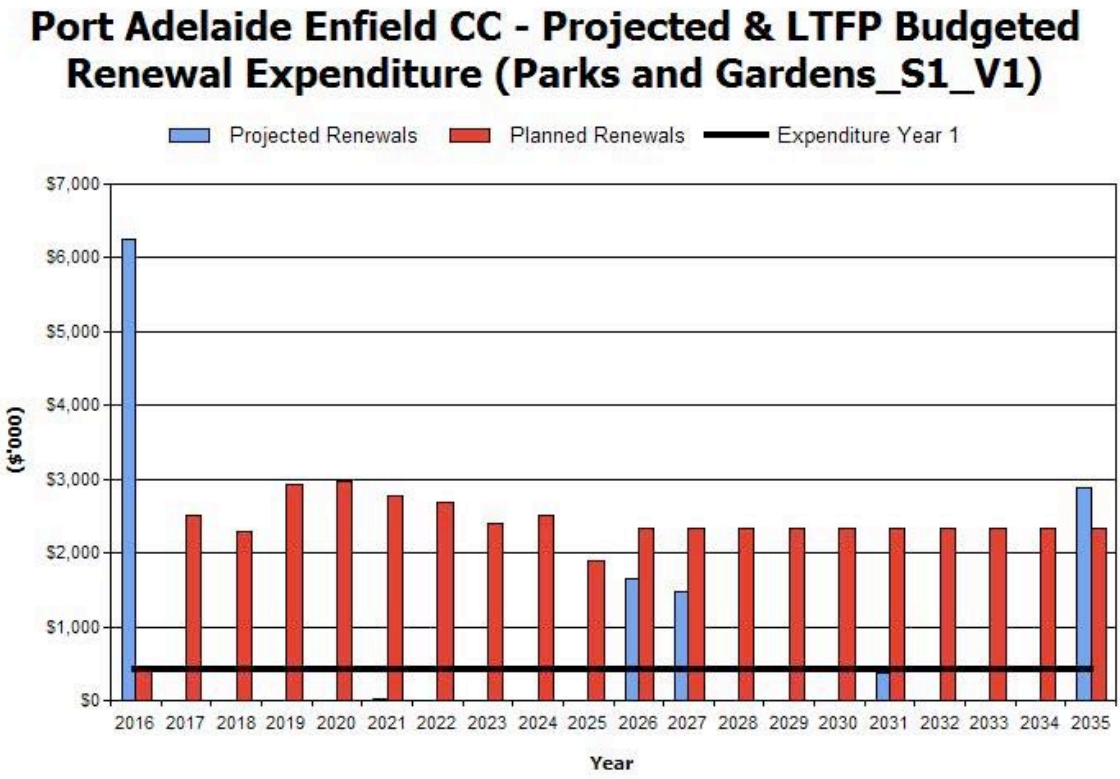


Table 6.1.1 shows the shortfall between projected renewal and replacement expenditures and expenditure accommodated in long term financial plan

Table 6.1.1: Projected and LTFP Budgeted Renewals and Financing Shortfall

Year End June 30	Projected Renewals ($'000)	LTFP Renewal Budget ($'000)	Renewal Financing Shortfall (- gap, + surplus) ($'000)	Cumulative Shortfall (- gap, + surplus) ($'000)
2016	$6,245	$426	$-5,819	$-5,819
2017	$6	$2,517	$2,511	$-3,308
2018	$0	$2,285	$2,285	$-1,023
2019	$0	$2,924	$2,924	$1,901
2020	$0	$2,979	$2,979	$4,880
2021	$15	$2,776	$2,761	$7,641
2022	$0	$2,678	$2,678	$10,319
2023	$0	$2,404	$2,404	$12,723
2024	$0	$2,520	$2,520	$15,243
2025	$0	$1,903	$1,903	$17,146
2026	$1,643	$2,341	$698	$17,844
2027	$1,465	$2,341	$876	$18,720
2028	$0	$2,341	$2,341	$21,062
2029	$0	$2,341	$2,341	$23,403
2030	$0	$2,341	$2,341	$25,744
2031	$385	$2,341	$1,956	$27,700
2032	$0	$2,341	$2,341	$30,041
2033	$0	$2,341	$2,341	$32,383
2034	$0	$2,341	$2,341	$34,724
2035	$2,885	$2,341	$-544	$34,180

Note: A negative shortfall indicates a financing gap, a positive shortfall indicates a surplus for that year.

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.

A gap between projected asset renewal/replacement expenditure and amounts accommodated in the LTFP indicates that further work is required on reviewing service levels in the AM Plan (including possibly revising the LTFP) before finalising the asset management plan to manage required service levels and funding to eliminate any funding gap.

We will manage the 'gap' by developing this asset management plan to provide guidance on future service levels and resources required to provide these services, and review future services, service levels and costs with the community.

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.

Expenditure projections are in 2016 real values.

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

Year	Operations	Maintenance	Projected Capital Renewal	Capital Upgrade/New	Disposals
2016	$0	$10,023	$6,245	$3,650	$0
2017	$0	$10,533	$6	$2,461	$0
2018	$0	$10,880	$0	$2,560	$0
2019	$0	$11,241	$0	$1,170	$0
2020	$0	$11,411	$0	$1,265	$0
2021	$0	$11,595	$15	$1,440	$0
2022	$0	$11,802	$0	$479	$0
2023	$0	$11,878	$0	$503	$0
2024	$0	$11,957	$0	$220	$0
2025	$0	$11,997	$0	$230	$0
2026	$0	$12,039	$1,643	$1,398	$0
2027	$0	$12,240	$1,465	$1,398	$0
2028	$0	$12,442	$0	$1,398	$0
2029	$0	$12,644	$0	$1,398	$0
2030	$0	$12,845	$0	$1,398	$0
2031	$0	$13,047	$385	$1,398	$0
2032	$0	$13,249	$0	$1,398	$0
2033	$0	$13,450	$0	$1,398	$0
2034	$0	$13,652	$0	$1,398	$0
2035	$0	$13,854	$2,885	$1,398	$0

All dollar values are in ($'000)'s

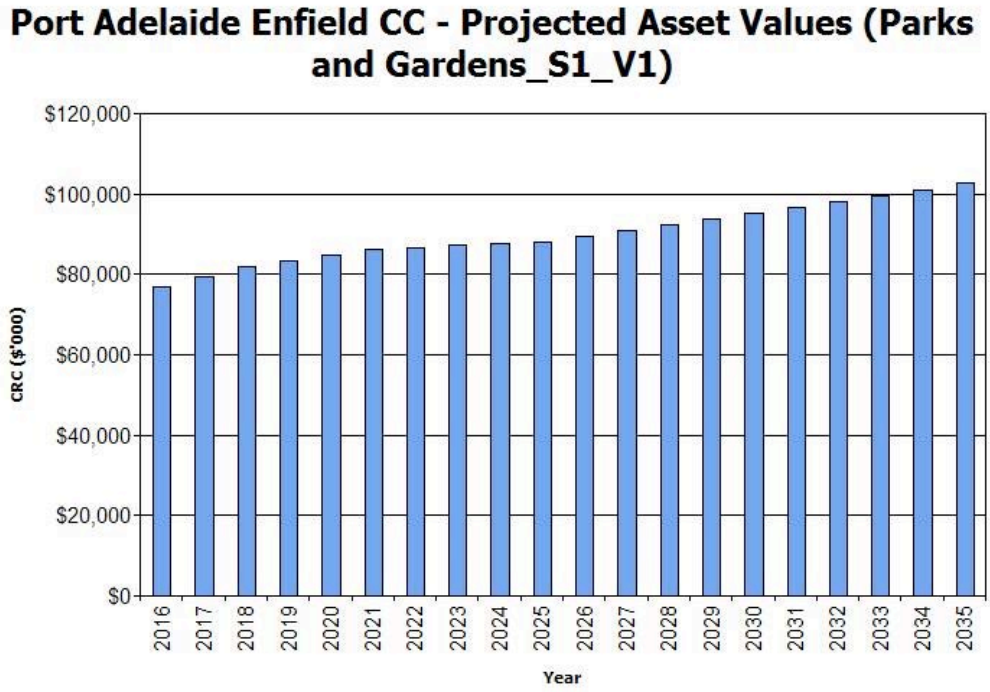
6.2 Funding Strategy

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

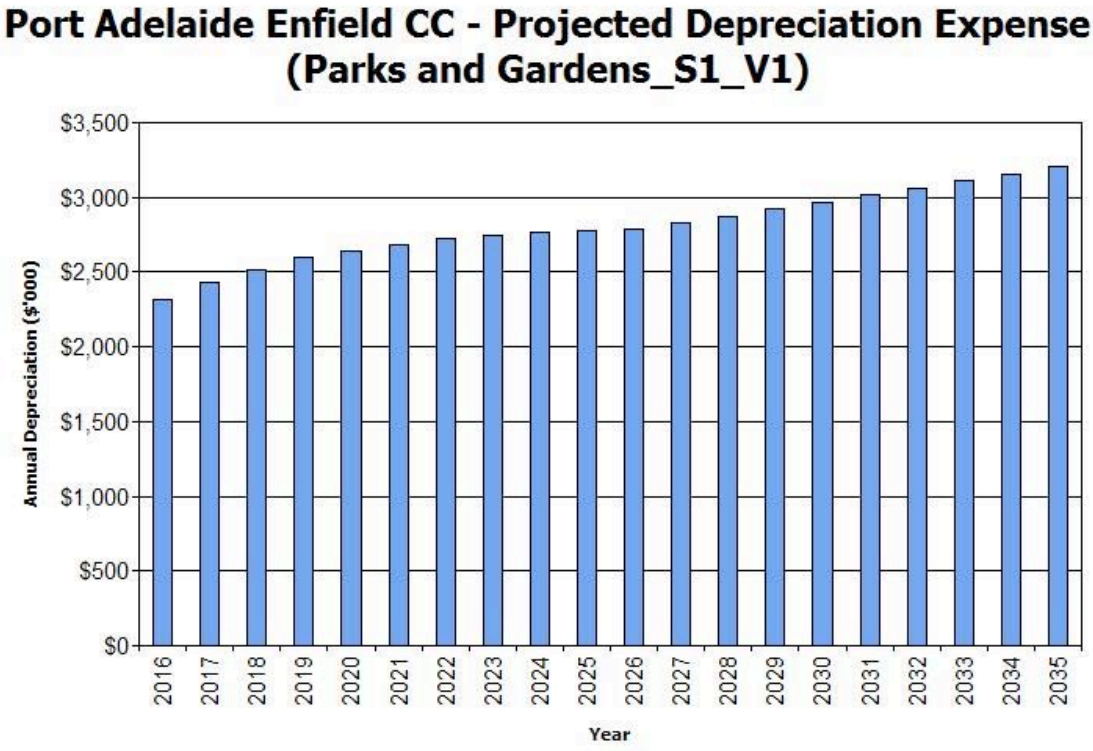
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Figure 9 shows the projected replacement cost asset values over the planning period in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

Figure 9: Projected Asset Values



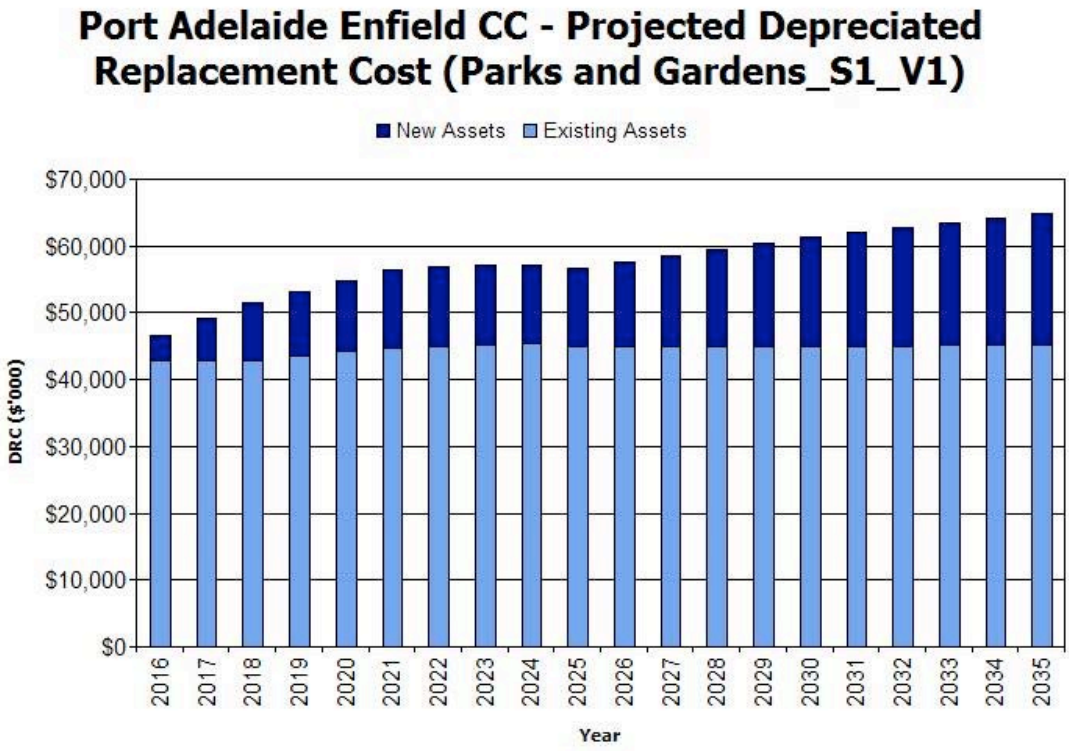
Depreciation expense values are forecast in line with asset values as shown in Figure 10.

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
0.1 % Network Growth	Uncertainty due to Greenfield sites / State Government Policy on land release
Useful Lives may change pending future revision of current captured data and the associated deterioration of asset type.	Major effect of valuation and depreciation modelling

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[8] in accordance with Table 6.5.

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	Uncertain to Reliable	Based on current and expected Greenfield developments
Growth projections	Reliable	Based Census data
Maintenance expenditures	Highly reliable	Based on historic expenditure records as well as Service Standards records
Projected Renewal expenses. - Asset values - Asset useful lives	Uncertain to Reliable	Staff have projected a greater Renewal spend in the LTFP, based on various in-house knowledge. An emphasis on capturing condition data will provide confidence and to justify future LTFP funding requirements.
Condition modelling	Uncertain	Council staff will continue to capture condition data through Pro-Active inspection, and aligning with maintenance works. This information will be captured in Hansen.
Defect repairs	Reliable	Based on current inspection programs
Upgrade/New expenditures	Uncertain to Reliable	Based on Free of Charge assets from Greenfield developments.

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

[8] IPWEA, 2011, IIMM, Table 2.4.6, p 2|59.

7. PLAN IMPROVEMENT AND MONITORING

7.1 Status of Asset Management Practices

7.1.1 Accounting and financial systems

Assets are recorded at fair value in Finance One in the following classifications:

- Land
- Buildings
- Infrastructure
- Plant & Equipment
- Furniture & Fittings
- Library Books
- Waste Bins
- Software

Accountabilities for financial systems

To ensure that Council's most valuable asset classes such as Land, Buildings and Infrastructure are recorded accurately at fair value, and to ensure each asset class is routinely inspected for condition by a third party consultant at least every 4 years, with interval year inspections performed by staff. This then forms part of the external audit performed by External Auditors.

Accounting standards and regulations

The applicable accounting standards are:

- AASB116 "Property, Plant & Equipment
- AASB138 "Intangible Assets"

Capital/maintenance threshold

There is no capital threshold in practice. At the moment, capital amounts are recognised on a case by case basis using professional judgement.

How and when maintenance is performed on an asset is not a finance function-this is matter for the relevant manager and director to decide.

Required changes to accounting financial systems arising from this AM Plan

None

7.2.1 Asset management system

Hansen

Asset registers

Buildings

Roads (Seal, Base, Kerb, footpath)

Parks and Gardens

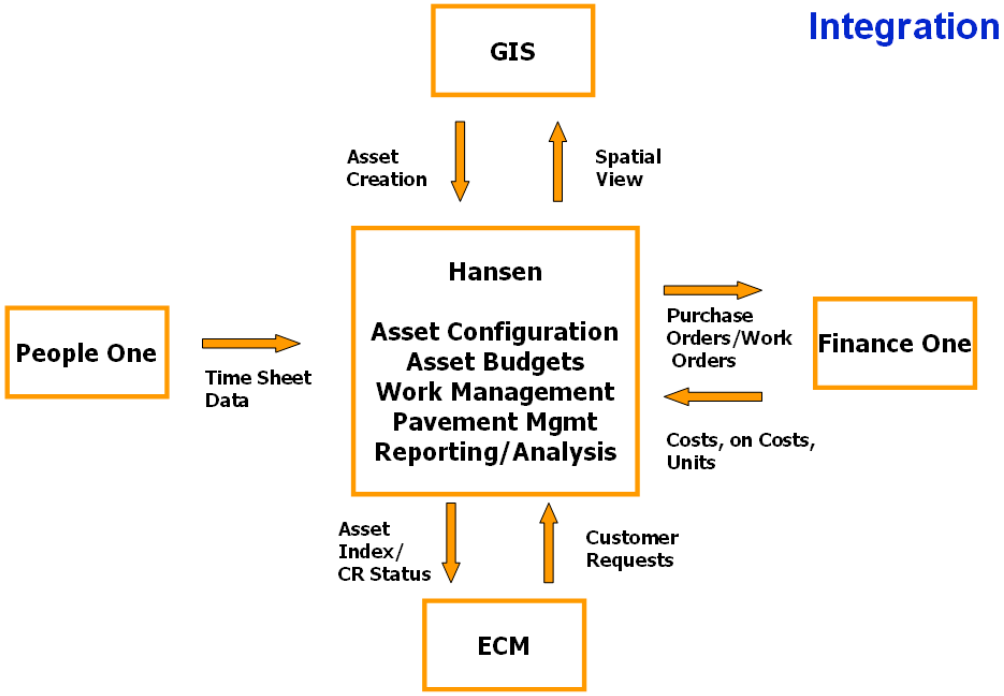
Stormwater

Public Art

Fleet

Linkage from asset management to financial system

The Asset System (Hansen) is integrated with the finance system (Finance 1), the payroll system (People 1), the GIS and the document Management System (ECM). The linkages are shown graphically below.



Accountabilities for asset management system and data maintenance

Simon Davis - Team Leader Asset Planning

James Nenke – Asset Planning

Brett Thatcher - Asset Support Officer

Tina Lambert – Asset Management Accountant

Simon Trill - Manager Parks and Gardens

Mel Reid - Building Services

Dave Perkins – Fleet Officer

Field Team Leaders

Required changes to asset management system arising from this AM Plan

Council will focus on reviewing useful lives through evidence based survey work.

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	Establish an internal Asset Management User Group that will meet quarterly to plan, implement, and review strategies and operations that will collectively advance Asset Management within Council. The committee will include (but not limited to) all Asset owners, strategic planner, asset accountant, IT Business Analysis, and Field Team Leaders.	Asset Planning	Internal	Mar-17
2	Capture existing assets and verify against current data in Hansen	Asset Planning	Staff or Contractor	Dec-17
3	Review structure of asset componentisation in Hansen	Asset Planning	Staff	Jun-18
4	Condition Rating programs against componentised assets	Asset Planning	Staff / Contractor	Dec-18
5	Review and Establish Useful Lives for assets classes	Asset Planning / Parks & Gdns Manager / Field staff	Staff	Dec-18
6	Identify installation date for various asset components	Asset Planning / Parks & Gdns Manager / Field staff	Staff	Dec-18
7	Review and establish data structure with regard to valuation and financial reporting practices	Asset Planning / Asset Accountant	Staff	Mar-19
8	Review resource requirements for data capture - particularly for administrative and data management purposes	Parks & Gardens Manager	Staff	Jun-17

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 within 4 years of 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 1.0.

8. REFERENCES

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

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

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

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

9. APPENDICES

Appendix A Projected 10 year Capital Works Program

Appendix B LTFP Budgeted Expenditures Accommodated in AM Plan

Appendix C Abbreviations

Appendix D Glossary

Appendix A Projected 10 year Capital Works Program

RENEW / REPLACE

	ACTIVE	PASSIVE	FORESHORE	GOLF	TOTAL
2016/17	$1,944,490	$1,226,000	$400,000	$30,000	$3,600,490
2017/18	$1,395,000	$1,267,000	$500,000		$3,162,000
2018/19	$1,042,000	$758,000	$198,000	$125,000	$2,123,000
2019/20	$1,901,000	$939,000	$120,000	$300,000	$3,260,000
2020/21	$1,570,000	$956,000	$60,000	$588,500	$3,174,500
2021/22	$1,410,000	$490,000	$148,000	$288,500	$2,336,500
2022/23	$806,000	$470,000	$450,000	$98,500	$1,824,500
2023/24	$865,000	$926,000	$198,000	$60,000	$2,049,000
2024/25	$1,220,000	$1,230,000		$60,000	$2,510,000
2025/26	$630,000	$1,008,000	$35,000	$60,000	$1,733,000
2026/27	$620,000	$680,000	$800,000	$60,000	$2,160,000

NEW / UPGRADE

	ACTIVE	PASSIVE	FORESHORE	GOLF	TOTAL
2016/17	$2,337,000	$1,190,000	$123,000		$3,650,000
2017/18	$1,585,000	$680,000	$196,000		$2,461,000
2018/19	$1,690,000	$690,000	$55,000	$125,000	$2,560,000
2019/20	$180,000	$640,000		$350,000	$1,170,000
2020/21	$265,000	$600,000	$250,000	$150,000	$1,265,000
2021/22	$150,000	$1,240,000	$50,000		$1,440,000
2022/23	$279,000	$200,000			$479,000
2023/24	$415,000	$88,000			$503,000
2024/25		$220,000			$220,000
2025/26	$230,000				$230,000
2026/27	$320,000	$250,000			$570,000

Appendix B Budgeted Expenditures Accommodated in LTFP

Parks and Gardens_S1_V1 Form 3 Data

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Asset Values ($000)	
CRC	73,159
Depreciable Amt	73,120
DRC	44,647
Annual Depreciation	2,317

Operations and Maintenance Costs from New Assets	
Additional Ops	0 %
Additional Maint	13.7 %
Additional Depreciation	3.17 %
Renewal Ratio	0.58 %

Edit Growth Details

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Financial Year ending 30 June	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Expenditure Outlays included in Long Term Financial Plan (in current $ values)										
Operations	$000	$000	$000	$000	$000	$000	$000	$000	$000	$000
Operations **Budget**	0	0	0	0	0	0	0	0	0	0
Management **Budget**	0	0	0	0	0	0	0	0	0	0
AM Systems **Budget**	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATIONS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Maintenance										
Reactive Maintenance **Budget**	2,004	2,004	2,004	2,004	2,004	2,004	2,004	2,004	2,004	2,004
Planned Maintenance **Budget**	8,019	8,019	8,019	8,019	8,019	8,019	8,019	8,019	8,019	8,019
Specific Maintenance Items**Budget**	0	0	0	0	0	0	0	0	0	0
TOTAL MAINTENANCE	**$ 10,023**	**$ 10,023**	**$ 10,023**	**$ 10,023**	**$ 10,023**	**$ 10,023**	**$ 10,023**	**$ 10,023**	**$ 10,023**	**$ 10,023**
Capital										
Planned Renewal **Budget**	426	2,517	2,285	2,924	2,979	2,776	2,678	2,404	2,520	1,903
Planned Upgrade/New **Budget**	7,001	2,926	2,800	1,385	1,665	1,000	380	338	210	225
Non-growth contributed asset value	0	0	0	0	0	0	0	0	0	0
Asset Disposals										
Est. cost to dispose of assets	0	0	0	0	0	0	0	0	0	0
Carrying value (DRC) of disposed assets	0	0	0	0	0	0	0	0	0	0

Additional Expenditure Outlays Requirements (e.g from Infrastructure Risk Management Plan)										
Additional Expenditure Outlays required and not included above	2016 $000	2017 $000	2018 $000	2019 $000	2020 $000	2021 $000	2022 $000	2023 $000	2024 $000	2025 $000
Operations	0	0	0	0	0	0	0	0	0	0
Maintenance	0	0	0	0	0	0	0	0	0	0
Capital Renewal	to be incorporated into Register (where Method 1 is used) OR Defect Repairs (where Method 2 or 3 is used)									
Capital Upgrade	0	0	0	0	0	0	0	0	0	0

Forecasts for Capital Renewal using Methods 2 & 3 (Form 2A & 2B) & Capital Upgrade (Form 2C)										
	2016 $000	2017 $000	2018 $000	2019 $000	2020 $000	2021 $000	2022 $000	2023 $000	2024 $000	2025 $000
Forecast Capital Renewal from Form 2A & Form 2B	6,245	6	0	0	0	15	0	0	0	0
Forecast Capital Upgrade/New from Form 2C	3,650	2,461	2,560	1,170	1,265	1,440	479	503	220	230

Appendix C Abbreviations

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

Appendix D 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.

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 cashflow predictions. Priorities are usually established on the basis of financial return gained by carrying out the work (rather than detailed risk analysis and optimised decision- making).

Cost of an asset
The amount of cash or cash equivalents paid or the fair value of the consideration given to acquire an asset at the time of its acquisition or construction, 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.

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.

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.

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.

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.

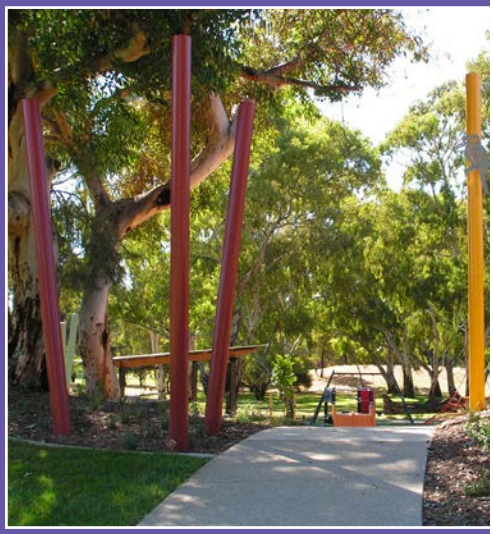
Useful life
Either:
(a) the period over which an asset is expected to be available for use by an entity, or
(b) the number of production or similar units expected to be obtained from the asset by the entity.

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.

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 *



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