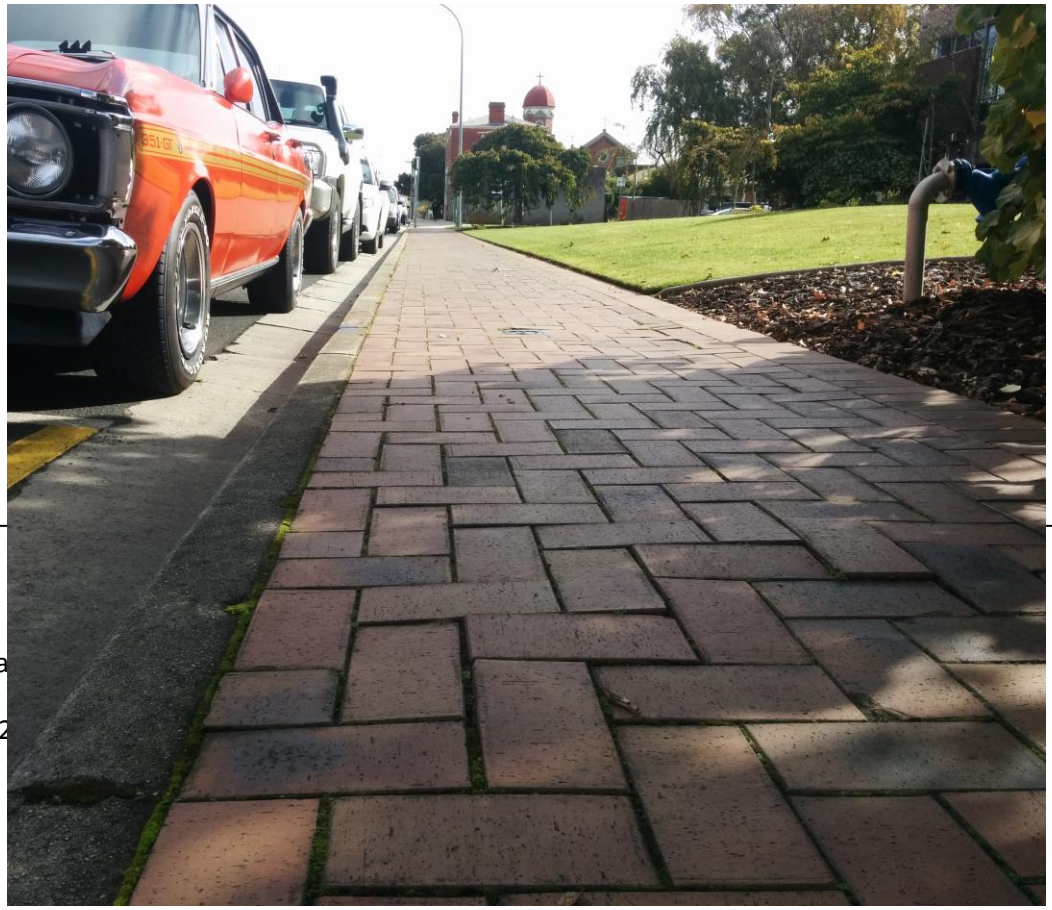
Waratah-Wynyard Council

Waratah Wynyard Council

FOOTPATHS INFRASTRUCTURE

Asset Management Plan



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1. EXECUTIVE SUMMARY

Context

The municipal area of Waratah-Wynyard contains the towns of Wynyard, Somerset, Waratah and Yolla as well as the increasingly urban Sisters Beach and Boat Harbour Beach villages. We aim to provide footpaths to facilitate safe pedestrian access in all urban areas other than industrial.

Demand for better footpath services (incl. wider footpaths and DDA compliant kerb ramps) is expected to increase as a result of our aging population. Significant numbers of kerb ramps are not present or not to standard and parts of our urban areas are not serviced.

The Footpaths Service
The Footpath network comprises:

- 71.4kms Concrete
- 4.5kms Asphalt
- 1.8kms Gravel
- 1.4kms Concrete Pavers

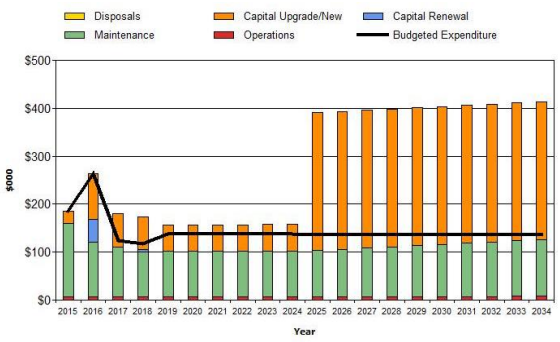
These infrastructure assets have a replacement value of $11,159,000.

What does it Cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan (AM Plan) includes operations, maintenance, renewal and upgrade of existing assets over the 10 year planning period is $1,743,000 or $174,300 on average per year.

Estimated available funding for this period is $1,511,000 or $151,100 on average per year which is 87% of the cost to provide the service. This is a funding shortfall of $23,000 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.

Projected Operating and Capital Expenditure



What we will do

We plan to provide the following:

- Operation, maintenance, renewal and upgrade of footpaths to meet service levels set by Council in annual budgets.
- Correction of all serious defects and provision/ upgrade of DDA compliant kerb ramps within the 10 year planning period.

What we cannot do

We do **not** have enough funding to provide all services at the desired service levels or provide new services. Works and services that cannot be provided under present funding levels are:

- Provision/upgrade of some missing or DDA non-compliant kerb ramps
- Construction of missing sections of footpath

Managing the Risks

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

- Inconvenience to footpath users where no footpath exists or where kerb ramps are either not present or not fully compliant with current standards

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

- Upgrading kerb ramps
- Review of acceptable service levels

Confidence Levels

This AM Plan is based on a Medium to Low level of confidence information.

The Next Steps

The actions resulting from this asset management plan are:

- Review of AM Policy
- Evidence-based review of useful live
- Benchmarking of revaluation methodology
- Rolling service level review
- Develop Infrastructure Risk Management Plan

Questions you may have

What is this plan about?

This asset management plan covers the infrastructure assets that serve the Waratah-Wynyard community's footpath needs. These assets include formally constructed footpaths throughout the municipal area that enable people to enjoy safe pedestrian access in all urban areas except industrial.

What is an Asset Management Plan?

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

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

Why is there a funding shortfall?

No renewal funding gap is shown in this plan however this should be qualified: Current renewal funding demands are low due to the age profile of the footpath network; given the long lives of concrete footpaths and the relatively young age of most of the network, the first scheduled renewals are not expected until beyond 2025. Renewal funding levels are likely to increase from this point onwards and a renewal funding gap start to become apparent.

The majority of the network service deficiencies identified in this plan relate to missing/ below-standard kerb ramps or sections of our urban areas without footpath services. Significant levels of future upgrade/new capital expenditure are required if these deficiencies are to be addressed.

Present funding levels are insufficient to achieve this over the life of this plan. We are therefore unable to provide existing services at current levels (as set out in Appendix A) in all non-industrial urban areas.

What options do we have?

Resolving the funding shortfall involves several steps:

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

What happens if we don't manage the shortfall?

It is likely that we will have to reduce service levels in some areas, unless new sources of revenue are found.

For footpaths, the service level reduction may include a reduction of the serviced area and/or a loosening of the definition of an 'acceptable' footpath to include footpath defects of greater severity.

What can we do?

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

What can you do?

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

2. INTRODUCTION

2.1 Background

This asset management plan is to demonstrate responsive management of assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding needed to provide the required levels of service over a 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 asset management plan is to be read with the organisation's Asset Management Policy, Asset Management Strategy and the following associated planning documents:

- *Waratah-Wynyard Strategic Plan 2009-2015*
- *Waratah-Wynyard Council Asset Management Policy*

This infrastructure assets covered by this asset management plan are shown in Table 2.1. These assets are used to provide safe pedestrian access in all urban areas other than industrial.

Table 2.1: Assets covered by this Plan

Asset category	Dimension	Replacement Value
Footpaths – Concrete – 75mm	62.5km	$8,757,208
Footpaths – Concrete – 100mm	8.9km	$1,747,705
Footpaths - Asphalt	4.2km	$291,267
Footpaths – Concrete Pavers	1.4km	$318,285
Footpaths - Gravel	1.8km	$25,158
Footpaths – Bitumen Seal	0.3km	$17,157
Footpaths – Concrete Step Stones	0.035km	$1,935
TOTAL	**79.135km**	**$11,158,715**

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, • Ensure organisation is financially sustainable.
General Manager	• Maintain organisation's focus on strategic asset management and sustainable service provision.
Council Staff	• To maintain a proactive approach to customer requests and to holistic asset management and service provision systems and procedures which can better inform decisions by Councillors.
Community	• Provide feedback to Council regarding the community's service level demands and their ability and willingness to pay for the costs of service delivery.

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

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

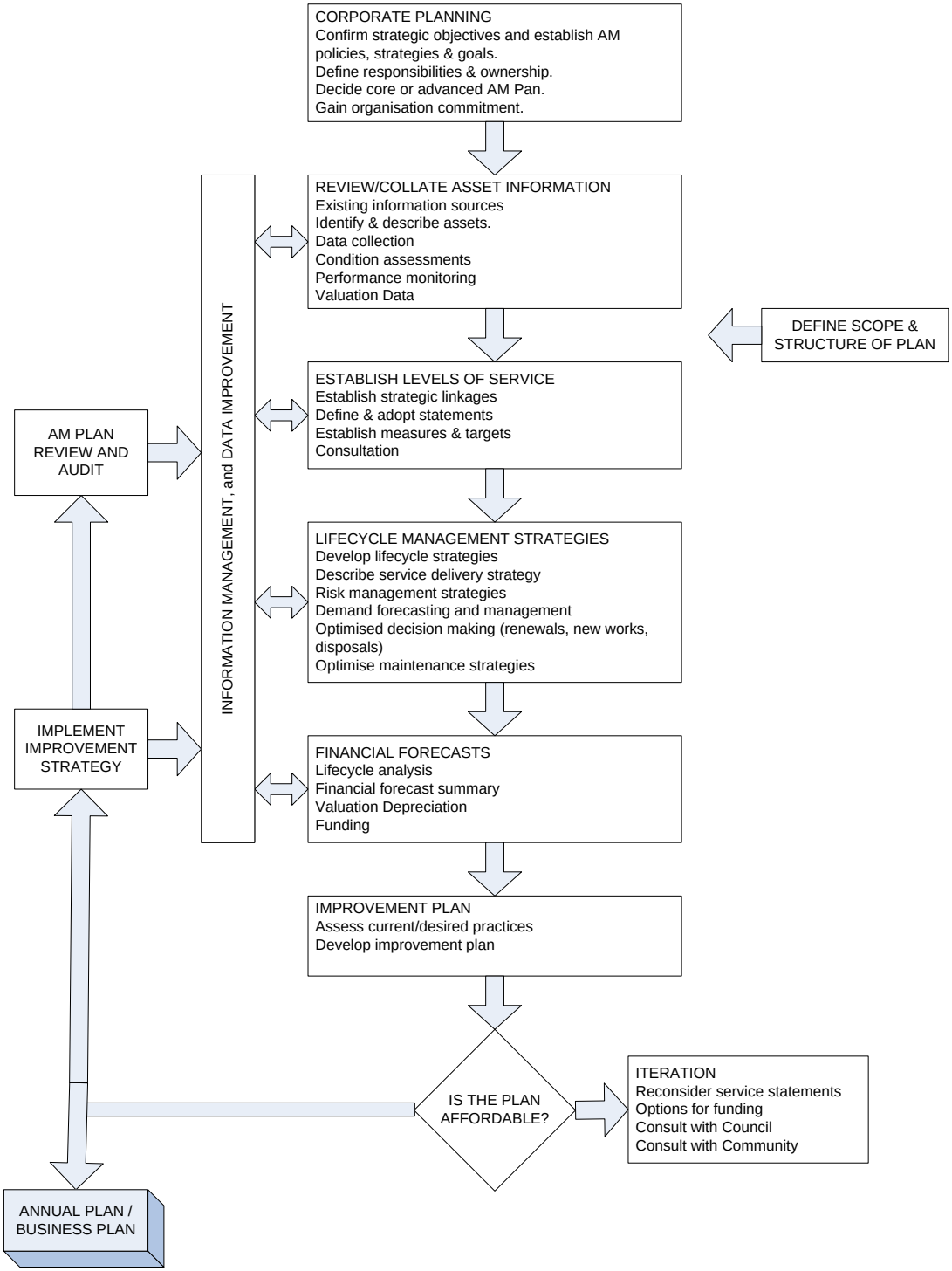
- Levels of service – specifies the services and levels of service to be provided by the organisation,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Life cycle management – how Council will manage its existing and future assets to provide defined levels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

In September and October 2014, Council engaged Insync Surveys to undertake a community survey to measure community members' views, ideas, and suggestions. This was the first survey of its kind conducted by this council and, while specific service areas were not a focus, it did serve to provide valuable information on the community's perspective of key areas of Council's performance.

Future revisions of the asset management plan will incorporate further community consultation on service levels and costs of providing the services. This will assist 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 services.

3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

The most recent community satisfaction survey reported satisfaction levels for the footpath service as follows:

Table 3.1: Community Satisfaction Survey Levels

Performance Measure	"Low" <---------- RATING ----------> "High"						
	1	2	3	4	5	6	7
Importance of footpath service					√		
Council's performance				√			

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

3.2 Strategic and Corporate Goals

This asset management plan is intended to fall under the direction of the organisation's vision, mission, goals and objectives as articulated in its Community Strategic Plan. It is noted that Council's Strategic Plan 2009-2014 has expired and that its replacement is currently being developed. This section will be updated upon adoption of the new Community Strategic Plan.

Our vision is:

"Waratah-Wynyard municipality will continue to be a thriving and prosperous municipality, with opportunities for all"

Our mission is:

"Waratah – Wynyard Council will work to create an environment where its people can prosper and take advantage of the municipality's unique advantages to the benefit of the community."

[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

Goal	Objective	How Goal and Objectives are addressed in AM Plan
Council's built infra-structure is constructed and maintained to a high standard	Develop and implement Asset Management Plans	The Infrastructure Asset Management Plan provides a framework to promote better understanding of sustainable service delivery and asset management principles and practices. It also sets down level of service requirements and seeks to define the manner in which these are achieved and maintained over the long term.
Council is managed in a financially sustainable and responsible manner	Prepare 5 year forward budget estimate plans to complement annual planning documents	The Infrastructure Asset Management Plan provides the expenditure cash flow projections that will be critical inputs into the council's long term financial plans.

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

3.3 Legislative Requirements

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

Table 3.3: Legislative Requirements

Legislation	Requirement
Local Government Act	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.
Roads & Jetties Act (1935)	An Act to consolidate and amend certain enactments relating to roads and jetties and to make provision for the establishment and maintenance of aerodromes.
Disability Discrimination Act (1992)	The objects of this Act are: (a) to eliminate, as far as possible, discrimination against persons on the ground of disability in the areas of: (i) work, accommodation, education, access to premises, clubs and sport; and (ii) the provision of goods, facilities, services and land; and (iii) existing laws; and (iv) the administration of Commonwealth laws and programs; and (b) to ensure, as far as practicable, that persons with disabilities have the same rights to equality before the law as the rest of the community; and (c) to promote recognition and acceptance within the community of the principle that persons with disabilities have the same fundamental rights as the rest of the community.
Traffic Act (1925)	An Act to consolidate and amend the law relating to vehicular and other traffic
Local Government (Highways) Act (1982)	An Act to consolidate with amendments certain enactments concerning the functions of the corporations of municipalities with respect to highways and certain other ways and places open to the public

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

3.4 Community Levels of Service

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

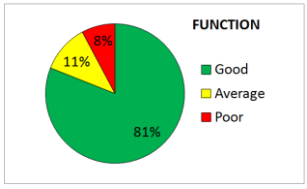
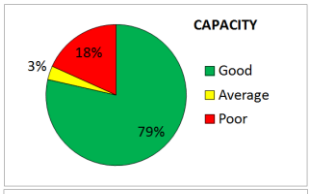
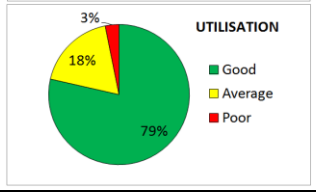
Community Levels of Service measure how the community receives the service and whether the organisation is providing community value.

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

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

The organisation's current and expected community service levels are detailed in Tables 3.4 and 3.5. Table 3.4 shows the agreed expected community levels of service based on resource levels in the current long-term financial plan and community consultation/engagement.

Table 3.4: Community Level of Service

Service Attribute	Service Objective	Performance Measure Process	Current Performance	Expected position in 10 years based on current LTFP
COMMUNITY OUTCOMES				
Delivery of footpath services to the community that are both acceptable and affordable				
COMMUNITY LEVELS OF SERVICE				
Quality	To provide a safe footpath network to the community in all urbanised areas other than industrial.	Community Survey: Gap of perceived performance against importance	Gap of 1.24	To be developed
	Organisational measure	Community Survey: Gap of perceived performance against importance	Gap of less than 2 [High confidence]	Gap of less than 2 [Low confidence]
Function	The footpath network is fit for purpose	DDA compliant access (width & kerb ramps)		To be developed
	Organisational measure	Footpath inspection program	71 missing kerb ramps 102 existing but non-compliant [High confidence]	To be developed
Capacity/ Utilisation	The footpath network provides adequate coverage to the service area	At least one side of the road reservation is serviced in non industrial areas	 	To be developed
	Organisational measure	Footpath inspection program	17 kms missing footpath 3 kms overserviced [Low confidence]	To be developed

The *Footpaths Service Level Document*[4] outlines Council's current maintenance intervention standards for footpaths as well as the way in which defect repair activities are prioritised given limited maintenance resources.

3.5 Technical Levels of Service

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

Technical service measures are linked to annual budgets covering:

- Operations – the regular activities to provide services such as opening hours, cleansing, mowing grass, energy, inspections, etc.
- Maintenance – the activities necessary to retain an asset as near as practicable to an appropriate service condition (eg road patching, unsealed road grading, building and structure repairs),
- Renewal – the activities that return the service capability of an asset up to that which it had originally (eg frequency and cost of road resurfacing and pavement reconstruction, pipeline replacement and building component replacement),
- Upgrade – the activities to provide a higher level of service (eg widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (eg a new library).

Service and asset managers plan, implement and control technical service levels to influence the customer service levels.[5]

Table 3.5 shows the technical level of service expected to be provided under this AM Plan. The agreed sustainable position in the table documents the position agreed by the Council/Board following community consultation and trade-off of service levels performance, costs and risk within resources available in the long-term financial plan.

[4] APPENDIX A – Footpaths Service Levels Document 2015

[5] IPWEA, 2011, IIMM, p 2.22

Table 3.5: Technical Levels of Service

Service Attribute	Service Objective	Activity Measure Process	Current Performance *	Desired for Optimum Lifecycle Cost **	Agreed Sustainable Position ***
TECHNICAL LEVELS OF SERVICE					
Operations					
		Budget			
Maintenance					
		Budget			
Renewal					
		Budget			
Upgrade/New					
		Budget			

Note: * *Current activities and costs (currently funded).*

** *Desired activities and costs to sustain current service levels and achieve minimum life cycle costs (not currently funded).*

*** *Activities and costs communicated and agreed with the community as being sustainable (funded position following trade-offs, managing risks and delivering agreed service levels).*

4. FUTURE DEMAND

4.1 Demand Drivers

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

4.2 Demand Forecast

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

4.3 Demand Impact on Assets

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

Table 4.3: Demand Drivers, Projections and Impact on Services

Demand drivers	Present position	Projection	Impact on services
Population	Approx 14,000	It is expected that the municipality will experience a slight decline in population over the next 5-10 years	Could result in reduction in the capacity of the community to pay for maintenance and renewal
Demographics	Aging population	Population continues to age with increased proportion of persons over 60 years of age	Increased usage of footpaths Demand to widen footpaths and provide DDA compliant access ramps
Sea Change	Undeveloped agricultural land comprising large allotments	Increased demand for small coastal residential allotments	Increased demand for high quality services with resulting higher costs
Land use	Council's planning scheme maintains control of areas of future development	Change to zonings to facilitate new domestic subdivisions	Increased access to new subdivisions may create pressure to increase existing service levels

4.4 Demand Management Plan

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

Non-asset solutions focus on providing the required service without the need for the organisation to own the assets and management actions including reducing demand for the service, reducing the level of service (allowing some assets to deteriorate beyond current service levels) or educating customers to accept appropriate asset failures[6]. Examples of non-asset solutions include providing services from existing infrastructure such as aquatic centres and libraries that may be in another community area or public toilets provided in commercial premises.

[6] IPWEA, 2011, IIMM, Table 3.4.1, p 3|58.

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

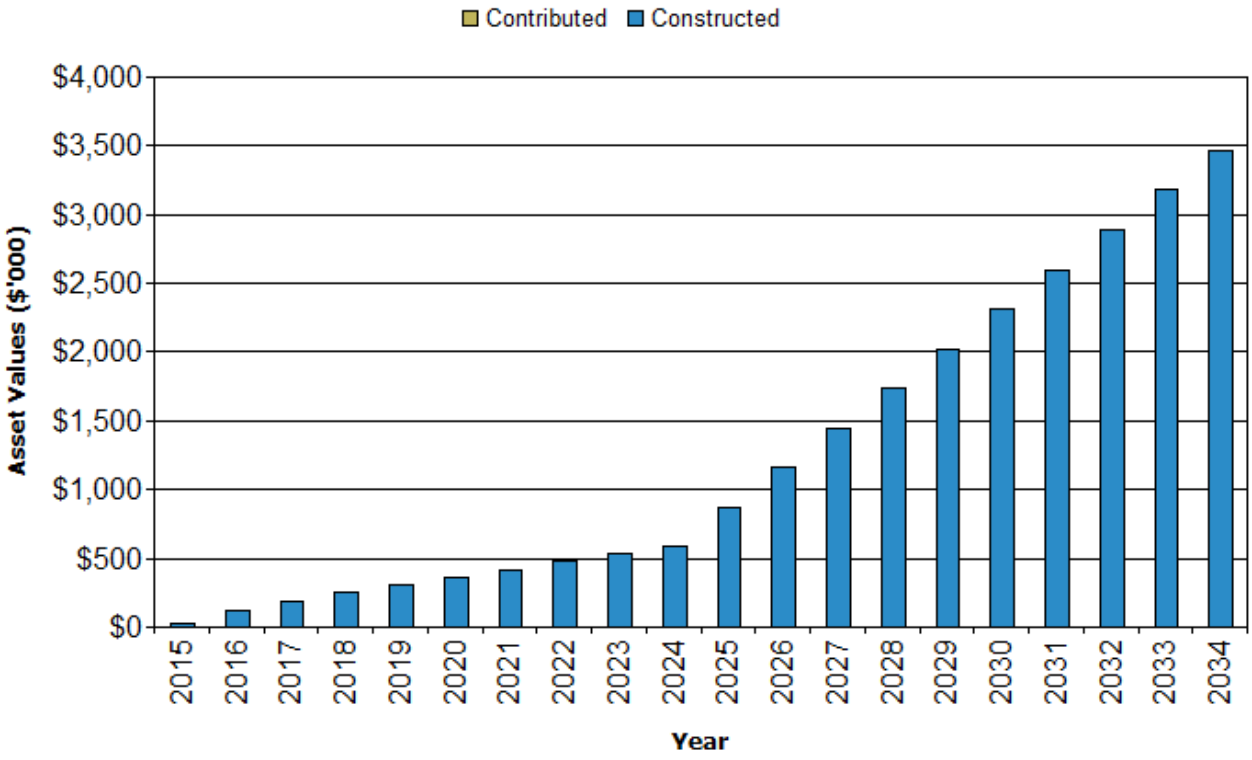
Table 4.4: Demand Management Plan Summary

Demand Driver	Impact on Services	Demand Management Plan
Population	It is expected that the municipality will experience a slight decline in population over the next 5-10 years. Could result in reduction in the capacity of the community to pay for maintenance and renewal	25 year Community plan development, 10 year LTFP, 10 year SAMP along with rolling service reviews
Demographics	Population continues to age with increased proportion of persons over 60 years of age. Increased usage of footpaths Demand to widen footpaths and provide DDA compliant access ramps	25 year Community plan development, 10 year LTFP, 10 year SAMP along with rolling service reviews
Sea Change	Increased demand for small coastal residential allotments. Increased demand for high quality services with resulting higher costs	25 year Community plan development, 10 year LTFP, 10 year SAMP along with rolling service reviews
Land use	Change to zonings to facilitate new domestic subdivisions. Increased access to new subdivisions may create pressure to increase existing service levels	25 year Community plan development, 10 year LTFP, 10 year SAMP along with rolling service reviews

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 Background Data

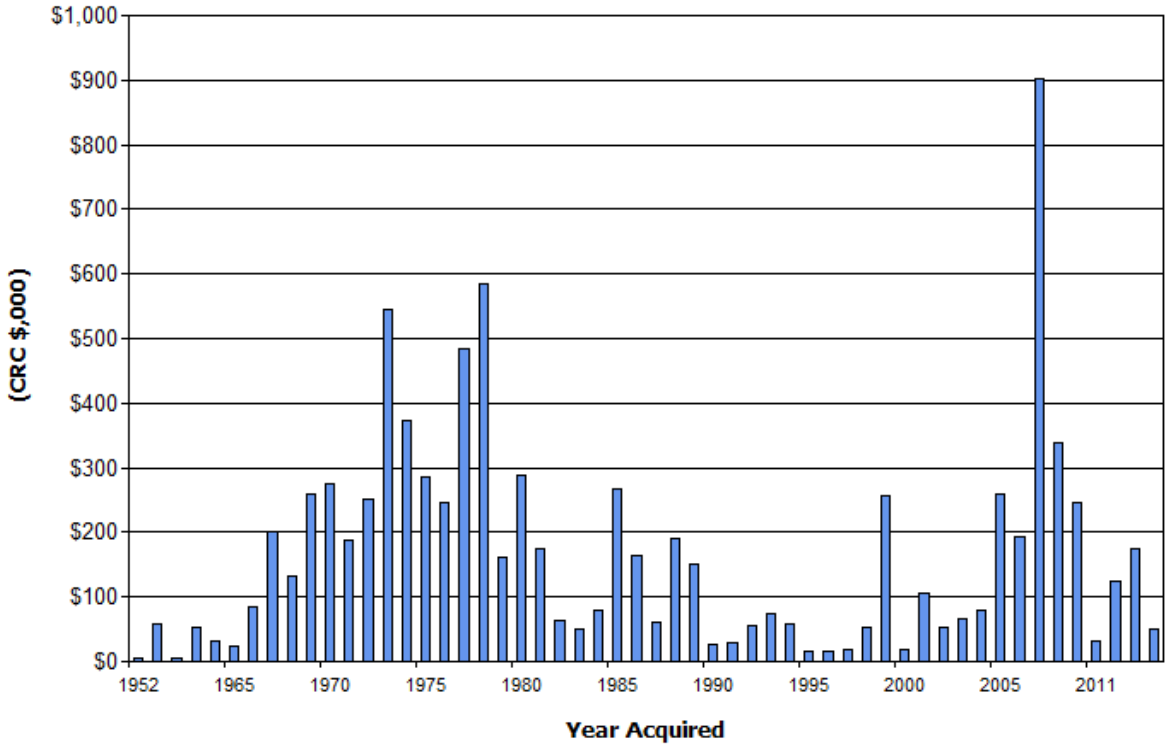
5.1.1 Physical parameters

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

The current footpath network was constructed over a considerable period of time and, as a result, consists of footpaths that built with different materials and construction methods, and to range of construction standards. There are also varying degrees of coverage within the network with some streets having footpaths on both sides, some on one side only, and others no footpath at all.

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

Figure 2: Asset Age Profile



5.1.2 Asset capacity and performance

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

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

Table 5.1.2: Known Service Performance Deficiencies

Location	Service Deficiency
Urban area, excluding industrial zones	• 140 trip lips • 102 not-to-standard footpath ramps • 71 missing footpath ramps • 71 instances of overhanging vegetation • 60 sections with extensive cracking • 28 pit lid defects • 9 nature strip/edge drop-off issues • 71 missing kerb ramps • 102 existing but non-compliant kerb ramps • Up to 17kms of missing footpath

The above service deficiencies were identified from the 2014/15 Footpath Network Inspection with reference to the Footpaths Service Level Document.

The costs of addressing these deficiencies are shown as projected Operating/Maintenance Expenditure and Capital Expenditure in sections 5.3.3 and 5.5.3 respectively and discussed in Section 6.1.

5.1.3 Asset condition

Condition is determined from the annual footpath network inspection by visual inspection.

No reliable condition assessment data is available at the writing of this asset management plan. A network inspection, using the methodology set out in the *Footpaths Service Level Document*[7], is scheduled for late 2015. This information will be used to inform the condition profile of our assets and will be shown in Figure 3 below.

Fig 3: Asset Condition Profile

NOT YET AVAILABLE

Condition is measured using a 1 – 5 grading system[8] as detailed in Table 5.1.3

Table 5.1.3: Simple Condition Grading Model

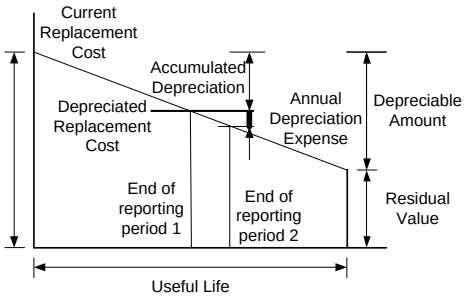
Condition Grading	Description of Condition
1	**Very Good**: only planned maintenance required
2	**Good**: minor maintenance required plus planned maintenance
3	**Fair**: significant maintenance required
4	**Poor**: significant renewal/rehabilitation required
5	**Very Poor**: physically unsound and/or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

[7] APPENDIX A – Footpaths Service Levels Document 2015
[8] IPWEA, 2011, IIMM, Sec 2.5.4, p 2|79.

5.1.4 Asset valuations

The value of assets recorded in the asset register as at 30.06.2014 covered by this asset management plan is shown below. Assets were last revalued at 30.06.2014. Assets are valued at fair value at cost to replace service capacity.

Current Replacement Cost	$11,158,715
Depreciable Amount	$11,158,715
Depreciated Replacement Cost[9]	$6,863,029
Annual Depreciation Expense	$146,604



Useful lives were reviewed in June 2014 using an industry standards approach.

Key assumptions made in preparing the valuations were:

- The *Modern equivalent asset* is 100mm thick, reinforced concrete footpath for all existing 75mm thick concrete footpaths
- Unit rates used in asset revaluation are developed from internal job cost averages from recent footpath construction works

Major changes from previous valuations are due to the adoption of 'modern equivalent asset' values for all 75mm thick plain concrete footpaths as well as revision of the unit rates to reflect current replacement costs.

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

Rate of Annual Asset Consumption (Depreciation/Depreciable Amount)	1.3%
Rate of Annual Asset Renewal (Capital renewal exp/Depreciable amount)	0%
Rate of Annual Asset Upgrade & New (Capital upgrade & new exp/Depreciable amount)	0.2%

5.1.5 Historical Data

For the most part, Council's footpaths were constructed gradually over time. Construction standards and quality have varied markedly over this time. For example, current standards call for 100mm thick concrete footpath with steel reinforcing, whereas in the past 75mm thickness without reinforcing was considered adequate. For a time in the late 1960's and early 1970's, Council participated in the R.E.D. scheme, a government-assisted initiative that involved construction of significant sections of footpath by unemployed members of the community. The workers were generally inexperienced and the concrete mixed on site and, as a result, sections of footpath from this era are of noticeably poorer standard than is typical for that time.

Historical expenditure on footpaths generally reflects the young age of the network; significant levels of assets contributed by developers, moderate upgrade/new expenditure and relatively low levels of maintenance expenditure. There has been a general lack of past systems approach for life cost awareness governing maintenance and construction techniques.

[9] Also reported as Written Down Current Replacement Cost (WDCRC).

NB: over the current 20 year planning period very little renewal is forecast which is consistent with the generally young age of the network. However, given the variance in construction standards over time (especially the R.E.D. scheme) a future review of useful lives may be warranted.

5.2 Infrastructure Risk Management Plan

An assessment of risks[10] associated with service delivery from infrastructure assets should serve to identify critical risks that will result in loss or reduction in service from infrastructure assets or a 'financial shock' to the organisation. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, assigns a risk rating, evaluates the risk and develops a risk treatment plan for risks deemed to be unacceptable.

While an Infrastructure Risk Management Plan has not yet been formalised, a draft risk register for council's footpath network infrastructure has been developed. No critical risks, being those assessed as 'Very High' - requiring immediate corrective action and 'High' – requiring prioritised corrective action, have been identified at this stage.

The development of a formal Infrastructure Risk Management Plan is a priority for reference by future versions of this Asset Management Plan. Review of the risks associated with council's management of infrastructure is considered an on-going, iterative process.

5.3 Routine Operations and Maintenance Plan

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

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

5.3.1 Operations and Maintenance Plan

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

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

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

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

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

Actual past maintenance expenditure is shown in Table 5.3.1.

Table 5.3.1: Maintenance Expenditure Trends

[10] Draft Transport Infrastructure Risk Register

Year	Maintenance Expenditure	
	Planned and Specific	Unplanned
2013-14	$'capital' defect repair + inspections	$maintenance
2012-13	$	$
2011-12	$	$

Planned maintenance work is currently 75% of total maintenance expenditure (expert judgement).

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 was historically undertaken by Council staff using experience and judgement. From 1 July 2015 reactive and planned maintenance will be carried out in accordance with intervention levels of service detailed in the *Footpaths Service Level Document*[11].

5.3.2 Operations and Maintenance Strategies

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

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

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 5.3.2.

[11] APPENDIX A – Footpaths Service Levels Document 2015

Table 5.3.2: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
Footpaths Hierarchy Class 1	Highly trafficked footpaths, such as the Central Business Districts
Footpaths Hierarchy Class 2	Footpaths with medium levels of pedestrian traffic and/or those that are located near vulnerable users, such as: • Aged care centres • Senior citizen centres • Schools • Car parks • Doctors surgeries
Footpaths Hierarchy Class 3	Footpaths in local access streets
Footpaths Hierarchy Class 4	Footpaths with low levels of pedestrian traffic in cul-de-sacs

Critical Assets

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

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

Table 5.3.2.1: Critical Assets and Service Level Objectives

Critical Assets	Critical Failure Mode	Operations & Maintenance Activities
NO HIGH-CONSEQUENCE-OF-FAILURE IDENTIFIED – (Based on expert judgement)		

Standards and specifications

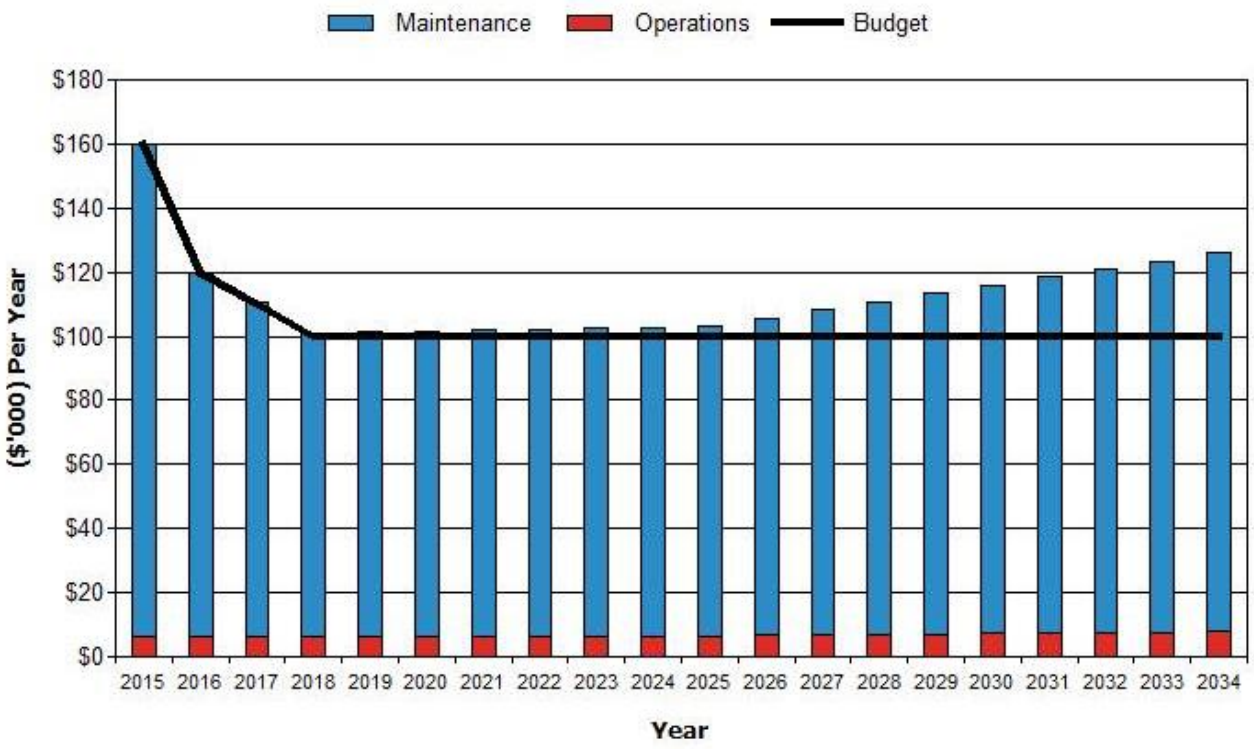
Maintenance work is carried out in accordance with the following Standards and Specifications.

- IPWEA/LGAT Tas Municipal standard drawings set
- Other applicable AUSTROADS published guidelines and Australian Standards

5.3.3 Summary of future operations and maintenance expenditures

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 4. Note that all costs are shown in current 2015 dollar values (ie real values).

Figure 4: Projected Operations and Maintenance Expenditure



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

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

5.4 Renewal/Replacement Plan

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

5.4.1 Renewal plan

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

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

Method 3 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 reviewed at the last asset revaluation on 01/07/2014.[12]

[12] Revaln Workpaper for Auditor

Table 5.4.1: Useful Lives of Assets

Asset (Sub)Category	Useful life
Footpaths – Concrete – 75mm	80 years
Footpaths – Concrete – 100mm	80 years
Footpaths – Concrete Step Stones	80 years
Footpaths - Asphalt	30 years
Footpaths – Concrete Pavers	20 years
Footpaths – Bitumen Seal	20 years
Footpaths - Gravel	20 years

5.4.2 Renewal and Replacement Strategies

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

- Planning and scheduling renewal projects to deliver the defined level of service in the most efficient manner,
- Undertaking project scoping for all capital renewal and replacement projects to identify:
    - the service delivery 'deficiency', present risk and optimum time for renewal/replacement,
    - the project objectives to rectify the deficiency,
    - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
    - and evaluate the options against evaluation criteria adopted by the organisation, and
    - select the best option to be included in capital renewal programs,
- Using 'low cost' renewal methods (cost of renewal is less than replacement) wherever possible,
- Maintain a current infrastructure risk register for assets and service risks associated with providing services from infrastructure assets and reporting Very High and High risks and residual risks after treatment to management and Council/Board,
- 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).[13]

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.[14]

[13] IPWEA, 2011, IIMM, Sec 3.4.4, p 3|60.

The ranking criteria used to determine priority of identified renewal and replacement proposals is detailed in Appendix E.

Renewal and replacement standards

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

- IPWEA/LGAT Tas Municipal standard drawings set
- Other applicable AUSTROADS published guidelines and Australian Standards

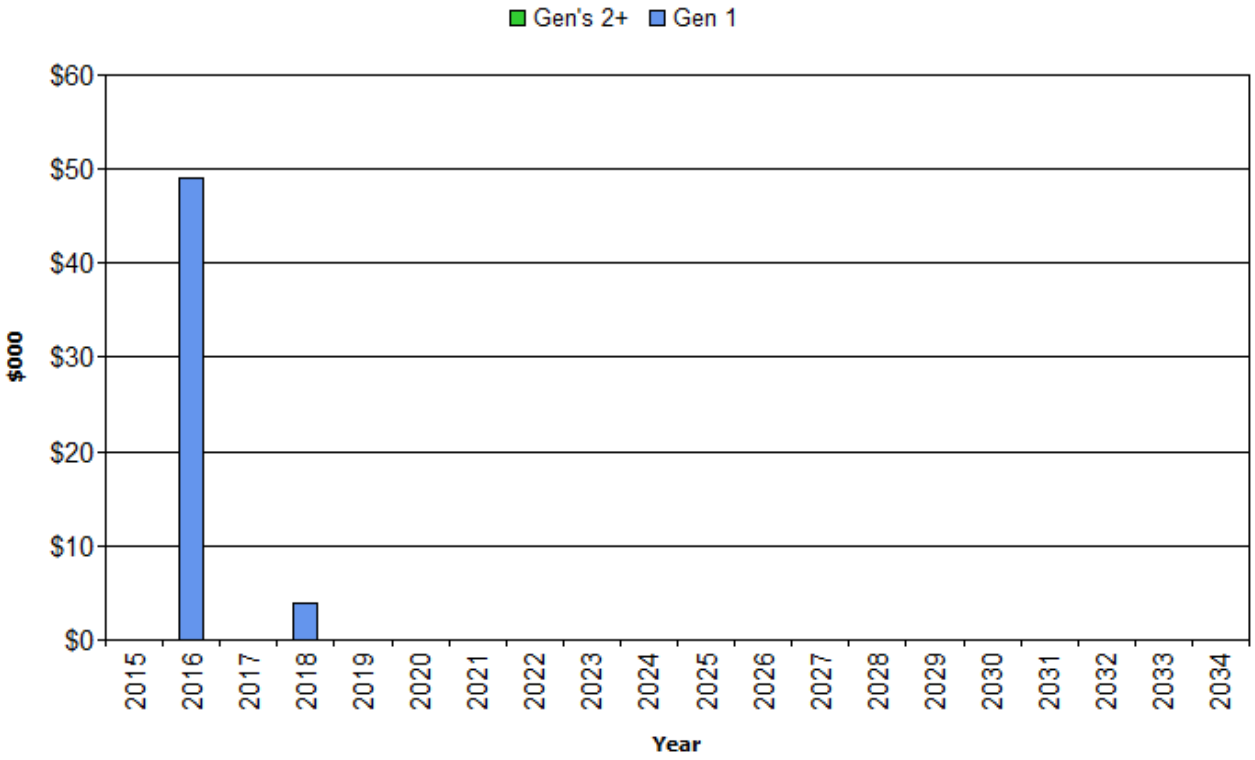
5.4.3 Summary of future renewal and replacement expenditure

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

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

[14] Based on IPWEA, 2011, IIMM, Sec 3.4.5, p 3|66.

Fig 5: Projected Capital Renewal and Replacement Expenditure



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

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

5.5 Creation/Acquisition/Upgrade Plan

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

5.5.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as 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. The priority ranking criteria is detailed in Appendix E.

5.5.2 Capital Investment Strategies

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

- Planning and scheduling capital upgrade and new projects to deliver the defined level of service in the most efficient manner,

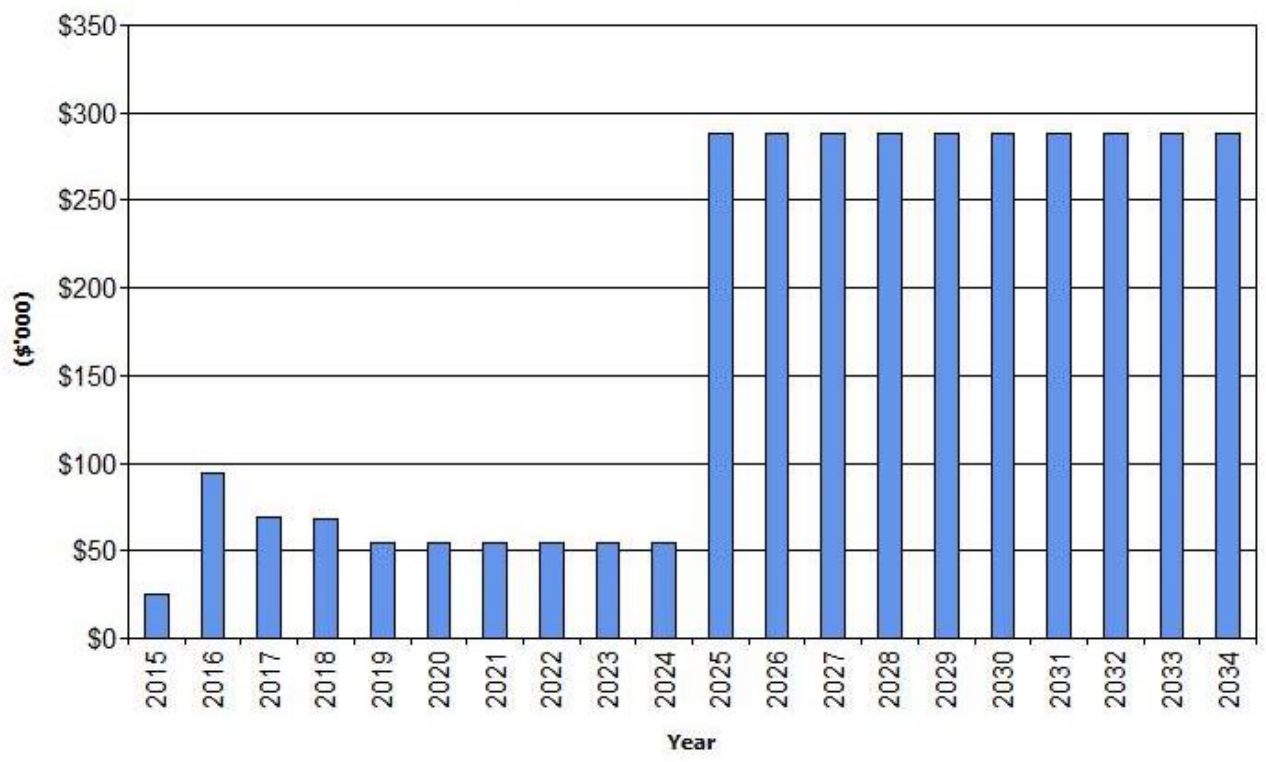
- Undertake project scoping for all capital upgrade/new projects to identify:
    - the service delivery 'deficiency', present risk and required timeline for delivery of the upgrade/new asset,
    - the project objectives to rectify the deficiency including value management for major projects,
    - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
    - management of risks associated with alternative options,
    - and evaluate the options against evaluation criteria adopted by Council, and
    - select the best option to be included in capital upgrade/new programs,
- Review current and required skills base and implement training and development to meet required construction and project management needs,
- Review management of capital project management activities to ensure Council is obtaining best value for resources used.

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

5.5.3 Summary of future upgrade/new assets expenditure

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

Fig 6: Projected Capital Upgrade/New Asset Expenditure



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

5.6 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation.

No proactive disposals are identified. However, based on the service aim[15] of providing a footpath service to at least one side of urban roads, many road segments which currently have footpaths on both sides may be over serviced. In these instances the footpath infrastructure is to be left in service for as long as its condition allows and will simply not be forecast for renewal.

It is likely that there are parts of the network where a footpath service to both sides of the road is warranted however this has not yet been determined and consequently reliable quantitative estimates of footpath over-servicing is not yet available.

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

5.7 Service Consequences and Risks

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

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

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

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

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

5.7.1 What we cannot do

There are some capital projects that are unable to be undertaken within the next 10 years. These include the following service provision gaps:

- Construct missing sections of the footpath network
- Construct/upgrade all missing or DDA non-compliant kerb ramps

5.7.2 Service consequences

Operations and maintenance activities and capital projects that cannot be undertaken will maintain or create service consequences for users. These include:

- Some urban streets will remain without a footpath service
- Some urban streets will remain without DDA compliant kerb ramps

5.7.3 Risk consequences

The operations and maintenance activities and capital projects that cannot be undertaken may maintain or create risk consequences for the organisation. These include:

- Pedestrians on streets not serviced by a footpath may experience greater inconvenience and/or higher risk of injury by walking on the nature strip or road
- Footpaths not serviced by DDA compliant kerb ramps may cause accessibility issues for users with additional mobility needs

[15] APPENDIX A – Footpaths Service Levels Document 2015

These risks will be included with the Infrastructure Risk Management Plan summarised in Section 5.2 and risk management plans actions and expenditures as part of the improvement plan. The expenditures required to meet these service provision gaps have been included within projected expenditures.

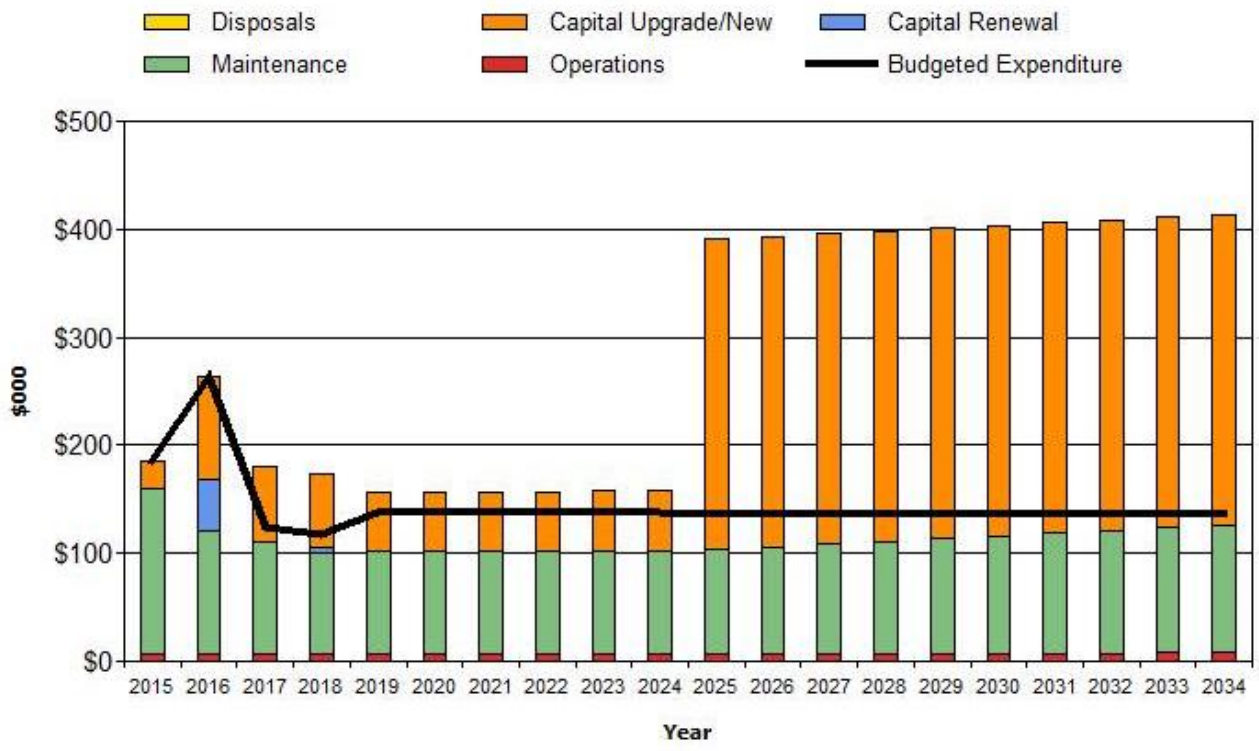
6. FINANCIAL SUMMARY

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

6.1 Financial Statements and Projections

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

Fig 7: Projected Operating and Capital Expenditure



It can be seen that large portions of the forecast upgrade/new capital expenditure are not accommodated by current levels of budgeted expenditure.

6.1.1 Sustainability of service delivery

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

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio[16]	100%

The Asset Renewal Funding Ratio is the most important indicator and reveals that over the next 10 years, Council is forecasting that it will have 100% of the funds required for the optimal renewal and replacement of its assets.

Long term - Life Cycle Cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the asset life cycle. Life cycle costs include operations and maintenance expenditure and asset consumption (depreciation expense). The life cycle cost for the services covered in this asset management plan is $257,000 per year (average operations and 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 operations, maintenance and capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure over the 10 year planning period is $114,000 per year (average operations and maintenance plus capital renewal budgeted expenditure in LTFP over 10 years).

A shortfall between life cycle cost and life cycle expenditure is the life cycle gap. The life cycle gap for services covered by this asset management plan is $-143,000 per year (-ve = gap, +ve = surplus).

Life cycle expenditure is 44% 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 operations, maintenance and capital renewal expenditures required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

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

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is $116,000 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is $114,000 on average per year giving a 10 year funding shortfall of $-2 per year. This indicates that Council expects to have 99% of the projected expenditures needed to provide the services documented in the asset management plan.

Medium Term – 5 year financial planning period

The projected operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is $129,000 on average per year.

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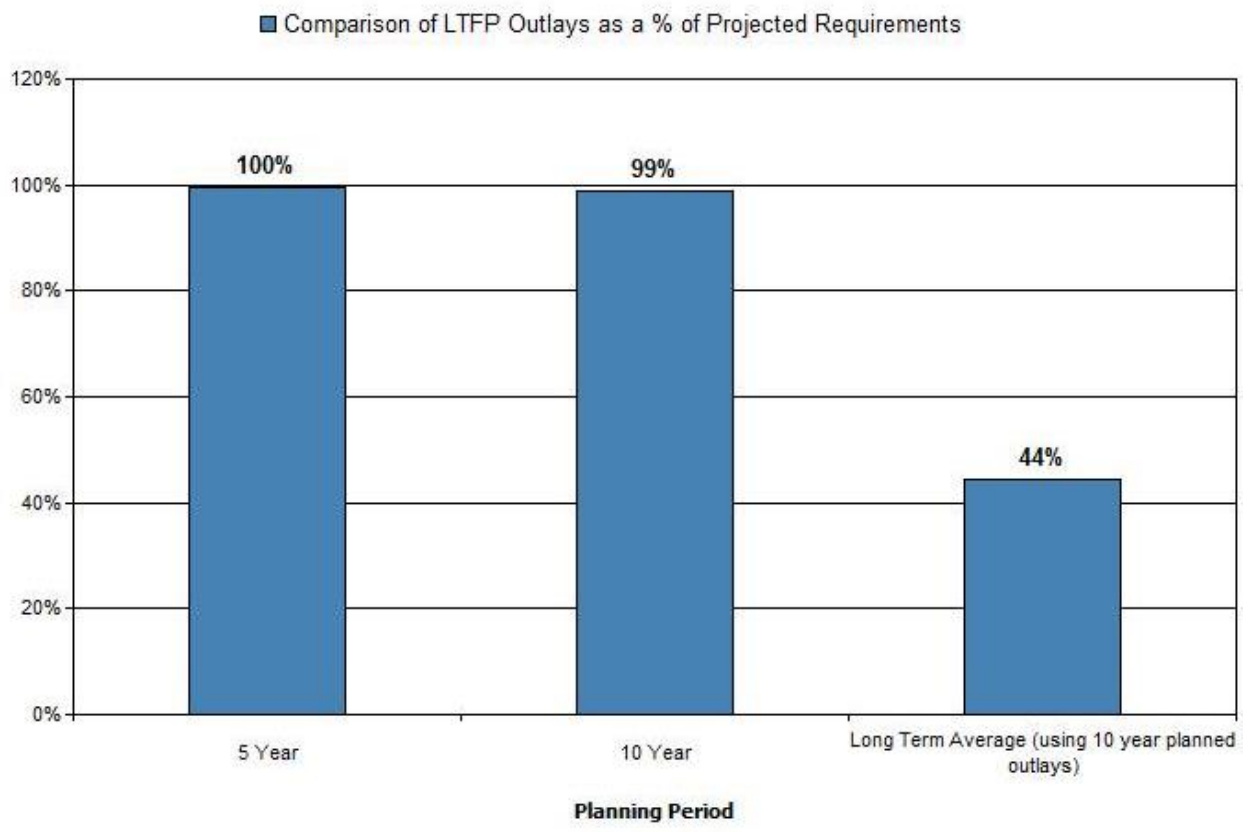
[16] AIFMG, 2012, Version 1.3, Financial Sustainability Indicator 4, Sec 2.6, p 2.16

Estimated (budget) operations, maintenance and capital renewal funding is $129,000 on average per year giving a 5 year funding shortfall of $0. This indicates that Council expects to have 100% 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

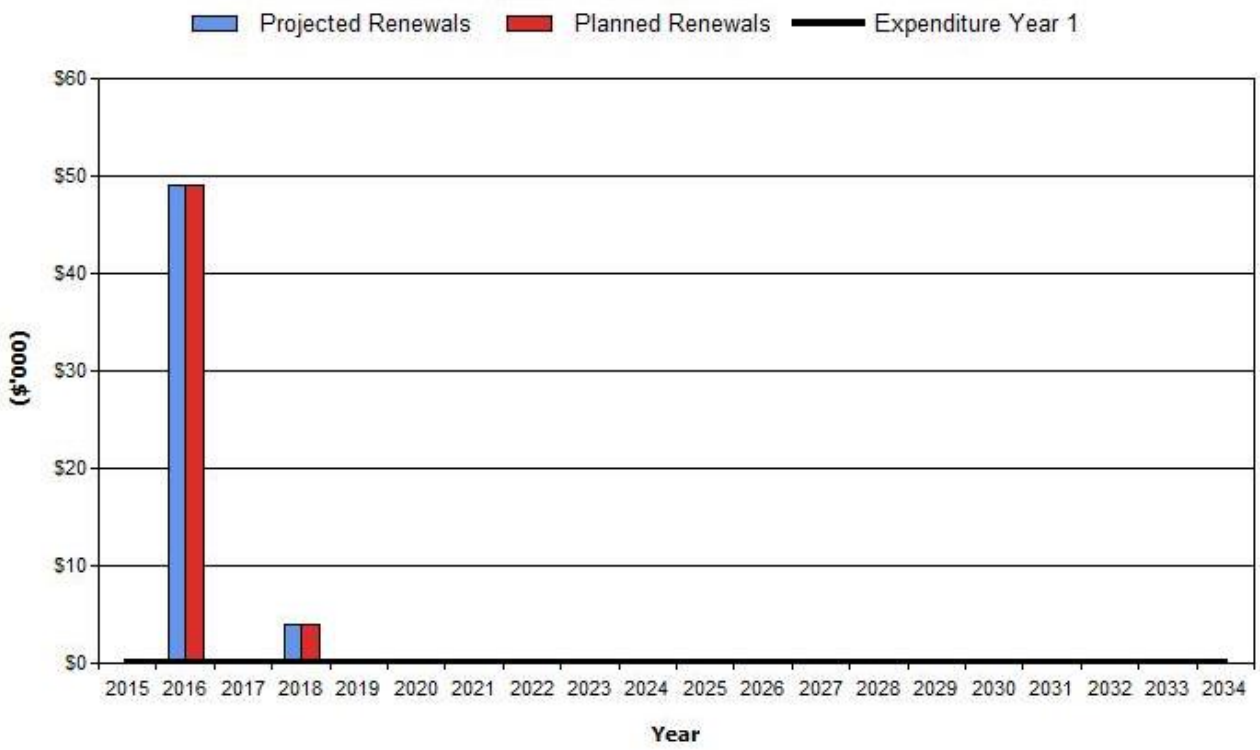


Table 6.1.1 shows the shortfall between projected renewal and replacement expenditures and expenditure accommodated in long term financial plan. Budget expenditures accommodated in the long term financial plan or extrapolated from current budgets are shown in Appendix D.

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 ($000) (-ve Gap, +ve Surplus)	Cumulative Shortfall ($000) (-ve Gap, +ve Surplus)
2015	$0	$0	$0	$0
2016	$49	$49	$0	$0
2017	$0	$0	$0	$0
2018	$4	$4	$0	$0
2019	$0	$0	$0	$0
2020	$0	$0	$0	$0
2021	$0	$0	$0	$0
2022	$0	$0	$0	$0
2023	$0	$0	$0	$0
2024	$0	$0	$0	$0
2025	$0	$0	$0	$0
2026	$0	$0	$0	$0
2027	$0	$0	$0	$0
2028	$0	$0	$0	$0
2029	$0	$0	$0	$0
2030	$0	$0	$0	$0
2031	$0	$0	$0	$0
2032	$0	$0	$0	$0
2033	$0	$0	$0	$0
2034	$0	$0	$0	$0

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 2015 real values.

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

Year	Operations ($000)	Maintenance ($000)	Projected Capital Renewal ($000)	Capital Upgrade/ New ($000)	Disposals ($000)
2015	$6	$154	$0	$25	$0
2016	$6	$114	$49	$94	$0
2017	$6	$104	$0	$69	$0
2018	$6	$95	$4	$68	$0
2019	$6	$95	$0	$55	$0
2020	$6	$95	$0	$55	$0
2021	$6	$96	$0	$55	$0
2022	$6	$96	$0	$55	$0
2023	$6	$96	$0	$55	$0
2024	$6	$96	$0	$55	$0
2025	$6	$97	$0	$288	$0
2026	$7	$99	$0	$288	$0
2027	$7	$101	$0	$288	$0
2028	$7	$104	$0	$288	$0
2029	$7	$106	$0	$288	$0
2030	$7	$109	$0	$288	$0
2031	$7	$111	$0	$288	$0
2032	$8	$113	$0	$288	$0
2033	$8	$116	$0	$288	$0
2034	$8	$118	$0	$288	$0

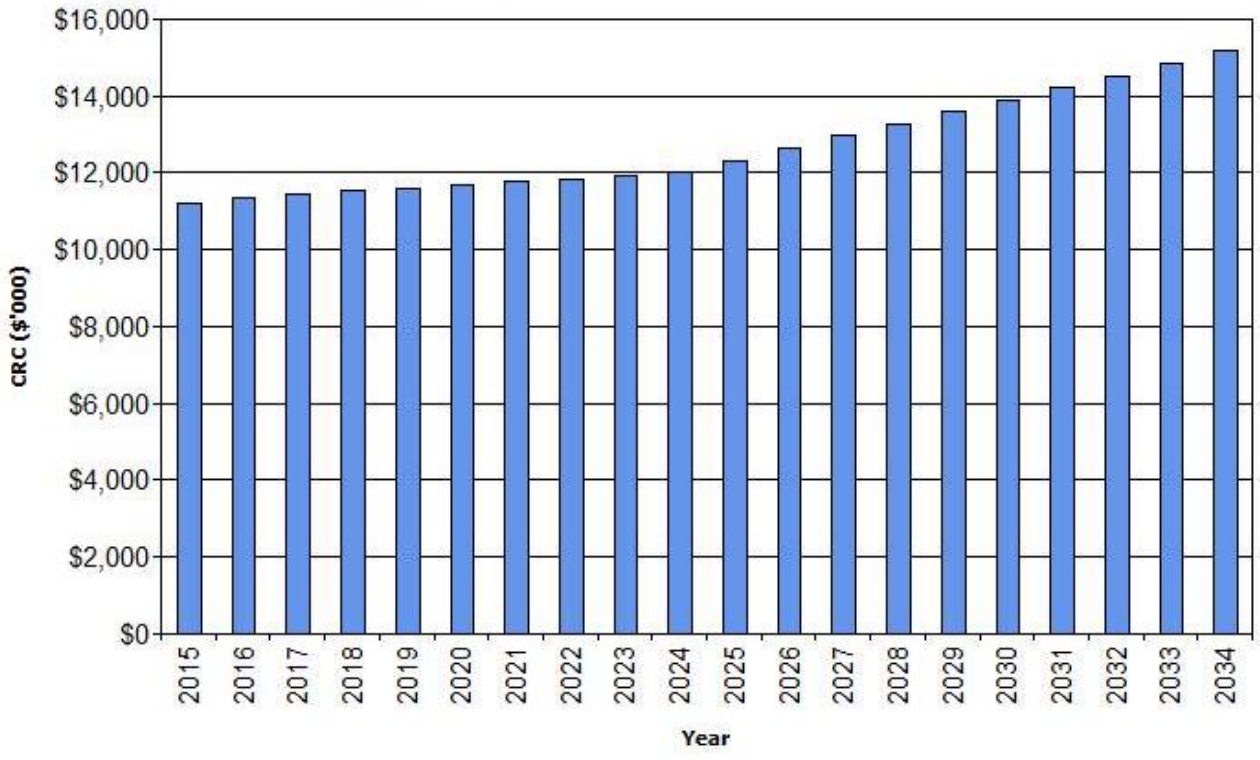
6.2 Funding Strategy

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

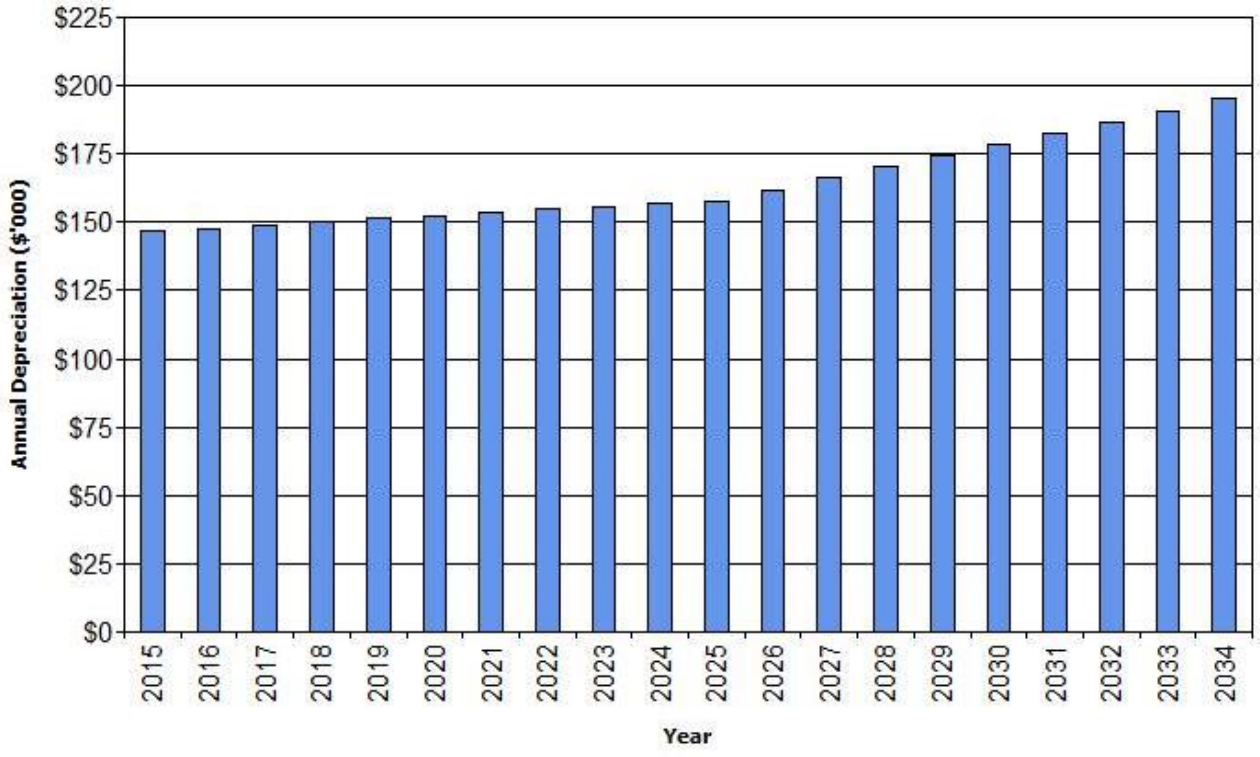
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Figure 9 shows the projected replacement cost asset values over the planning period in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

Figure 9: Projected Asset Values



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

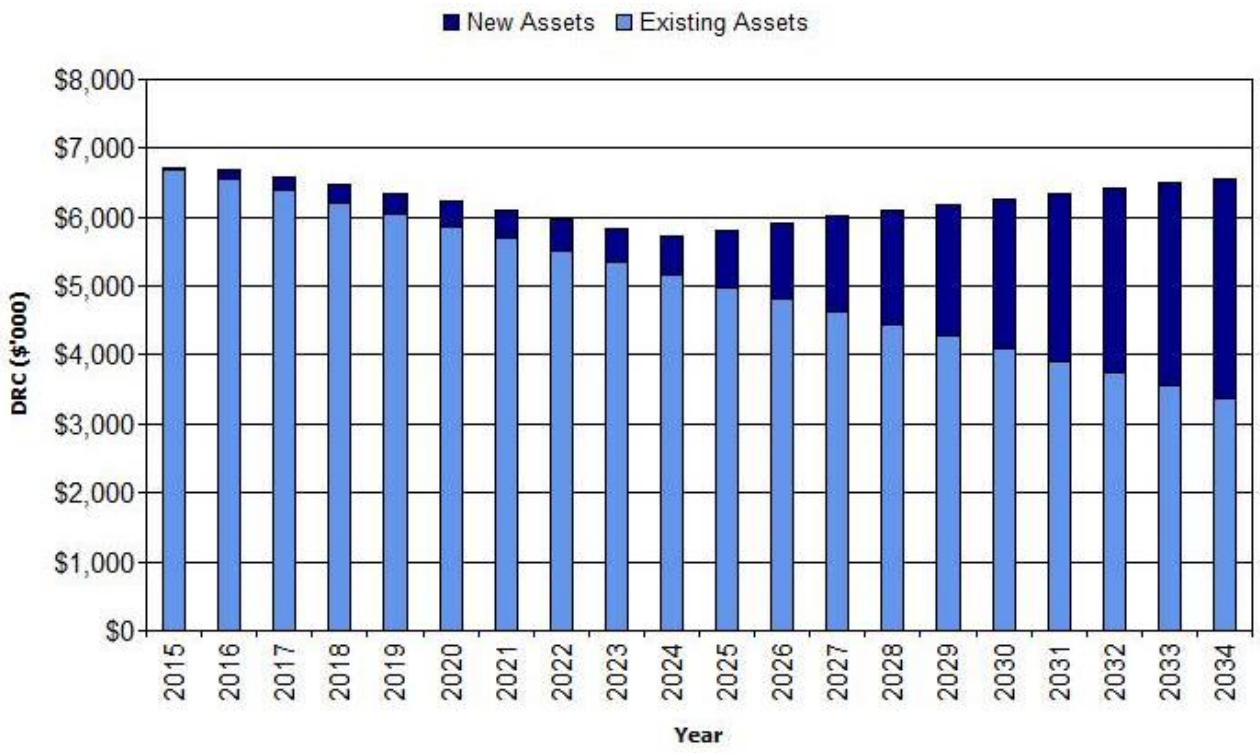
Figure 10: Projected Depreciation Expense



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
The *standard useful lives* currently recorded in council's asset management system for each of the asset sub-categories are accurate (eg concrete footpath – 80yrs etc).	Shorter useful lives would result in proportional increases to capital renewal and depreciation expense projections and *vice versa*.
Service levels (as documented in the Footpaths Service Level document) will remain constant for the life of the plan.	Raising or lowering service levels (eg maintenance intervention levels) are likely to increase or decrease operating and maintenance expenditure projections.
No new assets from growth over life of plan	Significant new assets from growth may increase capital renewal, depreciation, operating and maintenance expenditure projections.
Legislative compliance will remain constant.	Changes in legislation and regulations may increase operating and maintenance expenditure projections.
Data pertaining to the defects present in the footpath network is complete and reliable.	An increase to the number of defects present in the footpath network may increase renewal, maintenance and operating expense projections.
Waratah, Sisters Beach, Boat Harbour Beach and Yolla have been included equally with Somerset and Wynyard as 'Urban Areas' for the purpose of footpath service provision	Changes to footpath service levels based on locality may increase or decrease capital renewal, capital upgrade/new, depreciation, operating and maintenance expenditure projections.

considerations.	

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[17] 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	C	Expert judgement, some subjectivity
Growth projections	B	Population projections based on Australian Bureau of Statistics data
Operations expenditures	B	Based on current budget – transition to documented service levels not yet completed
Maintenance expenditures	B	Based on current budget – transition to documented service levels not yet completed
Projected Renewal exps. - Asset values	C	Expert judgement, some subjectivity
- Asset residual values	A	Residual values are not used for footpath assets
- Asset useful lives	C	Work to rigorously test and review asset useful lives has not yet been completed
- Condition modelling	C	Expert judgement; some subjectivity
- Network renewals	C	Expert judgement; some subjectivity
- Defect repairs	C	Evidence-based but network defect data incomplete
Upgrade/New expenditures	B	Evidence-based; estimates are within +/- 10%
Disposal expenditures	C	Expert judgement; some subjectivity

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

[17] 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

Council's accounting and financial system is the ***CIVICA Authority*** software package.

Accountabilities for financial systems

Financial Services is responsible for the administration and management of the financial system.

Accounting standards and regulations

Council's Accounting and Financial activities must comply with the relevant Australian Accounting Standards published by the Australian Accounting Standards Board (AASB). Key among these, in relation to asset management, is AASB 116 *Property, Plant and Equipment*.

Capital/maintenance threshold

Council's current capital / maintenance threshold policy is, *Expenditure on Transport assets is capitalised where the life of the future benefit can be accurately estimated and where the expenditure is above $5,000.*

Required changes to accounting financial systems arising from this AM Plan

Minor changes to improve the capture of footpath-specific maintenance costs are planned from 1 July 2015.

7.1.2 Asset management system

Council's asset management system is best visualised as a *framework* of inter-related systems and processes (linked at both strategic and operational levels) to provide a 'whole-of-organisation' approach to strategic asset management decision making where considerations of long-term service provision and financial sustainability are truly integrated.

This system continues to develop in accordance with the NAMS.PLUS3 *Guided Pathway to Asset Management* Planning with additional 'current best practice' mentoring and guidance from Jeff Roorda and Associates.

Asset registers

Council currently employs the ***Conquest*** asset management system for asset management at an operational level. This is a database which holds the entire register of assets along with their related physical and financial attributes. Conquest is utilised to carry out all financial transactions associated with asset management including annual capitalisation and depreciation as well as the periodic revaluation of assets. Conquest is integrated with ***Mapinfo***, council's GIS (mapping) system to provide a holistic view of assets' spatial attributes and inter-relationships.

Linkage from asset management to financial system

There is currently no automated integration between council's asset management and financial systems at an operational level (i.e. transfer of asset-related financial information between them must be undertaken manually) however, strategic linkages have been established and will continue to be strengthened as our AM maturity develops.

Accountabilities for asset management system and data maintenance

Engineering Services is responsible for administration and management of council's asset management system.

Required changes to asset management system arising from this AM Plan

No changes to council's asset management system have resulted from this asset management plan at this early stage. However, the Footpaths Infrastructure Asset Management Plan is a working document designed for regular revision

and on-going development. Current practices relating to the asset management system will be continually reviewed and adapted as an integral part of this process.

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	Council's existing Asset Management Policy is due for review. The purpose is to reaffirm the organisation's direction in relation to asset management and establish a policy framework for managers and staff to work within.			
2	A study of asset age and condition is required to provide a more robust and accurate approach to the review of useful lives.			
3	Reliable external unit rates are required for use as benchmarks in asset revaluations.			
4	Technical levels of service (s3.5) need to be developed			
5	A formalised Service Level Document (SLD) been developed for footpaths (appended to this plan) that include maintenance intervention levels, however these need to have more specific response times defined in a future iteration.			
6	Review footpath hierarchy (in SLD) to specify where footpath services on both sides of roads may be appropriate and define where it is not warranted – allows quantification of over-serviced areas			
7	As the maturity of our approach to asset management increases, the process of refining Council's Levels of Service (LOS) should involve consultation with the community (eg "we require this LOS and recognise the cost of having it")			
8	An Infrastructure Risk Management Plan needs to be developed to provide a framework within which 'critical' risks are identified and risk treatment plans, actions and funding for required works are included within future maintenance and capital works programs. The review of risks is an on-going, iterative process and the framework will need to be refined as the maturity of Council's assets management practices increases over time.			
9	Analysis needs to be undertaken so that a reasonable factor, acknowledging new assets from growth and development, can be included in the financial modelling.			

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 12 months of each Council/Board 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

Waratah-Wynyard Council, 'Strategic Plan 2009 – 2015',

Waratah-Wynyard Council, 'Annual Plan and Budget'.

9. APPENDICES

Appendix A Maintenance Response Levels of Service

Appendix B Projected 10 year Capital Renewal and Replacement Works Program

Appendix C Projected 10 year Capital Upgrade/New Works Program

Appendix D LTFP Budgeted Expenditures Accommodated in AM Plan

Appendix E Project Assessment Model – Budget Prioritisation Tool

Appendix F Abbreviations

Appendix G Glossary

Appendix A Footpaths Service Level Document

Appendix B Projected 10 year Capital Renewal and Replacement Works Program

Waratah-Wynyard
Projected Capital Renewal Works Program - FOOTPATHS_S2_V2

($000)

Year	Item	Description	Estimate
2015		**Network Renewals**	
2015		**Defect Repairs**	
2015		**Total**	**$0**

2016		**Network Renewals**	
	1	Renewal portion of footpath and handrail renewal - Camp Ck Bridge, Old Bass Hwy	$49
2016		**Defect Repairs**	
2016		**Total**	**$49**

($000)

Year	Item	Description	Estimate
2017		**Network Renewals**	
2017		**Defect Repairs**	
2017		**Total**	**$0**

2018		**Network Renewals**	Estimate
	1	Renewal portion - Upgrade Gutteridge Gardens - gravel to concrete from carpark east to river walkway	$4
2018		**Defect Repairs**	
2018		**Total**	**$4**

($000)

Year	Item	Description	Estimate
2019		**Network Renewals**	
2019		**Defect Repairs**	
2019		**Total**	**$0**

2020		**Network Renewals**	
2020		**Defect Repairs**	
2020		**Total**	**$0**

($000)

Year	Item	Description	Estimate
2021		**Network Renewals**	
2021		**Defect Repairs**	
2021		**Total**	**$0**

2022		**Network Renewals**	
2022		**Defect Repairs**	
2022		**Total**	**$0**

($000)

Year	Item	Description	Estimate
2023		Network Renewals	
2023		Defect Repairs	
2023		Total	$0

2024		Network Renewals	
2024		Defect Repairs	
2024		Total	$0

Appendix C Projected Upgrade/Exp/New 10 year Capital Works Program

Waratah-Wynyard
Projected Capital Upgrade/New Works Program - FOOTPATHS_S2_V2

($000)

Year	Item	Description	Estimate
2015	1	Upgrade DDA compliant ramps	$15
	2	Upgrade Footpath crossings for prams and gophers	$10
2015		**Total**	**$25**

($000)

Year	Item	Description	Estimate
2016	1	Upgrade portion of footpath and handrail renewal - Camp Ck Bridge, Old Bass Hwy	$49
	2	New footpath - Bridge St, Sisters Beach	$45
2016		**Total**	**$94**

($000)

Year	Item	Description	Estimate
2017	1	Upgrade 69 Pelissier St - infill 70LM of conc footpath	$14
	2	Missing and non-compliant kerb ramps	$55
2017		**Total**	**$69**

($000)

Year	Item	Description	Estimate
2018	1	Upgrade Gutteridge Gardens - upgrade gravel to concrete from carpark east to river walkway	$13
	2	Missing and non-compliant kerb ramps	$55
2018		**Total**	**$68**

($000)

Year	Item	Description	Estimate
2019	1	Missing and non-compliant kerb ramps	$55
2019		**Total**	**$55**

($000)

Year	Item	Description	Estimate
2020	1	Missing and non-compliant kerb ramps	$55
	10		
2020		**Total**	**$55**

($000)

Year	Item	Description	Estimate
2021	1	Missing and non-compliant kerb ramps	$55
2021		**Total**	**$55**

($000)

Year	Item	Description	Estimate
2022	1	Missing and non-compliant kerb ramps	$55
2022		**Total**	**$55**

($000)

Year	Item	Description	Estimate
2023	1	Missing and non-compliant kerb ramps	$55
2023		**Total**	**$55**

($000)

Year	Item	Description	Estimate
2024	1	Missing and non-compliant kerb ramps	$55
2024		**Total**	**$55**

Appendix D Budgeted Expenditures Accommodated in LTFP

NAMS.PLUS3 Asset Management **Waratah-Wynyard**

FOOTPATHS_S2_V2 Asset Management Plan

First year of expenditure projections **2015** (financial yr ending)

FOOTPATHS

Asset values at start of planning period

Current replacement cost	$11,159 (000)	Calc CRC from Asset Register	$0 (000)
Depreciable amount	$11,159 (000)	This is a check for you.	
Depreciated replacement cost	$6,863 (000)		
Annual depreciation expense	$147 (000)		

Operations and Maintenance Costs for New Assets

	% of asset value
Additional operations costs	0.00%
Additional maintenance	0.98%
Additional depreciation	1.31%

Planned renewal budget (information only)

You may use these values calculated from your data or overwrite the links.

Planned Expenditures from LTFP

20 Year Expenditure Projections Note: Enter all values in current **2015** values

Financial year ending	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
	$000	$000	$000	$000	$000	$000	$000	$000	$000	$000
Expenditure Outlays included in Long Term Financial Plan (in current $ values)										
Operations										
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**	$55	$55	$55	$55	$55	$55	$55	$55	$55	$55
Planned maintenance **budget**	$105	$65	$55	$45	$45	$45	$45	$45	$45	$45
Specific maintenance items **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total maintenance	$160	$120	$110	$100	$100	$100	$100	$100	$100	$100
Capital										
Planned renewal **budget**	$0	$49	$0	$4	$0	$0	$0	$0	$0	$0
Planned upgrade/new **budget**	$25	$94	$14	$13	$37	$37	$37	$37	$37	$37
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 asset	$27	$27	$27	$27	$27	$27	$27	$27	$27	$27

Maintenance is 70% of the Footpath related budget activities (based on 2013/14 actual spend across these areas)

Additional Expenditure Outlays Requirements (e.g from Infrastructure Risk Management Plan)

Additional Expenditure Outlays required and not included above	2015 $000	2016 $000	2017 $000	2018 $000	2019 $000	2020 $000	2021 $000	2022 $000	2023 $000	2024 $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 Forms 2 & 2.1 (where Method 1 is used) OR Form 2B Defect Repairs (where Method 2 or 3 is used)									
Capital Upgrade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
User Comments #2										

Forecasts for Capital Renewal using Methods 2 & 3 (Form 2A & 2B) & Capital Upgrade (Form 2C)

	2015 $000	2016 $000	2017 $000	2018 $000	2019 $000	2020 $000	2021 $000	2022 $000	2023 $000	2024 $000
Forecast Capital Renewal from Forms 2A & 2B	$0	$49	$0	$4	$0	$0	$0	$0	$0	$0
Forecast Capital Upgrade from Form 2C	$25	$94	$14	$13	$37	$37	$37	$37	$37	$37

Appendix E Project Assessment Model – Budget Prioritisation Tool

Appendix F 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 G 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 *