



Asset Management Plan 2028

Stormwater Assets

A safe, sustainable,
vibrant **Community**



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The entity can choose either template to write/update their plan regardless of their level of asset management maturity and in some cases may even choose to use only the Executive Summary.

The illustrated content is suggested only and users should feel free to omit content as preferred (e.g. where info is not currently available).

This Asset Management Plan may be used as a supporting document to inform an overarching Strategic Asset Management Plan.

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1.0 EXECUTIVE SUMMARY

1.1 The Purpose of the Plan

This Asset Management Plan (AM Plan) details information about infrastructure assets with actions required to provide an agreed level of service in the most cost-effective manner while outlining associated risks. The plan defines the services to be provided, how the services are provided and what funds are required to provide over 10 year planning period. The AM Plan will link to a Long-Term Financial Plan which typically considers a year planning period.

1.2 Asset Description

This plan covers the infrastructure assets that provide Stormwater (SW) related assets

The SW network comprises:

Asset Category	Quantity	Current Replacement Cost (\$)
SW Pipes	161,975m	125,560,522.85
Culverts	25 Nos	4,216,645.05
Open Channel Floors	10,919m ²	2,202,753.88
Open Channel Walls	12,147m ²	12,855,841.95
SW Pits	4021Nos	16,882,282.73
Water Detention System	1 Nos	496,723.68
Linear Park SW Assets (Trash Racks, GPT, Mesh Pits)		609,571.73
Total		162,824,342

Note: As valuation figure for WSUD assets are not available at the time of preparing this document, this asset class is not shown in the above table.

- The above infrastructure assets have replacement value estimated at **\$162,824,342**

Typical SW pipe and Culvert



Typical underground SW pipe



Typical Culvert

Open Channel Walls



Gabion Wall



Rock Wall



Rock Wall



Concrete Wall

Open Channel Floors



Concrete Floor



Rock Floor



Trash Rack



Mesh Pit

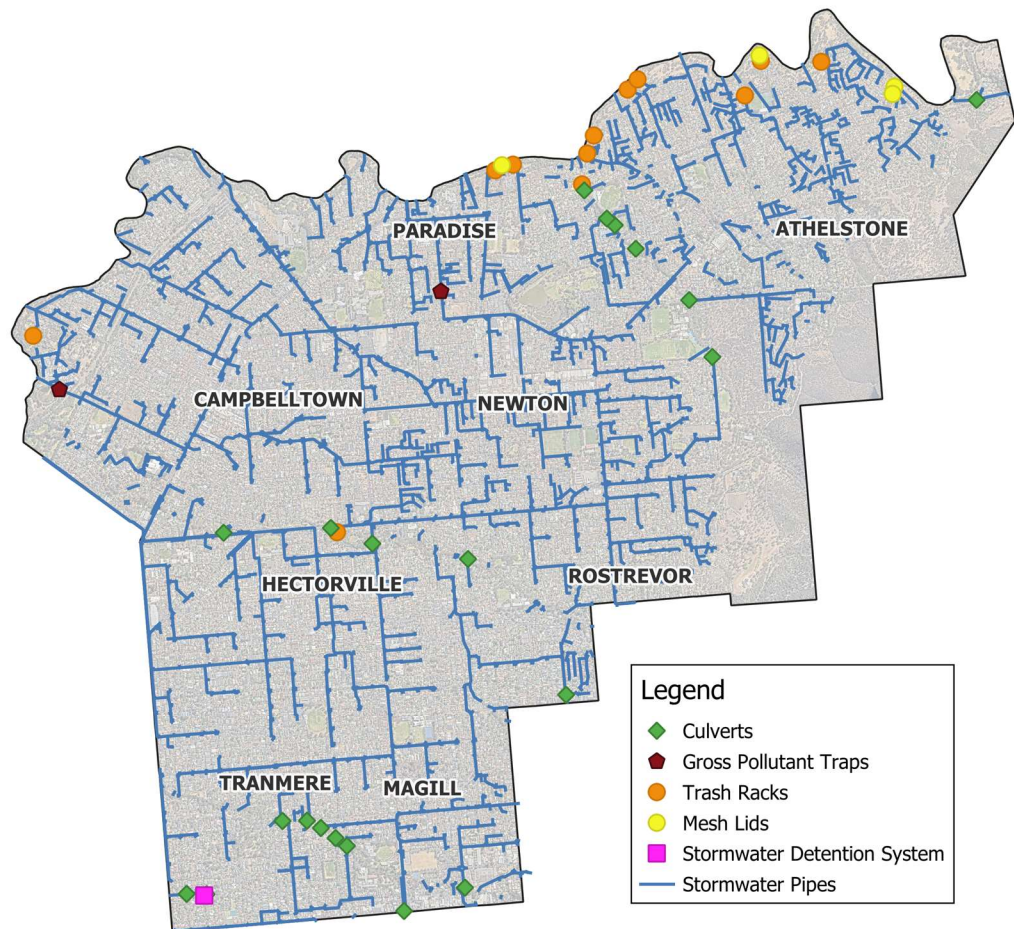


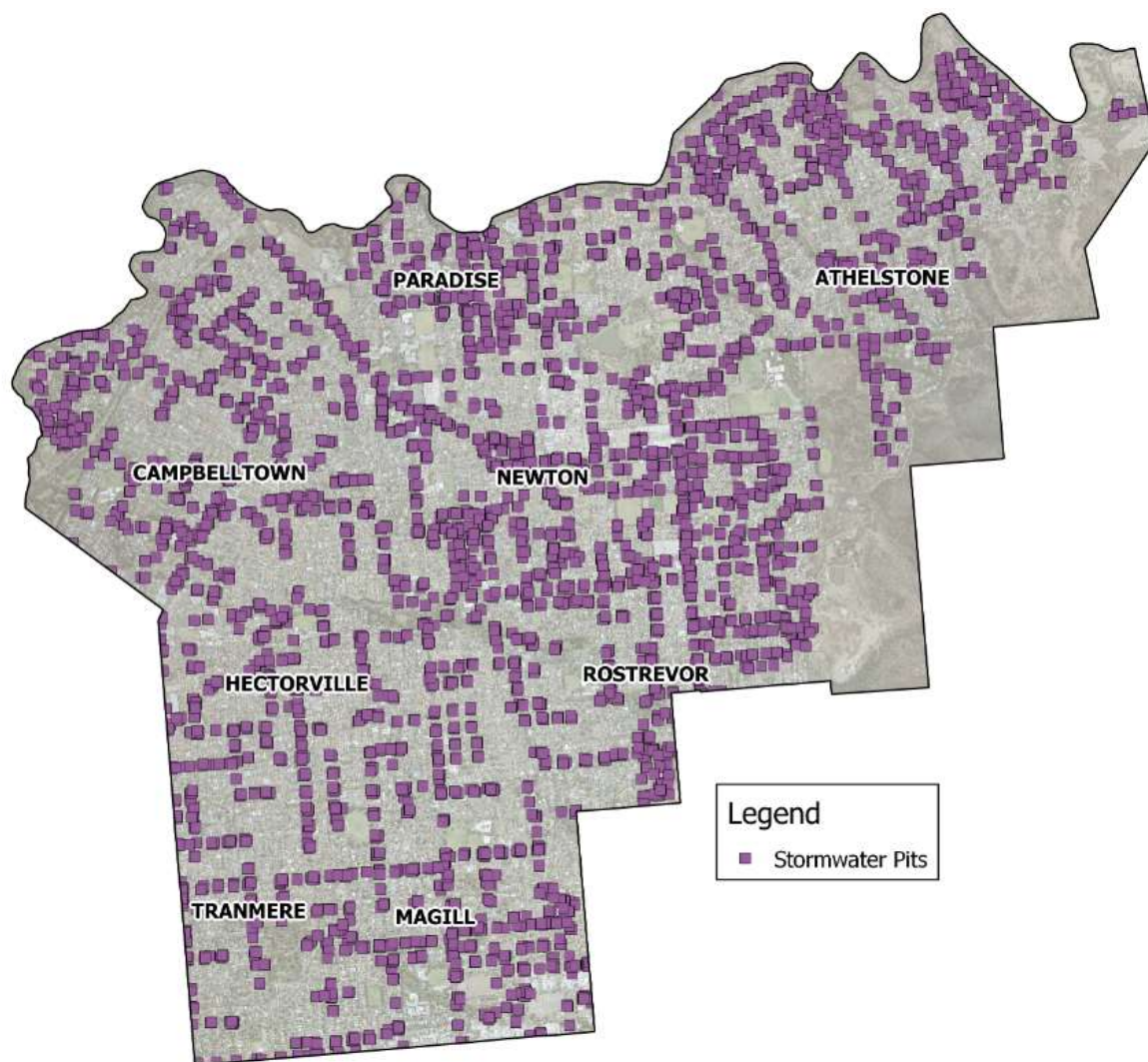
Grated Inlet Pit



Side Entry Pit (double SEP)

Locations of the SW assets are shown below:





1.3 Levels of Service

The allocation in the planned budget is sufficient to continue providing existing services at current levels for the planning period.

The main service consequences of the Planned Budget are:

- Litigation
- General Community Complaints
- Public perception/reputation – reduction in confidence of Council

1.4 Future Demand

The factors influencing future demand and the impacts they have on service delivery are created by:

- Climate
- Customer Requests and Community needs
- Budgets and funding partnership opportunities

These demands will be approached using a combination of managing existing assets, upgrading existing assets and providing new assets to meet demand. Demand management practices may also include a combination of non-asset solutions, insuring against risks and managing failures.

- Recognise climate change as part of stormwater implication – look for soft engineering solutions by consulting with other similar agencies to ensure best practice (upskilling Staff).
- With new development manage pre verse post storm water discharge to ensure broader catchment impacts are minimised.
- Advocate for broader Stormwater Catchment Management plans seeking partnership support.

1.5 Lifecycle Management Plan

1.5.1 What does it Cost?

The forecast lifecycle costs necessary to provide the services covered by this AM Plan includes operation, maintenance, renewal, acquisition, and disposal of assets. Although the AM Plan may be prepared for a range of time periods, it typically informs a Long-Term Financial Planning period of 10 years. Therefore, a summary output from the AM Plan is the forecast of 10 year total outlays, which for the SW assets are estimated as \$8,983,170 or \$898,317 on average per year.

1.6 Financial Summary

1.6.1 What we will do

Estimated available funding for the 10 year period is \$9,020,000 or \$902,000 on average per year as per the Long-Term Financial plan or Planned Budget. This is 100.53% of the cost to sustain the current level of service at the lowest lifecycle cost.

The infrastructure reality is that only what is funded in the long-term financial plan can be provided. The Informed decision making depends on the AM Plan emphasising the consequences of Planned Budgets on the service levels provided and risks.

The anticipated Planned Budget for SW assets leaves a surplus of \$3,683 on average per year of the forecast lifecycle costs required to provide services in the AM Plan compared with the Planned Budget currently included in the Long-Term Financial Plan. This is shown in the figure below.

Forecast Lifecycle Costs and Planned Budgets

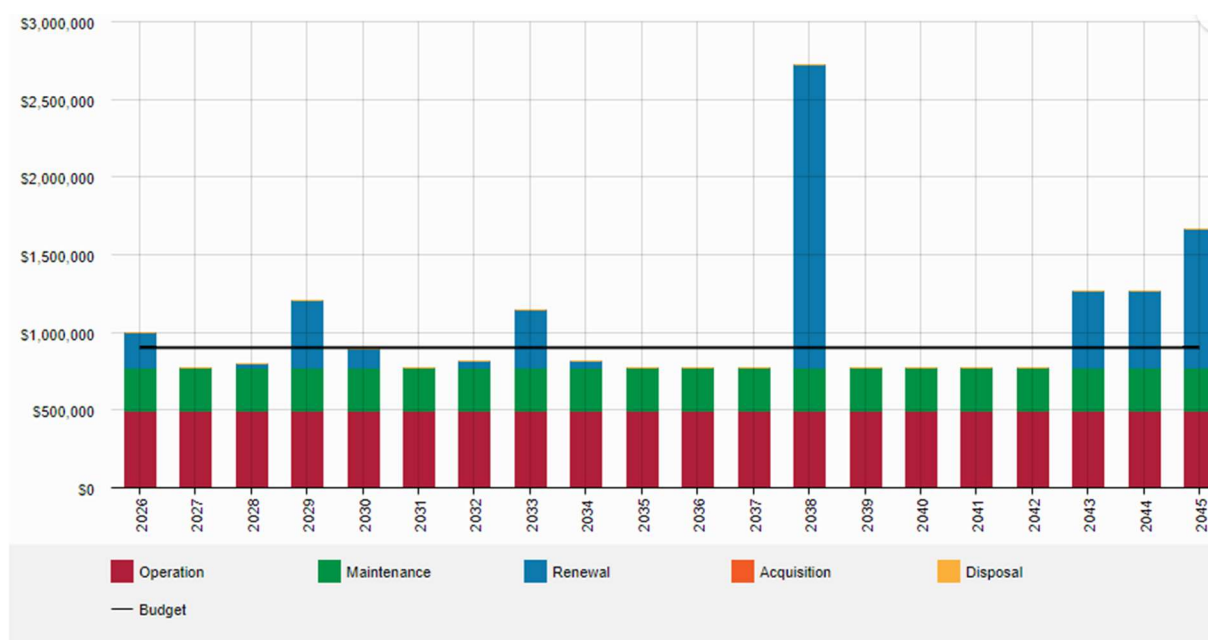
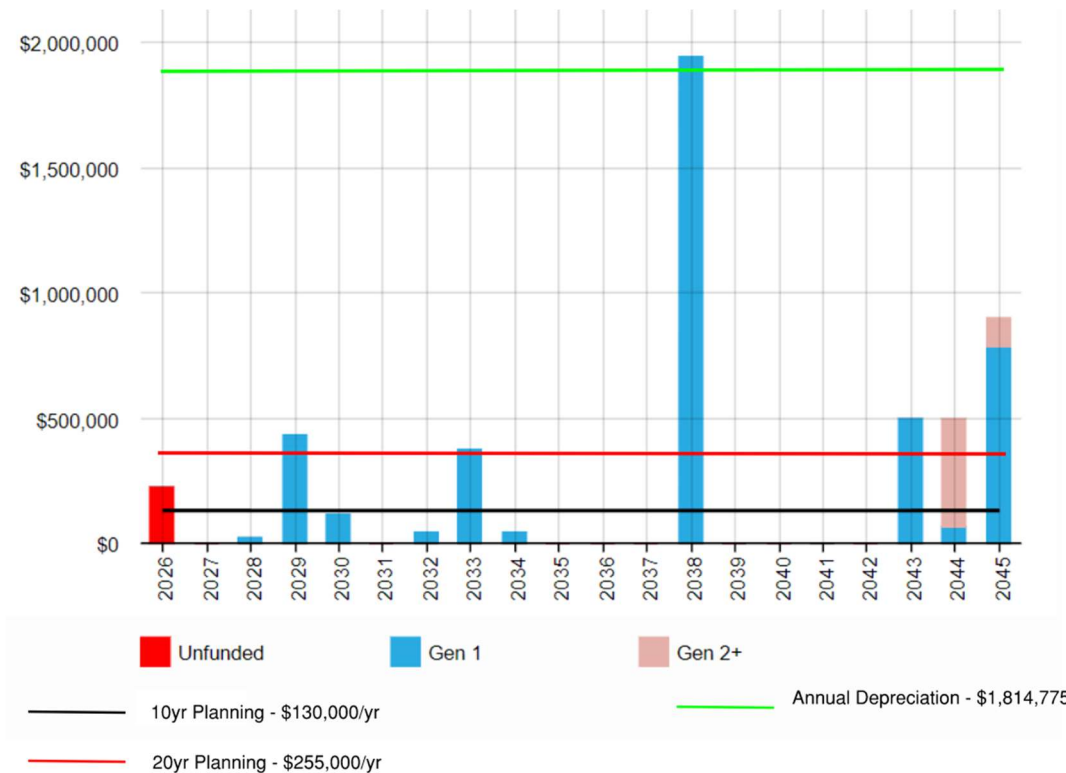


Figure Values are in current dollars (2023).

We plan to provide SW asset services for the following:

- Operation, maintenance, renewal and acquisition of SW network to meet service levels set by Council in annual budgets.
- No new works or Acquisitions have been identified in the next 10 years
- This plan is based on total budgeted expenditure for renewal works with 10 year average funding of \$130,000 per year
 - This level of funding create a surplus funding of \$3,683 per year for the next 10 year

Forecast renewal funding for the 20 year planning period vs annual depreciation (shown in 2023 dollars)



- Further modelling indicates that
 - For 20year planning, it requires on an average \$255,000 per year to complete the renewal works
- The disposal life cycle costs shown are minimal, as these cost are built into renewal costs.
- Annual depreciation cost is \$1,814,775

1.6.2 What we cannot do

We currently do **not** allocate enough budget to provide all new services being sought. Works and services that cannot be provided under present funding levels are:

- New SW related requests from the Community, unless funded through Council budgets.
- New SW infrastructure to cater for the increase of stormwater runoff due to infill development or through climate change, unless funded through Council or partnership budgets.

1.6.3 Managing the Risks

Our present budget levels are sufficient to continue to manage risks in the medium term.

The main risk consequences are:

- Litigation
- Financial
- Public perception/reputation – reduction in confidence of Council

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

- Undertaking frequent inspections and maintenance to ensure that the assets meet current legislative and safety requirements.
- Allocate sufficient funds to ensure that assets meet compliance requirements.
- Communicate effectively with the ratepayers.
- Requesting additional funding to remediate stormwater issues e.g. localise flooding
- Advocate for partnerships to develop city wide stormwater management plans

1.7 Asset Management Planning Practices

Key assumptions made in this AM Plan are:

- Data is accurate and best reflects asset characteristics.
- All assets within the area are known and recorded.
- Resources for AMP implementation are available
- The forecast budget is sufficient to cater for economic environment over a longer period.

Assets requiring renewal are identified from either the asset register or an alternative method.

- The timing of capital renewals based on the asset register is applied by adding the useful life to the year of acquisition or year of last renewal,
- Alternatively, an estimate of renewal lifecycle costs is projected from external condition modelling systems and may be supplemented with, or based on, expert knowledge.

The Asset Register was used to forecast the renewal lifecycle costs for this AM Plan.

This AM Plan is based on a reliable level of confidence of the source data.

1.8 Monitoring and Improvement Program

The next steps resulting from this AM Plan to improve asset management practices are:

- further develop/improve Mobile Field Data Collection technology which will enable Staff to record defects in the Maintenance Management in Conquest Asset Management System (ASM). With Council moving to a cloud-based system and upgrades in the AM system, opportunities to enhance current mobile data collection will support process improvement.
- train staff in order to update their knowledge with current Asset Management practices.
- Seek opportunities to action the recommendations from the 2023 Maturity assessment.

2.0 Introduction

2.1 Background

This AM Plan communicates the requirements for the sustainable delivery of services through management of assets, compliance with regulatory requirements, and required funding to provide the appropriate levels of service over the planning period.

The AM Plan is to be read with the Council planning documents. This should include the Asset Management Policy and Asset Management Strategy, where developed, along with other key planning documents:

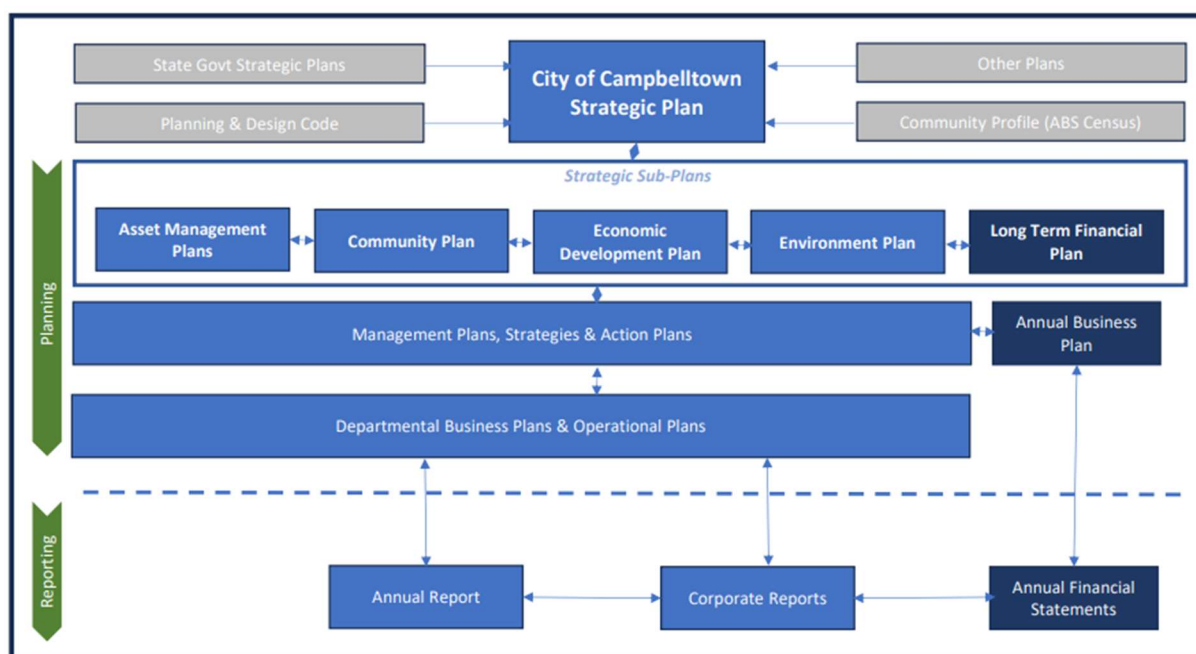
- Campbelltown City Council Asset Capitalisation Administrative Procedure
- Campbelltown City Council Depreciation Policy
- Unit Rate Review Document
- Resilient East Vulnerability Assessment and Climate Projects for the eastern Region
 - <https://www.resilienteast.com/resources>
- State of the Environment reporting (done every 5 years, most recent is 2018)
 - https://www.epa.sa.gov.au/data_and_publications/state_of_the_environment_reporting
- Campbelltown City Council Social Plan 2020
- Campbelltown City Council Strategic Plan 2024
- Climate Solution Strategy 2021

Comment on the current status of Asset Management in the Organisation.

The infrastructure assets covered by this AM Plan include SW Pipes, Culverts, Open Channel Walls, Trash Racks, SW Pits, Gross Pollutant Traps, Mesh Pits and Open Channel Floors. For a detailed summary of the assets covered in this AM Plan refer to Table in Section 5.

These assets are used to provide SW Management services throughout the City.

The infrastructure assets included in this plan have a total replacement value of \$162,824,342

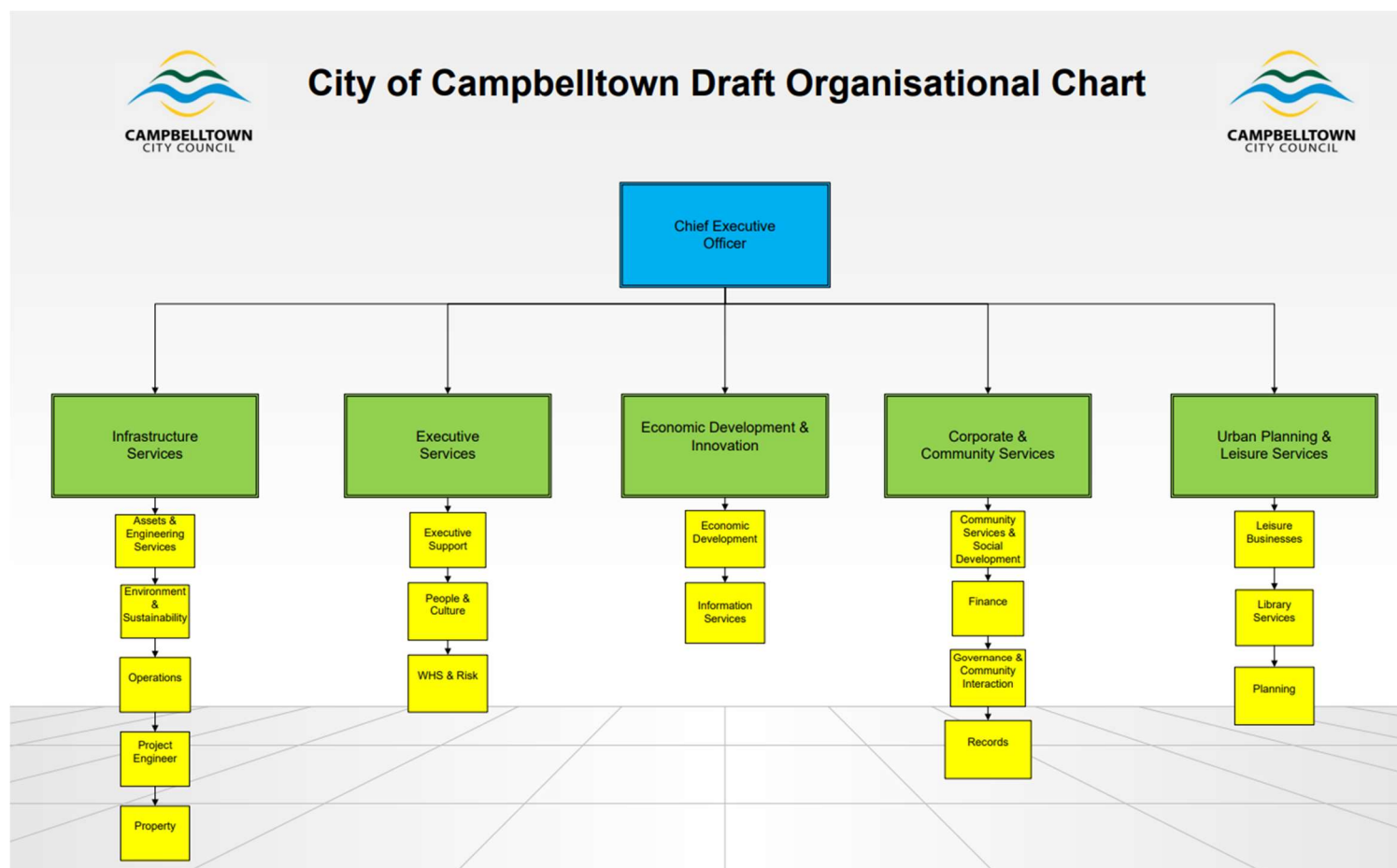


Key stakeholders in the preparation and implementation of this AM Plan are shown in Table 2.1.

Table 2.1: Key Stakeholders in the AM Plan

Key Stakeholder	Role in Asset Management Plan
Community & Ratepayers	<ul style="list-style-type: none"> • End users of the services, the customer • Provide feedback on services
Elected Members	<ul style="list-style-type: none"> • Represent needs of community/shareholders • Allocate resources to meet the organisation's objectives in providing services while managing risks • Ensure organisation is financial sustainable. • Adoption of AMP
CEO/ Executive Management team	<ul style="list-style-type: none"> • Provide direction of AMP to meet the organisation's objectives in providing services while managing risks • Ensure organisation is financially sustainable • Communicate AMP with the elected body
General Manager Infrastructure, Planning & Sustainability Services	<ul style="list-style-type: none"> • Manage organisation operational/capital activities • Provide future strategic planning and strategic directions • Allocate appropriate resources
<ul style="list-style-type: none"> • Manager Infrastructure Services 	<ul style="list-style-type: none"> • Overseeing the design of capital works projects and more broadly asset management. • Manage technical Level of Service • Manage the Asset Team
<ul style="list-style-type: none"> • Manager City Operations 	<ul style="list-style-type: none"> • Manage the delivery of Capital Works and maintenance programs
<ul style="list-style-type: none"> • Manager Environment & Sustainability Services 	<ul style="list-style-type: none"> • Manage the delivery of Councils Environmental and Sustainability goals
<ul style="list-style-type: none"> • Maintenance Coordinator 	<ul style="list-style-type: none"> • Supervision of Capital Works and maintenance programs
<ul style="list-style-type: none"> • Finance Department 	<ul style="list-style-type: none"> • LTFP, Asset Registers and operational financial data
<ul style="list-style-type: none"> • Team Leader Asset Planning & Design Engineering 	<ul style="list-style-type: none"> • Collate and analyse asset information • Manage Councils AMPs • Manage and maintain Councils AMS
<ul style="list-style-type: none"> • GIS Officer & Asset Support Officer 	<ul style="list-style-type: none"> • Assist in the development, maintenance and improvement of corporate spatial data and asset management • Develop, maintain and improve Council's GIS • Asset Management SQL Server Database Management • Undertake asset related inspections and condition assessments
<ul style="list-style-type: none"> • Governance 	<ul style="list-style-type: none"> • Development of Strategic Plans and other key strategic plans

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



2.2 Goals and Objectives of Asset Ownership

Our goal for 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
- Linking to a Long-Term Financial Plan which identifies required, affordable forecast costs and how it will be allocated.

Key elements of the planning framework are

- Levels of service – specifies the services and levels of service to be provided,
- Risk Management,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Lifecycle management – how to 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 – how we manage provision of the services,
- Monitoring – how the plan will be monitored to ensure objectives are met,
- Asset management improvement plan – how we increase asset management maturity.

Other references to the benefits, fundamentals principles and objectives of asset management are:

- International Infrastructure Management Manual 2015 ¹
- ISO 55000²

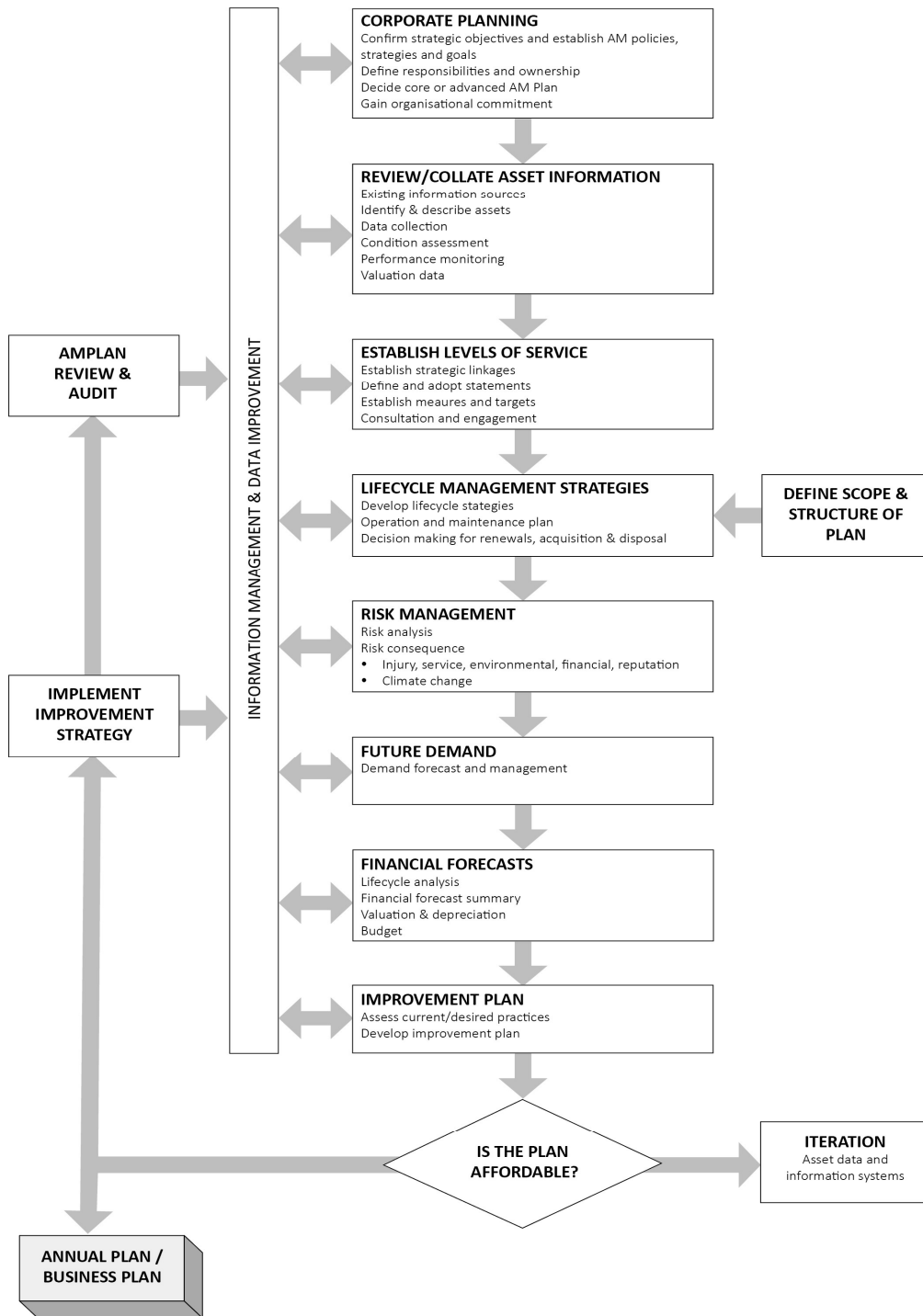
A road map for preparing an AM Plan is shown below.

Road Map for preparing an Asset Management Plan

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

¹ Based on IPWEA 2015 IIMM, Sec 2.1.3, p 2 | 13

² ISO 55000 Overview, principles and terminology



3.0 LEVELS OF SERVICE

3.1 Customer Research and Expectations

This AM Plan is prepared to facilitate consultation prior to adoption of levels of service by the Council. Future revisions of the AM Plan will incorporate customer consultation on service levels and costs of providing the service. This will assist the Council and stakeholders in matching the level of service required, service risks and consequences with the customer’s ability and willingness to pay for the service.

Figure 3.1 summarises the historical results from our Customer Satisfaction Survey.

Figure 3.1: Historical Customer Satisfaction Survey Levels

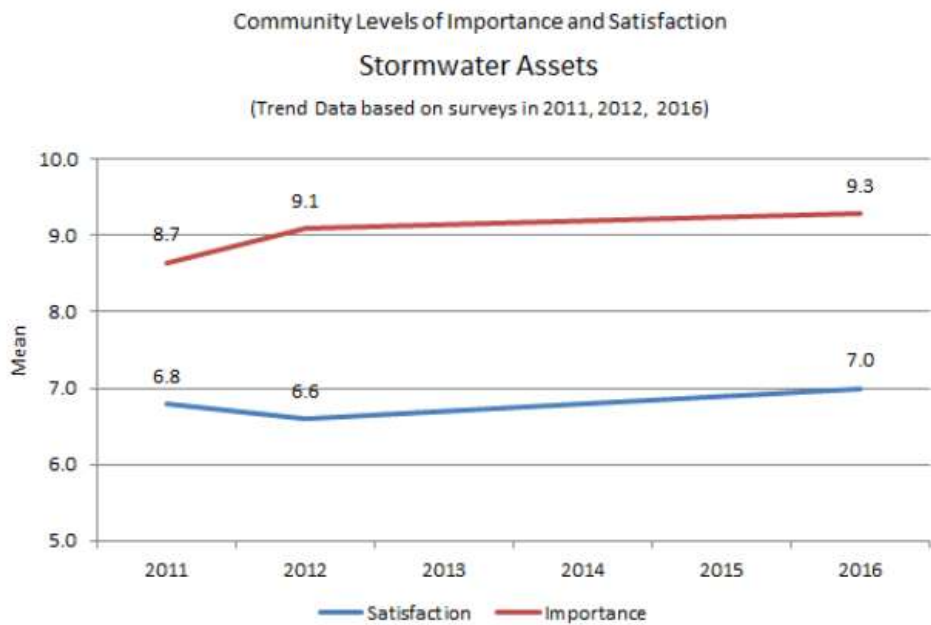
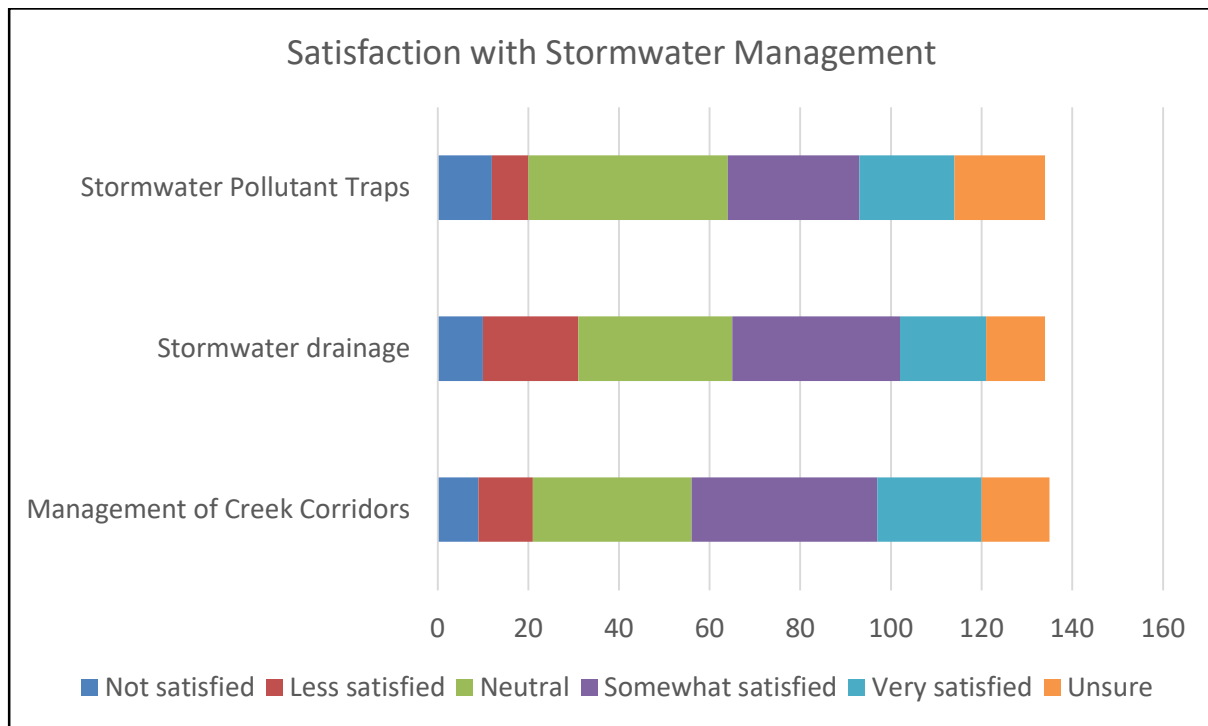
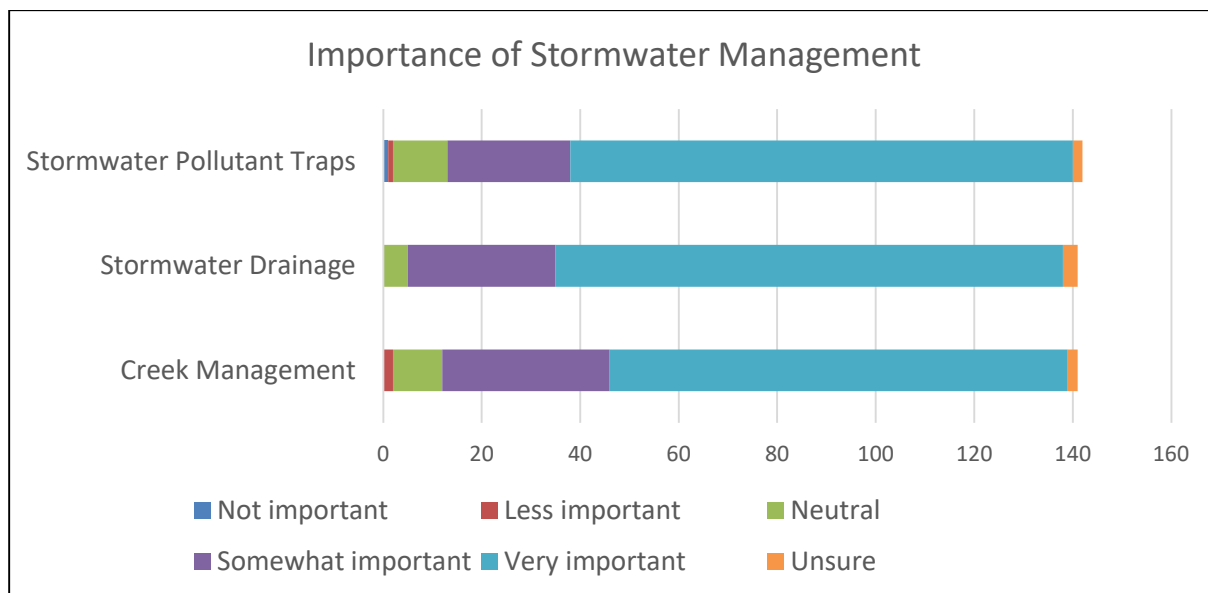


Table 3.1 summarises the results from Councils 2023 Customer Satisfaction Survey where the community provided feedback on three aspects of stormwater management: management of creek corridors, stormwater drainage and stormwater pollutant traps.

Table 3.1: Customer Satisfaction Survey Levels (2023)

Performance Measure	Satisfaction Level				
	Very Satisfied	Somewhat satisfied	Neutral	Less satisfied	Not satisfied
Satisfaction (1-10)	2	3	3	1	1
Importance (1-10)	7	2	1	-	-



The Community consider SW drains and Creek assets as very important and is typically satisfied with Council's performance in providing and maintaining these assets.

Given the last survey was undertaken in 2016, and the format of the recent survey, comparison data will add no value for this AMP. As an improvement future AMP's will include a consistent community survey approach to ensure gaps are identified and managed appropriately.

3.2 Strategic and Corporate Goals

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

Our vision is:

A safe, sustainable, vibrant Community

Our mission is:

The Community is the centre of everything we do

Strategic goals have been set by the Council. The relevant goals and objectives and how these are addressed in this AM Plan are summarised in Table 3.2.

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

Goal	Objective	How Goal and Objectives are addressed in the AM Plan
Supporting our Community	Provide our Community with a quality lifestyle, and support Community members to participate actively in Community life.	Part of providing a quality and active lifestyle is ensuring assets meet an expected level of service through responsible asset management.
Greening Our City	Through Councils declaration of a Climate Emergency deliver the Climate Solutions Strategy by taking urgent action regarding climate change.	The AM Plan recognises the changing climate as a risk and considers alternative, innovative, and sustainable environmental best practice within asset management.
Enhancing Our Assets	Council is committed to the delivery and enhancement of Councils assets in line with its seven Asset Management Plans.	Not only delivering the current AM Plan, however continuously looking at ways to improve and develop Councils asset management systems and processes.
Planning for our Future	Bring together our planning functions to enable Council to collaborate, disrupt and plan more effectively.	The AM Plan ensures Councils planning functions are embedded its function by recognising planning objectives within asset management practices.
Leading our People	Council is committed to continuing to improve organisational culture.	The AM Plan ensures our corporate values of respect, integrity, teamwork, leadership and retaining a customer focus by ensuring our plans listen to our stakeholders and the plans communicate responsible asset management that best serves the Community.

3.3 Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the SW Asset service are outlined in Table 3.3.

Table 3.3: Legislative Requirements

Legislation	Requirement
Local Government Act 1999	Sets out the role, purpose, responsibilities and powers of local governments including the preparation of a LTFP supported by AMPs for sustainable service delivery.
Local Government Act – Annual Reporting Section 428(2)(d)	A report on the condition of the public works, under the control of the Council as at the end of that year together with: (i) An estimate (current values) of the amount of money required to bring the works up to a satisfactory standard; and (ii) An estimate (current values) of the annual expense of maintain the works at that standard; and (iii) Council's programme for maintenance for that year in respect of the works.
Australian Road Rules	Contains power for Council to install and remove traffic control devices.
Australian Accounting Standards	Set out the financial reporting standards relating to, inter alia, the revaluation and depreciation of infrastructure assets.

Local Government (Financial Management) Regulations 2011	Impetus for the development of a Strategic Management Plan, comprising an (Infrastructure) AMP and LTFP.
Work Health & Safety Act 2012	<p>To secure the health, safety and welfare of persons at work.</p> <p>To eliminate, at their source, risks to the health, safety and welfare of persons at work.</p> <p>To protect the public against risks to health or safety arising out of or in connection with the activities of persons at work, or the use of operation of various types of plant.</p>
Highways Act 1926	Set out the legislative framework for roads and road authorities in SA
Environmental Protection Act 1993	<p>An Act to provide for the protection of the environment:</p> <ul style="list-style-type: none"> • to establish the Environment Protection Authority • to define its functions and powers; and <p>for other purposes.</p>
Road Traffic Act 1961	<ul style="list-style-type: none"> • Contains powers for Council to install or remove traffic control devices.

3.4 Customer Values

Service levels are defined in three ways, customer values, customer levels of service and technical levels of service.

Customer Values indicate:

- what aspects of the service is important to the customer,
- whether they see value in what is currently provided and
- the likely trend over time based on the current budget provision

Table 3.4: Customer Values

Service Objective:			
Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Importance	via Customer Satisfaction Survey	*The community considered stormwater assets are reasonably important with the rating of 9.0	Close the gap between importance and satisfaction
Satisfaction	via Customer Satisfaction Survey	*The community is fairly satisfied with the bridge assets and the overall satisfaction level was 6.8	Close the gap between importance and satisfaction

3.5 Customer Levels of Service

The Customer Levels of Service are considered in terms of:

- Condition** How good is the service ... what is the condition or quality of the service?
- Function** Is it suitable for its intended purpose Is it the right service?
- Capacity/Use** Is the service over or under used ... do we need more or less of these assets?

In Table 3.5 under each of the service measures types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

These are measures of fact related to the service delivery outcome (e.g. number of occasions when service is not available or proportion of replacement value by condition %'s) to provide a balance in comparison to the customer perception that may be more subjective.

Table 3.5: Customer Level of Service Measures

	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Condition	Provide a s/w network that is safe and free from hazards during rain events.	The condition will be maintained at a suitable service level	Perform regular condition audits, including CCTV inspections, in order to remedy defects efficiently.	Council will undertake the following works: <ul style="list-style-type: none"> • CCTV survey of approximately 3% of SW underground pipe network each year • Cleaning and data capture of side entry pits at least once per year • Regular maintenance
	Confidence levels		Medium	High
	Provide a s/w network that is maintained to ensure longevity of the asset and avoid unnecessary expenditure to prematurely replace the asset.	The condition will be maintained at a suitable service level	Perform regular condition audits, including CCTV inspections, in order to remedy defects efficiently.	Council will undertake the following works: <ul style="list-style-type: none"> • CCTV survey of approximately 3% of SW underground pipe network each year • Cleaning and data capture of side entry pits at least once per year • Regular maintenance
	Confidence levels		Medium	Medium
Function	Provide SW network that meets legislative requirements legislation (water quality), and that of the broader community.	Monitor CRMs (Customer Service Requests). Minimise flooding and ensure water quality (Gross Pollutant Trap, Trash Racks, Water Sensitive Urban Design opportunities).	Asset Management System providing detailed information regarding the SW assets and defects, enabling Planned Maintenance work. Regular GPT, Trash Rack cleaning.	Improve function as required by regulations, if required. Continue to deliver scheduled maintenance programs as require to meet demand.
	Confidence levels		Medium	High
	Provide a network that is designed in accordance with Australian Standards and industry best practice.	Network will sustain through its expected useful life and provide flexibility for expansion and improvement.	Regular audits providing condition performance, reflected in AMP.	Maintain current audit regime and maintenance, operational and renewal programs. Seek future opportunity for broader catchment SMP planning, partnership with State Govt.
	Confidence levels		Medium	High

Capacity	Ensure SW assets meet the required volume capacity.	Monitor CRMs and network performance during rain events.	Perform regular defect inspections and maintain a rain event database to record and resolve flooding matters.	Undertake necessary changes as required and prepare capital budget bids using technical information to assist in sound decision making. Council ABP process Develop Stormwater Management Plans to ensure infrastructure capacity is sufficient for future demands (development).
	Confidence levels		Medium	Medium
	Look for opportunity within the s/w network to reuse storm water runoff effectively.	Innovative solutions to s/w capture and reuse will be actively sought.	MAR scheme currently functioning storing s/w in the aquifer. New systems considering reuse within design to minimise the pressure on downstream networks	Seek opportunities to compliment existing system using industry best practice. Seek partnership funding and prepare budget bids for new initiatives. Council ABP process
	Confidence levels		Medium	High

3.6 Technical Levels of Service

Technical Levels of Service – To deliver the customer values, and impact the achieved Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

Technical service measures are linked to the activities and annual budgets covering:

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

Service and asset managers plan, implement and control technical service levels to influence the service outcomes.³

³ IPWEA, 2015, IIMM, p 2|28.

Table 3.6 shows the activities expected to be provided under the current 10 year Planned Budget allocation, and the Forecast activity requirements being recommended in this AM Plan.

Table 3.6: Technical Levels of Service

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
TECHNICAL LEVELS OF SERVICE				
Acquisition	SW design to meet capacity requirements and current design standards.	Compliance to relevant Codes and Standards and using broader SMP studies and catchment analysis.	New assets comply with current Aust. Standards and are free of defect.	New assets comply with current Aust. Standards and are free of defect.
	New donated assets received through development or as part of Council budget bid process for network improvement.	New assets are acquired at Condition 1 and free from defect.	New SW pipe installation for subdivisions are verified through CCTV and received at Condition 1 and free of defect.	New SW pipe installation for subdivisions are verified through CCTV and received at Condition 1 and free of defect.
		Budget		
Operation	SW network is inspected regularly.	Annual CCTV inspection based on the high-risk underground drainage areas.	Regular CCTV inspections undertaken externally, defects addressed and recorded on Councils GIS.	Continue to undertake yearly CCTV inspection and other relevant inspection regimes. Investigate internal resource to undertake periodic network checks and pursue innovative ways of collecting and storing data (AI).
	SW network is cleaned regularly.	Scheduled cleaning of Side Entry Pits twice a year and main pipe network as indicated through inspection.	Regular pit cleaning undertaken externally, defects addressed and recorded on Councils GIS.	Continue to undertake regular pit cleaning around times of large leaf litter. Record high cleaning areas and investigate alternative cleaning solutions.
		Budget	\$105,000	\$494,000

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Maintenance	Document and Rectify Defects	The SW network is defect inspected regularly, re-inspected after major storm events and CRMs are investigated promptly.	Technical and maintenance Staff to meet at the start of the FY to develop suitable maintenance programs consistent with AMP.	Defects are recorded and repaired in an effective manner.
	Maintain network in a serviceable and safe condition.	The SW network is defect inspected regularly, re-inspected after major storm events and CRMs are investigated promptly.	Technical and maintenance Staff to meet at the start of the FY to develop suitable maintenance programs consistent with AMP.	Defects are recorded and repaired in an effective manner. New maintenance technologies, i.e. internal pipe lining, are utilised to prolong the life of an asset.
		Budget	\$310,000	\$298,000
Renewal	Renew assets identified through audit inspections (CCTV) that are in a deteriorated condition (Condition 4 or 5), or at the end of their useful life.	Assets are not being renewed prematurely.	Detailed Survey and Condition audits (CCTV) of major/ minor culverts, Trash racks are carried out every 4 years. Renewal program is developed as part of the annual budget process. Assets are replaced in an effective manner.	Renewals are programmed as part of the annual budget process and assets are replaced in an effective manner.
		Budget	\$105,000	\$130,000
Disposal	To dispose of assets within the s/w network that are either at their end of life or are no longer required.	Asset has reached the end of its useful life or is no longer fit for purpose.	Assets disposed in accordance with AMPs.	Assets disposed in accordance with AMPs.
		Budget	\$0, as disposal cost is included in the replacement cost of components.	\$0, as disposal cost is included in the replacement cost of components.

Note: * Current activities related to Planned Budget.

** Expected performance related to forecast lifecycle costs.

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

4.0 FUTURE DEMAND

4.1 Demand Drivers

Drivers affecting demand include things such as population change, regulations, changes in demographics, climate impacts and emerging legal obligations to address climate risks, seasonal factors, vehicle ownership rates, consumer preferences and expectations, technological changes, economic factors, agricultural practices, environmental awareness and sustainability ESD requirements, etc.

4.2 Demand Forecasts

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented.

4.3 Demand Impact and Demand Management Plan

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

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 can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this AM Plan.

Table 4.3: Demand Management Plan

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Climate Change	Council SW assets are constructed based on the current environmental conditions and current environmental standards. Council has declared a Climate Emergency and have developed a Climate Solution Strategy through its Climate Solutions Committee. Addressing climate risk in assets is an action of the Climate Solutions Strategy	Temperature rise, more frequent and intense storms, extreme weather events becoming more frequent – likelihood of drought and flooding could have an impact on the SW assets.	Potential for ground movement in reactive soils during periods of drought which may cause pipe joint displacement, washout of SW infrastructure during flooding may impact on SW network assets. Tree root intrusion caused by pipe damage, that may impact on storm water pipe capacity. More frequent and intense downpours can also overwhelm the design capacity of local SW systems, leading to stormwater runoff and local flash flooding.	Continue to monitor the SW assets, research new engineering techniques and materials to actively combat the changing environment. Investigate and, if appropriate, apply techniques in problem areas that consider innovative ways to incorporate design with the environment. Collaborate within organisation and with others to develop key deliverables to ensure positive action is occurring. The development of a storm water management plan will assist with design parameters that allow for projected increases in the severity and frequency of intense weather patterns.
Growing Population	Estimated residential population in the Campbelltown Council area is	The population is projected to grow to	Given the proximity of Campbelltown to the CBD and the Government focus on infill development, there	Broader catchment Stormwater Management Plans that build in growth to capacity.

	55,475 – 2022 ERP figures. Increase in smaller allotment runoff.	63,963 by 2031.	is a competing demand of increased impervious surfaces through infill development and tree canopy targets. Dense development will impact capacity of existing drainage infrastructure with the potential for increased localised flooding.	Use innovative climate friendly design (WSUD) that works with the changing environment. Develop criteria for new assets that includes allowance for growth. Proactive maintenance programs that include CCTV of underground storm water assets.
Social	Healthy lifestyles are promoted with people recognising the importance of social connectivity.	More people walking and using trails and footpaths	Potential for increased community expectation on services provided, i.e. more footbridges and to a higher standard.	Develop master plans and strategies accordingly ensuring any increased demand is planned for strategically.

4.4 Asset Programs to meet Demand

The new assets required to meet demand may be acquired, donated or constructed. Additional assets are discussed in Section 5.4.

Acquiring new assets will commit the Council to 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 for inclusion in the long-term financial plan (Refer to Section 5).

4.5 Climate Change Adaptation

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. In the context of the Asset Management Planning process climate change can be considered as both a future demand and a risk.

How climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which we respond and manage those impacts.⁴

As a minimum we consider how to manage our existing assets given potential climate change impacts for our region.

Risk and opportunities identified to date are shown in Table 4.5.1

Table 4.5.1 Managing the Impact of Climate Change on Assets and Services

Climate Change Description	Projected Change	Potential Impact on Assets and Services	Management
Physical Risks	More frequent, long running and intense heatwaves. More frequent and extreme fire danger days. Less overall rain, but more frequent storms and flooding. Increased average temperatures across all seasons.	SW assets may not have the capacity or quality to adapt changing climate conditions	Through the design of new or renewed assets or the choice of material and rectification methodology for existing assets, ensure green best practice is considered within the asset management practice to ensure long term asset

⁴ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

			sustainability and resistance to such changes.
Transitional Risks	Increase in capital expenditure due to the lack of reliable information surrounding the impact of climate change on SW management. Higher operational cost through the transition to renewables. Restrictions on transport options with the change in the automotive industry towards EV's. Difficulty in sourcing funding as this would be considered as additional above normal core activities.	<p>May not be able to sustain budgets and likely gap increases between what we can and cannot afford.</p> <p>Increased capital costs as Council trials new designs, technology, and construction techniques to minimise project related emissions.</p> <p>Increase in expected project timelines to properly investigate new designs, source materials and technologies for trial.</p>	Ensure the AMP's consider this risk within financial modelling and create this as a discussion point to ensure asset management balances current environmental best practice.

Additionally, the way in which we design and construct new assets should recognise that there is opportunity to build in resilience to climate change impacts. Building resilience can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint

Table 4.5.2 summarises some asset climate change resilience opportunities.

Table 4.5.2 Stormwater Asset Resilience to Climate Change

New Asset Description	Climate Change impact These assets?	Build Resilience in New Works
Stormwater Drainage Network	Increase in severe storm events causing localised flooding given location at the upper (high end) of the urban catchment.	If the SW asset is to be installed at the same location, design the asset to cater for new hydraulic and climatic conditions, consider broad catchment in design factoring in population density growth. Consider increasing the stormwater capacity through upgrade or duplication.
Natural Waterways	Increase in changing weather patterns, hotter summers with more intense rainfall. Increase risk in erosion, flooding, and loss of habitat.	Plant natural corridors with resilient native species complimented with engineered rock armoured banks in high risk areas. Ensure proactive maintenance of corridors to promote sustainable growth that does not prohibit flow paths

The impact of climate change on assets is a complex discussion and further opportunities will be developed in future revisions of this AM Plan.

5.0 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the SW Asset plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) while managing life cycle costs.

5.1 Background Data

5.1.1 Physical parameters

The assets covered by this AM Plan are shown in Table 5.1.1.

The asset class ranges from underground pipes and culverts, pits, open channels, trash racks, gross pollutant traps to ensure stormwater quality is managed. Given parts of the SW asset class are not visible investigative camera and inspection regimes are crucial to ensure data quality is maintained and asset life cycle is best managed. The underground assets invite additional environmental risks such as tree root intrusion and movement in reactive soils.

The age profile of the assets included in this AM Plan are shown in Figure 5.1.1.

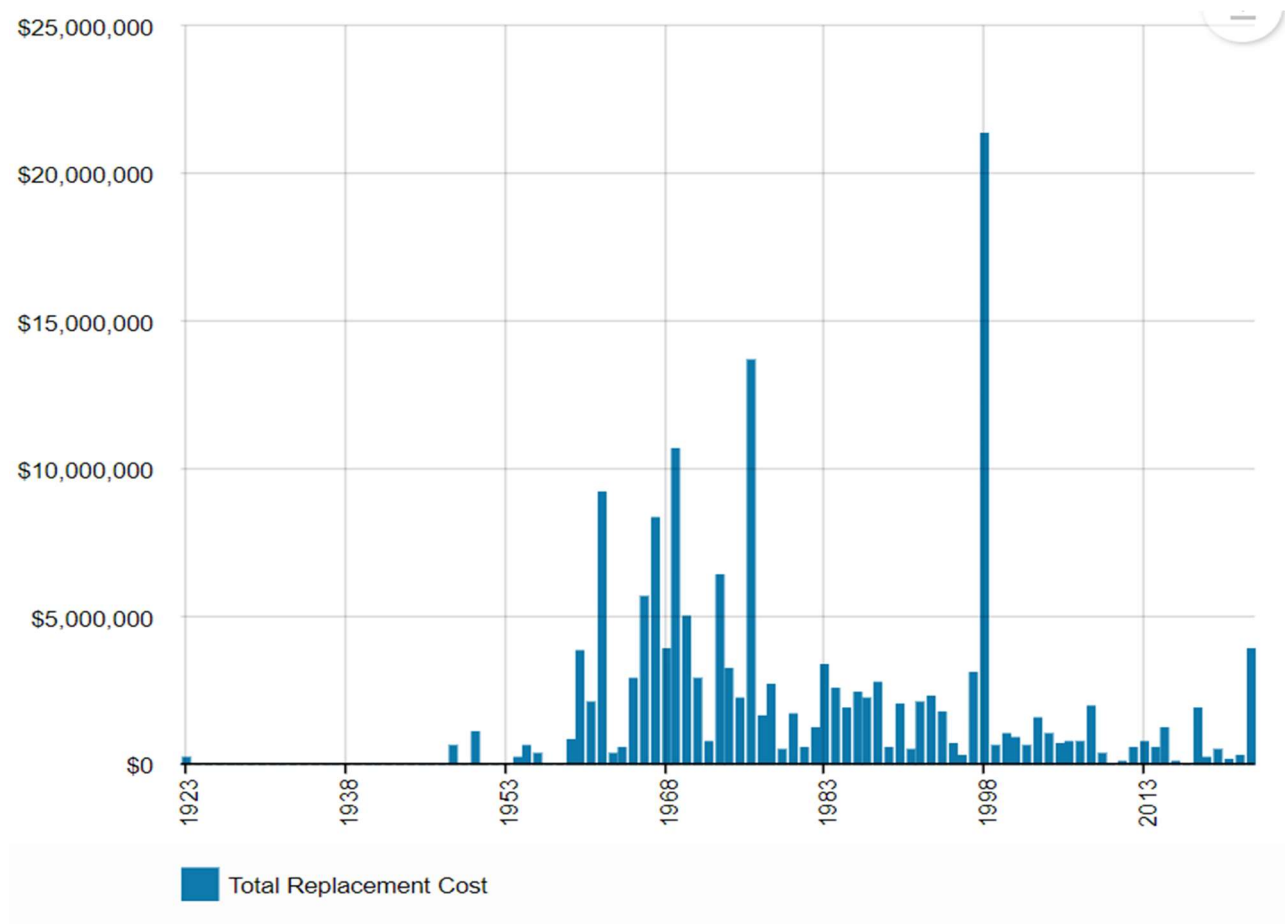
Table 5.1.1: Assets covered by this Plan

Asset Category	Quantity	Current Replacement Cost (\$)
SW Pipes	161,975m	125,560,522.85
Culverts	25 Nos	4,216,645.05
Open Channel Floors	10,919m ²	2,202,753.88
Open Channel Walls	12,147m ²	12,855,841.95
SW Pits	4021Nos	16,882,282.73
Water Detention System	1 Nos	496,723.68
Linear Park SW Assets (Trash Racks, Mesh Pits)		609,571.73
Total		162,824,342

All figure values are shown in current day (2023) dollars.

The age profile of the assets included in this AMP are shown in Figure 5.1.1.

Figure 5.1.1: Asset Age Profile



All figure values are shown in current day (2023) dollars.

The age profile indicates a large volume of assets, together with significant peaks, of age in the mid 1960's to 1970's together with a large peak in the mid 1990's. Given that the general useful life for this asset class is 100 years we would be expecting assets due for replacement around 2060/70's outside of our current 20 year reporting period ending in 2046. However, our current condition auditing is evidence that asset conditions are supportive of a likely extension in useful life for the SW asset class beyond 100 years.

With approximately 80% of the stormwater assets consisting of underground pipes, available CCTV data of a portion of the underground pipe network indicates that the pipes are in a 'good' condition, hence data within this plan assumes a condition rating of pipes to be Condition 2. As part of this AMP Improvement Plan the library of CCTV imagery is intended to increase and to be used as the basis for a condition audit of the underground network.

Operation and Maintenance Strategies

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

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

- (50 - 70% planned desirable as measured by cost),
- Maintain a current infrastructure risk register for assets and present service risks associated with providing services from infrastructure assets and reporting Very High and High risks and residual risks after treatment to management and Council,
- Review current and required skills base and implement workforce training and development to meet required operations and maintenance needs,
- Review asset utilisation to identify underutilised assets and appropriate remedies, and over utilised assets and customer demand management options,
- Maintain a current hierarchy of critical assets and required operations and maintenance activities,
- Develop and regularly review appropriate emergency response capability,
- Review management of operations and maintenance activities to ensure Council is obtaining best value for resources used.

5.1.2 Asset capacity and performance

In general terms it is believed that the SW network is meeting capacity and performance requirements.

In addition to the scheduled annual CCTV survey and SEP cleaning program, regular SW network inspection and condition audits are carried out on the entire network every 4 years. A survey and condition audit was carried out on all Culverts, Open Channel Walls & Floors and Trash Racks in 2019.

Assets are generally provided to meet design standards where these are available. Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

Table 5.1.2: Known Service Performance Deficiencies

Location	Service Deficiency
Various isolated locations around the City	Where there is evidence of localised flooding due to existing SW being under capacity or non-existent.

The above service deficiencies were identified from regular maintenance inspections, customer notifications and the monitoring of a localised flooding hotspots register. However it is equally prudent to recognise that Campbelltown is located within the upstream catchment of Adelaide, close to the Adelaide foothills, with positive gradients.

5.1.3 Asset condition

Condition is currently monitored through an external condition assessment every four years together with cyclic maintenance cleaning and investigative works recording and actioning hazards to ensure condition is maintained or re-assessed accordingly.

Condition is measured using a 1 – 5 grading system⁵ as detailed in Table 5.1.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AM plan results are translated to a 1 – 5 grading scale for ease of communication.

Table 5.1.3: Condition Grading System

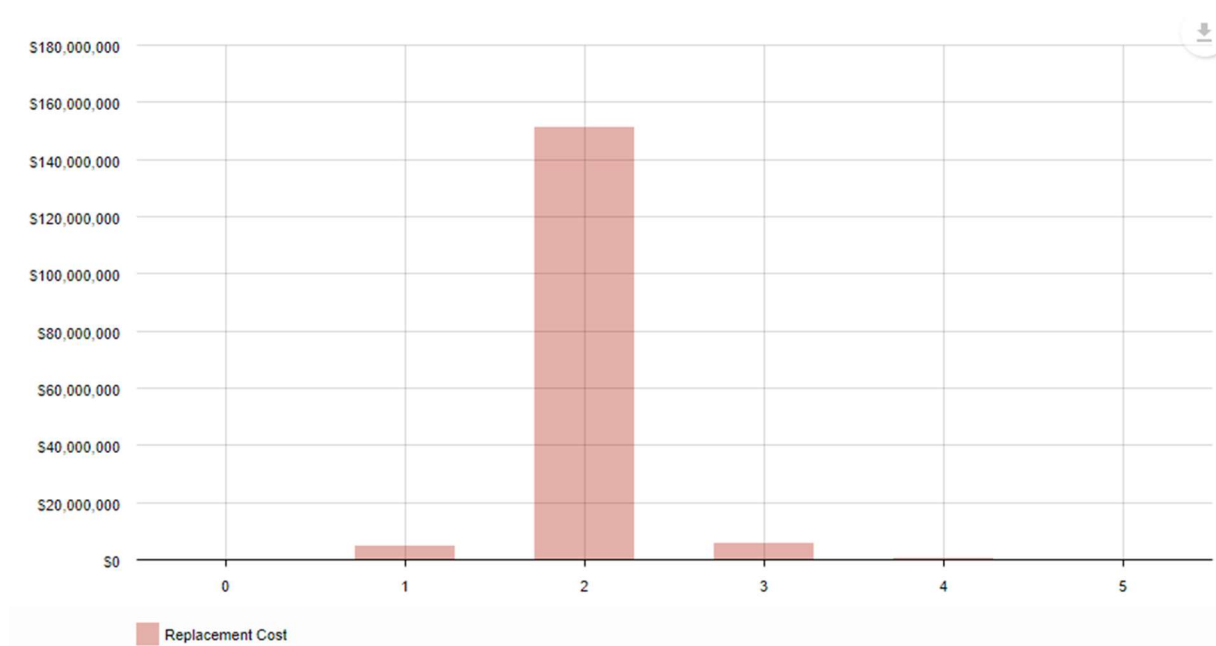
Condition Grading	Description of Condition
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⁵ IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

1	Very Good: free of defects, only planned and/or routine maintenance required
2	Good: minor defects, increasing maintenance required plus planned maintenance
3	Fair: defects requiring regular and/or significant maintenance to reinstate service
4	Poor: significant defects, higher order cost intervention likely
5	Very Poor: physically unsound and/or beyond rehabilitation, immediate action required

The condition profile of our assets is shown in Figure 5.1.3.

Figure 5.1.3: Asset Condition Profile



Note : Given scale of graph the data for the poor and very poor cannot be easily viewed, conditions are represented as:

Condition 1 – \$4,834,532

Condition 2 – \$151,408,976

Condition 3 – \$5,705,736

Condition 4 – \$648,928

Condition 5 - \$226,170

All figure values are shown in current day (2023) dollars.

Assets detailed as Condition 5, side entry pits and open channel concrete walls, have been inspected by Staff and have been assessed as being in a better condition than that reported, not requiring renewal.

5.2 Operations and Maintenance Plan

Operations include regular activities to provide services. Examples of typical operational activities include cleaning, street sweeping, asset inspection, and utility costs.

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. Examples of typical maintenance activities include pipe repairs, asphalt patching, and equipment repairs.

The trend in maintenance budgets are shown in Table 5.2.1.

Table 5.2.1: Maintenance Budget Trends

Year	Maintenance Budget \$
2022/23	\$292,000
2021/22	\$285,000
2020/21	\$315,000

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

Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement or through community feedback.

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 service hierarchy is shown in Table 5.2.2.

Table 5.2.2: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
SW Assets	To provide a safe and serviceable SW network for the community

Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.2 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

Figure 5.2: Operations and Maintenance Summary



All figure values are shown in 2023 dollars.

Deferred maintenance (i.e. works that are identified for maintenance activities but unable to be completed due to available resources) should be included in the infrastructure risk management plan.

The organisation undertakes cyclic scheduled cleaning maintenance of its pits (side entry pits, junction boxes, trash racks, together with camera inspections (CCTV), of underground assets of which hazards are recorded and rectified within existing budget allocations. Existing budgets have been suitable to manage hazard identification and rectification to ensure reactive (repairs) and proactive (cleaning) are undertaken on a risk needs basis.

With the CCTV survey works, approximately 3% of SW network, historically the survey presents no significant renewal works requiring within the network. Council found that the network still requires some maintenance works, e.g. joint displacements, cracking, tree root intrusion etc. The cost of fixing these defects can only be determined after completing such surveys.

5.3 Renewal Plan

Renewal is major capital work which does not significantly alter the original service provided by the asset, but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Assets requiring renewal are identified from one of two approaches in the Lifecycle Model.

- The first method uses Asset Register data to project the renewal costs (current replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year), or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work (i.e. condition modelling system, staff judgement, average network renewals, or other).

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 5.3. Asset useful lives were last reviewed on 2023/24 financial year as a part of scheduled condition survey assessment.⁶

Table 5.3: Useful Lives of Assets

Asset (Sub)Category	Useful life
SW Pipes	100
Culverts	
• Rock Headwall	30
• Concrete Apron	40
Culvert	100
Side Entry Pits/ Mesh Pits	100
Open Channel	
• Stone Wall	100
• Rock Wall	20
• Gabion Wall	30
• Concrete Wall	100
• Reno Mattress Floor	15
Stone Floor	20
GPT system	15
Trash Rack	
• Concrete Apron	40
• Steel Frame	15
Headwall	80

The estimates for renewals in this AM Plan were based on the Asset Register Method.

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a playground).⁷

It is possible to prioritise renewals by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have high use and subsequent impact on users would be significant,
- Have higher than expected operational or maintenance costs, and
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.⁸

⁶ Enter Reference to Report documenting Review of Useful Life of Assets

⁷ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

⁸ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 5.3.1.

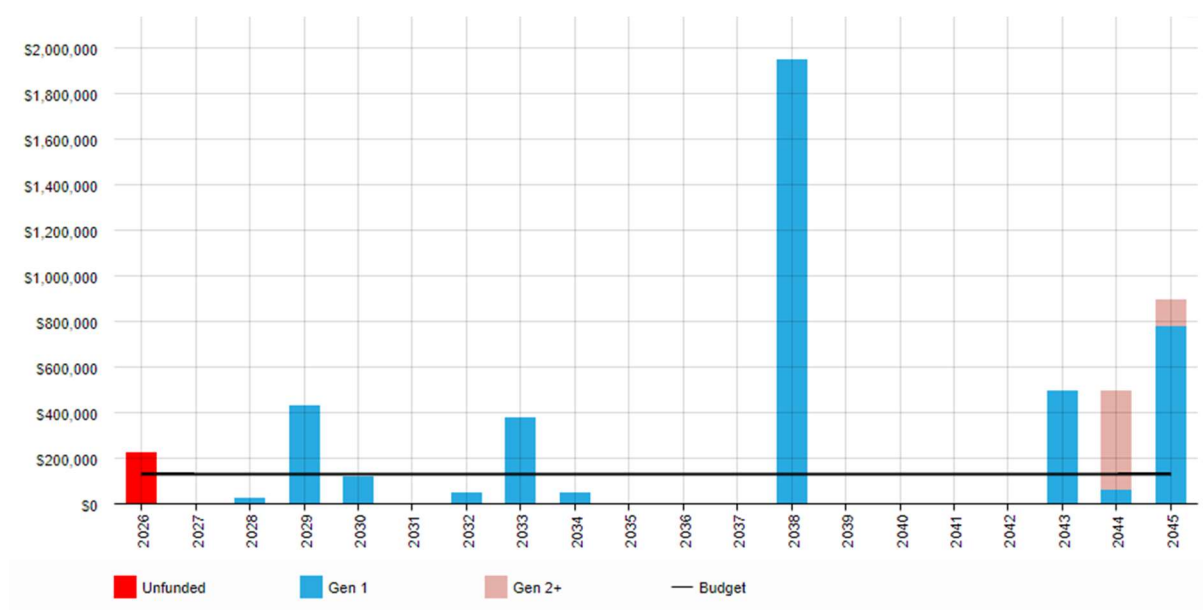
Table 5.3.1: Renewal Priority Ranking Criteria

Criteria	Weighting
Risk and Safety	30%
Physical Condition	20%
Financial impact	20%
Social impact	15%
Environmental Impact	15%
Total	100%

5.4 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.4.1. A detailed summary of the forecast renewal costs is shown in Appendix D.

Figure 5.4.1: Forecast Renewal Costs



All figure values are shown in current day dollars.

The unfunded amount of \$206,170 shown under year 2026, is associated with the following assets renewal works:

*Asset Category	Quantity	Renewal Amount (\$)
Side Entry Pit - Double	5 Nos	26,610

Side Entry Pit - Single	14 Nos	46,494
Open Channel – Concrete Wall	172m2	153,006
Total		\$226,170

* - Complete list of assets that come under this category is listed in the Appendix D

Staff inspected these assets and determined that the pit life can be extended as all in a serviceable condition. It was noted that some pit lids require replacement however the pits remained in a fair condition.

Staff checked the side entry pits (19) listed in the above table with the comments provided by the Side Entry Pit Cleaning Contactor for each pit with the last cycle of cleaning completed in November 2023

They have listed all these pits are in good condition in their comments. Staff also checked a sample of these pits (six pits) and found that the pits covers have been replaced lately through maintenance. Below pictures shows some of the pits checked.



Asset ID 119050



Asset ID 115495

The open channel walls were built in 1918 and open inspection cause no foreseeable risk of failure although showing evidence of fatigue.

- Open channel – Concrete Wall



• Riverview Drive – Asset ID 119713



River Drive – Asset ID 119714

Given Staffs inspection over the life of this AMP these assets do not require immediate renewal, however open channel (concrete walls), will be monitored to ensure no further fatigue causes failure or a risk to the community.

5.5 Acquisition Plan

Acquisitions are new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, demand, social or environmental needs. Assets may also be donated to the Council.

5.5.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to the Entities needs. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in Table 5.5.1.

Table 5.5.1: Acquired Assets Priority Ranking Criteria

Criteria	Weighting
Social Impact	20%
Financial Impact	20%
Environmental impact	20%
Legislative Impact	20%
Risk and Safety	20%
Total	100%

Summary of future asset acquisition costs

There are no forecast acquisition for the SW asset class

Expenditure on new assets and services in the capital works program will be accommodated in the long-term financial plan, but only to the extent that there is available funding.

5.6 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined in Table 5.6. Any costs or revenue gained from asset disposals is included in the long-term financial plan.

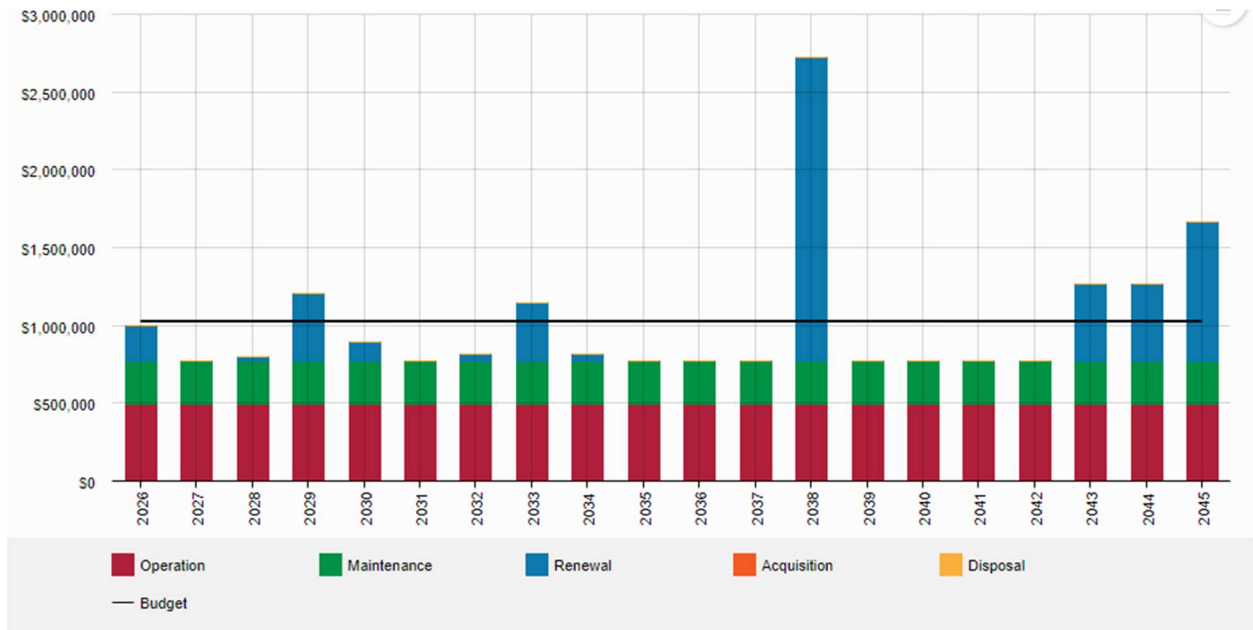
Assets Identified for disposal is listed in Appendix D under 10year renewal program. The disposal of cost of these assets are included in the asset replacement cost.

5.7 Summary of asset forecast costs

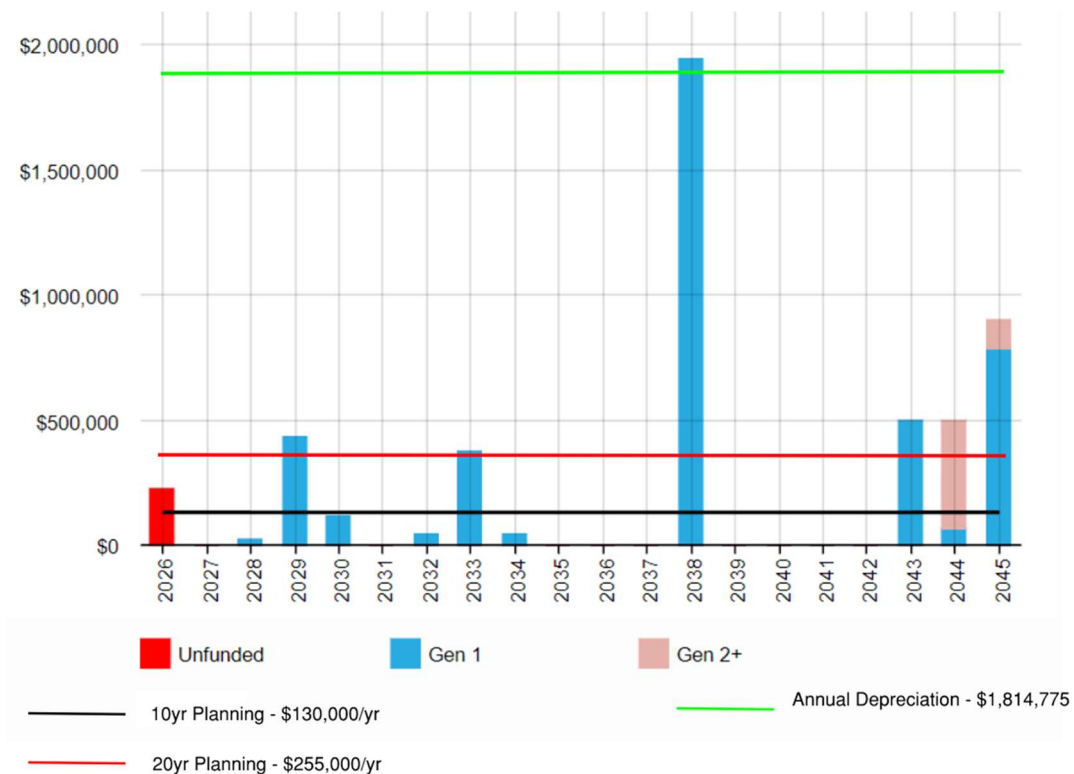
The financial projections from this asset plan are shown in Figure 5.7.1. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

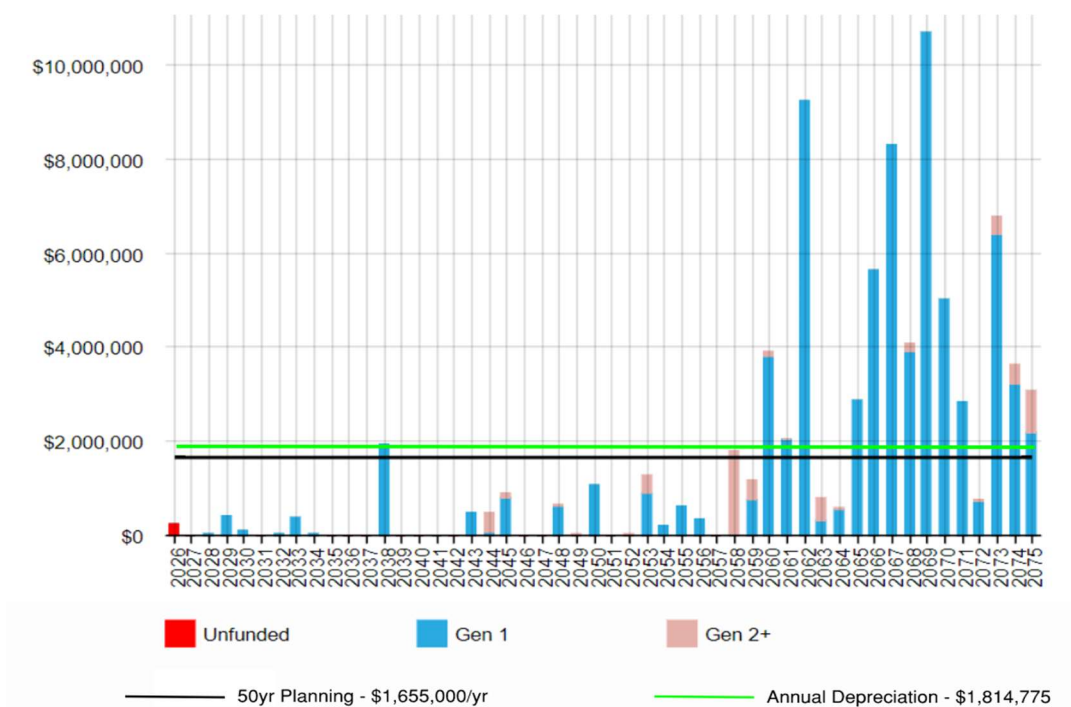
The bars in the graphs represent the forecast costs needed to minimise the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

Figure 5.7.1: Lifecycle Summary



Graphs showing renewal funding required for 20y and 50yr planning periods vs annual depreciation value





All figure values are shown in 2023 dollars.

The above Figure 5.7.1 details total budget expenditure (Acquisitions, Operation, Maintenance and Renewal costs)

- No new works or Acquisitions have been identified in the next 10 years
- This plan is based on total budgeted expenditure for renewal works with 10 year average funding of \$130,000 per year
 - This level of funding create a surplus funding of \$3,683 per year for the next 10 year
- Further modelling indicates that:
 - For 20year planning, it requires on an average \$255,000 per year to complete the renewal works
 - For 50year planning, it requires on an average \$1,655,000 per year to complete the renewal works
- The disposal life cycle costs shown are minimal, as these cost are built into renewal costs.
- Annual depreciation cost is \$1,814,775

6.0 RISK MANAGEMENT PLANNING

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: ‘coordinated activities to direct and control with regard to risk’⁹.

An assessment of risks¹⁰ associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarised in Table 6.1. Failure modes may include physical failure, collapse or essential service interruption.

Table 6.1 Critical Assets

Critical Asset(s)	Failure Mode	Impact
SW assets	Possible flooding events, asset damage in extreme storm events	Nuisance and possible hazard to the community

By identifying critical assets and failure modes an organisation can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

6.2 Risk Assessment

The risk management process used is shown in Figure 6.2 below.

It is an analysis and problem-solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

The process is based on the fundamentals of International Standard ISO 31000:2018.

⁹ ISO 31000:2009, p 2

¹⁰ REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

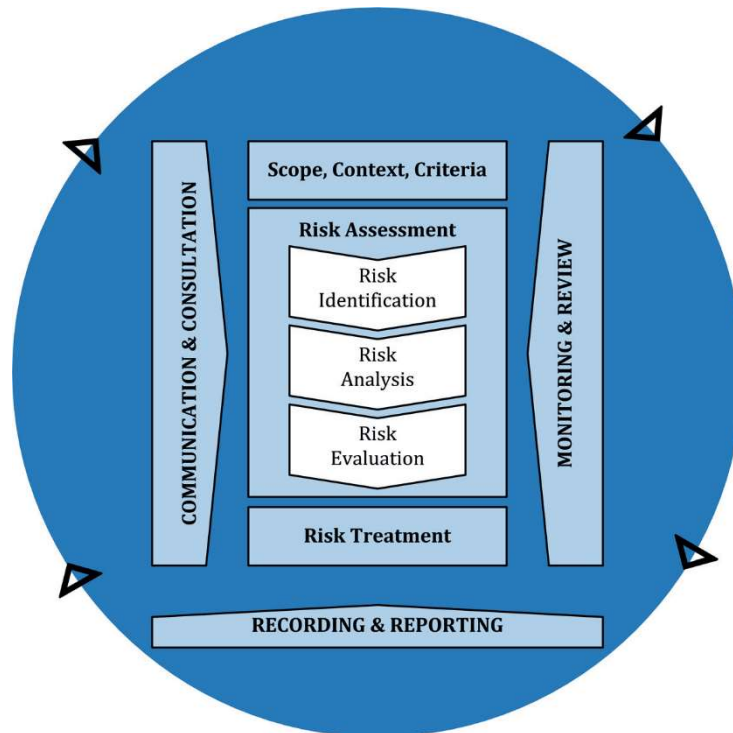


Fig 6.2 Risk Management Process – Abridged
Source: ISO 31000:2018, Figure 1, p9

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks¹¹ associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

Critical risks are those assessed with ‘Very High’ (requiring immediate corrective action) and ‘High’ (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2. It is essential that these critical risks and costs are reported to management and the Council.

Table 6.2: Risks and Treatment Plans

¹¹ REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Stormwater Pipes and Pits in general	Lack of funding to operate, maintain and renew assets	VH	Manage assets appropriately within the AMP and ensure this is utilised to inform best practice decision making. Ensure the appropriate funding levels are recognised through the LTFP and asset intervention points are proactive to enhance the life of the asset.	Low	Can be significantly high depending on the nature of the treatment
	Asset failure through insufficient knowledge of underground drainage performance characteristics	H	Given that we are yet to experience the complete lifecycle of our underground concrete pipe, i.e., predominantly installed locally in the 1960's with a lifecycle of 100 years, ongoing CCTV monitoring is critical to monitor performance. Undertake condition audits at least once every four years and review unit rates and life cycles.	Low	Can be significantly high depending on the nature of the treatment
	Asset fatigue through changing environmental/climate conditions	H	Continue monitoring and recording performance of assets looking for innovative new sustainable materials. Collaborate throughout the industry to share learnings and partner in case studies.	Low	Can be significantly high depending on the nature of the treatment
	Asset fatigue through lack of maintenance	VH	Ensure maintenance programs are carried out in accordance with industry best practice and work proactively with maintenance contractors/Staff to ensure technical expectations are met.	Low	Can be significantly high depending on the nature of the treatment
	Under design of asset causing assets that are over capacity and not fit for purpose.	VH	Undertake all design in line with Australian Standards. Ensure design considers the best information practicable for the broader catchment when designing new systems using current industry software (e.g. Drains modelling), and other tools.	Low	Can be significantly high depending on the nature of the treatment
	Increasing Infrastructure costs, shortage of contractors, workforce turnover	VH	Within project planning ensure suitable time frames and flexibility to cater for broader market and attract contractors and workforce through innovative thinking.	Low	Can be significantly high depending on the nature of the project.

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

6.3 Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions we need to understand our capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service.

Resilience recovery planning, financial capacity, climate change risk assessment and crisis leadership.

We do not currently measure our resilience in service delivery.

6.4 Service and Risk Trade-Offs

The decisions made in adopting this AM Plan are based on the objective to achieve the optimum benefits from the available resources.

6.4.1 What we cannot do

This section is not applicable at present as Council will allocate sufficient funds to meet the delivery of SW assets for the next 10 years.

6.4.2 Service trade-off

This section is not applicable at present as Council will allocate sufficient funds to meet the delivery of SW assets for the next 10 years.

6.4.3 Risk trade-off

This section is not applicable at present as Council will allocate sufficient funds to meet the delivery of SW assets for the next 10 years.

7.0 FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

7.1 Financial Sustainability and Projections

7.1.1 Sustainability of service delivery

There are two key indicators of sustainable service delivery that are considered in the AM Plan for this service area. The two indicators are the:

- Asset Renewal Funding Ratio (proposed renewal budget for the next 10 years / proposed renewal outlays for the next 10 years shown in the AM Plan), and
- Lifecycle Funding Ratio (proposed lifecycle budget (for the next 10 years / proposed lifecycle outlays for the next 10-years shown in the AM Plan).

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio¹² 102.92%

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have 100% of the funds required for the optimal renewal of assets.

The forecast renewal work along with the proposed renewal budget, and the cumulative shortfall where one exists, is illustrated in Appendix D.

Lifecycle Funding Ratio – 10 year financial planning period

This AM Plan identifies the forecast operations, maintenance and renewal costs required to provide an agreed, and affordable 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.

This forecast work can be compared to the proposed budget over the first 10 years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs over the 10 year planning period is \$691,317 on average per year.

The proposed (budget) operations, maintenance and renewal funding is \$902,000 on average per year giving a 10 year funding excess of \$3,683 per year. This indicates that 100.41% of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget. Note, these calculations exclude acquired assets.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately 1.0 for the first years of the AM Plan and ideally over the 10 year life of the Long-Term Financial Plan.

7.1.2 Forecast Costs (outlays) for the long-term financial plan

Table 7.1.2 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the long-term financial plan.

Forecast costs are shown in 2023/2024 dollar values.

Table 7.1.2: Forecast Costs (Outlays) for the Long-Term Financial Plan

¹² AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2026	0	494,000	278,000	226,170	-
2027	0	494,000	278,000	0	-
2028	0	494,000	278,000	23,999	-
2029	0	494,000	278,000	429,739	-
2030	0	494,000	278,000	118,262	-
2031	0	494,000	278,000	0	-
2032	0	494,000	278,000	44,489	-
2033	0	494,000	278,000	374,772	-
2034	0	494,000	278,000	45,739	-
2035	0	494,000	278,000	0	-

7.2 Funding Strategy

The proposed funding for assets is outlined in the Entity's budget and Long-Term financial plan.

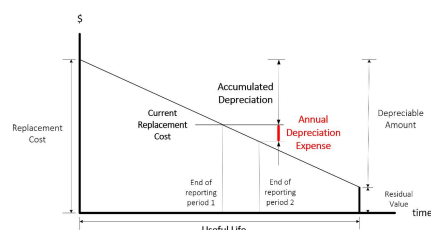
The financial strategy of the entity determines how funding will be provided, whereas the AM Plan communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

7.3 Valuation Forecasts

7.3.1 Asset valuations

The best available estimate of the value of assets included in this AM Plan are shown below. The assets are valued at fair value at cost to replace service capacity:

Replacement Cost (Gross)	\$162,824,342
Depreciable Amount	\$162,824,342
Current Replacement Cost ¹³	\$88,820,896
Annual Depreciation Expense	\$1,814,775



7.3.2 Valuation forecast

During the formulation of this plan, it is anticipated that asset numbers are forecast to remain consistent as there is no plan to add or remove assets from service.

Additional assets will generally add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts.

¹³ Also reported as Written Down Value, Carrying Amount or Net Book Value in some jurisdictions.

Additionally, asset unit rate values have significantly increased in recent years due to the global pandemic and economic pressures. It is anticipated that this trend will ease.

7.4 Key Assumptions Made in Financial Forecasts

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Council Asset Data registry reflects accurate data with a confidence level of $\pm 10\%$
- Operation and Maintenance cost remain within the same range for the next 10 years
- Council will allocate sufficient funding to meet operations, maintenance and renewal expenditure.
- The useful Lives of the SW assets are accurate
- Straight line depreciation
- Present service levels to remain constant over the life of this AMP
- Nil Growth
- All valuations are based on 2023/24 unit rates

7.5 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is classified on a A - E level scale¹⁴ in accordance with Table 7.5.1.

Table 7.5.1: Data Confidence Grading System

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

¹⁴ IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 7.5.2.

Table 7.5.2: Data Confidence Assessment for Data used in AM Plan

Data	Confidence Assessment	Comment
Demand drivers	Reliable	Based on Council's adopted Asset Management Policy
Growth projections	Reliable	Data based on government populations data
Acquisition forecast	Reliable	Data based on past experience
Operation forecast	Reliable	Expenditures have been apportioned across each asset class
Maintenance forecast	Reliable	Council will allocate sufficient funds to meet maintenance forecast
Renewal forecast - Asset values	Reliable	Unit Rates are reviewed each year and endorsed independently. Asset values are calculated using unit rates multiplied by valuation measurement.
Renewal forecast - Asset useful lives	Reliable	Useful lives are reviewed yearly by internal staff
Renewal forecast - Condition modelling	Reliable	Council undertakes above ground stormwater detailed assets condition audit every 4 years.
Disposal forecast	Reliable	Based on the financial data

The estimated confidence level for and reliability of data used in this AM Plan is considered to be 'Reliable'.

8.0 PLAN IMPROVEMENT AND MONITORING

8.1 Status of Asset Management Practices¹⁵

8.1.1 Accounting and financial data sources

This AM Plan utilises accounting and financial data. The source of the data is from Council's corporate financial system, Finance One.

8.1.2 Asset management data sources

This AM Plan also utilises asset management data. The source of the data is from Council's Asset Management Data System, Conquest.

8.2 Improvement Plan

It is important that an entity recognise areas of their AM Plan and planning process that require future improvements to ensure effective asset management and informed decision making. In 2023 Council received a maturity assessment of Councils asset management systems providing an independent review of competency across key aspects of the overall system. The improvement plan generated from this AM Plan is shown in Table 8.2, and together with the maturity assessment will provide Council with guidance on improvements to the current systems.

Table 8.2: Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
1	Further develop Mobile Technology for field work defect recording and Maintenance Management in Conquest AMS. Explore better ways to integrate this into Councils broader system with Councils move to a cloud-based network in 2024.	GIS Officer, Team Leader Asset Planning & Design Engineering, IT Team, Manager City Operations	Staff Resources. External Resources: Mobile Device / software / budgets	1 to 4 years

SEP Assets Cleaning Programme – recording the data in the field



¹⁵ ISO 55000 Refers to this as the Asset Management System

2	Continually develop cyclic maintenance programs (pit cleaning twice a year, CCTV inspections) that include quality control and the accurate recording and action of any defect rectification. Improvement in the system better connecting the requirements of the AMP to the Operations Team	GIS Officer, Asset Support Officer, Team Leader Asset Planning & Design Engineering, IT Team, Manager City Operations	Staff Resources. External Resources: Mobile Device / software / budgets	Ongoing
3	Componentise Side Entry Pits (Pit Cover and the Pit) to better manage the renewals	Team Leader Asset Planning & Design Engineering, GIS Officer	Staff Resources.	1-2 years
4	Undertake a targeted 'level of service' consultation where the consultation is relevant to current Community expectations and understandings of assets throughout the city.	General Manager/ Manager of Infrastructure Services, Manager Governance, Team Leader Asset Planning & Design Engineering, Community Engagement Officer.	Staff Resources. External Resources: Other recent Council consultations / historical consultations / budgets.	1-4 years
5	Consider a broad Stormwater Management Plan to investigate the capacity of the current network, including storm water infrastructure gaps, for both now and the future (growth).	General Manager/ Manager of Infrastructure Services, Team Leader Asset Planning & Design Engineering.	Staff Resources. External Resources: Consultant / external (SMA) and internal funding.	1-4 years with funding secured.
6	Install climate resilient storm water infrastructure, consider WSUD and green infrastructure.	General Manager/ Manager of Infrastructure Services, Manager of Operations, Manager Environment & Sustainability Services, Team Leader Asset Planning & Design Engineering.	Staff Resources. External Resources: Consultant / contractors / Other Councils / budgets.	Ongoing

7	Review how the operational and maintenance costs are captured within the Finance One system.	General Manager/ Manager of Infrastructure Services, General Manager/Manager of Finance, Team Leader Asset Planning & Design Engineering, Accountant	Staff Resources (Internal System Checks).	1-4 years
8	Undertake further CCTV inspections to better understand condition of underground assets	General Manager/ Manager of Infrastructure Services, Team Leader Asset Planning & Design Engineering, Asset Officer, GIS Officer	Staff Resources. External resources: Contractor / consultant/ budgets.	1-4 years
9	Review and capture storm water infrastructure within private property (drainage easements)	General Manager/ Manager of Infrastructure Services, Team Leader Asset Planning & Design Engineering, Asset Officer, GIS Officer	Staff Resources. External resources: Contractor (location verifications) / Students seeking experience (data entry) / budgets.	3-4 years
11	Develop an Asset Renewal/Maintenance Forward Program, planning for 2024-2028 (AMP) – Maintenance and Renewal Costs	Manager of Infrastructure Services, Team Leader Asset Planning & Design Engineering	Staff Resources	2-3 months
12	Consider recommendations from the 2023 Maturity Assessment Plan.	Manager of Infrastructure Services, Team Leader Asset Planning & Design Engineering	Staff Resources	Ongoing

Note : Improvements from the previous plan have been carried forward or completed.

8.3 Monitoring and Review Procedures

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will guide decision making annually to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These

forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

The AM Plan has a maximum life of 4 years and is due for complete revision and updating within 2 years of each Council election.

8.4 Performance Measures

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan,
- The degree to which the 1-5 year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan,
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans,
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90 – 100%).

9.0 REFERENCES

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- ISO, 2014, ISO 55000:2014, Overview, principles and terminology
- ISO, 2018, ISO 31000:2018, Risk management – Guidelines
- 'Strategic Plan 2020 – 2024',
- 'Annual Plan and Budget'.
- Annual Financial Statements for the Year Ended 30 June 2023.
- Maturity Assessment Plan Campbelltown City Council 2023 IIMM Maturity Assessment Tonkin (Endorsed by Audit & Risk Advisory committee (9 November 2023))

10.0 APPENDICES

Appendix A Acquisition Forecast – *N/A no acquisitions in the AMP reporting period.*

Appendix B Operation Forecast

B.1 – Operation Forecast Assumptions and Source

Operation costs will remain unchanged for next 20 years. The operation forecast figure listed in the table below is based on the average operation costs that Council has incurred in the last two financial years.

B.2 – Operation Forecast Summary

NAMS+ Outputs Summary for Operation

Table B2 - Operation Forecast Summary

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2026	494,000	0	494,000
2027	494,000	0	494,000
2028	494,000	0	494,000
2029	494,000	0	494,000
2030	494,000	0	494,000
2031	494,000	0	494,000
2032	494,000	0	494,000
2033	494,000	0	494,000
2034	494,000	0	494,000
2035	494,000	0	494,000
2036	494,000	0	494,000
2037	494,000	0	494,000
2038	494,000	0	494,000
2039	494,000	0	494,000
2040	494,000	0	494,000
2041	494,000	0	494,000
2042	494,000	0	494,000
2043	494,000	0	494,000
2044	494,000	0	494,000
2045	494,000	0	494,000

Appendix C Maintenance Forecast

C.1 – Maintenance Forecast Assumptions and Source

Maintenance costs will remain unchanged for next 20 years. The maintenance cost forecast figure listed in the table below is based from historical maintenance costs and includes a projected increase based on current industry trends.

C.2 – Maintenance Forecast Summary

NAMS+ Outputs Summary for Maintenance

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2026	278,000	0	278,000
2027	278,000	0	278,000
2028	278,000	0	278,000
2029	278,000	0	278,000
2030	278,000	0	278,000
2031	278,000	0	278,000
2032	278,000	0	278,000
2033	278,000	0	278,000
2034	278,000	0	278,000
2035	278,000	0	278,000
2036	278,000	0	278,000
2037	278,000	0	278,000
2038	278,000	0	278,000
2039	278,000	0	278,000
2040	278,000	0	278,000
2041	278,000	0	278,000
2042	278,000	0	278,000
2043	278,000	0	278,000
2044	278,000	0	278,000
2045	278,000	0	278,000

Appendix D Renewal Forecast Summary

D.1 – Renewal Forecast Assumptions and Source

The renewal summary is generated through National Asset Management System+ (NAMS+) based on the information contained in Council's Asset Register.

It is assumed that Council will allocate enough funds to meet the renewal projects expenditure.

D.2 – Renewal Project Summary

The project titles included in the lifecycle forecast are included here.

D.3 – Renewal Forecast Summary

NAMS+ Outputs Summary for Renewal

Table D3 - Renewal Forecast Summary

Year	Renewal Forecast	Renewal Budget
2026	226,170	130,000
2027	0	130,000
2028	23,999	130,000
2029	429,739	130,000
2030	118,262	130,000
2031	0	130,000
2032	44,489	130,000
2033	374,772	130,000
2034	45,739	130,000
2035	0	130,000
2036	0	130,000
2037	0	130,000
2038	194,7629	130,000
2039	0	130,000
2040	0	130,000
2041	1,590	130,000
2042	0	130,000
2043	493,593	130,000
2044	496,736	130,000
2045	895,250	130,000

D.4 –Renewal Plan

Detail output from NAMS+ Report for the Register Method

Asset ID	Asset Category	Location	Planned Renewal Year	Renewal Forecast (\$)
115473	Side Entry Pit (Double)	RIVERVIEW DRIVE	2023/2024	5322
115495	Side Entry Pit (Single)	RIVERVIEW DRIVE	2023/2024	3321
115512	Side Entry Pit (Single)	ELESE AVENUE	2023/2024	3321
115532	Side Entry Pit (Single)	SHEPHERD LANE	2023/2024	3321
115493	Side Entry Pit (Single)	RIVERVIEW DRIVE	2023/2024	3321
115624	Side Entry Pit (Single)	ADELA CRESCENT	2023/2024	3321
116298	Side Entry Pit (Single)	COLTON AVENUE	2023/2024	3321
116518	Side Entry Pit (Single)	EDMUND AVENUE	2023/2024	3321
116795	Side Entry Pit (Single)	GLADSTONE AVENUE	2023/2024	3321
117519	Side Entry Pit (Single)	LORNE AVENUE	2023/2024	3321
117563	Side Entry Pit (Double)	LOWER ATHELSTONE ROAD	2023/2024	5322
117581	Side Entry Pit (Single)	LOWER NORTH EAST ROAD	2023/2024	3321
117614	Side Entry Pit (Double)	MAPLE AVENUE	2023/2024	5322
117644	Side Entry Pit (Double)	MARYVALE ROAD	2023/2024	5322
117816	Side Entry Pit (Single)	MOORE CRESCENT	2023/2024	3321
117821	Side Entry Pit (Single)	MOORE STREET	2023/2024	3321
117907	Side Entry Pit (Double)	NIGHTINGALE AVENUE	2023/2024	5322
118234	Side Entry Pit (Single)	RESERVE ROAD	2023/2024	3321
119050	Side Entry Pit (Single)	WESSEN STREET	2023/2024	3321
119714	Open Channel - Concrete Wall	RIVERVIEW DRIVE	2023/2024	67634
119713	Open Channel - Concrete Wall	RIVERVIEW DRIVE	2023/2024	85432
Total Renewal Cost (Backlog) - \$226,170				
119884	Open Channel - Stone Floor	GREENBANK ROAD	2027/ 2028	14777
119885	Trash Rack Frame Type 1 (Bracket/Frame)	Athelstone Recreation Reserve	2027/ 2028	6360
119883	Trash Rack Frame Type 1 (Bracket/Frame)	River Torrens Linear Park near Clark Cresce	2027/ 2028	2862
Total Renewal Cost in 2027/ 2028 - \$23,999				
119903	Continuous Deflective Spearation (CDS) S _y	Lochiel Parkway, Campbelltown	2028/ 2029	263509
119759	Continuous Deflective Spearation (CDS) S _y	Avenue Road, Paradise	2028/ 2029	166230
Total Renewal Cost in 2028/ 2029 - \$429,739				
124800	Open Channel - Reno Mattress Floor	FREEMAN AVENUE	2029/ 2030	24542
124801	Open Channel - Reno Mattress Floor	Open Channel - MAYNARD AVENUE	2029/ 2030	33467
119978	Open Channel - Reno Mattress Floor	Open Channel - LOWER NORTH EAST ROAD	2029/ 2030	7437
119952	Open Channel - Reno Mattress Floor	LOWER NORTH EAST ROAD	2029/ 2030	2975
119976	Open Channel - Reno Mattress Floor	LOWER NORTH EAST ROAD	2029/ 2030	33838
119961	Open Channel - Reno Mattress Floor	MEADOW AVENUE	2029/ 2030	11156
119973	Open Channel - Gabion Wall	VERCO COURT	2029/ 2030	4847
Total Renewal Cost in 2029/ 2030 - \$118,262				

Asset ID	Asset Category	Location	Planned Renewal Year	Renewal Forecast (\$)
119974	Trash Rack Frame Type 1 (Bracket/Frame)	Fourth Creek Denis Morrissey Park	2031/2032	1590
119967	Trash Rack Frame Type 1 (Bracket/Frame)	Fourth Creek Denis Morrissey Park	2031/2032	1590
124906	Trash Rack Frame Type 1 (Bracket/Frame)	Lochiel Park Wetlands, Campbelltown	2031/2032	3180
124907	Trash Rack Frame Type 1 (Bracket/Frame)	River Torrens Linear Park near Silkes Road	2031/2032	2862
124908	Trash Rack Frame Type 1 (Bracket/Frame)	Fifth Creek at George Street and Tracy Ave	2031/2032	13356
124909	Trash Rack Frame Type 1 (Bracket/Frame)	River Torrens Linear Park near Fayden Drive	2031/2032	2862
124910	Trash Rack Frame Type 2 (Fence)	River Torrens Linear Park near Coventry Road	2031/2032	3244
124911	Trash Rack Frame Type 2 (Fence)	River Torrens Linear Park near The Dress Circle	2031/2032	3244
119907	Trash Rack Frame Type 1 (Bracket/Frame)	River Torrens Linear Park near Joyleen Court	2031/2032	3021
119897	Trash Rack Frame Type 1 (Bracket/Frame)	Fourth Creek Denis Morrissey Park	2031/2032	1590
119902	Trash Rack Frame Type 1 (Bracket/Frame)	Fourth Creek Denis Morrissey Park	2031/2032	1590
119901	Trash Rack Frame Type 1 (Bracket/Frame)	Fourth Creek Denis Morrissey Park	2031/2032	1590
119899	Trash Rack Frame Type 1 (Bracket/Frame)	Fourth Creek Denis Morrissey Park	2031/2032	1590
119943	Trash Rack Frame Type 1 (Bracket/Frame)	Fourth Creek Denis Morrissey Park	2031/2032	1590
119924	Trash Rack Frame Type 1 (Bracket/Frame)	Fourth Creek Denis Morrissey Park	2031/2032	1590
Total Renewal Cost in 2031/ 2032 - \$44,489				
119926	Open Channel - Concrete Floor (300mm thick)	GALWAY GROVE	2032/2033	129152
119932	Open Channel - Concrete Floor (300mm thick)	SHAKESPEARE AVENUE	2032/2033	213306
119931	Open Channel - Stone Floor	VERCO COURT	2032/2033	3897
119922	Open Channel - Stone Floor	MAYNARD AVENUE	2032/2033	3248
119942	Open Channel - Stone Floor	AVENIDA STREET	2032/2033	7307
119914	Open Channel - Rock Floor	RIVERVIEW DRIVE	2032/2033	8931
119941	Open Channel - Stone Floor	STONEBROOK DRIVE	2032/2033	974
119926	Open Channel - Stone Floor	RANGE ROAD	2032/2033	3248
119932	Open Channel - Stone Floor	GLADYS CRESCENT	2032/2033	1786
119931	Open Channel - Stone Floor	GREENBANK ROAD	2032/2033	2923
Total Renewal Cost in 2032/ 2033 - \$371,849				
119922	Open Channel - Reno Mattress Floor	MARYVALE ROAD	2033/2034	2975
119942	Open Channel - Reno Mattress Floor	RIVERBANK CIRCUIT	2033/2034	26030
119914	Open Channel - Reno Mattress Floor	LEABROOK DRIVE	2033/2034	3719
119941	Open Channel - Reno Mattress Floor	RIVERBANK CIRCUIT	2033/2034	13015
Total Renewal Cost in 2033/ 2034 - \$45,739				

Appendix E Disposal Summary - *N/A no acquisitions in the AMP reporting period.*

Appendix F Budget Summary by Lifecycle Activity

- The existing SW assets will achieve their assumed useful life.
- The existing SW asset classes have been constructed using sound engineering and design practices to ensure they are fit for purpose.
- The unit rates for replacement of SW asset classes are realistic.
- Accuracy of future financial forecasts may be improved in future revisions of the SW AMP
- No acquisitions planned for the next 20 years.
- Operation and maintenance costs and service levels remain the same for next 20 years.

Table F1 – Budget Summary by Lifecycle Activity

Year	Acquisition	Operation	Maintenance	Renewal	Disposal	Total
2026	0	494,000	278,000	130,000	-	902,000
2027	0	494,000	278,000	130,000	-	902,000
2028	0	494,000	278,000	130,000	-	902,000
2029	0	494,000	278,000	130,000	-	902,000
2030	0	494,000	278,000	130,000	-	902,000
2031	0	494,000	278,000	130,000	-	902,000
2032	0	494,000	278,000	130,000	-	902,000
2033	0	494,000	278,000	130,000	-	902,000
2034	0	494,000	278,000	130,000	-	902,000
2035	0	494,000	278,000	130,000	-	902,000
2036	0	494,000	278,000	130,000	-	902,000
2037	0	494,000	278,000	130,000	-	902,000
2038	0	494,000	278,000	130,000	-	902,000
2039	0	494,000	278,000	130,000	-	902,000
2040	0	494,000	278,000	130,000	-	902,000
2041	0	494,000	278,000	130,000	-	902,000
2042	0	494,000	278,000	130,000	-	902,000
2043	0	494,000	278,000	130,000	-	902,000
2044	0	494,000	278,000	130,000	-	902,000
2045	0	494,000	278,000	130,000	-	902,000