Protecting our Natural Environment

SOLID WASTE ASSET MANAGEMENT PLAN

27 MARCH 2015

MID-WESTERN REGIONAL COUNCIL
OPERATIONS: SERVICES

TOWARDS 2030

Mid-Western REGIONAL COUNCIL

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1. Executive Summary

1.1 Context

Mid-Western Regional Council covers an area of over 9,000km² and includes the historic towns of Gulgong, Kandos, Mudgee and Rylstone, and many rural villages. The region stretches from the Wollemi National Park in the east to Lake Burrendong in the west and from the Goulburn National Park in the north to the Macquarie and Turon Rivers in the south.

The region is predominantly agricultural, also including extensive viticulture, large mines, increasing tourism and retail. While coal is transported from mine by train, all industries, including those that service the mines, tourism and local transport needs are dependent on road infrastructure.

The total population of the Mid-Western Region exceeds 22,000 with a median age of 41. There are currently four large mines operating within the region. Council estimates that within 2-5 years there will be an additional six large mines within the region. This is expected to correspond to a comparatively high population increase within the next five years. In addition, tourism brings approximately 280,000 visitors to the region each year.

This asset management plan for waste facilities comprises a collation of Mid-Western Regional Council's waste infrastructure data base and service delivery programs. It is a long term planning document that Council can use to provide a rational framework for current and future understanding of its waste assets.

The Waste Service

Mid-Western Regional Council provides a kerbside domestic waste and recycling collection service within the towns of Mudgee, Gulgong, Kandos and Rylstone and the villages of Charbon and Clandulla servicing 7,323 properties. Domestic waste collected is transported to the Mudgee Waste Facility for landfilling. Recyclable waste collected is also transported to the Mudgee Waste Facility for sorting, processing and transporting to Sydney.

The rural areas and remaining villages are serviced with access to Waste Transfer Stations that provide both domestic waste and recycling facilities. Council has 14 facilities servicing rural areas.

The Council's aim and focus is to:

- Minimise the amount of waste that goes to landfill.
- Encourage the maximisation of community involvement into recycling by providing accessible recycling services and facilities.

- Maintain the transfer stations around the region for the community to maximise opportunity for convenient waste disposal and for recycling.
- Have an appropriate waste disposal network to ensure the future and current waste disposal and resource recovery needs of the community are met.
- Waste management and resource recovery infrastructure will be managed in an environmentally, financially and sustainable manner.

The Waste network comprises:

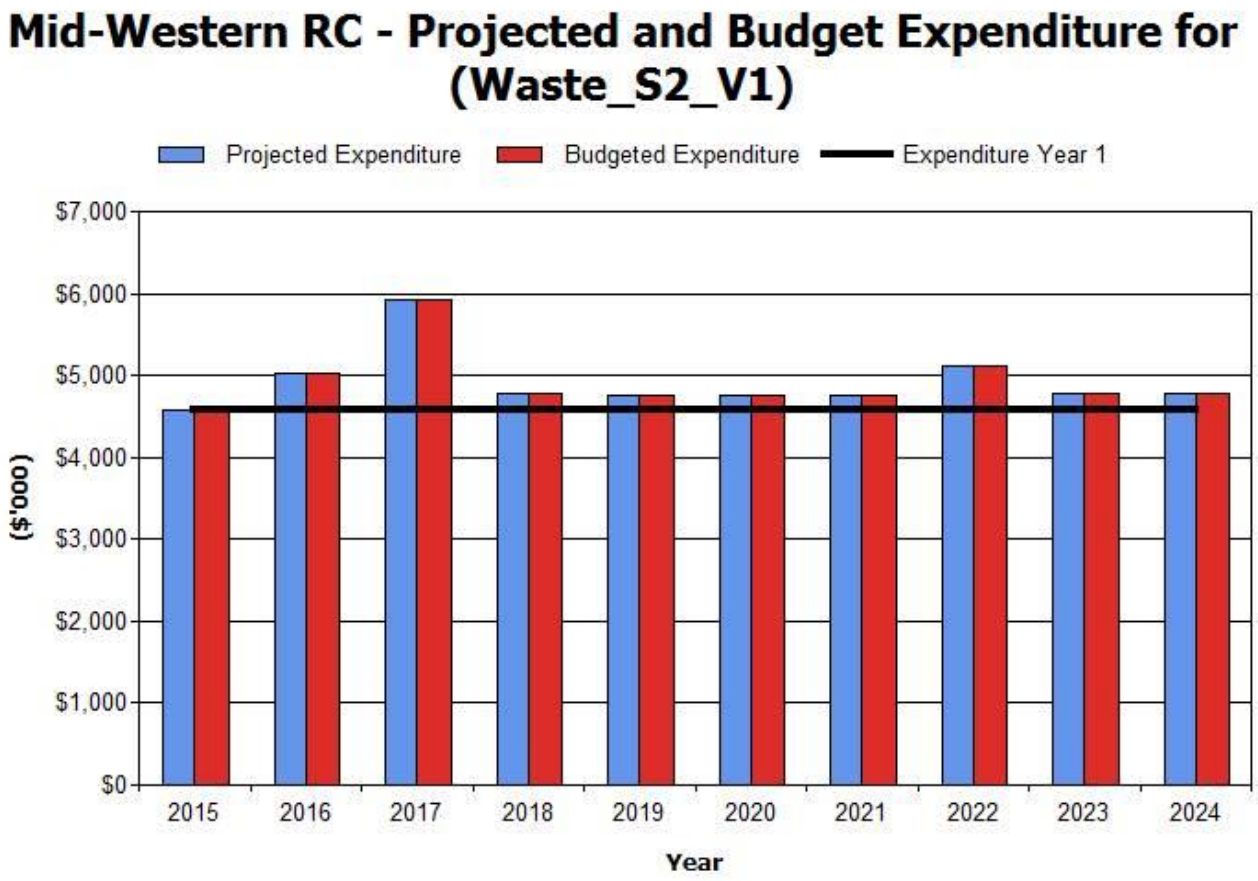
- Mudgee Waste Facility and landfill
- Rural waste transfer station network
- Other structures
- Recycling plant and equipment

These infrastructure assets have a replacement value of $3,177,000. Assets covered under this plan include the Mudgee Waste Facility and the Waste Transfer station network. Other assets like buildings and land are covered in other asset management plans.

1.2 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 $49,223,000 or $4,922,000 on average per year.

Estimated available funding for this period is $49,223,000 or $4,922,000 on average per year which is 100% of the cost to provide the service. This is no funding shortfall of indicated as part of this AM Plan. 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.



1.3 What we will do

We plan to provide Waste services for the following:

- Operation, maintenance, renewal and upgrade of the waste management network to meet the service levels set by Council through annual budgets,
- Remediate old landfill sites by capping and vegetating in accordance with current standards,
- Ensure that infrastructure is maintained at a safe and functional level as set out in the Waste AMP,
- Ensure that Council achieve acceptable service delivery and sustainability in line with best practice waste management philosophies, environmental outcomes and State Government waste targets,
- Meet legislative compliance in all operations.

1.4 What we cannot do

Subject to future investigations and fair value assessments the Waste Fund currently has the capability to meet the needs of this AM Plan. The level of service that can be provided is dependent on the willingness and capacity for the community to pay for a

desired level of service. There are some historical issues with remediating sites that need to be achieved over time. This is planned for in Councils long term waste financial model. Part of the actions from this AM Plan is to review the waste asset stock, value and remaining life which may change the estimated value of the assets.

1.5 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:

- Illegal dumping at remote sites
- non-compliance with Environmental Protection Licence (EPL) i.e. dust control
- hazardous waste types at rural sites
- high instances of vandalism
- environmental issues in relation to water run off
- inability to service sites resulting in inappropriate levels of stored wastes
- degrading assets over time

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

- routine servicing of rural sites in accordance with funding levels including condition assessments
- ensuring compliance with EPL remains a priority
- regular inspections to identify hazards before they occur
- improved waste asset data
- improved use of technology to increase efficiency and service levels

1.6 Confidence Levels

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

1.7 The Next Steps

The actions resulting from this asset management plan are:

- improve Councils asset management maturity over the next 2-3 years
- set performance measures to monitor agreed service levels provided under the long term financial plan
- undertake a survey of all waste assets to fill knowledge gaps. Fair value assessment of these assets is due during 2016/17 financial year
- develop and coordinate asset management systems that are meaningful and informative
- detailed risk assessment profile

Questions you may have

WHAT IS THIS PLAN ABOUT?

This asset management plan covers the infrastructure assets that serve the Mid-Western Regional Council solid waste services. These assets include landfill facilities, rural waste transfer stations, recycling facilities and historic landfill sites. The asset management plan is to demonstrate responsive management of assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding to provide the desired level of service.

WHAT IS AN ASSET MANAGEMENT PLAN?

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

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

WHY IS THERE A FUNDING SHORTFALL?

Most of the Council's waste network has been constructed over long periods of time and driven by either EPA reforms, local demand drivers or a need to introduce waste transfer stations to replace landfills. Some assets were acquired from external entities i.e. Mudgee Recycling. Some of these assets have not had a fully considered approach of ongoing operations, maintenance and replacement needs.

The current AM Plan does not indicate a funding shortfall and there is a medium level of confidence this is correct. Further reviews over the next 12 months including fair value assessment during 2015/16 financial year will assist to validate this position.

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

WHAT OPTIONS DO WE HAVE?

Actions to validate funding levels 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. Consulting with the community to ensure that waste services and costs meet community needs and are affordable,

5. Developing partnerships with other bodies, where available to provide services or infrastructure.

WHAT CAN WE DO?

We can develop options, costs and priorities for future waste 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 Waste mix of services to ensure that the appropriate level of service can be provided to the community within available funding.

2. Introduction

2.1 Background

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

The asset management plan follows the format for AM Plans recommended in Section 4.2.6 of the International Infrastructure Management Manual[1].

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

- Mid-Western Region Community Plan
- Mid-Western Regional Council Delivery Plan

This infrastructure assets covered by this asset management plan are shown in Table 2.1. These assets are used to provide solid waste management services to the community.

TABLE 2.1: ASSETS COVERED BY THIS PLAN

Asset category	Replacement Value ($,000)
Mudgee Waste Management Facility	$579
Kandos waste transfer station	$431
Gulgong waste transfer station	$470
Other rural waste transfer stations (11)[2]	$1,697
TOTAL	**$3,177**

This plan does not include buildings, land or other structures covered in other asset management plans.

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

[2] Birriwa, Bylong, Goolma, Hargraves, Home Rule, Ilford, Lue, Queens Pinch, Ulan, Windeyer, Wollar.

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
Council	Represent needs of community/shareholders, Adopts the Asset Management Plan and ensures sufficient resources are applied to manage the assets and Stewardship responsibility for the control and care of infrastructure assets.
Community	Provide feedback on levels of service
Management Executive	Reporting on the status and effectiveness of current asset management processes to Council.
Asset Management Team	Coordinate development and implementation of AM Plans and asset management related matters.
Asset Managers	Implementation of AM Plans and management of assets under their direct control.
Insurers	Underwrite risk management strategies associated with sound AM practices.
State and Federal Government authorities and agencies	Regulates some practices and requirements through Legislation.

2.2 Goals and Objectives of Asset Management

The Council exists to provide services to its community. Some of these services are provided by infrastructure assets. Council has acquired infrastructure assets by 'purchase', by contract or construction by staff to meet levels of service needs.

Council's 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.[3]

[3] Based on IPWEA, 2011, IIMM, Sec 1.2 p 1|7.

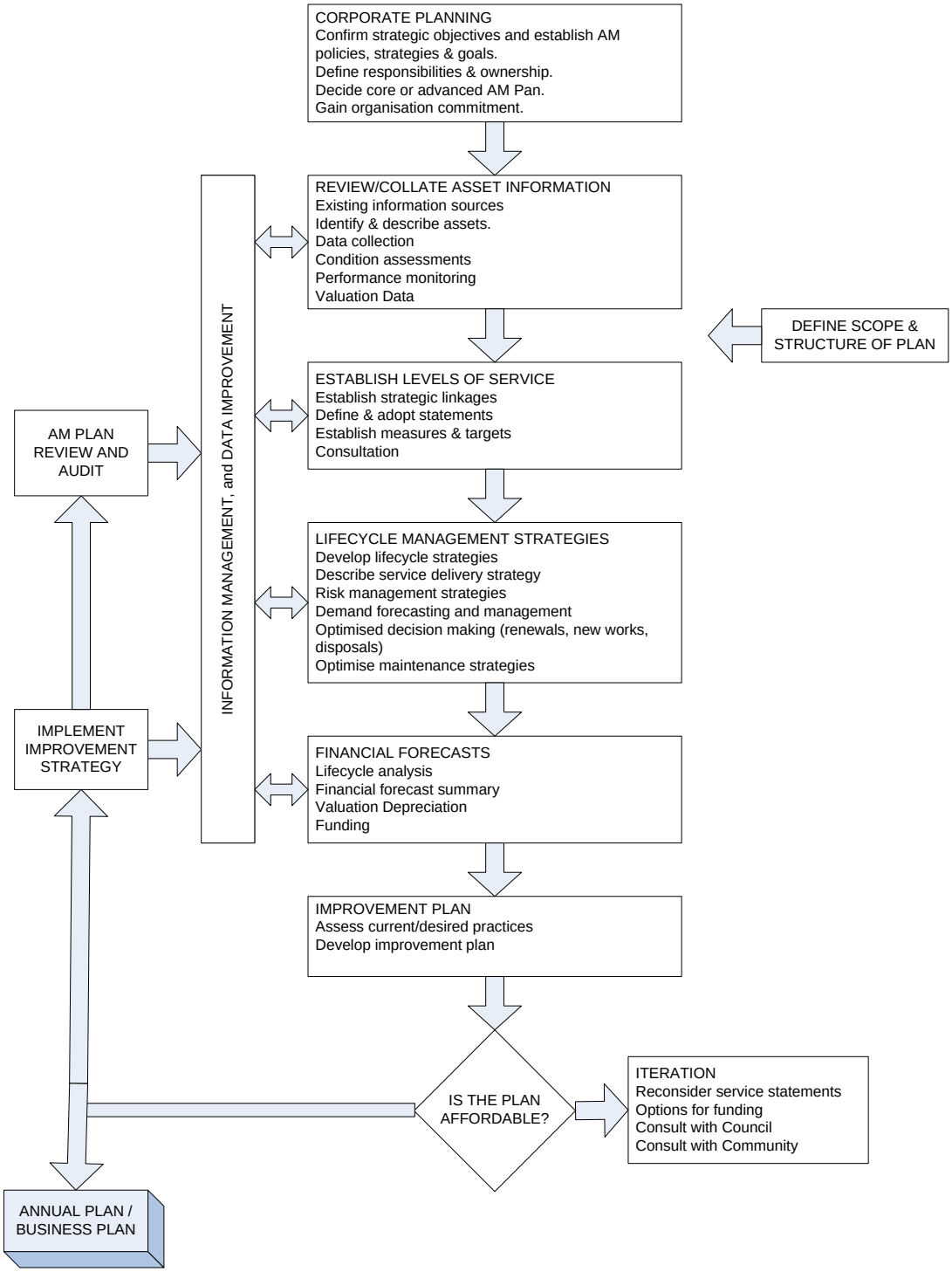
2.3 Plan Framework

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.

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[4]. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. Core asset management is a 'top down' approach where analysis is applied at the 'system' or 'network' level.

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

2.5 Community Consultation

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

[4] IPWEA, 2011, IIMM.

3. Levels of Service

3.1 Customer Research and Expectations

This will be investigated for future updates of the asset management plan. The community were consulted when preparing Mid-Western Regional Council's Towards 2030 Community Plan. Community input through this process highlighted the following expectations in the area of waste management:

- Continue to reduce, reuse, recycle – minimising waste to landfill
- Dispose of rubbish properly, do not litter in street and other public places
- Reduce consumption of energy and fossil fuels, and consider alternative resources.

3.2 Legislative Requirements

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

TABLE 3.3: LEGISLATIVE REQUIREMENTS

Legislation	Requirement
Local Government Act 1993	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Workplace Health and Safety Act 2011	Protects workers and other persons against harm to their health and safety and welfare through elimination or minimisation of risks arising from work.
OLG Integrated Planning and Reporting framework	Sets out standards for asset management plans and requires the plan to integrate with community plans and resourcing strategy
Environmental Planning & Assessment Act 1979	Sets out assessment and approval processes of community services and facilities
Protection of the Environment Operations Act 1997	Allocation of responsibility. There is a broad allocation of responsibilities under the Act between the EPA, local councils and other public authorities. Under the Act, the EPA is the regulatory authority for: ■ activities listed in Schedule 1 to the Act and the premises where they are carried on; ■ activities carried on by State or public authority; and ■ other activities in relation to which a licence regulating waste management is issued. In nearly all other cases, the regulatory authority is the relevant local council.
Waste Avoidance and Resource	This Act:

Recovery Act 2001	■ promotes waste avoidance and resource recovery; ■ repeals and replaces the Waste Minimisation and Management Act 1995; ■ establishes a scheme to promote extended producer responsibilities in place of industry waste reduction plans; and ■ continues the Waste Fund for the purposes of funding relevant programs
Protection of the Environment Operations (Waste) Regulation 2005.	This Act: ■ establishes the EPA, the board of the EPA, two community consultation forums, and the NSW Council on Environmental Education; and ■ requires the EPA to make a report on the state of the environment every 3 years.

3.3 Community Levels of Service

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

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

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

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

The Council'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 initial 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 **Kerb-side collection service**				
COMMUNITY LEVELS OF SERVICE				
Quality	Waste / Recycling is collected without spillage or damage	Customer service requests	20 per year	20 per year
Function	Waste / Recycling is collected to schedule	Customer service requests relating to missed services	20 per year	20 per year
Capacity/ Utilisation	Collection is sufficient to meet demand	Customer service requests related to collection capacity	Not measured	zero
SERVICE ATTRIBUTE	SERVICE OBJECTIVE	PERFORMANCE MEASURE PROCESS	CURRENT PERFORMANCE	EXPECTED POSITION IN 10 YEARS BASED ON CURRENT LTFP
COMMUNITY OUTCOMES **Rural Waste Collection Service**				
COMMUNITY LEVELS OF SERVICE				
Quality	Waste / Recycling is collected and area left clean	Customer service requests	15 per year	15 per year
Function	Waste / Recycling is collected to schedule	Customer service requests relating to overfull bins	8 per year	8 per year
Capacity/ Utilisation	Bin numbers and capacity is sufficient to meet demand	Customer service requests and survey related to bin capacity	4	4

Service Attribute	Service Objective	Performance Measure Process	Current Performance	Expected position in 10 years based on current LTFP
COMMUNITY OUTCOMES **Landfill Management**				
COMMUNITY LEVELS OF SERVICE				
Quality	Site is tidy, accessible and user friendly	Customer complaints	<5 p/a	<5 p/a
Function	Landfill face is covered each day	Supervisor check	80%	95%
Capacity/ Utilisation	Hours of operation suit customer needs	Customer complaints related to opening hours	>2 p/a	zero

3.4 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 of facilities, collection services, recycling processing, energy, routine maintenance inspections, etc.
- Maintenance – the activities necessary to retain an asset as near as practicable to an appropriate service condition e.g. replacing signs and fencing, pavement repairs, bins and structure repairs and licence compliance.
- Renewal – the activities that return the service capability of an asset up to that which it had originally e.g. frequency and cost of road resurfacing and pavement reconstruction, recycling equipment renewal, general facility renewals.
- Upgrade – the activities to provide a higher level of service (e.g. recycling plant upgrades that allow increased production, increased bins at rural's, additional or expanded services (e.g. a new kerb-side organics collection service).

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

[5] IPWEA, 2011, IIMM, p 2.22

following community consultation and trade-off of service levels performance, costs and risk within resources available in the long-term financial plan.

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	Servicing and Management	EPL and legislative compliance Customer complaints	Routine inspection not carried out. Compliance with risk based EPL and legislation.	All waste assets inspected routinely dependant on risk EPA deemed risk ranking as 'Low' for landfill.	All waste assets inspected routinely dependant on risk EPA deemed risk ranking as 'Low' for landfill.
	Machinery is reliable and well maintained	Machinery is always available for essential services	>90% availability	95% availability	>95% availability
Maintenance	Routine inspection and maintenance of waste assets	All waste assets are inspected at least bi-annually	Ad-hoc and reactive inspections	Landfill assets inspected monthly. Waste transfer station assets inspected quarterly.	Landfill assets inspected monthly. Waste transfer station assets inspected quarterly.
Renewal/upgrade	Renew assets as they reach end of life or optimal operating performance	Assets maintain functionality and serviceability	Condition assessments not routinely undertaken	Annual condition assessments undertaken to review asset renewal needs	Annual condition assessments undertaken to review asset renewal needs

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, environmental awareness, disposal habits 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 growth	23,000 (2011)	25,050 (2031)	Increased demand for waste services and landfill space
Release of future subdivisions to cater for growth	Large release of subdivisions has just occurred	Continued release, although more sustained rate and not as rapid as has just occurred	Increased demand for kerb-side collection services stretching existing servicing capacity.
Changing demographics (aging population)	Presently occurring	Average age of population is increasing	Nature of service delivery may change with a need for a higher level of service for a less mobile population
Legislation	Legislation is constantly under review	Introduction of waste levy, price on carbon and waste reuse restrictions	Increased costs associated with landfilling or reducing waste going to landfill.
Increasing mining industry	More mines are planned for the region	Additional mines operating within Mid-Western	Pressure on rural waste transfer stations and servicing to meet transient workforces.

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].

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

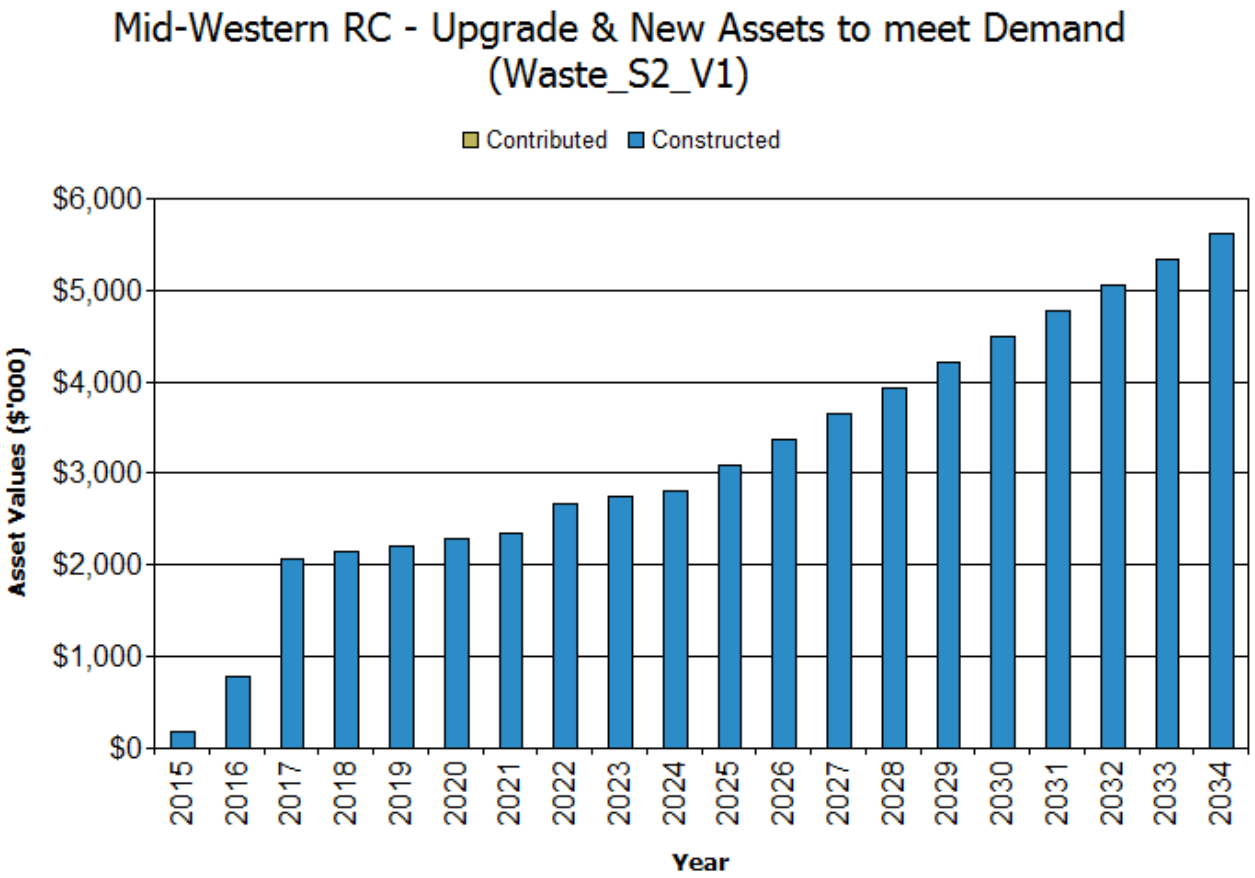
Demand Driver	Impact on Services	Demand Management Plan
Preventative action vs reactive action	Strategic review of service delivery, rationalisation or expansion of services	Initiate proactive inspection and maintenance schedule and waste strategic plan.
Asset upgrades to meet demand for processing kerb-side recycling	Current recycling sorting system cannot meet through put demand.	Equipment upgrades to provide efficiency, multi stream processing and increased capacity.
Increased problem waste types	Limited infrastructure to manage problem wastes	Apply for grants including through Waste Less Recycle More initiative for infrastructure improvements

4.5 Asset Programs to meet Demand

New assets required to meet growth will be acquired as need arises and funded through waste fund reserves or grants. New assets constructed/acquired by the Council are discussed in Section 5.5. It is unlikely new assets will be required in the short term. The current landfill site is due to expire in approximately 16 - 20 years. A new site or technologies for the disposal of waste will be required after that time.

FIGURE 1: UPGRADE AND NEW ASSETS TO MEET DEMAND

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



Acquiring these new assets will commit the Council 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 Council 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 waste assets referred to in this plan are all the elements that go into a fully licensed landfill site and rural waste transfer stations including fencing, internal roads, leachate systems pumps, bores, landfill cells, bins, signs and legacy sites no longer in use but requiring maintenance and remediation.

Waste assets are located throughout the Mid-Western Region and in more remote locations like Bylong and Birriwa on the fringe of the Council boundary. Some assets like monitoring wells and leachate systems are subsoil and important environmental protection assets. The specific age profile of many assets is unknown and subject to further research to be included in future asset management plans.

Age profile information is not currently available for most assets. An age profile will be developed in future revisions of the asset management plan.

Plans showing the Waste assets are:

- Mid-Western GIS Waste Layer
- Landfill Environmental Management Plan
- Various consultant engineering reports and survey plans
- Councils current asset data

5.1.2 Asset capacity and performance

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

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

TABLE 5.1.2: KNOWN SERVICE PERFORMANCE DEFICIENCIES

Location	Service Deficiency
Rural waste transfer station clean-ups	Irregular servicing of bulk areas of rural waste transfer stations.
Mudgee Waste Facility	Processing organics - Present legislation prevents Council on-selling chipped green waste without high order processing that is currently not available.
Supervision of rural waste transfer stations	The fully accessible nature of waste transfer stations creates serviceability and efficiency issues

The above service deficiencies were identified from customer requests and legislation changes through the EPA.

5.1.3 Asset condition

Condition is monitored presently in an ad-hoc manner for maintenance however; a remediation plan is available for rural sites detailing future remediation works and costs for old rural landfill sites.

Condition is measured using a 1 – 5 grading system[7] 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

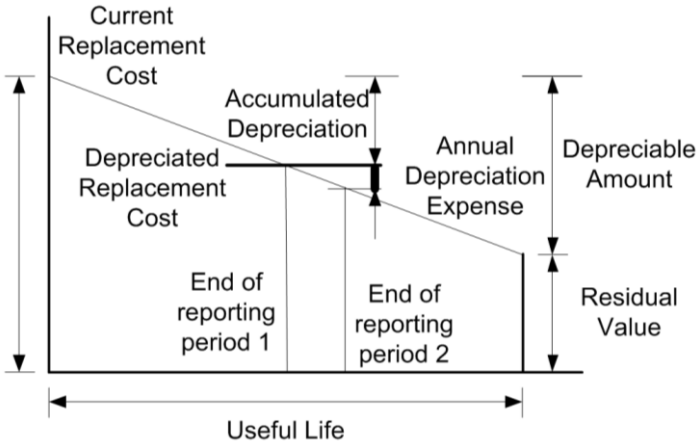
[7] IPWEA, 2011, IIMM, Sec 2.5.4, p 2|79.

4	**Poor**: significant renewal/rehabilitation required
5	**Very Poor**: physically unsound and/or beyond rehabilitation

5.1.4 Asset valuations

The value of assets recorded in the asset register as at 30 June 2014 covered by this asset management plan is shown below. Assets were last revalued at 30 June 2011. Assets are valued at

Current Replacement Cost	$3,177,000
Depreciable Amount	$3,177,000
Depreciated Replacement Cost[8]	$1,690,000
Annual Depreciation Expense	$150,000



Useful lives were reviewed in 2011 by assessing their Fair Value amounts at June 30.

Key assumptions made in preparing the valuations were:

- Assets were in fair to good condition
- Waste 30 year plan is updated annually.

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
4.7%

(Depreciation/Depreciable Amount)

Rate of Annual Asset Renewal
1.6%

(Capital renewal exp/Depreciable amount)

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

In 2015 the Council plans to renew assets at 33.3% of the rate they are being consumed and will be increasing its asset stock by 5.8% in the year.

5.1.5 Historical Data

Minor amount of historical data exist on Council records management system that add value to this plan.

5.2 Infrastructure Risk Management Plan

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

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

TABLE 5.2: CRITICAL RISKS AND TREATMENT PLANS

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Landfill	Leachate leaving site	VH	Commission and maintain closed system where leachate is pumped to STP.	Low	15K
Landfill	Landfill fire	H	Emergency response action plan, minimise stockpiles and equipment to respond to fires	Medium	10K
Rural waste transfer stations	Environmental and community harm	H	Routine regular inspections for illegally dumped toxic waste types. Clean up response plan and temporary site closure process.	Low	10K
Collection service	Plant failure disrupting service	H	Maintain capacity in the fleet to cover breakdowns and use contractor services	Medium	minimal
Asset register not accurate	Financial shock to organisation	H	Detailed survey and update of asset register over one	Low	20K

			year period.		
Waste assets maintenance	Lack of routine maintenance expedites asset life	M	Implement a planned asset maintenance strategy and resourcing plan for waste asset types	Low	10K

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

A detailed risks register will be developed over the next 12 months to be included in the next revision of this AMP.

5.3 Routine Operations and Maintenance Plan

Operations include regular activities to provide services such as public health, safety and amenity, e.g. waste collection services and landfill operations.

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 such as kerb-side collection services, responding to customer requests, frequency and consistency of services and opening hours of 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, e.g. pavement repairs 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.

Planned and reactive maintenance work is currently not accounted for separately in the Operations and Maintenance budgets.

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

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

A reactive maintenance schedule will be developed as part of the next revision of this asset maintenance plan and will be detailed in Appendix A.

5.3.2 Operations and Maintenance Strategies

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

- Scheduling operations activities to deliver the defined level of service in the most efficient manner,
- Undertaking maintenance activities through a planned maintenance system to reduce maintenance costs and improve maintenance outcomes. Undertake cost-benefit analysis to determine the most cost-effective split between planned and unplanned maintenance activities (50 – 70% planned desirable as measured by cost),
- Maintain a current infrastructure risk register for assets and present service risks associated with providing services from infrastructure assets and reporting Very High and High risks and residual risks after treatment to management and Council/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.

TABLE 5.3.2: ASSET SERVICE HIERARCHY

Service Hierarchy	Service Level Objective
Level 1 (Critical, High priority) Waste collection services - Including rural's, kerbside, street and park bins.	Maintain year round collection services that are reliable and prevent the risk of households not being able to dispose of household waste.
Level 1 (Critical, high priority) Landfill Operation and maintenance	Maintain year round landfill operations to ensure Mid-Western Regional Council's waste has a disposal site at all times and complies with legislative requirements.
Level 2 (Critical) Rural waste transfer stations	All rural waste transfer stations are accessible and safe year round to local residents.
Level 3 (Non-Critical) Street sweeping and cleaning operations	Maintain CBD and surrounding streets in a clean and presentable manner.

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
Mudgee Landfill Facility	Closure	Intermediate transfer to other regional facilities

STANDARDS AND SPECIFICATIONS

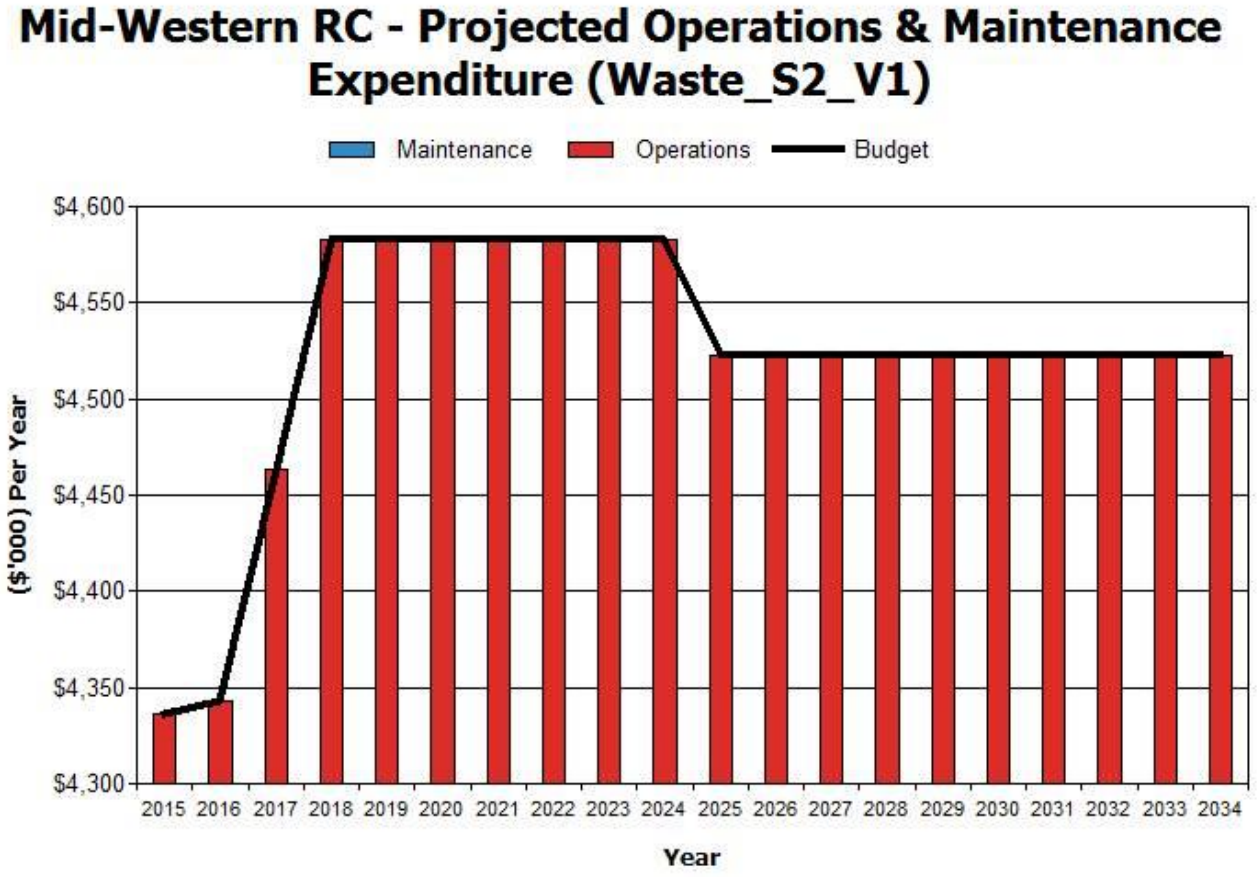
Maintenance work is carried out in accordance with the following Standards and Specifications.

- Environmental Protection Licence
- Landfill Environmental Management Plan
- Environmental Guidelines: Solid Waste Landfills
- Set standards and specifications for individual plant and equipment
- WHS legislation
- Various Acts and Regulations

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 last reviewed on 30 June 2011. Further review in line with fair value work that will be undertaken in 2015/16 financial year. This AMP will be updated to reflect any changes as a result of that review.

TABLE 5.4.1: USEFUL LIVES OF ASSETS

Asset (Sub)Category	Useful life
Landfill site (Landfill cell)	16 years
Landfill site buildings	50 years
Fencing	20 years
Pavements	39 years
Recycling equipment	12 years
Bins	5 years
Land remediation	100 years

5.4.2 Renewal and Replacement Strategies

The Council 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, provided ongoing maintenance costs do not outstrip costs or downtime V's capital costs of new equipment.
- Maintain a current infrastructure risk register for assets and service risks associated with providing services from infrastructure assets and reporting Very High and High risks and residual risks after treatment to management and Council,
- Review current and required skills base and implement workforce training and development to meet required construction and renewal needs,
- Maintain a current hierarchy of critical assets and capital renewal treatments and timings required,
- Review management of capital renewal and replacement activities to ensure Council is obtaining best value for resources used.

RENEWAL RANKING CRITERIA

Asset renewal and replacement is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (eg replacing a weighbridge that has a load limit not suited to modern trucks), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (eg up to date weighbridge computer systems, recycling equipment that minimises contamination levels).

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.[9]

The ranking criteria used to determine priority of identified renewal and replacement proposals is detailed in Table 5.4.2.

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

TABLE 5.4.2: RENEWAL AND REPLACEMENT PRIORITY RANKING CRITERIA

Criteria	Weighting
Quality	10%
Function	20%
Capacity / utilisation	10%
Maintenance	15%
Operations	15%
Renewals / upgrades	10%
Condition	10%
Hierarchy	10%
Total	**100%**

RENEWAL AND REPLACEMENT STANDARDS

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

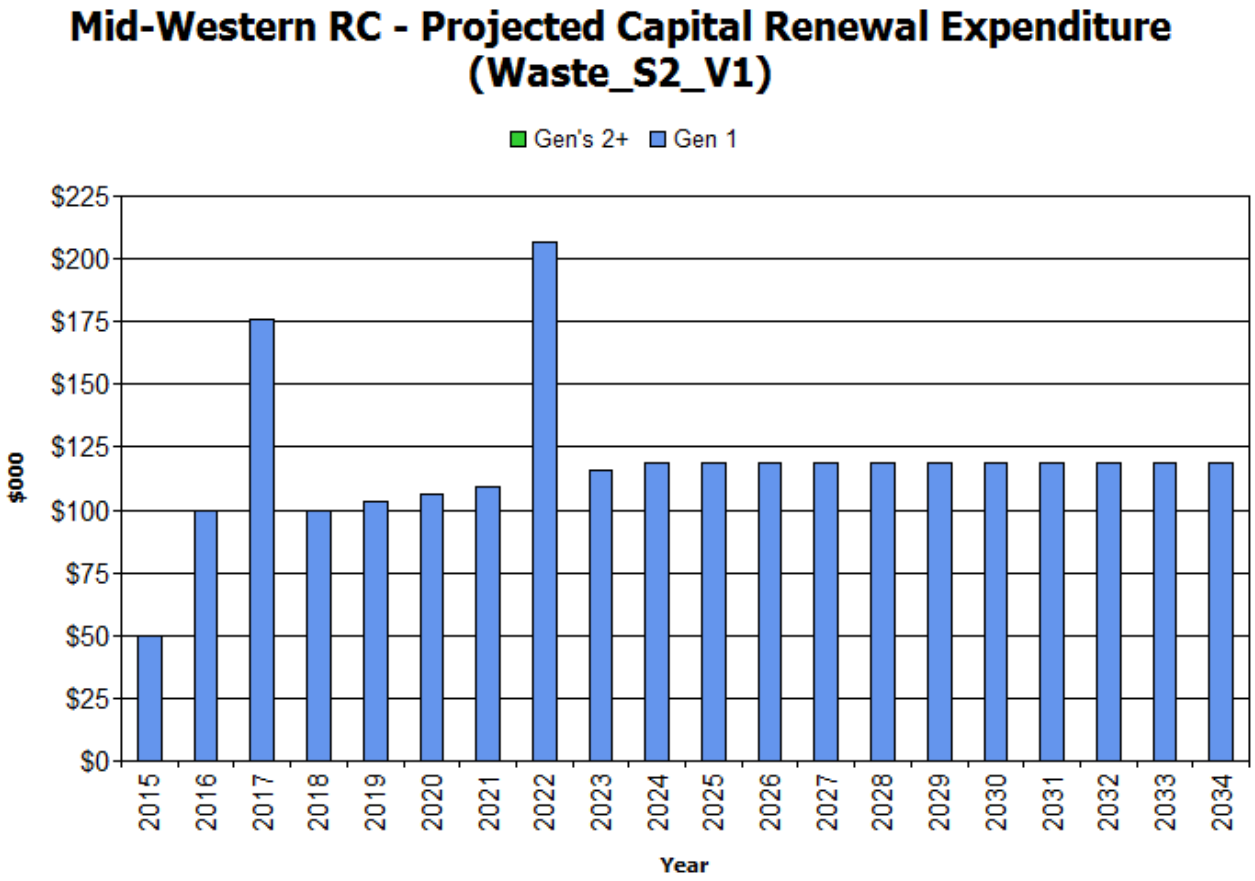
- Environmental Protection Licence
- Landfill Environmental Management Plan
- Environmental Guidelines: Solid Waste Landfills
- Set standards and specifications for individual plant and equipment
- Specific environmental legislation i.e. Protection of the Environment and Operations Act.

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. In terms of waste management serviceability from growth will increase at a great rate than the need for increased physical assets.

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

FIG 5: PROJECTED CAPITAL RENEWAL AND REPLACEMENT EXPENDITURE



Deferred renewal and replacement, i.e. 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. 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/executive 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 through Council budget processes. The priority ranking criteria is detailed below.

TABLE 5.5.1: NEW ASSETS PRIORITY RANKING CRITERIA

Criteria	Weighting
Upgrade / provide new assets as indentified in the Delivery Program/Operation Plan	100%
Total	100%

5.5.2 Capital Investment Strategies

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

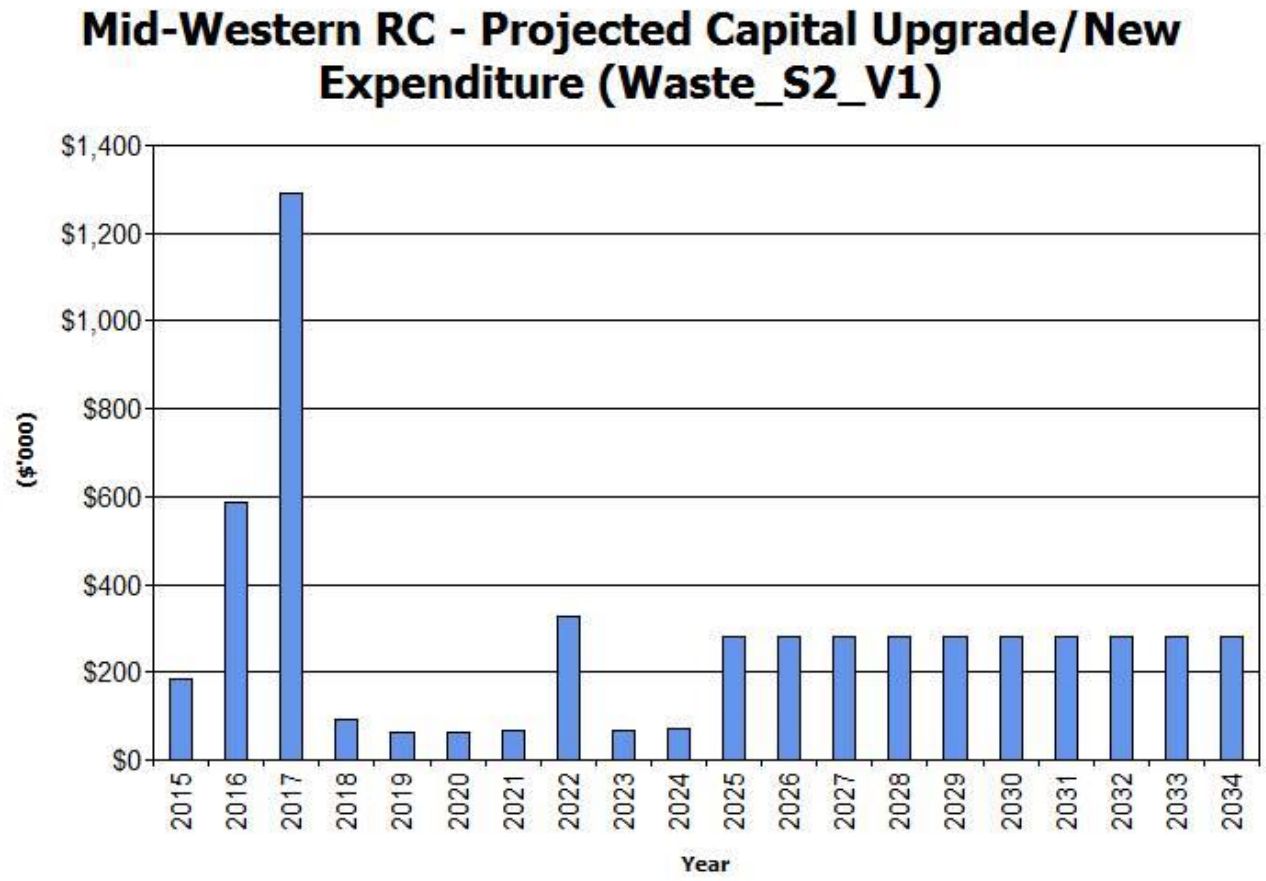
- Planning and scheduling capital upgrade and new projects to deliver the defined level of service in the most efficient manner,
- Undertake project scoping for all capital upgrade/new projects to identify:
  - the service delivery 'deficiency', present risk and required timeline for delivery of the 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 Council's capital works program will be accommodated in the long term financial plan. The spike indicated in the graph during 2017 is the construction of a new landfill cell. This is further discussed in Section 6.2.

5.6 Disposal Plan

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

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

TABLE 5.6: ASSETS IDENTIFIED FOR DISPOSAL

Asset	Reason for Disposal	Timing	Disposal Expenditure	Operations & Maintenance Annual Savings
Closure of Frog Rock recycling drop off area	Not being used for its intended purpose by the community	February 2015	<5K	$3-5K

5.7 Service Consequences and Risks

The Council 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 (i.e. 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 operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years. These include:

- There are currently no known projects or maintenance that is unable to be undertaken over the next 10 year period. This will be further considered as part of future asset management plans and after detailed survey works have been carried out.

5.7.2 Service consequences

Operations and maintenance activities and capital projects will be updated in subsequent AP Plans.

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 will be updated in subsequent AM Plans.

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

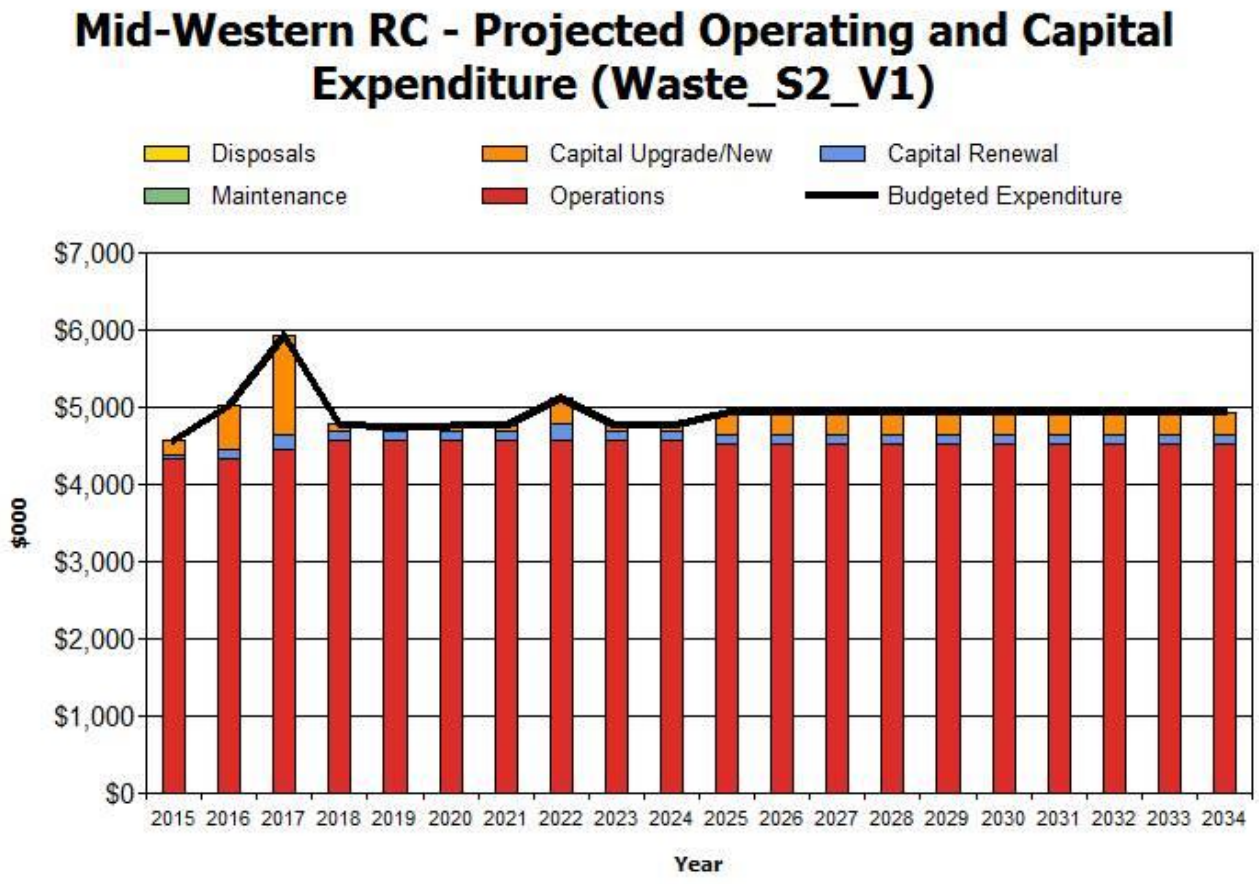
6. Financial Summary

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

6.1 Financial Statements and Projections

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

FIG 7: PROJECTED OPERATING AND CAPITAL EXPENDITURE



6.1.1 Sustainability of service delivery

There are four key indicators for service delivery sustainability that have been considered in the analysis of the services provided by this asset category, these

being the asset renewal funding ratio, long term life cycle costs/expenditures and medium term projected/budgeted expenditures over 5 and 10 years of the planning period.

ASSET RENEWAL FUNDING RATIO

Asset Renewal Funding Ratio[10] 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 $7,154,000 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 $4,641 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 $2,513,000 per year (-ve = gap, +ve = surplus).

Life cycle expenditure is 65% 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 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

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

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 $4,641,000 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is $4,641,000 on average per year giving a 10 year funding shortfall of $0 per year. This indicates that Council expects to have 100% of the projected expenditures needed to provide the services documented in the asset management plan.

MEDIUM TERM – 5 YEAR FINANCIAL PLANNING PERIOD

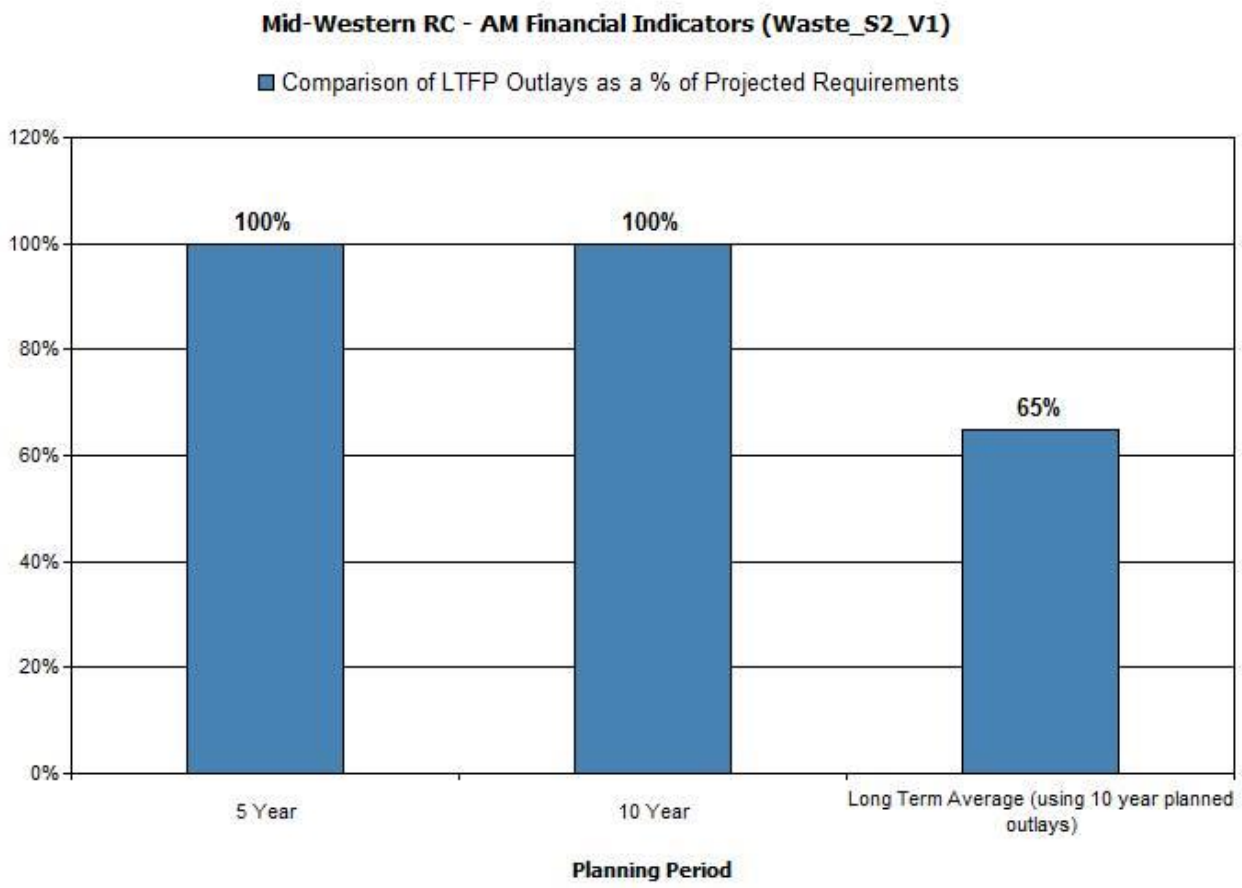
The projected operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is $4,567,000 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is $4,567,000 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

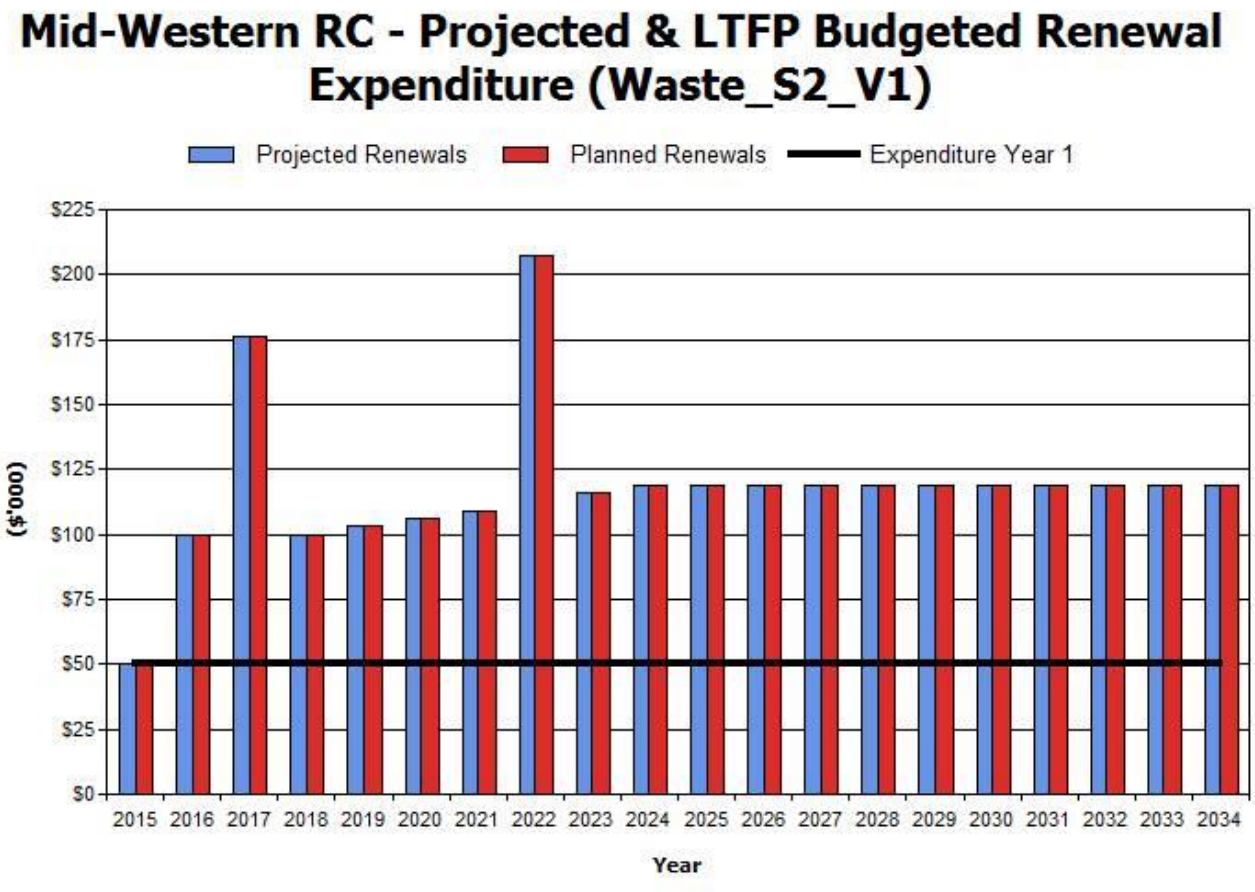


Table 6.1.1 shows the shortfall between projected renewal and replacement expenditures and expenditure accommodated in long term financial plan. Budget expenditures accommodated in the long term financial plan or extrapolated from current budgets are shown in Appendix D.

TABLE 6.1.1: PROJECTED AND LTFP BUDGETED RENEWALS AND FINANCING SHORTFALL

Year	Projected Renewals ($000)	LTFP Renewal Budget ($000)	Renewal Financing Shortfall ($000) (-ve Gap, +ve Surplus)	Cumulative Shortfall ($000) (-ve Gap, +ve Surplus)
2015	$50	$50	$0	$0
2016	$100	$100	$0	$0
2017	$176	$176	$0	$0
2018	$100	$100	$0	$0
2019	$103	$103	$0	$0
2020	$106	$106	$0	$0
2021	$109	$109	$0	$0
2022	$207	$207	$0	$0
2023	$116	$116	$0	$0
2024	$119	$119	$0	$0
2025	$119	$119	$0	$0
2026	$119	$119	$0	$0
2027	$119	$119	$0	$0
2028	$119	$119	$0	$0
2029	$119	$119	$0	$0
2030	$119	$119	$0	$0
2031	$119	$119	$0	$0
2032	$119	$119	$0	$0

Year	Projected Renewals ($000)	LTFP Renewal Budget ($000)	Renewal Financing Shortfall ($000) (-ve Gap, +ve Surplus)	Cumulative Shortfall ($000) (-ve Gap, +ve Surplus)
2033	$119	$119	$0	$0
2034	$119	$119	$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 2014 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	$4,336	$0	$50	$185	$0
2016	$4,606	$0	$100	$588	$0
2017	$5,563	$0	$176	$1,290	$0
2018	$7,520	$0	$100	$93	$0
2019	$7,652	$0	$103	$61	$0
2020	$7,739	$0	$106	$63	$0
2021	$7,828	$0	$109	$65	$0
2022	$7,921	$0	$207	$329	$0
2023	$8,389	$0	$116	$69	$0
2024	$8,488	$0	$119	$71	$0
2025	$8,528	$0	$119	$281	$0
2026	$8,928	$0	$119	$281	$0
2027	$9,329	$0	$119	$281	$0
2028	$9,730	$0	$119	$281	$0
2029	$10,130	$0	$119	$281	$0
2030	$10,531	$0	$119	$281	$0
2031	$10,931	$0	$119	$281	$0
2032	$11,332	$0	$119	$281	$0
2033	$11,732	$0	$119	$281	$0
2034	$12,133	$0	$119	$281	$0

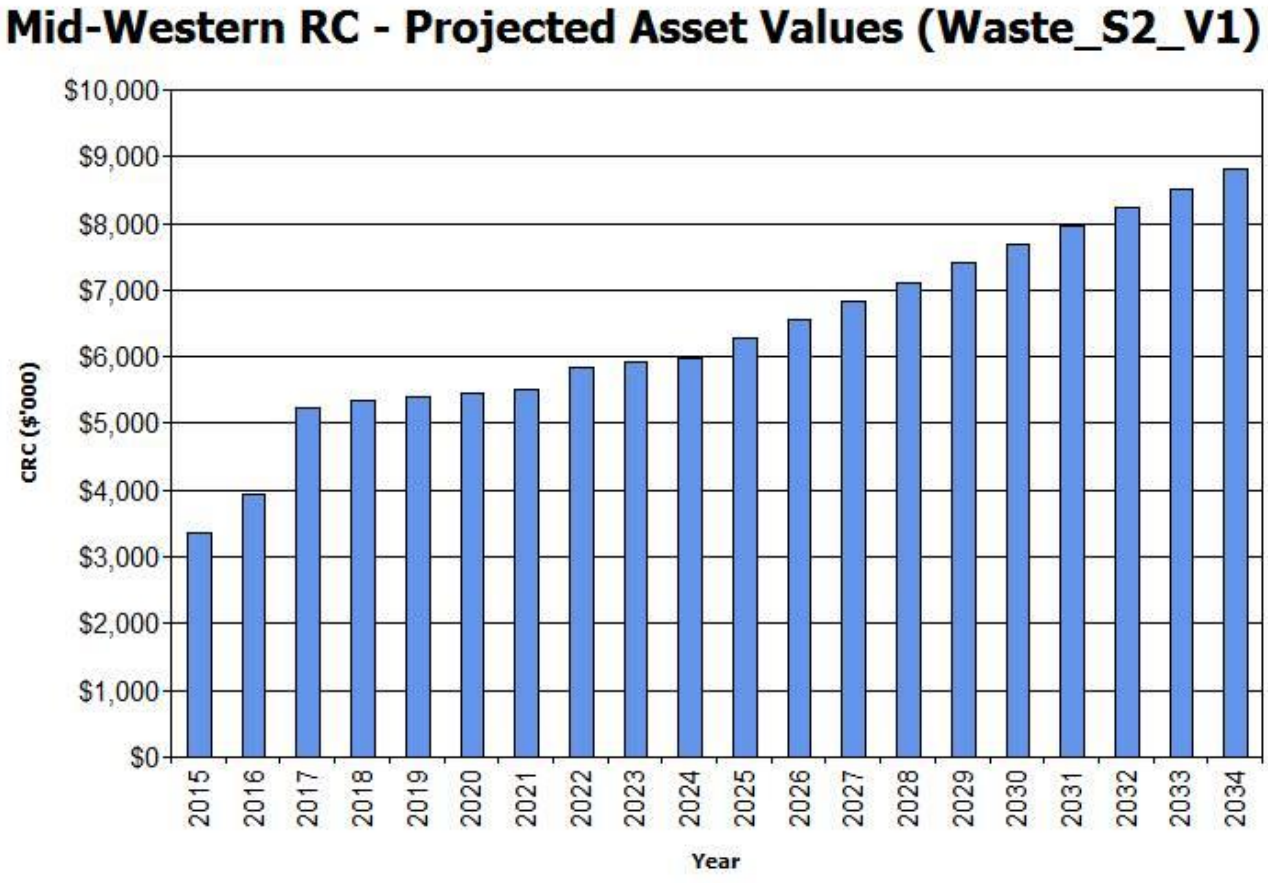
6.2 Funding Strategy

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

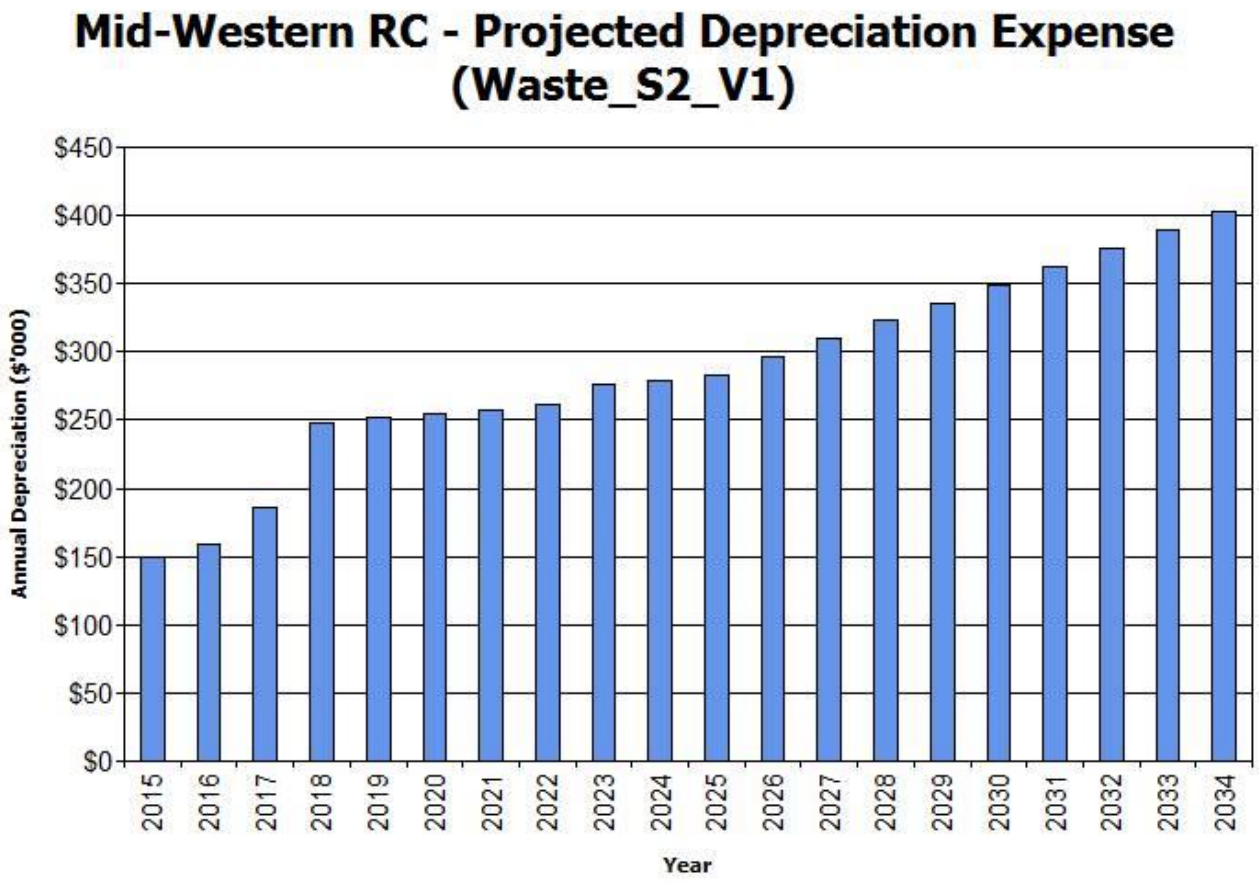
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council. Figure 9 shows the projected replacement cost asset values over the planning period in real values.

FIGURE 9: PROJECTED ASSET VALUES



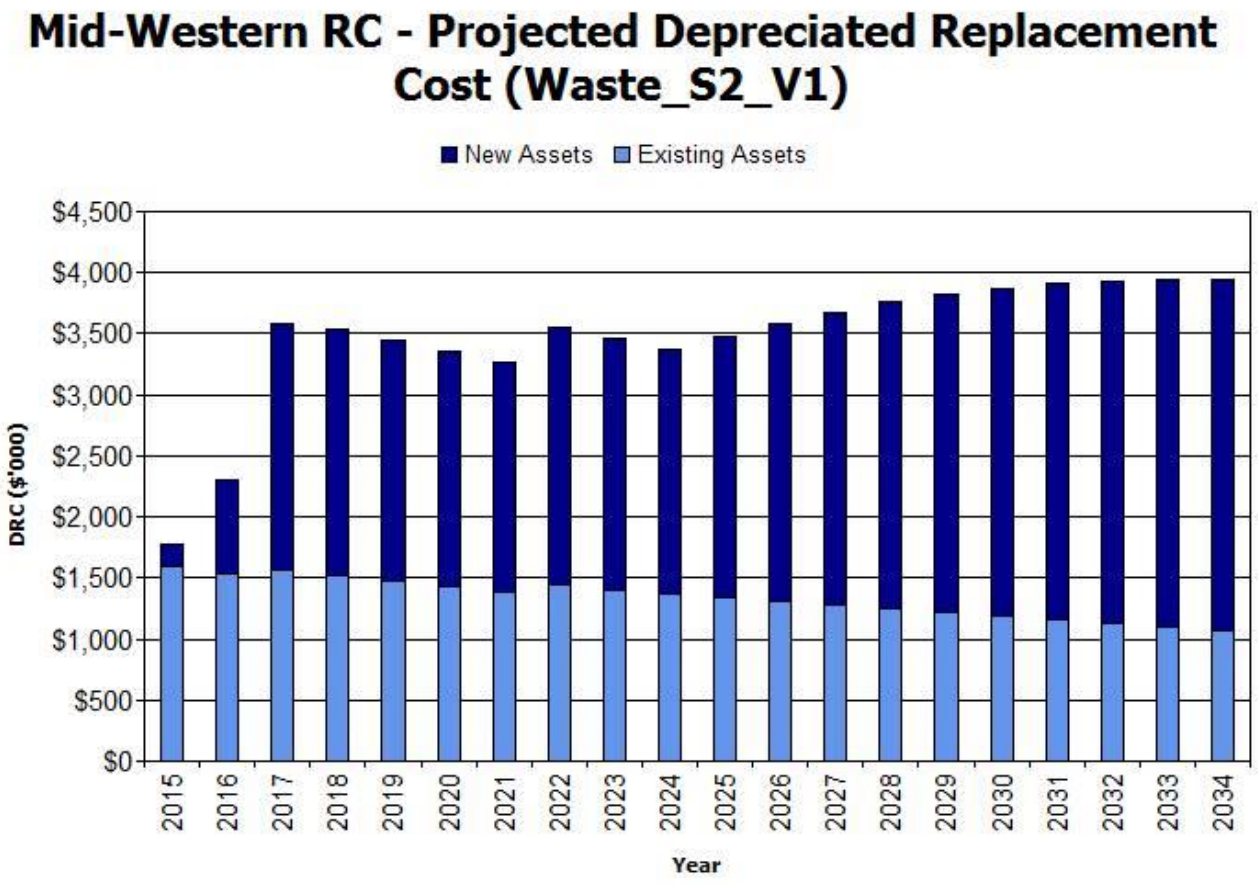
Depreciation expense values are forecast in line with asset values as shown in Figure 10.

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
Forecasts based on maintaining current levels of service	Current levels of service cannot be maintained.
Data asset register is accurate	Change in asset data may affect financial forecasts
Expenditure projections vary over time	Actual expenditure costs more /less.

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[11] 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	B	If high growth eventuates demands on services and assets will increase.
Growth projections	C	Fluctuates due to nature of industry driving growth.
Operations expenditures	B	Established operating environment
Maintenance expenditures	C	More work required to differentiate between planned and unplanned maintenance
Projected Renewal exps. - Asset values	C	Low level of confidence until detail asset survey undertaken
- Asset residual values	B	Based on fair value analysis
- Asset useful lives	C	Review of asset condition required.
-Condition modelling	C	Little to no information.
- Network renewals	C	Knowledge gaps exist with some assets.
- Defect repairs	D	Little recorded information
Upgrade/New expenditures	B	Information captured through capital upgrade works.

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

Disposal expenditures	E	None identified

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

7. Plan Improvement and Monitoring

7.1 Status of Asset Management Practices

7.1.1 Accounting and financial systems

Mid-Western Regional Council uses Technology One for financials and asset management. Council's waste infrastructure was revalued 30th June 2011 in accordance with the Fair Value accounting standards and Office of Local Government requirement and compiled into a single asset register.

ACCOUNTABILITIES FOR FINANCIAL SYSTEMS

The finance department is responsible for the financial systems operating at Mid-Western Regional Council.

ACCOUNTING STANDARDS AND REGULATIONS

- Australian Accounting Standards.
- NSW Office of Local Government Accounting Code.

CAPITAL/MAINTENANCE THRESHOLD

Presently capital budget is defined and managed through the waste 30 plan and reinstatement works.

REQUIRED CHANGES TO ACCOUNTING FINANCIAL SYSTEMS ARISING FROM THIS AM PLAN

The chart of accounts would be required to separate operations and maintenance expenditure and also planned and reactive maintenance.

7.1.2 Asset management system

Technology One

ASSET REGISTERS

MWRC Asset Register

LINKAGE FROM ASSET MANAGEMENT TO FINANCIAL SYSTEM

The depreciation and asset capitalisation are linked to the finance system. Operation and maintenance are not presently linked to the asset system.

ACCOUNTABILITIES FOR ASSET MANAGEMENT SYSTEM AND DATA MAINTENANCE

Primary accountability for asset management lies with the Plant and Facilities Department within the Operations Directorate. This is supported by the Finance Department within the Corporate Directorate which is responsible for the management of the asset management systems.

REQUIRED CHANGES TO ASSET MANAGEMENT SYSTEM ARISING FROM THIS AM PLAN

- Restructure of hierarchy and asset attributes.
- Utilisation of work orders for scheduling maintenance activities and recording planned and reactive maintenance.
- Improved accuracy of asset data necessary.
- Further collection of asset data to add to the system.

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	SURVEY ALL CURRENT ASSETS TO ENSURE ALL ASSETS ARE CAPTURED	MANAGER WASTE	INTERNAL STAFF RESOURCES	JUNE 2016
2	REVIEW USEFUL LIFE OF ASSETS	MANAGER WASTE	ASSET ASSESSMENT CONSULTANTS	BEFORE AMP REVIEW
3	DEVELOP DETAILED RISK MANAGEMENT PLAN	MANAGER WASTE	INTERNAL STAFF RESOURCES	JUNE 2016
4	SEPERATION OF REACTIVE AND PLANNED MAINTENANCE	MANAGER WASTE AND FINANCE	INTERNAL STAFF RESOURCES	BEFORE AMP REVIEW
5	CONDITION ASSESSMENTS	MANAGER WASTE	INTERNAL STAFF RESOURCES	BEFORE AMP REVIEW
6	REVIEW REINSTATEMENT PLAN	MANAGER WASTE	INTERNAL STAFF RESOURCES	DECEMEBR 2015
7	DEVELOP MAINTENANCE RESPONSE LEVELS OF SERVICE	MANAGER WASTE	INTERNAL STAFF RESOURCES	JUNE 2016
8	DEVELOP AGE PROFILE OF ASSETS TO BE INCLUDED IN FUTURE AMP	FINANCE AND MANAGER WASTE	INTERNAL STAFF RESOURCES	BEFORE AMP REVIEW

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 6 months of each Council election.

7.4 Performance Measures

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

- The degree to which the required projected expenditures identified in this asset management plan are incorporated into Council's long term financial plan,

- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the 'global' works program trends provided by the asset management plan,
- The degree to which the existing and projected service levels and service consequences (what we cannot do), risks and residual risks are incorporated into the Council's Strategic Plan and associated plans,
- **The Asset Renewal Funding Ratio achieving the target of 1.0.**

8. References

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

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

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

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

Mid-Western Regional 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 Abbreviations

Appendix F Glossary

Appendix A Maintenance Response Levels of Service

To be developed.

Appendix B Projected 10 year Capital Renewal and Replacement Works Program

PROJECT	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
WASTE SITE RE-HAB*	$100k	$130k	$135k	$200k	$119k	$123k	$127k	$130k	$134k	$138k
WASTE DEPOTS RURAL	$55k	$56k	$58k	$61k	$63k	$65k	$67k	$69k	$71k	$73
WASTE DEPOT MUDGEE	$32k	$33k	$34k	$35k	$36k	$37k	$38k	$39k	$40k	$41k
MUDGEE AMENITIES							$94k			
RECYCLE CAGES								$25k		
RECYCLE PLANT	$500k									
REMOTE CAMERAS		$46k					$54k			
LANDFILL CELL		$1,200k								$1,520
LAND MATTERS									$50k	

* Waste sites rehabilitation works schedule is being reviewed for years 2019/20 onwards. The existing program does not extend past 2018/19 and is shown in the following table:

LOCATION	2015/16	2016/17	2017/18	2018/19
MUDGEE WASTE DEPOT	$50,000	$50,000	$50,000	$100,000
BYLONG WTS		$30,000		
KANDOS WTS			$50,000	
BIRRIWA			$35,000	
PUTTA BUCCA				$100,000
HOME RULE WTS	$30,000			
LUE WTS	$20,000			
HARGRAVES		$50,000		
TOTAL	$100,000	$130,000	$135,000	$200,000

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

Insert 10 year Projected Capital Upgrade/New Program from Worksheet *Upgrade-New Program* on the NAMS.PLUS3 Expenditure Template

DELETE above sentence.

Appendix D Budgeted Expenditures Accommodated in LTFP

NAMS.PLUS3 Asset Management **Mid-Western RC**

Waste_S2_V1 Asset Management Plan

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

IPWEA INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALASIA JRA

Planned Expenditures from LTFP

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

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

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**	$3,253	$3,254	$3,342	$3,430	$3,430	$3,430	$3,430	$3,430	$3,430	$3,430
Management **budget**	$1,083	$1,089	$1,121	$1,153	$1,153	$1,153	$1,153	$1,153	$1,153	$1,153
AM systems **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total operations	$4,336	$4,343	$4,463	$4,583	$4,583	$4,583	$4,583	$4,583	$4,583	$4,583
Maintenance										
Reactive maintenance **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Planned maintenance **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Specific maintenance items **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total maintenance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capital										
Planned renewal **budget**	$50	$100	$176	$100	$103	$106	$109	$207	$116	$119
Planned upgrade/new **budget**	$185	$588	$1,290	$93	$61	$63	$65	$329	$69	$71
Non-growth contributed asset value	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Asset Disposals										
Est Cost to dispose of assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Carrying value (DRC) of disposed assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Additional Expenditure Outlays Requirements (e.g from Infrastructure Risk Management Plan)										
Additional Expenditure Outlays required and not included above	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	2016	2017	2018	2019	2020	2021	2022	2023	2024
Forecast Capital Renewal from Forms 2A & 2B	$000 $50	$000 $100	$000 $176	$000 $100	$000 $103	$000 $106	$000 $109	$000 $207	$000 $116	$000 $119
Forecast Capital Upgrade from Form 2C	$185	$588	$1,290	$93	$61	$63	$65	$329	$69	$71

Appendix E Abbreviations

Abbrev	Description
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 F 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 noncritical assets.

CURRENT REPLACEMENT COST (CRC)

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

DEFERRED MAINTENANCE

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

DEPRECIABLE AMOUNT

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

DEPRECIATED REPLACEMENT COST (DRC)

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

DEPRECIATION / AMORTISATION

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

ECONOMIC LIFE

See useful life definition.

EXPENDITURE

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

EXPENSES

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

FAIR VALUE

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

FINANCING GAP

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

HERITAGE ASSET

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

IMPAIRMENT LOSS

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

INFRASTRUCTURE ASSETS

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

INVESTMENT PROPERTY

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

- use in the production or supply of goods or services or for administrative purposes; or
- 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:

- the period over which an asset is expected to be available for use by an entity, or
- 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 *