Yorke Peninsula Council



Water Infrastructure

Asset Management Plan



Scenario 1 Version 1

August 2017

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1. EXECUTIVE SUMMARY

Context

Council owns and manages potable water schemes in the Yorke Peninsula townships of Balgowan, Black Point, Hardwicke Bay and Marion Bay. The water supplied to three of the townships is provided via an SA Water main offtake for each town, while the water supplied to Marion Bay is provided from a desalination plant which sources salt water from a beach well bore. Water is then desalinated by a reverse osmosis process.

The Water Service

The Water network comprises:

- Water Pipes
- Water Nodes
- Water Pumping, Storage and Treatment Assets

These infrastructure assets have a replacement value of **\$3,853,874**.

What does it Cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan (AMP) includes operations, maintenance, renewal and upgrade of existing assets over the 10 year planning period is **\$2,685,000** or **\$268,000** on average per year.

Estimated available funding for this period is **\$3,010,000** or **\$301,000** on average per year which is **112%** of the cost to provide the service. This is a funding excess of **\$33,000** on average per year. Projected expenditure required to provide services in the AMP compared with planned expenditure currently included in the Long Term Financial Plan (LTFP) are shown in the graph below.





What we will do

We plan to provide Water services for the following:

• Operation, maintenance, renewal and upgrade of Water assets as outlined in Table 2.1 to meet service levels set by Council in annual budgets.

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:

- Failure to maintain the existing Water network to a safe and serviceable standard
- Failure to undertake inspections of the existing Water network

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

- Ensuring sufficient funding to maintain the network at an appropriate level
- Prioritise all works required
- Document all inspections and complaints

Confidence Levels

This AMP is based on the most recent information available at the time of preparing this plan. Council will continue to review and update this plan to increase data confidence levels. Please refer to Table 6.5.1 for the assessment of data used in this AMP.

The Next Steps

The actions resulting from this asset management plan are:

• Complete the Improvement Plan as set out in Table 7.1

Questions you may have

What is this plan about?

This asset management plan covers the infrastructure assets that provide a portable Water supply to four Yorke Peninsula Council community's. These assets include water pipes, tanks, pumps, valves, water meters and osmosis system.

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.

What can we do?

We can develop options, costs and priorities for future Water 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 AMP and suggestions on how we may change or reduce its mix of Water services to ensure that the appropriate level of service can be provided to the community within available funding.

2. INTRODUCTION

2.1 Background

This AMP demonstrates responsive management of assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding needed to provide the required levels of service over a 20 year planning period.

This AMP follows the format recommended in Section 4.2.6 of the International Infrastructure Management Manual¹.

This AMP is to be read in conjunction with the organisation's Asset Management Policy and the following associated planning documents:

- Yorke Peninsula Council Strategic Management Plan 2016-2020
- Yorke Peninsula Council Long Term Financial Plan
- Yorke Peninsula Council Annual Business Plan and Budget
- Yorke Peninsula Council Potable Water Infrastructure Asset Valuation & Methodology

The infrastructure assets covered by this AMP are shown in Table 2.1. These assets are used to provide potable Water services to the community.

Asset category	Dimension	Replacement Value
Nodes	Air Valve (24) End Cap (12) Fire Hydrant (1) Fire Plug (51) Reducer (13) Seat Gate Valve (4) Stop Valve (26) Water Meter (815)	\$396,123
Pipes	Connection (5320m) Main (26326m) Water Line (1487m) Salt Water Line (1338m)	\$2,293,835
Pumping, Treatment & Storage	Pumps (11) Tanks (12) Treatment Plant (1)	\$1,163,916
TOTAL		\$3,853,874

Table 2.1: Assets covered by this Plan

Key stakeholders in the preparation and implementation of this AMP are shown in Table 2.1.1.

Table 2.1.1: Key Stakeholders in the AMP

Key Stakeholder	Role in Asset Management Plan
Councillors	 Represent needs of community, Allocate resources to meet the organisation's objectives in providing services while managing risks, Ensure Council is financially sustainable.
Corporate Management Team	Endorse the development of AMPs and provide resources required to complete this task. Set high level priorities for asset management development in Council and raise the awareness of this function among Council staff and contractors. Support the implementation of actions resulting from this plan and prepared to make changes to a better way of managing assets and delivering services. Support for an asset management driven budget and LTFP.

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

Assets & Infrastructure Services Staff	Manage the infrastructure with resources provided by Council.

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. We have acquired infrastructure assets by 'purchase', by contract, construction by our staff and by donation of assets constructed by developers and others to provide Water services.

Our goal in managing infrastructure assets is to meet the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- Having a long-term financial plan which identifies required, affordable expenditure and how it will be financed.²

2.3 Plan Framework

Key elements of the plan are

- Levels of service specifies the services and levels of service to be provided by the Council,
- Future demand how this will impact on future service delivery and how this is to be met,
- Life cycle management how Council will manage its existing and future assets to provide 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 Council's objectives,
- Asset management improvement plan.

2.4 Core and Advanced Asset Management

This AMP is prepared as a 'core' AMP over a 20 year planning period in accordance with the International Infrastructure Management Manual³. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term 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 AMP 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' AMP is prepared to facilitate community consultation initially through feedback on public display of draft AMPs prior to adoption by the Council. Future revisions of the AMP 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.

YORKE PENINSULA COUNCIL – WATER INFRASTRUCTURE ASSET MANAGEMENT PLAN

 $^{^{\}rm 2}$ Based on IPWEA, 2011, IIMM, Sec 1.2 $\,$ p 1|7.

³ IPWEA, 2011, IIMM.

3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

The Council has not carried out any research on customer expectations. This will be investigated for future updates of the AMP.

Table 3.1: Community Satisfaction Survey Levels

Performance Measure	Satisfaction Level				
	Very Satisfied	Fairly Satisfied	Satisfied	Somewhat satisfied	Not satisfied
To be completed in future updates of this plan					

3.2 Strategic and Corporate Goals

This AMP is prepared under the direction of the Council's vision, mission, goals and objectives.

Our vision is:

We will foster opportunities to support and enhance Yorke Peninsula which is valued for its natural beauty, rich agriculture, spectacular coastline and unique blend of seaside and rural lifestyles.

Relevant organisational goals and objectives and how these are addressed in this AMP are:

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

Goal	Objective	How Goal and Objectives are addressed in AMP	
Community Connected through Infrastructure	Develop and deliver on Asset Management Plans for all asset classes.	Water AMP developed and adopted by Council.	
Community Connected through Infrastructure	Explore Provision of new infrastructure.	New infrastructure provided as per an adopted Water AMP.	

3.3 Legislative Requirements

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

Table 3.3: Legislative Requirements

Legislation	Requirement
Local Government Act	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
SA Public Health Act and Regulations	Promote and to provide for the protection of the health of the public of South Australia and to reduce the incidence of preventable illness, injury and disability.
Environment Protection Act and Regulations	Provides for the protection of the environment.
Water Industry Act and Regulations	To facilitate planning in connection with water demand and supply.
Work Health and Safety Act and Regulations	To provide for the health, safety and welfare of persons at work.
Australian Drinking Water Guidelines	An authoritative reference to the community and the water supply industry on what defines safe, good quality water, how it can be achieved and how it can be assured.
Office of the Technical Regulator	Monitors compliance with legislation and applicable technical standards in the electricity, gas and water industries.

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

3.4 Community Levels of Service

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

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

Community levels of service measures used in the AMP 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 community consultation/engagement.

Service Attribute	Service Objective	Performance Measure Process	Current Performance	Expected position in 10 years based on current LTFP			
COMMUNITY OL	COMMUNITY OUTCOMES						
Supply of potable	e water in accordance with	industry standards.					
COMMUNITY LE	VELS OF SERVICE						
Quality	Provide a restricted potable water supply	Customer Service Requests relating to Water maintenance.	<50 per year	<20 per year			
	Organisational measure Confidence levels	High	High	High			
Function	Water network is appropriately maintained. Meets relevant legislative requirements.	Customer Service Requests relating to Water maintenance. Complies with legislative requirements.	<50 per year Complies with legislative requirements.	<20 per year Continuing to comply with legislative requirements.			
	Organisational measure Confidence levels	High	High	High			
Capacity/ Utilisation	Water network has the capacity to accept current and projected usage for each township.	New developments can connect to the Water network.	Less than 10 new connections per year in total for all schemes. Each scheme has capacity for new connections.	Less than 10 new connections per year in total for all schemes. Continuing to meet capacity requirements.			
	Organisational measure Confidence levels	Medium	Medium	Medium			

Table 3.4:	Community	Level o	f Service

3.5 Technical Levels of Service

Technical Levels of Service - Supporting the community service levels are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities that the Council 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 regular inspections of water network,
- Maintenance the activities necessary to retain an asset as near as practicable to an appropriate service condition (eg pipe repairs),
- Renewal the activities that return the service capability of an asset up to that which it had originally been (eg frequency and cost of pipeline replacement and treatment and storage component replacement),
- Upgrade the activities to provide a higher level of service (eg replacing a pipeline with a larger size) or a new service that did not exist previously (eg a new pump station or storage facility).

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

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

⁴ IPWEA, 2011, IIMM, p 2.22

YORKE PENINSULA COUNCIL – WATER INFRASTRUCTURE ASSET MANAGEMENT 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	Water network meets user and regulatory requirements.	Inspections of network.	Quarterly inspections and repairs of network in line with water meter reading. Quarterly water quality testing. Annual backflow prevention device inspections.	Current Performance	Current Performance
		Budget	Budget - Current	Budget – Current	Budget – Current
Maintenance	Water network is well maintained.	RegularmaintenanceprogramandCustomerServiceRequestscompletedinareasonable time frame.	Planned maintenance is undertaken as and where required. Customer Service Requests are actioned in a time frame determined by their priority.	Maintenance is undertaken as planned and required.	Current Performance
		Budget	Budget - Current	Budget - Current	Budget - Current
Renewal	Renewal of Water assets as required and at the optimum time frame.	Assets renewed as per current renewal program and budget.	Planned renewal work is undertaken as per current renewal program and budget.	Identified renewal work funded each year as per adopted Capital Renewal Program.	Identified renewal work funded each year as per adopted Capital Renewal Program.
		Budget	Budget - Current	Budget - Current	Budget - Current
Upgrade/New	Upgrade of Water assets are identified through design and new technology.	Assets are upgraded as per current upgrade program and budget.	Planned upgrade work is undertaken as per current upgrade program and budget.	Identified upgrade work funded each year as per adopted Capital Upgrade Program	Identified upgrade work funded each year as per adopted Capital Upgrade Program
		Budget	Budget - Current	Budget - Current	Budget - Current

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

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

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

4. FUTURE DEMAND

4.1 Demand Drivers

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

4.2 Demand Forecast

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

4.3 Demand Impact on Assets

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

Demand drivers	Present position	Projection	Impact on services
New Development / Connections	Growth through new houses and (small land division connections.	Expected to continue	Impact on existing supply and storage capacity
Tourism	Increased demand on some coastal township services during peak holiday periods.	Expected to continue	Impact on existing supply and storage capacity
Regular changes to Water standards and guidelines	Regulatory standards are managed by the Infrastructure Manager.	Additional operational and reporting requirements	Not identified

Table 4.3: Demand Drivers, Projections and Impact on Services

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 Council 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 failures⁵. Examples of non-asset solutions include providing services from existing infrastructure such as aquatic centres and libraries that may be in another community area or public toilets provided in commercial premises.

Opportunities for demand management will be developed in future revisions of this AMP.

4.5 Asset Programs to meet Demand

The new assets required to meet growth will be acquired free of cost from land developments and constructed/acquired by the Council. New assets constructed/acquired by the Council are discussed in Section 5.5.

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

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 AMP are shown in Table 2.1.

The age profile of the assets included in this AMP is shown in Figure 2.

Figure 2: Asset Age Profile



Yorke Peninsula DC - Age Profile (Water_S1_V1)

Plans showing the Water assets are:

- Council's GIS
- Records Management System

5.1.2 Asset capacity and performance

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.

1	able 5.1.2:	Known Ser	vice Perfor	mance	Defici	iencies	
	ľ						

Location	Service Deficiency
Balgowan, Black Point and Hardwicke Bay Water Schemes	Lack of SA Water supply during peak load periods.
Balgowan	Inferior tapping saddles initially installed. Program to replace with stainless steel saddles.

Marion Bay	Storage tanks not suitable for desalinated water. Budget to replace with appropriate tanks.
All schemes	Network leakage. Program regular inspections and continual monitoring.

The above service deficiencies were identified from maintenance records and customer service requests.

5.1.3 Asset condition

Condition of Water Infrastructure assets is monitored by Council staff but a full condition profile has not yet been developed for the entire network, this will be developed in a future revision of this plan.

The condition profile of our assets will be shown in a future version of this AMP.

5.1.4 Asset valuations

The value of assets recorded in the asset register as at **30th June 2016** covered by this AMP is shown below. Assets were last revalued at **1st July 2015**. Assets are valued at Current Replacement Cost (CRC) of an asset minus any accumulated depreciation and impairment losses.

Current Replacement Cost	\$3,854,000	Current Replacement Cost Accumulated
Depreciable Amount	\$3,842,000	Depreciated Depreciation Annual Depreciated Amount
Depreciated Replacement Cost ⁶	\$2,996,000	Cost End of
Annual Depreciation Expense	\$73,000	reporting reporting Value period 2 v
		∣ ∢ −−−−−

Useful lives were reviewed in **May 2016** by Council staff and consultants. Council value their assets at a component level which enables assets to be assigned an average useful life for each component to determine depreciation rates.

The useful life of Water Infrastructure assets is assumed to be the time that an asset is expected to last before total replacement is required. It is likely that during their useful life, some assets will require maintenance.

The useful life of these assets is governed by two factors:

- Structural deterioration i.e. when a pipe or pit or any asset fails due to age/physical deterioration and renewal is required.
- Suitability when despite being in physically good condition an asset is no longer suitable for purpose, e.g. when a pipe's capacity is exceeded.

The useful lives that are assigned to different Water Infrastructure asset types are based on industry standards.

Major changes from previous valuations are due to the Water Infrastructure Asset Register being updated and the asset group being further componentised and unit rate and useful lives being reviewed.

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	1.9%
(Depreciation/Depreciable Amount)	

Rate of Annual Asset Renewal0.5%(Capital renewal exp/Depreciable amount)

⁶ Also reported as Written Down Current Replacement Cost (WDCRC).

YORKE PENINSULA COUNCIL – WATER INFRASTRUCTURE ASSET MANAGEMENT PLAN

In **2017/18** the Council plans to renew assets at **27.6%** of the rate they are being consumed and will be increasing its asset stock by **0.3%** in the year.

5.1.5 Historical Data

Historical data, such as construction plans, on Council's Water network are located in Council's offices and Council's records management system.

5.2 Infrastructure Risk Management Plan

An assessment of risks⁷ 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.

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Water Supply	No SA Water Supply		Water supply is restricted and not guaranteed by Council.		Current Budget
Pump Failure	No supply		Telemetry monitoring of systems. Backup pumps available. Staff on call.		Current Budget
Pipe Break	No supply		Regular maintenance		Current Budget
External Party Damage to Pipes	External Party digging through pipes.		Dial Before You Dig (DBYD) Member – notified when external parties intend to undertake excavation works on Council roads, footpaths or land. External parties required to complete SF039 Application to Carry Out Work on Council's Roads or Footpaths prior to laying underground services.		Current Budget

Table 5.2:	Critical Risk	ks and	Treatment	Plans

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

5.3 Routine Operations and Maintenance Plan

Operations include regular activities to provide services such as public health, safety and amenity, eg water quality testing.

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

5.3.1 Operations and Maintenance Plan

Operations activities affect service levels including quality and function through water quality testing, flushing of valves and hydrants and regular inspections of the water infrastructure network.

⁷ Critical Risks and Treatments have been identified but not assessed

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating, eg water pipe repair. 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 backflow prevention device inspection and replacement, etc. This work falls below the capital/maintenance threshold but may require a specific budget allocation.

Actual past and budgeted maintenance expenditure is shown in Table 5.3.1.

Table 5.3.1: Maintenance Expenditure Trends

Year	Maintenance Expenditure
2014/15	\$222,550
2015/16	\$244,955
2016/17	\$233,496

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 AMP and service risks considered in the Infrastructure Risk Management Plan.

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

5.3.2 Operations and Maintenance Strategies

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

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

Asset hierarchy

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

The Council's service hierarchy is shown is Table 5.3.2.

Table 5.3.2: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
Nodes	Conveyance of water from storage to user.
Pipes	Conveyance of water from storage to user.
Pumping, Treatment and Storage	Conveyance of water from source to user. Treatment of water to a standard suitable for drinking in accordance with regulatory standards.

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, Council 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 will be developed in future versions of this AMP.

Standards and specifications

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

- AS/NZS 3500: Plumbing and drainage.
- AS/NZS 2031: Water quality Sampling for microbiological analysis (ISO 19458:2006, MOD).
- AS/NZS ISO 3100: Risk management Principles and Guidelines.
- The National Construction Code (NCC) Volume 3 Plumbing Code of Australia (PCA) including South Australian Variations and/or Additional Provisions as listed in Appendix A.

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 **2017/18** dollar values (ie real values).



Yorke Peninsula DC - Projected Operations & Maintenance Expenditure (Water_S1_V1)



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.

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

Method 1 was used for this AMP.

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 in **May 2016**.⁸

⁸ Potable Water Infrastructure Asset Valuation and Methodology 1 July 2015

Table 5.4.1: Useful Lives of Assets

Asset (Sub)Category	Useful life
Nodes	25 to 60 years
Pipes	60 to 100 years
Pumping, Storage and Treatment	15 to 50 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 option that could address the service deficiency,
 - o and evaluate the options against evaluation criteria adopted by the Council, and
 - o select the best option to be included in capital renewal programs,
- Using 'low cost' renewal methods (cost of renewal is less than replacement) wherever possible,
- Maintain a current infrastructure risk register for assets and service risks associated with providing services from infrastructure assets and reporting 'Very High' and 'High' risks and residual risks after treatment to management and Council,
- Review current and required skills base and implement workforce training and development to meet required construction and renewal needs,
- Maintain a current hierarchy of critical assets and capital renewal treatments and timings required,
- Review management of capital renewal and replacement activities to ensure Council is obtaining best value for resources used.

Renewal ranking criteria

Asset renewal and replacement is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (eg tank storage capacity), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (eg water quality).⁹

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 Council,
- Have the highest average age relative to their expected lives,
- Are identified in the AMP as key cost factors,
- Have high operational or maintenance costs, and
- Where replacement with modern equivalent assets would yield material savings.¹⁰

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

⁹ IPWEA, 2011, IIMM, Sec 3.4.4, p 3|60.

¹⁰ Based on IPWEA, 2011, IIMM, Sec 3.4.5, p 3|66.

Table 5.4.2: Renewal and Replacement Priority Ranking Criteria Guide

Criteria	
Breakages	
Customer Services Requests	
Available Budget	

Renewal and replacement standards

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

- AS/NZS 3500: Plumbing and drainage.
- AS/NZS 2031: Water quality Sampling for microbiological analysis (ISO 19458:2006, MOD).
- AS/NZS ISO 3100: Risk management Principles and Guidelines.
- The National Construction Code (NCC) Volume 3 Plumbing Code of Australia (PCA) including South Australian Variations and/or Additional Provisions as listed in Appendix A.

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 Figure 5. Note that all amounts are shown in real values. Gen 2 assets shown in Figure 5 are assets with a useful life of less than 20 years, which means they will be replaced twice during the reporting period.

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

Figure 5: Projected Capital Renewal and Replacement Expenditure

Yorke Peninsula DC - Projected Capital Renewal Expenditure (Water_S1_V1)



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

Renewal and replacement expenditure in Council's capital works program will be accommodated in the LTFP. This is further discussed in Section 6.2.

5.5 Creation/Acquisition/Upgrade Plan

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

5.5.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as councillor, officer or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria guide is detailed below.

Table 5.5.1: New Assets Priority Ranking Criteria Guide

	Criteria	
Cost benefit analysis		
Service Deficiency		
Usage		
Customer Service Requests		
Available Budget		

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,
 - o 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,
 - o 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 Figure 6. Newly identified upgrade/new projects will be presented to Council for consideration during the budget process each year.



Figure 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 LTFP. 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, together with estimated annual savings from not having to fund operations and maintenance of the assets are not known at this stage. Any revenue gained from asset disposals is accommodated in Council's LTFP.

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

5.7 Service Consequences and Risks

Council has prioritised decisions made in adopting this AMP to obtain the optimum benefits from its available resources. Decisions were made based on the development of 3 scenarios of AMPs.

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

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

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

The development of scenario 1 and scenario 2 AMPs 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).

6. FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this AMP. 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 Figure 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.





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 Ratio¹¹ 126%

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 **126%** of the funds required for the optimal renewal and replacement of its assets.

¹¹ AIFMG, 2012, Version 1.3, Financial Sustainability Indicator 4, Sec 2.6, p 2.16

Long term - Life Cycle Cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the asset life cycle. Life cycle costs include operations and maintenance expenditure and asset consumption (depreciation expense). The life cycle cost for the services covered in this AMP is **\$321,000** 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 **\$270,000** per year (average operations and maintenance plus capital renewal budgeted expenditure in LTFP over 10 years).

A shortfall between life cycle cost and life cycle expenditure is the life cycle gap. The life cycle gap for services covered by this AMP is **\$51,000** per year.

Life cycle expenditure is 84% of life cycle costs.

The life cycle costs and life cycle expenditure comparison highlights any difference between present outlays and the average cost of providing the service over the long term. If the life cycle expenditure is less than that life cycle cost, it is most likely that outlays will need to be increased or cuts in services made in the future.

Knowing the extent and timing of any required increase in outlays and the service consequences if funding is not available will assist Council in providing services to their communities in a financially sustainable manner. This is the purpose of the AMPs and LTFP.

Medium term – 10 year financial planning period

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

These projected expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall. In a core AMP, 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 **\$267,000** on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is **\$270,000** on average per year giving a 10 year funding excess of **\$3,000** per year. This indicates that Council expects to have **101%** of the projected expenditures needed to provide the services documented in the AMP.

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 **\$249,000** on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is **\$257,000** on average per year giving a 5 year funding excess of **\$8,000**. This indicates that Council expects to have **103%** of projected expenditures required to provide the services shown in this AMP.

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 AMP and ideally over the 10 year life of the LTFP.

Figure 8 shows the projected asset renewal and replacement expenditure over the 20 years of the AMP. The projected asset renewal and replacement expenditure is compared to renewal and replacement expenditure in the capital works program, which is accommodated in the LTFP

Figure 8: Projected and LTFP Budgeted Renewal Expenditure

Yorke Peninsula DC - Projected & LTFP Budgeted Renewal Expenditure (Water_S1_V1)



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

Year	Projected Renewals (\$000)	LTFP Renewal Budget (\$000)	Renewal Financing Shortfall (\$000) (-ve Gap, +ve Surplus)	Cumulative Shortfall (\$000) (-ve Gap, +ve Surplus)
2018	\$0	\$20	\$20	\$20
2019	\$3	\$21	\$18	\$38
2020	\$14	\$21	\$7	\$45
2021	\$0	\$22	\$22	\$67
2022	\$46	\$22	\$-24	\$43
2023	\$0	\$22	\$22	\$65
2024	\$44	\$23	\$-21	\$44
2025	\$17	\$23	\$6	\$50
2026	\$0	\$24	\$24	\$74
2027	\$64	\$24	\$-40	\$34
2028	\$0	\$25	\$25	\$59
2029	\$25	\$25	\$0	\$59
2030	\$52	\$26	\$-26	\$33
2031	\$21	\$26	\$5	\$38
2032	\$118	\$27	\$-91	\$-53
2033	\$29	\$27	\$-2	\$-54
2034	\$9	\$28	\$19	\$-35
2035	\$100	\$28	\$-72	\$-107
2036	\$13	\$29	\$16	\$-91
2037	\$53	\$29	\$-24	\$-115

Table 6.1.1: Projected and LTFP Budgeted Renewals and Financing Shortfall

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 LTFP.

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 AMP (including possibly revising the LTFP)** before finalising the AMP to manage required service levels and funding **to eliminate any funding gap**.

We will manage the 'gap' by developing this AMP 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 LTFP.

Expenditure projections are in **2017/18** real values.

Year	Operations (\$000)	Maintenance (\$000)	Projected Capital Renewal (\$000)	Capital Upgrade/ New (\$000)	Disposals (\$000)
2018	\$162	\$68	\$0	\$10	\$0
2019	\$164	\$69	\$3	\$0	\$0
2020	\$166	\$70	\$14	\$0	\$0
2021	\$168	\$71	\$0	\$0	\$0
2022	\$169	\$73	\$46	\$0	\$0
2023	\$172	\$74	\$0	\$0	\$0
2024	\$177	\$76	\$44	\$0	\$0
2025	\$183	\$77	\$17	\$0	\$0
2026	\$188	\$79	\$0	\$0	\$0
2027	\$195	\$80	\$64	\$0	\$0
2028	\$201	\$82	\$0	\$0	\$0
2029	\$207	\$84	\$25	\$0	\$0
2030	\$214	\$85	\$52	\$0	\$0
2031	\$221	\$87	\$21	\$0	\$0
2032	\$228	\$89	\$118	\$0	\$0
2033	\$236	\$91	\$29	\$0	\$0
2034	\$244	\$93	\$9	\$0	\$0
2035	\$252	\$94	\$100	\$0	\$0
2036	\$261	\$96	\$13	\$0	\$0
2037	\$270	\$98	\$53	\$0	\$0

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

6.2 Funding Strategy

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

6.3 Valuation Forecasts

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



Figure 9: Projected Asset Values

Yorke Peninsula DC - 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

Yorke Peninsula DC - Projected Depreciated Replacement Cost (Water_S1_V1)



New Assets Existing Assets

6.4 Key Assumptions made in Financial Forecasts

This section details the key assumptions made in presenting the information contained in this AMP 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 AMP and risks that these may change are shown in Table 6.4.

Table 6.4:	Key	Assumptions	made in	AMP	and	Risks	of	Change
------------	-----	-------------	---------	-----	-----	-------	----	--------

Key Assumptions	Risks of Change to Assumptions
Asset data is complete and reliable	Discovery of assets not recorded in the asset register will
	increase capital renewal expenditure and depreciation expense
	projections.
Legislative compliance will remain constant	Changes in legislation and regulation may increase operating
	and maintenance expenditure projections.
Average useful lives are based on current knowledge	A review of useful lives has the potential to vary future cost
	predictions.

6.5 Forecast Reliability and Confidence

The expenditure and valuations projections in this AMP 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 scale¹² in accordance with Table 6.5.

Confidence Grade	Description
A Highly reliable	Data based on sound records, procedures, investigations and analysis, documented properly and recognised
	as the best method of assessment. Dataset is complete and estimated to be accurate \pm 2%
B Reliable	Data based on sound records, procedures, investigations and analysis, documented properly but has minor
	shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed
	on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate ± 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.

Table 6.5: Data Confidence Grading System

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

Data	Confidence Assessment	Comment
Demand drivers	E	Not developed
Growth projections	E	Not used
Operations expenditures	В	Current and previous budget information
Maintenance expenditures	В	Current and previous budget information
Projected Renewal exps. - Asset values	В	Generated from CONQUEST. Data reviewed and updated for the implementation of CONQUEST and a Water valuation
- Asset residual values	В	Generated from CONQUEST. Data reviewed and updated for the implementation of CONQUEST and a Water valuation
- Asset useful lives	В	Generated from CONQUEST. Data reviewed and updated for the implementation of CONQUEST and a Water valuation
- Condition modelling	E	Not used / developed
- Network renewals	В	Generated from CONQUEST. Data reviewed and updated for the implementation of CONQUEST and a Water valuation
- Defect repairs	С	Generated from Assets & Infrastructure Services
Upgrade/New expenditures	С	Generated from Assets & Infrastructure Services
Disposal expenditures	В	Generated from Assets & Infrastructure Services – No disposals identified by staff

Table 6.5.1: Data Confidence Assessment for Data used in AMP

Over all data sources the data confidence is assessed as **reliable (B)** confidence level for data used in the preparation of this AMP.

¹² IPWEA, 2011, IIMM, Table 2.4.6, p 2|59.

7. PLAN IMPROVEMENT AND MONITORING

7.1 Improvement Plan

The asset management improvement plan generated from this AMP is shown in Table 7.1.

Task No	Task	Responsibility	Resources Required	Timeline
1	Collect condition data on the Water network.	Infrastructure Manager	Annual Budget Allocation	Ongoing
2	Define Levels of Service.	Director A & I	In house	Ongoing
3	Develop the Capital Works program in alignment with the Asset Management System.	Infrastructure Manager / Asset Manager	In house	2018/19
4	Continual review of Asset Register.	Infrastructure Manager / Asset Manager	In house	Ongoing
5	Continue development of Councils Asset Management System (Conquest) and Geospatial Information System (MapInfo).	Asset Manager	In house	Ongoing
6	Conduct a risk assessment workshop to further develop the critical risk and treatment plans.	Risk Management Officer	In house	Ongoing
7	Review Future Demand and develop a Demand Management Plan if required.	Asset Manager / Manager Financial Services / Manager Development Services	In house	Ongoing
8	Develop Priority Ranking Criteria for Renewal and Replacement and New/Upgrade of assets.	Infrastructure Manager / Asset Manager	In house	Ongoing

Table 7.1: Improvement Plan

7.2 Monitoring and Review Procedures

This AMP 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 AMP 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 Council's LTFP.

The AMP has a life of 4 years (Council election cycle) and is due for complete revision and updating within two years of each Council election.

7.3 Performance Measures

The effectiveness of the AMP can be measured in the following ways:

- The degree to which the required projected expenditures identified in this AMP are incorporated into Council's LTFP,
- 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 AMP,
- 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.

• The Asset Sustainability Ratio (*Per LGA 'Financial Sustainability' Information Paper No. 9: Financial Indicators - Revised May 2015*) is to achieve capital outlays on renewing/replacing assets at greater than 90% but less than 110% of the level proposed in the AMP.

8. **REFERENCES**

- IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, <u>www.ipwea.org/IIMM</u>
- IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, <u>www.ipwea.org/namsplus</u>.
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Yorke Peninsula Council, 'Strategic Management Plan',

Yorke Peninsula Council, 'Annual Business Plan and Budget',

Yorke Peninsula Council, 'Long Term Financial Plan',

Yorke Peninsula Council, 'Potable Water Infrastructure Asset Valuation and Methodology'.

9. APPENDICES

Appendix A	Maintenance Response Levels of Service
Appendix B	Projected 10 year Capital Renewal and Replacement Works Program
Appendix C	Abbreviations
Appendix D	Glossary

Appendix A Maintenance Response Levels of Service

To be developed in future revisions of this plan.

Yorke Peninsula Council - Report 6 - Appendix B 10 year Renewal & Replacement Program (Water_S1_V1)								
Assot	Sub				Rem	Planned	Renewal	Useful
ID	Category	Asset Name	From	То	Life	Renewal	Cost	Life
					(Years)	Year	(\$)	(Years)
29568	Tank Filling	Hardwicke Bay	Moores	Hardwicke	1	2019	\$3 <i>,</i> 000	15
	Control	Water Scheme Tank	Drive	Вау				
	System	Filling Control						
	<u> </u>	System				Subtotal	¢2.000	
	Sub				Rom	Planned	ŞS,000 Renewal	lleoful
Asset	Catagoriu	Accet Nome	Гиона	То	Life	Plaineu	Cost	Userur
ID	Category	Asset Name	From	10		Renewal	Cost	
205.07	Air Mahua		Dlask	Dia di Daint	(Years)	Year	(\$)	(Years)
28597	All valve	All Valve (PVV-IN-	Point	BIACK POINT	Z	2020	ŞZ,287	25
		Drive	Drive					
28615	Air Valve	Air Valve (PW-N-	St Vincent	Black Point	2	2020	\$2,287	25
		00052) in St Vincent	Highway					
		Highway						
28616	Air Valve	Air Valve (PW-N-	Black	Black Point	2	2020	\$2,287	25
		00053) in Black Bobs	Bobs					
28617	Air Valve	KOad Air Valve (PW-N-	Road	Black Point	2	2020	\$2 287	25
20017		00054) in Black Bobs	Bobs	DIGCKTOIL	2	2020	<i>92,201</i>	25
		Road	Road					
28618	Air Valve	Air Valve (PW-N-	Pine Point	Black Point	2	2020	\$2,287	25
		00055) in Pine Point	Road					
00010		Road	D D L L				40.007	
28619	Air Valve	Air Valve (PW-N-	Pine Point	Black Point	2	2020	\$2,287	25
		Road	Nuau					
			L			Subtotal	\$13.722	
	Sub				Rem	Planned	Renewal	Useful
Asset	Category	Asset Name	From	То	Life	Renewal	Cost	Life
U					(Years)	Year	(\$)	(Years)
29609	Submersible	Marion Bay Salt	Moores	Marion	4	2022	\$23,000	15
	Bore Pump	Water Desalination	Drive	Bay				
		Plant Beach Well						
		Bore Pump 1					400.000	4-
29610	Submersible	Marion Bay Salt	Moores	Marion	4	2022	\$23,000	15
	воге Риттр	Plant Beach Well	Drive	вду				
		Bore Pump 2						
	l		1	L	<u> </u>	Subtotal	\$46,000	1

Appendix B Projected 10 year Capital Renewal and Replacement Works Program

	Sub				Rem	Planned	Renewal	Useful
Asset	Category	Asset Name	From	То	Life	Renewal	Cost	Life
					(Years)	Year	(\$)	(Years)
29558	25mm Gate	Hardwicke Bay	Moores	Hardwicke	6	2024	\$928	20
	Valve	Water Scheme Gate	Drive	Bay				
		Valves 25mm						
29559	50mm Gate	Hardwicke Bay	Moores	Hardwicke	6	2024	\$900	20
	Valve	Water Scheme Gate	Drive	Вау				
20567	FOmm	Valves 50mm	Mooros	Hardwicko	6	2024	¢E40	20
29507	Solenoid	Water Scheme	Drive	Bay	0	2024	Ş540	20
	Valve	Solenoid Valve	Drive	Day				
		50mm						
29561	75mm	Hardwicke Bay	Moores	Hardwicke	6	2024	\$560	20
	Pressure	Water Scheme	Drive	Bay				
	Gauge	Gauges 75mm						
29557	80mm	Hardwicke Bay	Moores	Hardwicke	6	2024	\$2,470	20
	Flowmeter	Water Scheme	Drive	Bay				
		Flowmeter 80mm					40.000	
29560	80mm Gate	Hardwicke Bay	Moores	Hardwicke	6	2024	\$3,600	20
	valve	Water Scheme Gate	Drive	вау				
29562	ا مربوا	Hardwicke Bay	Moores	Hardwicke	6	2024	\$4.400	20
29302	Regulator	Water Scheme Level	Drive	Bay	0	2024	J4,400	20
	negulator	Regulators	Dirive	Duy				
29563	Transfer	Hardwicke Bay	Moores	Hardwicke	6	2024	\$10,350	20
	Pump 3kW	Water Scheme Main	Drive	Bay				
		Transfer Pump 1						
29564	Transfer	Hardwicke Bay	Moores	Hardwicke	6	2024	\$10,350	20
	Pump 3kW	Water Scheme Main	Drive	Bay				
		Transfer Pump 2					410.070	
29565	Transfer	Hardwicke Bay	Moores	Hardwicke	6	2024	\$10,350	20
	Ритр Зкуу	Transfor Pump 2	Drive	вау				
						Subtotal	<u>слл лло</u>	
-	Sub				Bom	Dianned	244,448 Bonowol	Ucoful
Asset	Sub		_	_	Kem	Planneu	Reliewal	Uselui
ID	Category	Asset Name	From	10	Life	Renewal	Cost	LITE
20244					(Years)	Year	(\$)	(Years)
29341	Water Meter	Water Meter (PW-N-	Harvey	Black Point	7	2025	Ş100	30
		00745) In Harvey	Crescent					
29342	Water Meter	Water Meter (PW-N-	Harvey	Black Point	7	2025	\$100	30
23342	water weter	00746) in Harvey	Crescent	DIACK I OIIIT	/	2025	J100	50
		Crescent	0.0000.11					
29343	Water Meter	Water Meter (PW-N-	Harvey	Black Point	7	2025	\$100	30
		00747) in Harvey	Crescent					
		Crescent						
29344	Water Meter	Water Meter (PW-N-	Harvey	Black Point	7	2025	\$100	30
		00748) in Harvey	Crescent					
000		Crescent					A	
29345	Water Meter	Water Meter (PW-N-	Harvey	Black Point	7	2025	\$100	30
		Crescent	crescent					
		Cresterre						

29346	Water Meter	Water Meter (PW-N- 00750) in Harvey Crescent	Harvey Crescent	Black Point	7	2025	\$100	30
29243	Water Meter	Water Meter (PW-N- 00751) in Harvey Crescent	Harvey Crescent	Black Point	7	2025	\$100	30
29244	Water Meter	Water Meter (PW-N- 00752) in Harvey Crescent	Harvey Crescent	Black Point	7	2025	\$100	30
29245	Water Meter	Water Meter (PW-N- 00753) in Harvey Crescent	Harvey Crescent	Black Point	7	2025	\$100	30
29246	Water Meter	Water Meter (PW-N- 00754) in Harvey Crescent	Harvey Crescent	Black Point	7	2025	\$100	30
29247	Water Meter	Water Meter (PW-N- 00755) in Harvey Crescent	Harvey Crescent	Black Point	7	2025	\$100	30
29248	Water Meter	Water Meter (PW-N- 00756) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29249	Water Meter	Water Meter (PW-N- 00757) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29250	Water Meter	Water Meter (PW-N- 00758) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29251	Water Meter	Water Meter (PW-N- 00759) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29252	Water Meter	Water Meter (PW-N- 00760) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29253	Water Meter	Water Meter (PW-N- 00761) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29254	Water Meter	Water Meter (PW-N- 00762) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29255	Water Meter	Water Meter (PW-N- 00763) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29347	Water Meter	Water Meter (PW-N- 00764) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29348	Water Meter	Water Meter (PW-N- 00765) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29349	Water Meter	Water Meter (PW-N- 00766) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29350	Water Meter	Water Meter (PW-N- 00767) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29351	Water Meter	Water Meter (PW-N- 00769) in Black Point	Black Point	Black Point	7	2025	\$100	30

		Drive	Drive					
20252	Water Motor	Mator Motor (DW/ N	Black	Black Doint	7	2025	¢100	20
29552	water weter	00770) in Plack Doint	DidCK	DIACK PUITL	/	2025	\$100	50
			Point					
20252	Wator Motor	Water Motor (DW/ N	Black	Plack Doint	7	2025	¢100	20
29333	water weter	00771) in Plack Point	Didck	DIACK FUITL	/	2023	2100	50
			Drive					
2025/	Wator Motor	Water Motor (DW/N	Black	Plack Doint	7	2025	¢100	20
29304	water weter	00772) in Black Point	Point	DIACK FUILL	/	2025	\$100	30
			Drive					
29355	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
25555	water wieter	00773) in Black Point	Point	Didek i olite	,	2025	Ϋ́ιοο	50
		Drive	Drive					
29356	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
23330	water meter	00774) in Black Point	Point	Black Forme	,	2025	ŶĨŨŨ	50
		Drive	Drive					
29357	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00775) in Black Point	Point			-0-0	<i>+</i> - 00	
		Drive	Drive					
29358	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00776) in Black Point	Point				,	
		Drive	Drive					
29359	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00777) in Black Point	Point				7-00	
		Drive	Drive					
29256	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00778) in Black Point	Point					
		Drive	Drive					
29257	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00779) in Black Point	Point					
		Drive	Drive					
29258	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00780) in Black Point	Point					
		Drive	Drive					
29259	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00781) in Black Point	Point					
		Drive	Drive					
29260	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00782) in Black Point	Point					
		Drive	Drive					
29261	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00783) in Black Point	Point					
-		Drive	Drive					
29262	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00784) in Black Point	Point					
		Drive	Drive					
29263	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00785) in Black Point	Point					
		Drive	Drive					
29264	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	Ş100	30
		00786) in Black Point	Point					
20255		Drive	Drive					
29265	Water Meter	water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
			Point					
1		Drive	Drive			1	1	

29266	Water Meter	Water Meter (PW-N- 00788) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29267	Water Meter	Water Meter (PW-N- 00789) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29268	Water Meter	Water Meter (PW-N- 00790) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29360	Water Meter	Water Meter (PW-N- 00791) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29361	Water Meter	Water Meter (PW-N- 00792) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29362	Water Meter	Water Meter (PW-N- 00793) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29363	Water Meter	Water Meter (PW-N- 00794) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29364	Water Meter	Water Meter (PW-N- 00795) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29365	Water Meter	Water Meter (PW-N- 00796) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29366	Water Meter	Water Meter (PW-N- 00797) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29367	Water Meter	Water Meter (PW-N- 00798) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29368	Water Meter	Water Meter (PW-N- 00799) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29369	Water Meter	Water Meter (PW-N- 00800) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29370	Water Meter	Water Meter (PW-N- 00801) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29371	Water Meter	Water Meter (PW-N- 00802) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29372	Water Meter	Water Meter (PW-N- 00803) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29269	Water Meter	Water Meter (PW-N- 00804) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29270	Water Meter	Water Meter (PW-N- 00805) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29271	Water Meter	Water Meter (PW-N- 00806) in Black Point	Black Point	Black Point	7	2025	\$100	30

		Drive	Drive					
20272	Wator Motor	Mator Motor (DM/ N	Plack	Rlack Point	7	2025	\$100	20
29272	water weter	00207) in Plack Point	Didck	DIACK FUITL	/	2023	2100	50
			Drive					
20272	Water Meter	Water Meter (DW-N-	Black	Black Point	7	2025	\$100	30
29275		00808) in Black Point	Diack	DIACK FUITL	/	2023	\$100	50
			Drive					
2027/	Water Meter	Water Meter (DW-N-	Black	Black Point	7	2025	\$100	30
25274	water weter	00809) in Black Point	Point	DIACK I OITT	,	2025	J100	50
		Drive	Drive					
29275	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
23275		00810) in Black Point	Point	Black Forne		2023	ŶĨŨŨ	50
		Drive	Drive					
29276	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00811) in Black Point	Point			-0-0	<i>+</i> - 00	
		Drive	Drive					
29277	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00812) in Black Point	Point				,	
		Drive	Drive					
29278	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00813) in Black Point	Point					
		Drive	Drive					
29279	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00814) in Black Point	Point					
		Drive	Drive					
29280	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00815) in Black Point	Point					
		Drive	Drive					
29281	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00816) in Black Point	Point					
		Drive	Drive					
29373	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00817) in Black Point	Point					
		Drive	Drive					
29374	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00818) in Black Point	Point					
		Drive	Drive					
29375	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00819) in Black Point	Point					
		Drive	Drive				4	
29376	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	Ş100	30
		00820) in Black Point	Point					
20277		Drive	Drive		-	2025	6400	20
29377	water Meter	Water Meter (PW-N-	Black	Black Point	/	2025	\$100	30
			Point					
20270	Mator Mator	Drive	Drive	Dia di Daint	7	2025	ć100	20
29378	water weter	00822) in Plack Point	BidCK	BIACK POINT	/	2025	\$100	30
		Drivo	Drivo					
20270	Wator Motor	Water Motor (DW/ N	Black	Plack Doint	7	2025	\$100	20
23313		00823) in Rlack Point	Point		1	2025	ΥUU	50
			Drive					
29380	Water Meter	Water Meter (PW/-N-	Black	Black Point	7	2025	\$100	30
23300	water meter	00824) in Black Point	Point	Didek i Onit	,	2025	9100	50
		Drive	Drive					

29381	Water Meter	Water Meter (PW-N- 00825) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29382	Water Meter	Water Meter (PW-N- 00826) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29383	Water Meter	Water Meter (PW-N- 00827) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29384	Water Meter	Water Meter (PW-N- 00828) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29385	Water Meter	Water Meter (PW-N- 00829) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29282	Water Meter	Water Meter (PW-N- 00830) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29283	Water Meter	Water Meter (PW-N- 00831) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29284	Water Meter	Water Meter (PW-N- 00832) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29285	Water Meter	Water Meter (PW-N- 00833) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29286	Water Meter	Water Meter (PW-N- 00834) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29287	Water Meter	Water Meter (PW-N- 00835) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29288	Water Meter	Water Meter (PW-N- 00836) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29289	Water Meter	Water Meter (PW-N- 00837) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29290	Water Meter	Water Meter (PW-N- 00838) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29291	Water Meter	Water Meter (PW-N- 00839) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29292	Water Meter	Water Meter (PW-N- 00840) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29293	Water Meter	Water Meter (PW-N- 00841) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29294	Water Meter	Water Meter (PW-N- 00842) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29386	Water Meter	Water Meter (PW-N- 00843) in Black Point	Black Point	Black Point	7	2025	\$100	30

		Drive	Drive					
20207	Water Motor	Mator Motor (DW/ N	Plack	Rlack Doint	7	2025	\$100	20
29507	water weter	00844) in Plack Doint	DidCK	DIACK POILIT	/	2025	\$100	50
		Drivo	Drivo					
20200	Wator Motor	Mator Motor (DW/ N	Black	Plack Doint	7	2025	\$100	20
29300	water weter	00845) in Plack Point	Didck	DIACK FUILL	/	2025	2100	50
		Drive	Drive					
20200	Wator Motor	Mator Motor (DW/ N	Black	Plack Doint	7	2025	¢100	20
29309		008/16) in Black Point	Point	DIACK FOILIT	,	2025	\$100	30
		Drive	Drive					
29390	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
25550	Water Meter	00847) in Black Point	Point	Black Forme	,	2025	ŶĨŨŨ	50
		Drive	Drive					
29391	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
23031	mater meter	00848) in Black Point	Point	Black Foline		2023	ŶĨŨŨ	
		Drive	Drive					
29392	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00849) in Black Point	Point				<i>+</i> - 00	
		Drive	Drive					
29393	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00850) in Black Point	Point					
		Drive	Drive					
29394	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00851) in Black Point	Point					
		Drive	Drive					
29395	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00852) in Black Point	Point					
		Drive	Drive					
29396	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00853) in Black Point	Point					
		Drive	Drive					
29397	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00854) in Black Point	Point					
		Drive	Drive					
29398	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00855) in Black Point	Point					
		Drive	Drive					
29399	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00856) in Black Point	Point					
		Drive	Drive					
29400	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00857) in Black Point	Point					
		Drive	Drive					
29401	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00858) in Black Point	Point					
		Drive	Drive				4	
29402	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	Ş100	30
		00859) in Black Point	Point					
		Drive	Drive			2025	4400	
29403	water Meter	water Meter (PW-N-	Black	Black Point	/	2025	\$100	30
			Point					
20404	\\/otor \/-+-		Drive	Dia als Datiant	7	2025	ć100	20
29404	water weter	00861) in Plack Doint	Black	васк роіпт	/	2025	\$100	30
			Puill					
1	1	Dive	Dive			1	1	1

29405	Water Meter	Water Meter (PW-N- 00862) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29406	Water Meter	Water Meter (PW-N- 00863) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29407	Water Meter	Water Meter (PW-N- 00864) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29408	Water Meter	Water Meter (PW-N- 00865) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29409	Water Meter	Water Meter (PW-N- 00866) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29410	Water Meter	Water Meter (PW-N- 00868) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29411	Water Meter	Water Meter (PW-N- 00870) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29459	Water Meter	Water Meter (PW-N- 00871) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29460	Water Meter	Water Meter (PW-N- 00872) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29461	Water Meter	Water Meter (PW-N- 00873) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29462	Water Meter	Water Meter (PW-N- 00874) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29463	Water Meter	Water Meter (PW-N- 00875) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29464	Water Meter	Water Meter (PW-N- 00876) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29465	Water Meter	Water Meter (PW-N- 00877) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29466	Water Meter	Water Meter (PW-N- 00878) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29467	Water Meter	Water Meter (PW-N- 00879) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29468	Water Meter	Water Meter (PW-N- 00880) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29469	Water Meter	Water Meter (PW-N- 00881) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29470	Water Meter	Water Meter (PW-N- 00882) in Black Point	Black Point	Black Point	7	2025	\$100	30

		Drive	Drive					
20471	Water Motor	Mator Motor (DW/ N	Black	Black Doint	7	2025	¢100	20
29471	water weter	00992) in Plack Point	Didck	DIACK FUITL	/	2023	2100	50
			Drive					
20/12	Water Meter	Water Meter (DW-N-	Black	Black Point	7	2025	\$100	30
23412	water weter	00884) in Black Point	Point	DIACK FOILIC	/	2025	\$100	30
			Drive					
20/12	Water Meter	Water Meter (DW-N-	Black	Black Point	7	2025	\$100	30
25415	water weter	00885) in Black Point	Point	DIACK I OITT	,	2025	J100	50
		Drive	Drive					
29414	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
23.11.		00886) in Black Point	Point	Black Forne		2023	<i></i>	
		Drive	Drive					
29415	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00887) in Black Point	Point				<i>+</i> - 00	
		Drive	Drive					
29416	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00888) in Black Point	Point				7-00	
		Drive	Drive					
29417	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00889) in Black Point	Point					
		Drive	Drive					
29418	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00890) in Black Point	Point					
		Drive	Drive					
29419	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00891) in Black Point	Point					
		Drive	Drive					
29420	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00892) in Black Point	Point					
		Drive	Drive					
29421	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00893) in Black Point	Point					
		Drive	Drive					
29422	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00894) in Black Point	Point					
-		Drive	Drive					
29423	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00895) in Black Point	Point					
		Drive	Drive					
29424	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	\$100	30
		00896) in Black Point	Point					
		Drive	Drive				4	
29472	Water Meter	Water Meter (PW-N-	Black	Black Point	7	2025	Ş100	30
		00897) in Black Point	Point					
		Drive	Drive		_	2025		
29473	Water Meter	Water Meter (PW-N-	Black	Black Point	/	2025	\$100	30
		00898) In Black Point	Point					
20474		Drive	Drive	Dia di Daint	7	2025	ć100	20
29474	water weter	00800) in Plack Daint	BidCK	BIACK POINT	/	2025	\$100	30
		Drivo	Point					
20/75	Water Motor	Water Meter (DM/ N	Black	Black Doint	7	2025	\$100	20
23473		00900) in Rlack Point	Point		/	2025	2100	50
		Drive	Drive					
1						1	1	1

29476	Water Meter	Water Meter (PW-N- 00901) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29477	Water Meter	Water Meter (PW-N- 00902) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29478	Water Meter	Water Meter (PW-N- 00903) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29479	Water Meter	Water Meter (PW-N- 00904) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29480	Water Meter	Water Meter (PW-N- 00905) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29481	Water Meter	Water Meter (PW-N- 00906) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29482	Water Meter	Water Meter (PW-N- 00907) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29483	Water Meter	Water Meter (PW-N- 00908) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29425	Water Meter	Water Meter (PW-N- 00910) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29426	Water Meter	Water Meter (PW-N- 00911) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29427	Water Meter	Water Meter (PW-N- 00913) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29428	Water Meter	Water Meter (PW-N- 00914) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29429	Water Meter	Water Meter (PW-N- 00915) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29430	Water Meter	Water Meter (PW-N- 00916) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29431	Water Meter	Water Meter (PW-N- 00918) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29432	Water Meter	Water Meter (PW-N- 00919) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29433	Water Meter	Water Meter (PW-N- 00920) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
29488	Water Meter	Water Meter (PW-N- 00936) in Black Point Drive	Black Point Drive	Black Point	7	2025	\$100	30
						Subtotal	\$17,100	

Asset	Sub				Rem	Planned	Renewal	Useful
ID	Category	Asset Name	From	То	Life	Renewal	Cost	Life
					(Years)	Year	(\$)	(Years)
29607	25mm Air	Marion Bay Salt	Moores	Marion	9	2027	\$296	20
	Release Valve	Water Desalination	Drive	Вау				
		Valve						
29621	25mm Gate	Marion Bay Salt	Moores	Marion	9	2027	\$928	20
25021	Valve	Water Desalination	Drive	Bay	5	2027	<i>Ş</i> 520	20
	, and a	Plant Gate Valves	Diric	Duy				
		25mm PE						
29622	25mm Gate	Marion Bay Salt	Moores	Marion	9	2027	\$2,784	20
	Valve	Water Desalination	Drive	Bay				
		Plant Gate Valves						
		25mm PVC						
29620	50mm	Marion Bay Salt	Moores	Marion	9	2027	\$4,740	20
	Flowmeter	Water Desalination	Drive	Вау				
		Plant Flowmeter						
20622	50mm Cata	50mm Marion Ray Salt	Mooros	Marian	0	2027	\$2,700	20
29025	Valve	Water Desalination	Drive	Bay	9	2027	\$2,700	20
	Valve	Plant Gate Valves	Drive	Day				
		50mm PVC						
29625	50mm	Marion Bay Salt	Moores	Marion	9	2027	\$1,680	20
	Pressure	Water Desalination	Drive	Bay				
	Gauge	Plant Gauges 50mm						
29624	80mm Gate	Marion Bay Salt	Moores	Marion	9	2027	\$5,400	20
	Valve	Water Desalination	Drive	Bay				
		Plant Gate Valves						
		80mm SS					4	
29608	Backflush	Marion Bay Salt	Moores	Marion	9	2027	\$2,240	20
	Controller	Water Desalination	Drive	вау				
29615	Distribution	Marion Bay Salt	Moores	Marion	9	2027	\$9 747	20
25015	Pump 2.4kW	Water Desalination	Drive	Bay	5	2027	<i>43,717</i>	20
		Plant Distribution						
		Pump 1						
29616	Distribution	Marion Bay Salt	Moores	Marion	9	2027	\$9,747	20
	Pump 2.4kW	Water Desalination	Drive	Вау				
		Plant Distribution						
		Pump 2					4	
29626	Feed Pump	Marion Bay Salt	Moores	Marion	9	2027	\$11,080	20
	30KW	Water Desalination	Drive	вау				
29619	Filter Feed	Marion Bay Salt	Moores	Marion	9	2027	\$5 240	20
25015	Pump	Water Desalination	Drive	Bav		2027	<i>43,240</i>	20
		Plant Filter Feed	2					
		Pump						
29631	Level	Marion Bay Salt	Moores	Marion	9	2027	\$6,600	20
	Regulator	Water Desalination	Drive	Вау				
		Plant Plant Start Up						
		Level Regulators						

29434	Water Meter	Water Meter (PW-N-	Black	Black Point	9	2027	\$100	30
		00921) in Black Point	Point					
		Drive	Drive					
29435	Water Meter	Water Meter (PW-N-	Black	Black Point	9	2027	\$100	30
		00926) in Black Point	Point					
		Drive	Drive					
29436	Water Meter	Water Meter (PW-N-	Black	Black Point	9	2027	\$100	30
		00928) in Black Point	Point					
		Drive	Drive					
29484	Water Meter	Water Meter (PW-N-	Black	Black Point	9	2027	\$100	30
		00932) in Black Point	Point					
		Drive	Drive					
29485	Water Meter	Water Meter (PW-N-	Black	Black Point	9	2027	\$100	30
		00933) in Black Point	Point					
		Drive	Drive					
29486	Water Meter	Water Meter (PW-N-	Black	Black Point	9	2027	\$100	30
		00934) in Black Point	Point					
		Drive	Drive					
29487	Water Meter	Water Meter (PW-N-	Black	Black Point	9	2027	\$100	30
		00935) in Black Point	Point					
		Drive	Drive					
						Subtotal	\$63,881	
					Prog	ram Total	\$188 151	

Appendix C Abbreviations

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

Appendix D Glossary

Annual service cost (ASC)

1) Reporting actual cost

The annual (accrual) cost of providing a service including operations, maintenance, depreciation, finance/opportunity and disposal costs less revenue.

 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 useful life (or total future the 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.

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Depreciated replacement cost (DRC)

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

Depreciation / amortisation

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

Economic life

See useful life definition.

Expenditure

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

Expenses

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

Fair value

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

Financing gap

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

Heritage asset

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

Impairment Loss

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

Infrastructure assets

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

Investment property

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

- (a) use in the production or supply of goods or services or for administrative purposes; or
- (b) sale in the ordinary course of business.

Key performance indicator

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

Level of service

The defined service quality for a particular service/activity against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental impact, acceptability and cost.

Life Cycle Cost *

- 1. **Total LCC** The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs.
- Average LCC The life cycle cost (LCC) is average cost to provide the service over the longest asset life cycle. It comprises average operations, maintenance expenditure plus asset consumption expense, represented by depreciation expense projected over 10 years. The Life Cycle Cost does not indicate the funds required to provide the service in a particular year.

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 nondisclosure 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, oncosts 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/subcomponents of assets that is undertaken on a regular cycle including repainting, replacement of air conditioning equipment, etc. This work generally falls below the capital/ maintenance threshold and needs to be identified in a specific maintenance budget allocation.

Strategic Longer-Term Plan

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

Sub-component

Smaller individual parts that make up a component part.

Useful life

Either:

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

It is estimated or expected time between placing the asset into service and removing it from service, or the estimated period of time over which the future economic benefits embodied in a depreciable asset, are expected to be consumed by the Council.

Value in Use

The present value of future cash flows expected to be derived from an asset or cash generating unit. It is deemed to be depreciated replacement cost (DRC) for those assets whose future economic benefits are not primarily dependent on the asset's ability to generate net cash inflows, where the entity would, if deprived of the asset, replace its remaining future economic benefits. Source: IPWEA, 2009, Glossary

Additional and modified glossary items shown *