



Trinity Valley Stormwater Drainage Upgrade

Asset Management Plan

Stormwater Management Infrastructure

2025–2034



City of
Norwood
Payneham
& St Peters

Document Control		2025-2034 ASSET MANAGEMENT PLAN STORMWATER MANAGEMENT INFRASTRUCTURE			
Rev No	Date	Revision Details	Author	Reviewer	Approver
0	August 2024	Draft for Community Consultation	JC	DL	DL

Draft

Contents

- 1.0 EXECUTIVE SUMMARY 5**
- 1.1 Asset Management Plans 5
- 1.2 Asset Description 5
- 1.3 Levels of Service..... 5
- 1.4 Future Demand 6
- 1.5 Life-Cycle Management Plan 6
- 1.6 Financial Summary..... 6
- 1.7 Asset Management Practices 8
- 1.8 Monitoring and Improvement Program 8

- 2.0 INTRODUCTION 9**
- 2.1 Background 9
- 2.2 Goals and Objectives of Asset Ownership 12

- 3.0 LEVELS OF SERVICE 14**
- 3.1 Community Research and Expectations 14
- 3.2 Strategic and Corporate Goals 14
- 3.3 Legislative Requirements..... 15
- 3.4 Citizen Values..... 16
- 3.5 Citizen Levels of Service..... 17
- 3.6 Technical Levels of Service..... 18

- 4.0 FUTURE DEMAND 20**
- 4.1 Demand Drivers 20
- 4.2 Demand Forecasts 20
- 4.3 Demand Impact and Demand Management Plan 20
- 4.4 Asset Programs to Meet Demand..... 20
- 4.5 Climate Change and Adaptation 21

- 5.0 LIFE-CYCLE MANAGEMENT PLAN 22**
- 5.1 Background Data 22
- 5.2 Operational Maintenance Plan 23
- 5.3 Renewal Plan 24
- 5.4 Summary of Future Renewal Costs..... 25
- 5.5 Acquisition Plan 26
- 5.6 Disposal Plan..... 26

- 6.0 RISK MANAGEMENT PLANNING 27**

6.1	Critical Assets.....	27
6.2	Risk Assessment.....	27
6.3	Infrastructure Resilience Approach	29
6.4	Service and Risk Trade-Offs	29
7.0	FINANCIAL SUMMARY	31
7.1	Financial Statements and Projections.....	31
7.2	Funding Strategy.....	33
7.3	Valuation Forecasts	33
7.4	Key Assumptions Made in Financial Forecasts	33
7.5	Forecast Reliability and Confidence.....	33
8.0	PLAN IMPROVEMENT AND MONITORING	35
8.1	Status of Asset Management Practices	35
8.2	Improvement Plan	35
8.3	Monitoring and Review Procedures	35
8.4	Performance Measures	35
9.0	REFERENCES	36
10.0	APPENDICES	37
	Appendix A.....	37
	Appendix B.....	38
	Appendix C.....	39
	Appendix D.....	40

Draft

1.0 EXECUTIVE SUMMARY

1.1 Asset Management Plans

The City of Norwood Payneham & St Peters Asset Management Plans (the AMPs), provide a comprehensive overview of the City's assets, encompassing their replacement value, current condition, performance, service levels, objectives, and the Council's financial position in relation to these assets.

Its purpose is to ensure that the Council can effectively deliver services, maintain assets and achieve its strategic goals in a financially sustainable manner over the short, medium and long terms.

The AMPs outline the requirements for managing, inspecting and replacing assets, including projected annual expenditure over a ten (10) year period, while also detailing the Council's planned activities for its assets to achieve its strategic goals and deliver community services in the medium to long term.

The AMPs comprise of four documents, each of which have been developed to encompass the major classes of assets, including civil infrastructure, stormwater management, buildings, and recreation and open space.

Purpose of AMPs

The AMPs are crucial strategic documents for the Council to ensure the efficient management of its assets throughout the lifespan of these respective assets, which ultimately achieves the Council's strategic objectives, while maintaining compliance with legislation and delivering a high level of service to the community.

The purpose of the AMPs is to communicate the requirements for the sustainable delivery of services through the management of the assets, compliance with regulatory requirements and required funding to provide the appropriate levels of service over the long-term planning period.

Requirement under Local Government Act

Section 122 of *Local Government Act 1999*, requires the Council to develop and adopt an AMP, relating to the management and development of its infrastructure and major assets for a period of at least ten (10) years.

This requirement to develop and adopt an AMP ensures that the Council considers the management and development of its infrastructure and major assets at a strategic level and in line with its strategic management plan (i.e., *CityPlan 2030*). It also includes provisions for asset renewal over the next ten (10) years, aligned with the Council's Long-term Financial Plan (LTFP).

1.2 Asset Description

The City's Stormwater Management Infrastructure Network comprises of the following:

- stormwater drainage infrastructure (inclusive of pits, pipes, culverts and open channels);
- waterways under vehicular bridges; and
- footbridges.

The Stormwater Management Infrastructure Network has a significant total renewal value estimated at \$156,555,401.

1.3 Levels of Service

The Council's present funding levels are sufficient to continue to provide existing services at current service levels.

The main service consequences of the Planned Budget expenditure are:

- assets are replaced accordingly with respect to condition and intended useful life; and
- assets complying with the relevant standards and guidelines.

1.4 Future Demand

The main demands for new services are created by:

- climate change;
- increased runoff from historic development within catchments; and
- stormwater quality enhancements prior to discharging of stormwater.

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, including:

- monitoring of asset condition;
- undertaking community expectation surveys; and
- monitoring the impacts of climate change and increased urban development.

1.5 Life-Cycle Management Plan

1.5.1 What does it Cost?

The forecast life-cycle costs necessary to provide the services covered by this AMP includes operational maintenance, renewal, acquisition, and disposal of assets. Although the AMP may be prepared for a range of time periods, it typically informs a long-term financial planning period of ten (10) years. Therefore, a summary output from the AMP is the forecast of ten (10) year total outlay, which for the Stormwater Management Infrastructure Network is estimated as \$36,054,708 or \$3,605,471 on average per year.

1.6 Financial Summary

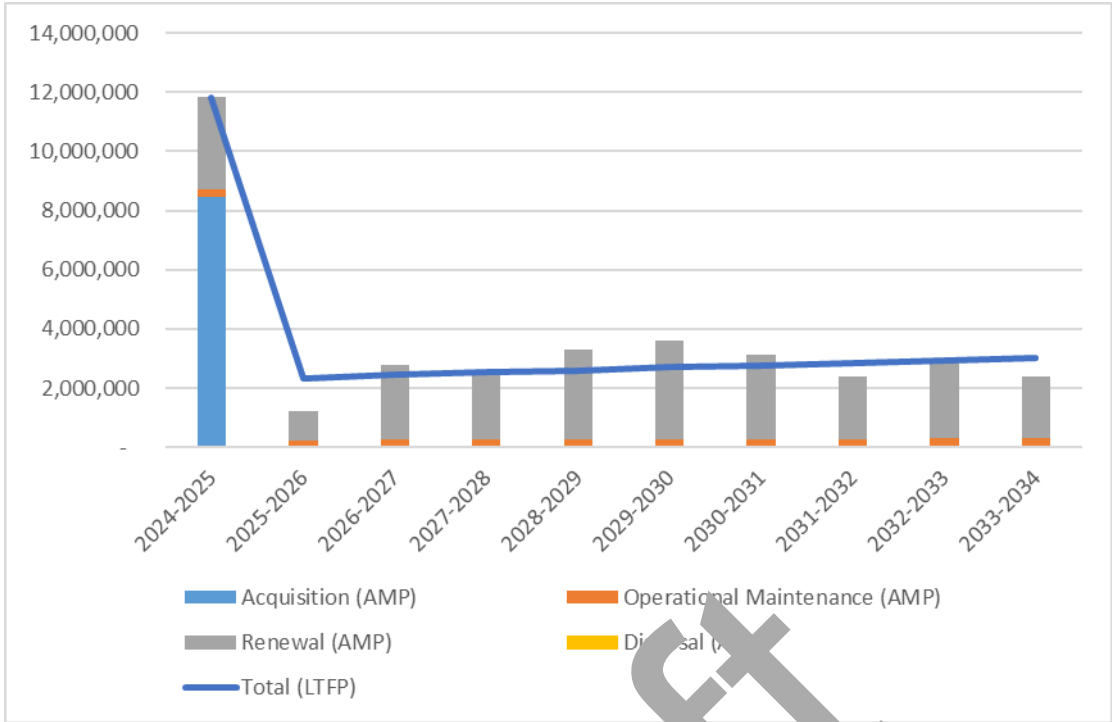
1.6.1 What the Council will do

Estimated available funding for the ten (10) year period is \$36,055,900 or \$3,605,594 on average per year) as set out in the LTFP. This is approximately 100% of the cost to sustain the current level of service at the lowest life-cycle cost.

The reality is that only what is funded in the LTFP can be provided. The informed decision-making depends on the AMP emphasising the consequences of Planned Budgets on the service levels which are provided and the associated risks.

The anticipated Planned Budget for the City's Stormwater Management Infrastructure Network results in nil shortfall for the forecast life-cycle costs required to provide services in the AMP compared with the Planned Budget currently included in the LTFP, which is shown in Figure 1.6.1 below.

Figure 1.6.1: FORECAST LIFE-CYCLE COSTS AND PLANNED BUDGETS



The Council plans to undertake the following in respect to the existing stormwater management Infrastructure Network:

- provision of operational maintenance and renewal works for existing assets to meet current service levels; and
- major renewal projects within the ten (10) year planning period which consists of improving the level of flood protection within catchments to provide the defined level of service through an integrated stormwater management approach. This includes opportunities for stormwater reuse and water sensitive urban design (WSUD) initiatives wherever possible within the project budget.

1.6.2 What the Council cannot do

Works and services that cannot be provided under present funding levels are:

- undertaking of major acquisition projects which are not set out in Council’s LTFP; and
- provision of operational maintenance and renewal works above the current service levels.

1.6.3 Managing the Risks

If there is forecast work (operational maintenance, renewal, acquisition or disposal) that cannot be undertaken due to insufficient resources, then this will result in service consequences for users. These service consequences include:

- frequency of flood events increasing due to increasing stormwater runoff;
- stormwater of poor quality entering the receiving waters and wider environment; and
- community expectations are not met.

The Council will endeavour to manage these risks within the available funding allocation by:

- reacting to potential flood events with temporary mitigation measures;
- finding efficiencies within the current operational maintenance program; and
- prioritisation of renewal projects.

1.7 Asset Management Practices

The Council's systems to manage assets include:

- the Council's asset management system;
- the Council's financial system; and
- the Council's strategic and planning documents.

1.8 Monitoring and Improvement Program

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

- formalise ongoing monitoring and reporting of improvement plan tasks and performance measures;
- establish formal condition rating process of drainage infrastructure;
- further develop risk assessment and management planning;
- improve GIS data storage system integration with asset database; and
- review resilience of critical infrastructure.

Draft

2.0 INTRODUCTION

2.1 Background

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

This AMP is to be read in conjunction with the following key planning documents:

- *CityPlan 2030: Shaping Our Future;*
- Long-term Financial Plan;
- Annual Business Plan;
- City Wide Floodplain Mapping and Long Term Drainage Program;
- Asset Management Policy; and
- City of Norwood Payneham & St Peters Community Survey Report.

The Council has a strong focus on asset management, with continuous improvements during the revision of the AMP. Integration of acquisition and renewal planning is undergoing continuous improvement to ensure the minimum required investment provides the greatest value outcomes.

Strategic Direction

The Council's strategic direction is guided by four outcomes or Pillars which contribute to the realisation of the Council's Vision and are based on the four Pillars of the Quadruple Bottom Line (QBL) framework. The four outcomes are Social Equity, Cultural Vitality, Economic Prosperity and Environmental Sustainability.



For our City, adding the fourth Pillar of culture to the traditional Triple Bottom Line (TBL) of environmental, social and economic sustainability highlights the importance of protecting and enhancing our City's unique character and sense of place.

The objectives set out in *CityPlan 2030: Shaping Our Future*, which outline the priorities for what needs to happen to achieve the four outcomes, reflect the community’s aspirations, the policy commitments of the Council and the likely trends and issues which our City will face over the course of *CityPlan 2030*.

CityPlan 2030 plays a pivotal role in guiding the City of Norwood Payneham & St Peters towards the community’s vision for the future. Achieving the strategies contained in *CityPlan 2030*, requires transparent and accountable governance structures and processes which are both flexible and responsive to the future opportunities and challenges that will present themselves.

It will also require a positive ‘can-do attitude’ and approach to ensure that we realise the future which we want for ourselves and the next generation, rather than just ‘letting things happen’.

Strategic Planning Framework

In working towards our vision, all of the programs, projects and services which the Council delivers are structured into four key outcome areas, referred to as the ‘Four Pillars’ of Community Well-being.



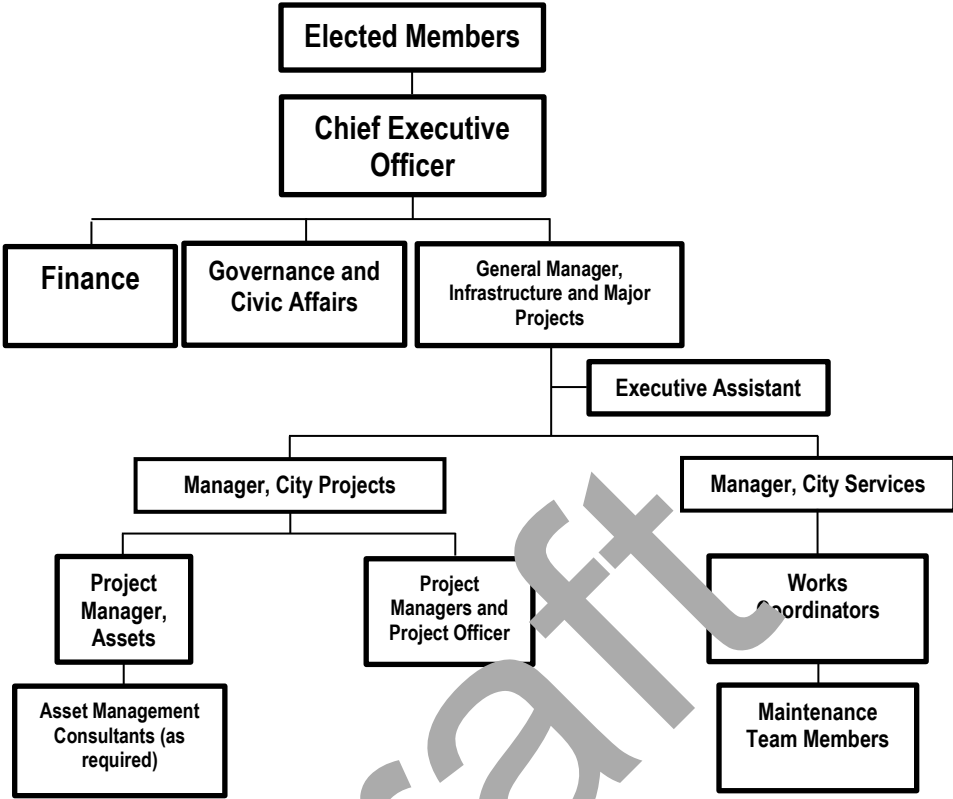
Key stakeholders in the preparation and implementation of this AMP are shown in Table 2.1 below.

Table 2.1: KEY STAKEHOLDERS IN THE AMP

Key Stakeholder	Role in AMP
Elected Members	Represent needs of community and shareholders, allocate resources to meet planning objectives in providing services while managing risks and ensure services are sustainable.
Chief Executive Officer	Endorse the development of the AMP and provide resources (as funded by the Council) required to complete the task.
General Manager, Infrastructure and Major Projects Manager, City Projects	Set high level priorities for asset management development and support the implementation of actions resulting from this AMP.
Finance Governance and Civic Affairs	Development of supporting policies such as capitalisation and depreciation. Provision of GIS applications and support.
Asset Management Consultants	Preparation of asset sustainability and financial reports incorporating asset depreciation in compliance with current accounting standards. Host and consolidate asset registers including updating valuations, capitalisation and depreciation. Provide support for development of the AMP and the implementation of effective asset management principles. Independently endorse asset revaluation methodology.
Project Manager, Assets	Responsible for the overall development of the AMP. Coordinate input of other stakeholders into the AMP. Manage the periodic collection of asset condition data.
City Assets / City Projects	Assist the Project Manager Assets in the development of the AMP.
City Services	Provide a high level of detail of the assets. Describe the maintenance standards deployed and the ability to meet the technical and citizen levels of service.
External Parties	Local Residents; Local Businesses; Utilities; Developers; and Federal and State Governments.

The Council’s organisational structure for service delivery of infrastructure assets is detailed in Figure 2.1 below.

Figure 2.1: ORGANISATIONAL STRUCTURE



2.2 Goals and Objectives of Asset Owners.

The Council’s goal in respect to the management of 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 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 life-cycle 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 the LTFP which identifies required, affordable forecast costs and how it will be allocated.

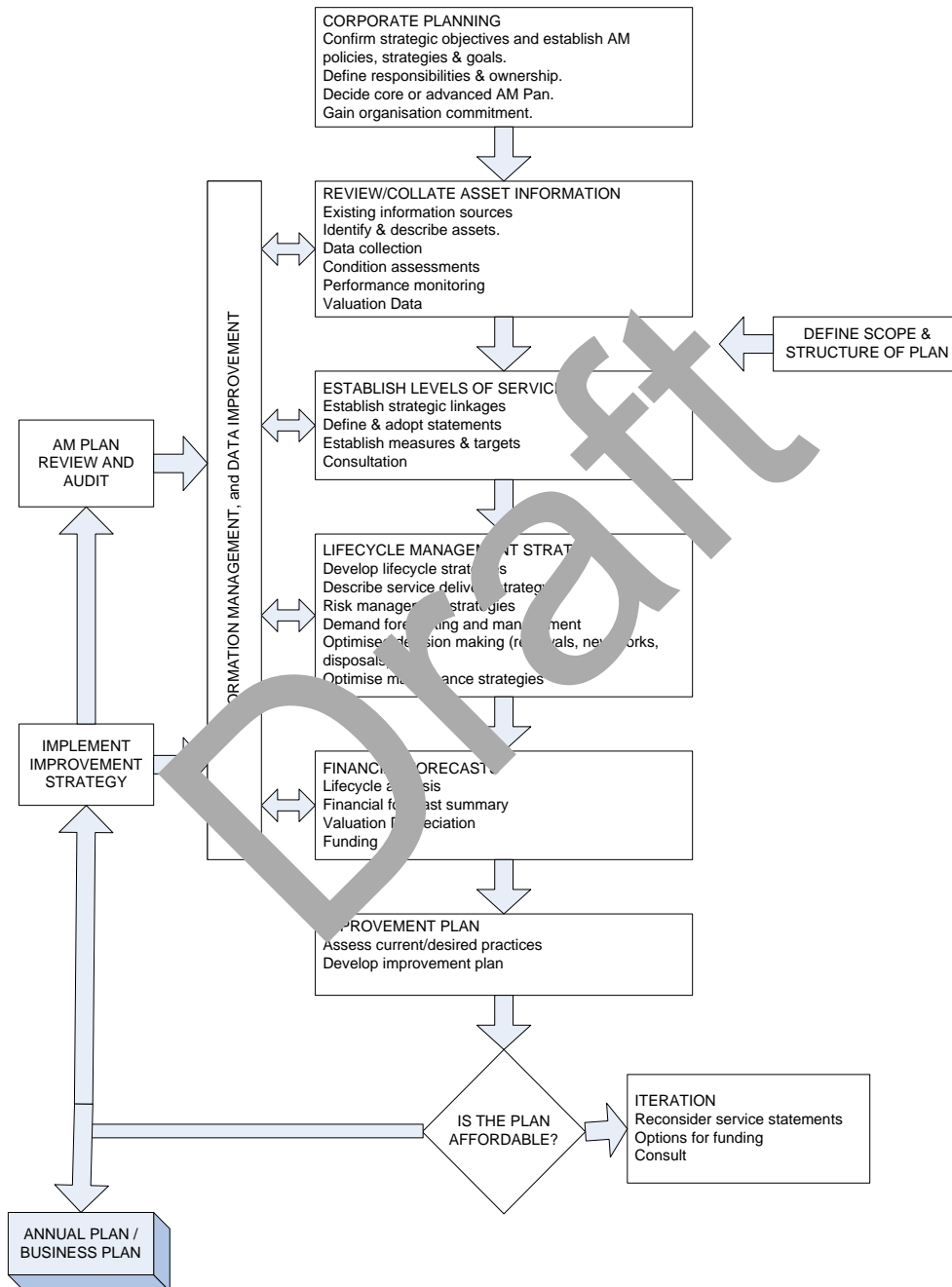
Key elements of the planning framework are:

- **levels of service** – specifies the services and levels of service to be provided;
- **future demand** – how this will impact on future service delivery and how this is to be met;
- **life-cycle 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 the Council manages the provision of the services;
- **monitoring** – how the AMP will be monitored to ensure objectives are met; and

- **asset management improvement plan** – how the Council increases asset management maturity.
- Other references to the benefits, fundamentals principles and objectives of asset management are:
- International Infrastructure Management Manual 2015 ¹; and
 - International Organisation for Standardisation (ISO) 55000².

A road map for preparing an AMP is shown in Figure 2.2 below.

Figure 2.2: ROAD MAP FOR PREPARING AN AMP



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 Community Research and Expectations

The Council conducts Community Surveys at regular intervals to establish how the Council is performing in a number of key indicators. Community Surveys have been conducted in 2009, 2011, 2013, 2017, 2019 and 2021, with the most recent survey undertaken in 2023. The survey uses a 5-point scale to determine satisfaction, with 1 being very dissatisfied, and 5 being very satisfied. The last version of the AMP included data up to 2019. Table 3.1 below summarises the results from the Council’s Resident Surveys.

Table 3.1: RESIDENT SATISFACTION SURVEY LEVELS

Performance Measure	Satisfaction Level						
	2023	2021	2019	2017	2013	2011	2009
Overall Infrastructure Satisfaction	3.8	3.9	3.8	3.8	4.0	4.0	3.6
Overall Environmental Management Satisfaction	3.5	3.8	3.4	3.7	3.9	4.0	3.7
Enhancing the Natural Environment	3.8	3.8	3.7	3.8	3.8	3.9	3.5
Managing Watercourses	3.8	3.7	3.4	3.6	3.6	3.6	3.2
Water, Management & Use	3.6	3.7	3.4	3.7	3.5	3.6	3.1
Undertaking Environmental Initiatives	3.4	3.7	3.4	3.5	3.2	3.2	3.0
Responding to Climate Change	3.1	3.3	3.0	N/A	N/A	N/A	N/A

3.2 Strategic and Corporate Goals

This AMP has been prepared in accordance with the Council’s Vision, Mission, Goals and Objectives as set out in its Strategic Management Plan, *CityPlan 2030 – Shaping our Future*.

The Council’s Vision is:

‘A City which values its heritage, cultural diversity, sense of place and natural environment.

A progressive City which is prosperous, sustainable and socially cohesive, with a strong community spirit.’

Council’s strategic goals, and how these are addressed in this AMP, are summarised in Table 3.2 below.

Table 3.2: GOALS AND HOW THESE ARE ADDRESSED IN THIS AMP

Goal	Objective	How Goal and Objectives are Addressed in the AMP
Environmental Sustainability – A leader in environmental sustainability	Mitigating and adapting to the impacts of climate change	Development of service levels provided by the infrastructure and the balancing of this with the available funding and acceptable risk. Planning of long-term sustainable infrastructure is important and to enable appropriate resources to be identified and provided.
Environmental Sustainability - Sustainable and efficient management of water, waste, energy and other resources.	Implement mechanisms to make better use of water resources including the harvesting and re-use of stormwater.	Planning for water quality improvements upstream of existing stormwater harvesting infrastructure to increase the harvest potential. Planning to harvest stormwater for use in public toilet flushing where available and in conjunction with renewal of public toilet facilities.
Environmental Sustainability - Healthy and sustainable watercourses	Revegetate and restore natural watercourses. Improve the water quality in our City’s watercourses. Encourage the capture and re-use of stormwater and reduce stormwater run-off.	Planning for naturalisation of existing watercourses where feasible in conjunction with Recreation and Open Space projects. Planning to develop WSUD initiatives as part of integrated stormwater management and streetscape projects. Planning to develop WSUD initiatives as part of integrated stormwater management and streetscape projects.

3.3 Legislative Requirements

There are a number of legislative requirements relating to the management of assets. Legislative requirements that impact upon the delivery of the Stormwater Management Infrastructure Network are set out in Table 3.3 below.

Table 3.3: LEGISLATIVE REQUIREMENTS

Legislation	Requirement
Aboriginal Heritage Act 1988	An Act to provide for the protection and preservation of the Aboriginal heritage, and for other purposes.
Australian Accounting Standards	Standards applied in preparing financial statements, relating to the valuation, revaluation and depreciation of transport assets.
Australian Standards	Council’s infrastructure projects are undertaken in accordance with Australian Standards, or in the absence of, best practice techniques.
Building Code of Australia	Sets out minimum standards for construction of new assets. Also provides minimum standards for new properties.
Disability Discrimination Act 1992	Provides protection for everyone in Australia against discrimination based on disability. It encourages everyone to be involved in implementing the Act and to share in the overall benefits to the community and the economy that flow from participation by the widest range of people.

Environmental Protection Act 1993	Provides the regulatory framework to protect South Australia's environment, including land, air and water.
Highways Act 1926	An Act to provide for the appointment of a Commissioner of Highways, and to make further and better provision for the construction and maintenance of roads and works and for other purposes.
Local Government Act 1999	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long-term financial plan supported by infrastructure and asset management plans for sustainable service delivery.
Manual of Legal Responsibilities and Technical Requirements for Traffic Control Devices – Part 2 – Code of Technical Requirements	Defines legal requirements for the installation of traffic control devices.
Road Traffic Act 1961	Defines responsibilities pertaining to roadways and standards.
Roads (Opening & Closing Act) 1991	Allows for the formalisation of roadways status.
Work Health and Safety Act 2012	Provides minimum standards for health and safety of individuals performing works.

3.4 Citizen Values

Service levels are defined in three (3) ways: Citizen Values, Citizen Levels of Service and Technical Levels of Service.

Citizen Values indicate:

- what aspects of a service is important to the citizen;
- whether they see value in what is currently being provided; and
- the likely trend over time based on the current budget provision.

A summary of the satisfaction measure being used, the current feedback and the expected performance based on the current funding levels is set out in Table 11 below.

Table 3.4: CITIZEN VALUES

Citizen Values	Citizen Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Enhancing natural environment	Community Survey Report	Community survey results indicate: <ul style="list-style-type: none"> this is the second most important factor which impacts overall satisfaction with environment management satisfaction has remained consistent compared to 2019 (i.e., when the AMP was last renewed) 	Likely to remain unchanged with limited opportunity within urban environment.
Management of watercourses, including flooding	Community Survey Report	Community survey results indicate: <ul style="list-style-type: none"> this is the fourth most important factor which impacts overall satisfaction with environment management satisfaction has improved compared to 2019 	Continued improvement of management of watercourses including reduced risk of flooding to private property.
Undertaking environmental initiatives, including water quality and reuse	Community Survey Report	Community survey results indicate: <ul style="list-style-type: none"> this is the fourth most important factor which impacts overall satisfaction with environment management satisfaction has remained consistent compared to 2019 	Continued improvement with implementation of integrated stormwater management and streetscape projects.

3.5 Citizen Levels of Service

The Citizen Levels of Service are considered in terms of:

- **quality:** 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:** Is the service over or under used? Does the Council need more or less of these assets?

A summary of the performance measure being used, the current performance and the expected performance based on the current funding level is set out in Table 3.5 below.

Confidence levels of current performance and expected trend are set out in Table 3.5 below and are categorised as follows:

- **high:** professional judgement supported by extensive data;
- **medium:** professional judgement supported by data sampling; or
- **low:** professional judgement with no data evidence.

Table 3.5: CITIZEN LEVELS OF SERVICE MEASURES

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Quality	Asset condition is 'fit for purpose'	Community survey on Managing Watercourses	Community survey results indicate satisfaction has improved compared to 2019 (i.e., when the AMP was last renewed)	No change, as expired assets are renewed as required
	Confidence levels		High	Medium
Function	Asset meets service needs	Community survey on Enhancing Natural Environment	Community survey results indicate satisfaction has remained consistent compared to 2019	Likely to remain unchanged with limited opportunity within urban environment
	Confidence levels		High	Medium
Capacity	Capacity of assets to meet demands	Community survey on Managing Watercourses	Community survey results indicate satisfaction has improved compared to 2019	Improved performance is expected as a result of further drainage upgrade works
	Confidence levels		High	Medium

3.6 Technical Levels of Service

To deliver the Citizen Values and impact the perceived Citizen Levels of Service, operational or technical measures of performance are used. These technical measures relate to the activities and allocation of resources to best achieve the desired community outcomes and demonstrate effective performance.

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

- **acquisition:** the activities to provide a higher level of service or a new service that did not exist previously (e.g. construction of a new detention basin);
- **operational maintenance:** the regular activities to retain an asset as near as practicable to an appropriate service condition (e.g. inspections and condition assessments);
- **renewal:** the activities that return the service capability of an asset up to that which it had originally provided (e.g. straight replacement of pipeline); and
- **disposal:** the activities associated with the disposal of a decommissioned asset including sale, demolition or relocation (e.g. redundancy of pipeline network).

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

Table 3.6 below shows the activities expected to be provided under the current Planned Budget allocation and the forecast activity requirements being recommended in this AMP.

³ IPWEA, 2015, IIMM, p 2|28.

Table 3.6: TECHNICAL LEVELS OF SERVICE

Life-Cycle Activity	Purpose of Activity	Activity Measure	Current Performance (LTFP)	Recommended Performance (AMP)
Acquisition	Gifted or transferred infrastructure from developers / property owners	Incorporate into asset register upon ownership	Occurs on an ad hoc basis dependent on development	Occurs on an ad hoc basis dependent on development
	Trinity Valley Stormwater Drainage Upgrade	Budget allocation	As budgeted within the LTFP (this is discussed further in Sections 5.4 and 5.5)	As per Council’s City Wide Floodplain Mapping and Long Term Drainage Program
		Budget	\$0 over ten (10) years	\$8,472,308 over ten (10) years
Operational Maintenance	Side entry pit and trash rack cleaning	Frequency	Conduct on a programmed basis and on request	Conduct on a programmed basis and on request
	CCTV inspection of underground assets	Frequency	Yearly inspection program of section of underground network	Yearly inspection program of section of underground network
	Drainage structures condition assessment	Frequency	Asset Condition Assessment undertaken once every five (5) years	Asset Condition Assessment undertaken once every five (5) years
		Budget	\$2,691,104 over ten (10) years	\$2,691,249 over ten (10) years
Renewal	Renewal of asset	Renewal to requirements on asset register	As budgeted within the LTFP	Prioritise and undertake projects as per Council’s City Wide Floodplain Mapping and Long Term Drainage Program (2019)
		Budget	\$33,435,832 over ten (10) years	\$24,891,151 over ten (10) years
Disposal	Disposal of assets no longer in use	As identified in the AMP	No assets identified as no longer in use	No assets identified as no longer in use
		Budget	\$0 over ten (10) years	\$0 over ten (10) years

It is important to regularly monitor the service levels provided by the Council as these will change. The current performance is influenced by work efficiencies and technology, and community priorities will change over time.

4.0 FUTURE DEMAND

4.1 Demand Drivers

Drivers affecting demand include (but are not limited to) changes in population, regulations, changes in demographics, seasonal factors, vehicle ownership rates, consumer preferences and expectations, technological changes, economic factors, agricultural practices and environmental awareness.

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 below.

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 below. Further opportunities will be developed in future revisions of this AMP.

Table 4.3: DEMAND MANAGEMENT PLAN

Demand Driver	Current Position	Projection	Impact on Services	Demand Management Plan
Climate change			Refer to Section 4.5	
Infill development	Minimise additional runoff to waterways through planning controls	Increased stormwater runoff	Higher stormwater flow capacity demands on services during heavy rainfall events	Maintain and enhance development planning controls
Environmental management	Renewal program designed to enhance environmental outcome where possible	Increased water quality and reuse expectations	Increased requirement for WSUD infrastructure	Asset renewal and upgrade designs to consider an integrated stormwater management approach Maintain and enhance development planning controls

4.4 Asset Programs to Meet Demand

The new assets required to meet demand may be acquired, donated or constructed and these assets are discussed in Section 5.5.

Acquiring new assets will commit the Council to increased ongoing operational 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 operational maintenance and renewal costs for inclusion in the LTFP (refer to Section 5).

4.5 Climate Change and Adaptation

The impacts of climate change can have a significant impact on the assets which the Council manages and the services which are provided. 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 will impact on assets can vary significantly depending on the location and the type of asset and services provided, as will the way in which the Council responds and manage these impacts.

As a minimum, the Council should consider both how to manage existing assets given the potential impacts of climate change and how to create resilience to climate change in any new works or acquisitions.

Opportunities which have been identified to date to manage the impacts of climate change on existing assets are shown in Table 4.5.1 below.

Table 4.5.1: MANAGING THE IMPACT OF CLIMATE CHANGE ON ASSETS

Climate Change Description	Projected Change	Potential Impact on Assets and Services	Management
Storm intensity	Increased rainfall intensity during rainfall events	Increased demand to manage increased flows	Asset renewal and upgrade designs to consider flood modelling which accounts for climate change impacts
Rainfall	Reduced annual rainfall	Reduced availability for water reuse	Asset renewal and upgrade designs to optimise water reuse
Temperature	Higher maximum temperatures	Decreased lifespan of assets	While most assets are underground, the material used for exposed above-ground assets can be considered more closely with regards to this issue

The way in which the Council constructs new assets should recognise that there is opportunity to develop resilience to the impacts of climate change. Developing resilience has a number of benefits including but not limited to:

- assets will be able to withstand the impacts of climate change;
- services can be sustained; and
- assets that can endure the impacts of climate change may potentially lower the life-cycle cost and reduce their carbon footprint.

Table 4.5.2 below summarises some asset climate change resilience opportunities.

Table 4.5.2: DEVELOPING ASSET RESILIENCE TO CLIMATE CHANGE

New Asset Description	Climate Change Impact These Assets?	Develop Resilience in New Works
WSUD infrastructure	Reduced annual rainfall	Higher quality stormwater more likely to be captured by ASR and reused for irrigation
Stormwater detention assets	Increased rainfall intensity during rainfall events	Reduce requirement to increase the capacity of the existing pit and pipe network

These initiatives are currently being implemented within Council projects where possible. However, it is acknowledged that the impact of climate change on assets is a new and complex issue, and further opportunities will be developed in future revisions of this AMP.

5.0 LIFE-CYCLE MANAGEMENT PLAN

The Life-Cycle Management Plan details how the Council 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

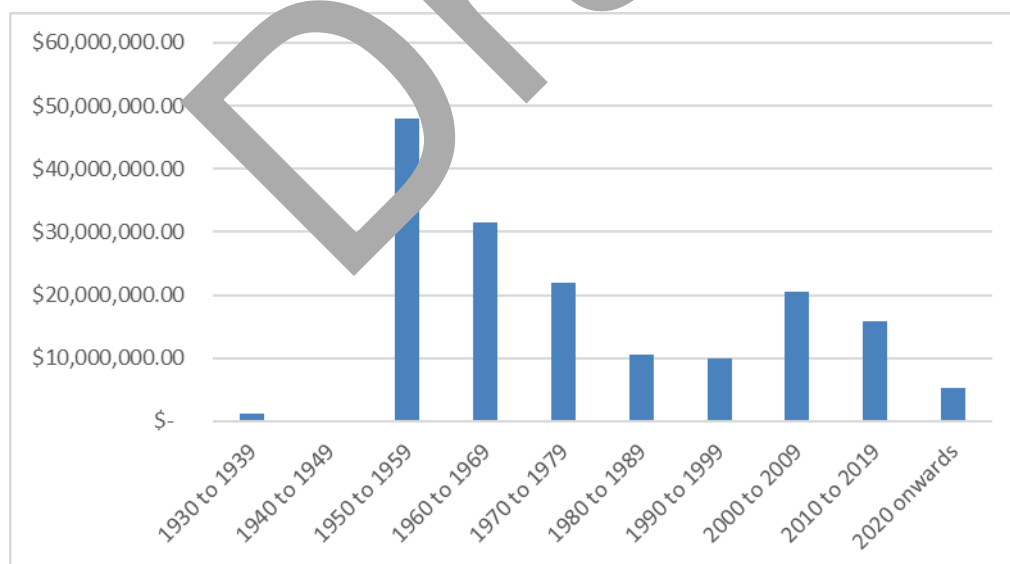
The assets covered by this AMP are shown in Table 5.1.1 below.

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

Table 5.1.1: ASSETS COVERED BY THIS AMP

Asset Category	Replacement Value (\$)
Nodes (pits, outlets, chambers)	17,016,674
Pipes	88,510,260
Culverts	35,712,300
Channels	10,270,100
Waterways under vehicular bridges	2,035,955
Creek Protection	1,041,000
Footbridges	198,394
TOTAL	156,831,001

Figure 5.1.1: ASSET AGE PROFILE



Stormwater Management Infrastructure assets typically have a long life, often in excess of 80 to 100 years. The majority of the City's underground Stormwater Management Infrastructure was constructed between 1950 and 1970.

5.1.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available. However, there is insufficient resources to address all known deficiencies. Locations where deficiencies in service performance are known are detailed in Table 5.1.2 below.

Table 5.1.2: KNOWN SERVICE PERFORMANCE DEFICIENCIES

Location	Service Deficiency
Trinity Valley	Level of flood protection provided
Joslin Valley	Level of flood protection provided
First Creek	Level of flood protection provided

The above service deficiencies have been identified through the Council's City Wide Floodplain Mapping and Long Term Drainage Program, together with operational reports and historical data. The identified service deficiencies are addressed systematically through the annual works programs and operational maintenance works wherever feasible.

5.1.3 Asset condition

The condition of assets should be monitored by undertaking a condition assessment of the Stormwater Management Infrastructure assets accessible from ground (e.g. pipes and open channels) once every five (5) years. Annual CCTV inspections of some inaccessible underground assets (e.g. pipes and culvert) should be completed to systematically monitor asset condition.

A formal condition rating has not been historically provided with Stormwater Management Infrastructure condition assessments. The output has consisted of defects lists and associated maintenance requirements. The condition assessment rating system is to be formalised prior to the next condition data collection (scheduled for the 2025-2026 financial year).

5.2 Operational Maintenance Programs

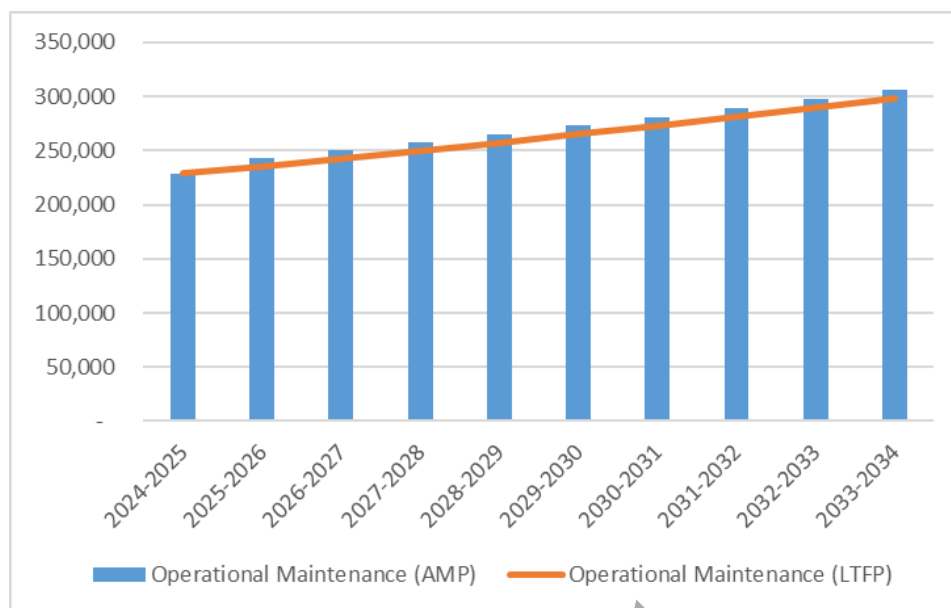
Operational maintenance works focus on the efficiency of assets to ensure the achievement of organisational objectives and the improvement of performance. They include all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating.

Examples of typical operational maintenance activities include asset inspections and patch repairs.

Summary of forecast operational maintenance costs

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

Figure 5.2: OPERATIONAL MAINTENANCE SUMMARY



Operational maintenance costs remain consistent over the course of the AMP as the cost for the Stormwater Management Infrastructure Network are relatively stable due to the nature and location of the assets.

Upon completion of the Trinity Valley Stormwater Drainage Upgrade project, the increasing additional operational costs will need to be monitored and reflected onto the LTFP accordingly. However, this increase in operational maintenance costs is forecasted to be minor in respect to the total operational maintenance costs for the Stormwater Management Infrastructure Network.

5.3 Renewal Plan

Renewal involves major capital work which does not significantly alter the original service provided by the asset, but restores, rehabilitates, 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 operational maintenance costs.

The typical “useful lives” of assets used to develop projected asset renewal forecasts are shown in Table 5.3 below.

Table 5.3: USEFUL LIVES OF ASSETS

Asset Category	Useful Life
Stormwater pipes, culverts, inlets and junction boxes	80 to 100 years
Footbridges	100 years
Reno Mattress and Gabion Walls	70 years
Pumps and Control Systems	10 to 20 years

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; or

- to ensure the infrastructure is of sufficient quality to meet the service requirements.⁴

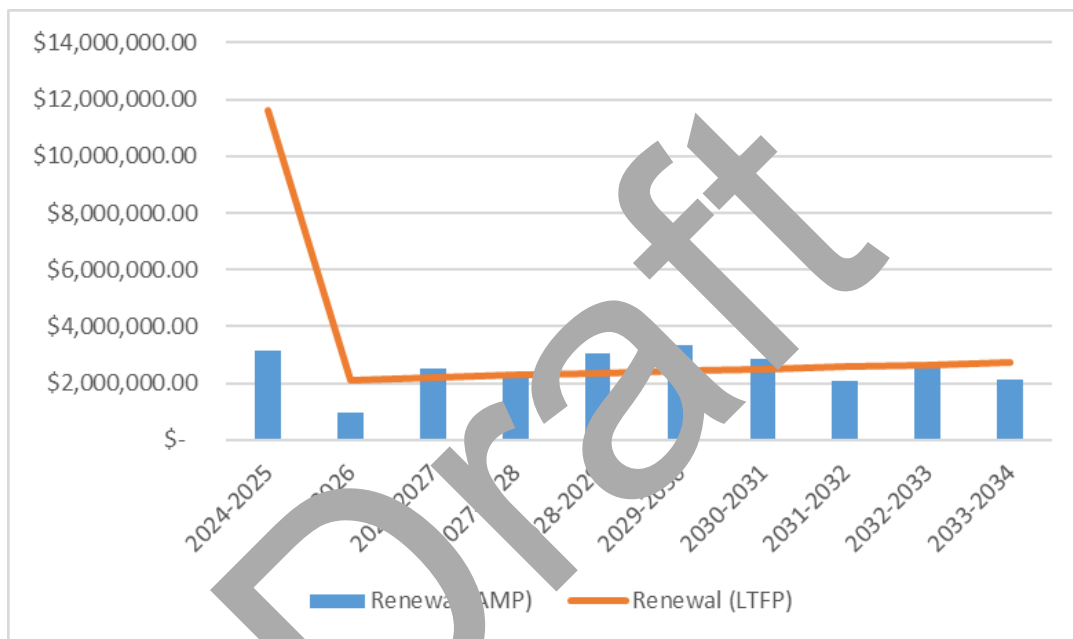
It is possible to prioritise renewals by identifying assets or asset groups that:

- have a high consequence of failure;
- have high use and subsequent impact on users would be significant;
- have higher than expected operational maintenance costs, and
- have potential to reduce life-cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.⁵

5.4 Summary of Future Renewal Costs

The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.4 below.

Figure 5.4: FORECAST RENEWAL COSTS



The scheduling of identified renewal proposals is guided by Council’s City Wide Floodplain Mapping and Long Term Drainage Program (2019). One of the major projects identified in the program is the Trinity Valley Stormwater Drainage Upgrade Project. Initially, the Project entailed the renewal of existing assets within Trinity Valley, as well as minor upgrades of a number of sections of the stormwater drainage system. Therefore, the construction costs associated with this Project were identified as “Renewal”, and this is reflected in the LTFP.

As the Project progressed, it was deemed that major upgrade works are required to be undertaken to ensure that the Project objectives are met. To accurately capture the nature of the works, the “upgrade” component of the Project has been identified as “Acquisition” within the AMP. In isolation, Figure 5.4 above and Figure 5.5 in Section 5.5 illustrate a difference of totals between the AMP and LTFP numbers. However, when viewed holistically, the LTFP and AMP totals are approximately even, as illustrated in Figure 7.1.3 in Section 7.1.3.

Should there be resourcing issues, prioritisation of these renewals will need to be determined, with high-risk assets to be renewed when required and lower-risk assets being deferred.

⁴ IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

⁵ Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

5.5 Acquisition Plan

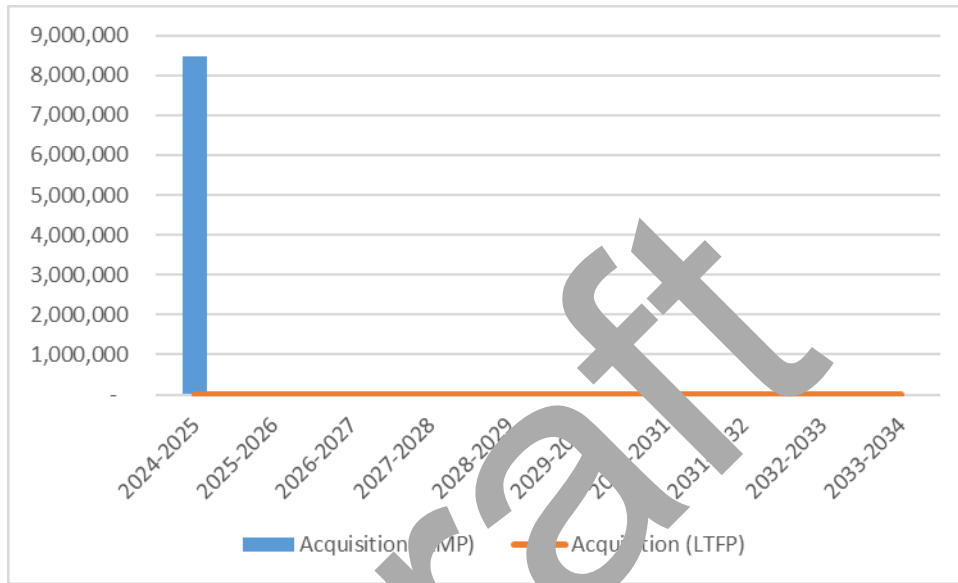
Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, demand, social or environmental needs. Assets may also be donated to the Council.

The acquisition projects included in the AMP are projects identified within Council’s strategies.

Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised in Figure 5.5 below and shown relative to the proposed acquisition budget.

Figure 5.5: FORECAST ACQUISITION COSTS



The variance between the acquisition AMP and LTFP numbers illustrated in Figure 5.5 above is discussed in Section 5.4. It is important to note that, when viewed statistically, the LTFP and AMP totals are approximately even, as illustrated in Figure 7.1.3 in Section 7.

Within the Council area, there are major waterways which are partially located on privately-owned land without Council easements, hence the ownership and responsibility of maintenance is of the owner of the private property.

It is a matter which requires further consideration, as a failure of a privately-owned section of a major waterway will significantly impact the stormwater drainage system. While the Council can assist with remediation of these failure issues within private land, the absence of easements adds a layer of complexity.

The Council should remain alert of opportunities to secure ownership of the land or easement over these sections of major waterways (e.g., as part of major development works).

5.6 Disposal Plan

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

At this stage, there are no disposal costs forecasted in the next ten (10) years.

6.0 RISK MANAGEMENT PLANNING

The purpose of risk management associated with infrastructure assets 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’⁶.

An assessment of risks 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 below.

Table 6.1: CRITICAL ASSETS

Critical Assets	Failure Mode	Impact
Footbridges	Degradation Third party damage	Service interruption
Outlets	Embankment collapse	Increased flood risk
Major culverts	Blockage	Increased flood risk

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

6.2 Risk Assessment

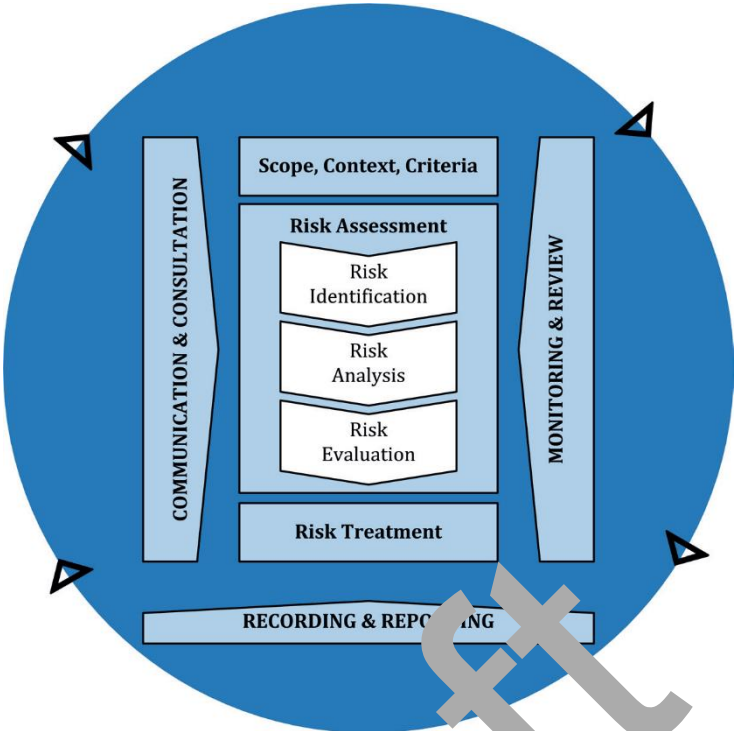
The risk management process used is shown in Figure 6.2 below.

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.

⁶ ISO 31000:2009, p 2

Figure 6.2: RISK MANAGEMENT PROCESS – ABRIDGED



Source: ISO 31000:2018 Figure 1, p. 10

The risk assessment process identifies credible risks, the likelihood of a 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 risks 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. This is outlined in Table 6.2 below.

Table 6.2: RISKS AND TREATMENT PLANS

Service or Asset at Risk	Risk Event	Impact Category	Risk Rating	Risk Treatment Plan	Residual Rating
Underground stormwater drainage assets	Potential for uninformed decision making, as a majority of assets are not visible	Service	Substantial (13)	Update condition data through CCTV works and review renewal program	Medium (17)
Side entry pits	Blockage due to debris and vegetation	Reputation	Substantial (13)	Monitor suitability of maintenance schedule and adjust accordingly (e.g., increase maintenance and inspections during high leaf fall periods)	Low (21)
Footbridges	Footbridge failure	Service / Reputation	Substantial (14)	Undertake periodic inspection and maintenance works	Medium (16)

6.3 Infrastructure Resilience Approach

The resilience of the Council’s critical infrastructure is vital to the ongoing provision of services to the community. To adapt to changing conditions, the Council needs to understand its capacity to ‘withstand a given level of stress or demand’ and to respond to possible disruptions to ensure continuity of service.

Resilience is built on aspects such as response and recovery planning, financial capacity, climate change and crisis leadership.

The Council does not currently measure its resilience in service delivery. This will be included in future iterations of the AMP.

6.4 Service and Risk Trade-Offs

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

6.4.1 What the Council cannot do

Works and services that cannot be provided under present funding levels are:

- undertaking of major acquisition works which are not set out in Council’s LTFP; and
- provision of operational maintenance and renewal works above the current service levels.

6.4.2 Service trade-off

If there is forecast work (operational maintenance, renewal, acquisition or disposal) that cannot be undertaken due to insufficient resources, then this will result in service consequences for users. These service consequences include:

- frequency of flood events increasing due to increasing stormwater runoff;

- stormwater of poor quality entering the receiving waters and wider environment; and
- community expectations are not met.

6.4.3 Risk trade-off

The forecast works not being undertaken due to insufficient resources may sustain or create risk consequences. These risk consequences include:

- loss of service; and
- loss of the Council's reputation.

The Council will endeavour to manage these risks within the available funding allocation by:

- reacting to potential flood events with temporary mitigation measures;
- finding efficiencies within the current operational maintenance program; and
- prioritisation of renewal projects.

Draft

7.0 FINANCIAL SUMMARY

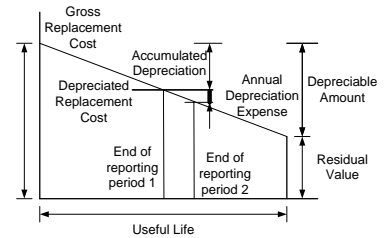
This section contains the financial requirements resulting from the information presented in the previous sections of this AMP. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

7.1 Financial Statements and Projections

7.1.1 Asset valuations

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

Current (Gross) Replacement Cost	\$156,555,401
Depreciable Amount	\$156,555,401
Depreciated Replacement Cost ⁷	\$74,593,523
Depreciation during the 2022-2023 Financial Year	\$1,705,839



7.1.2 Sustainability of service delivery

There are two key indicators of sustainable service delivery that are considered in the AMP for this service area, namely:

- asset renewal funding ratio (proposed LTFP renewal budget for the next ten (10) years / forecast AMP renewal costs for next ten (10) years); and
- medium term forecast costs / proposed budget (over ten (10) years of the planning period).

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio⁸ 134.33%

The Asset Renewal Funding Ratio is an important indicator as it illustrates that over the next ten (10) years, the Council expects to have 100% of the funding required for the optimal renewal of assets.

The variance between the acquisition AMP and LTFP numbers is discussed in Section 5.4. It is important to note that, when viewed holistically, the LTFP and AMP totals are approximately even, as illustrated in Figure 7.1.3 in Section 7.1.3.

Additionally, between 2025-2026 and 2033-2034, the total AMP renewal figure is approximately \$21.76 million and the LTFP renewal figure is approximately \$21.83 million. This results in an Asset Renewal Funding Ratio of 100.33% for those nine (9) years, which is within the target range of 90% to 110%.

The forecast renewal work along with the proposed renewal budget is illustrated in Appendix C.

Medium term – ten (10) year financial planning period

This AMP identifies the forecast operational maintenance and renewal costs required to provide an agreed level of service to the community over a ten (10) year period. This provides input into ten (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 ten (10) year period to identify any funding shortfall.

The forecast AMP operational maintenance and renewal costs over the ten (10) year planning period is \$2,758,240 on average per year.

⁷ Also reported as Written Down Value, Carrying or Net Book Value.

⁸ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

The LTFP operational maintenance and renewal funding is \$3,605,594 on average per year, resulting in nil funding shortfall. This indicates that 100% of the forecast costs needed to provide the services documented in this AMP are accommodated in the proposed budget.

Similar to the above, the variance between the AMP and LTFP numbers is discussed in Section 5.4. Additionally, the ratio is approximately 1.0 (100.01%) for the remaining nine years of the AMP timeframe.

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 AMP and ideally over the ten (10) year life of the LTFP.

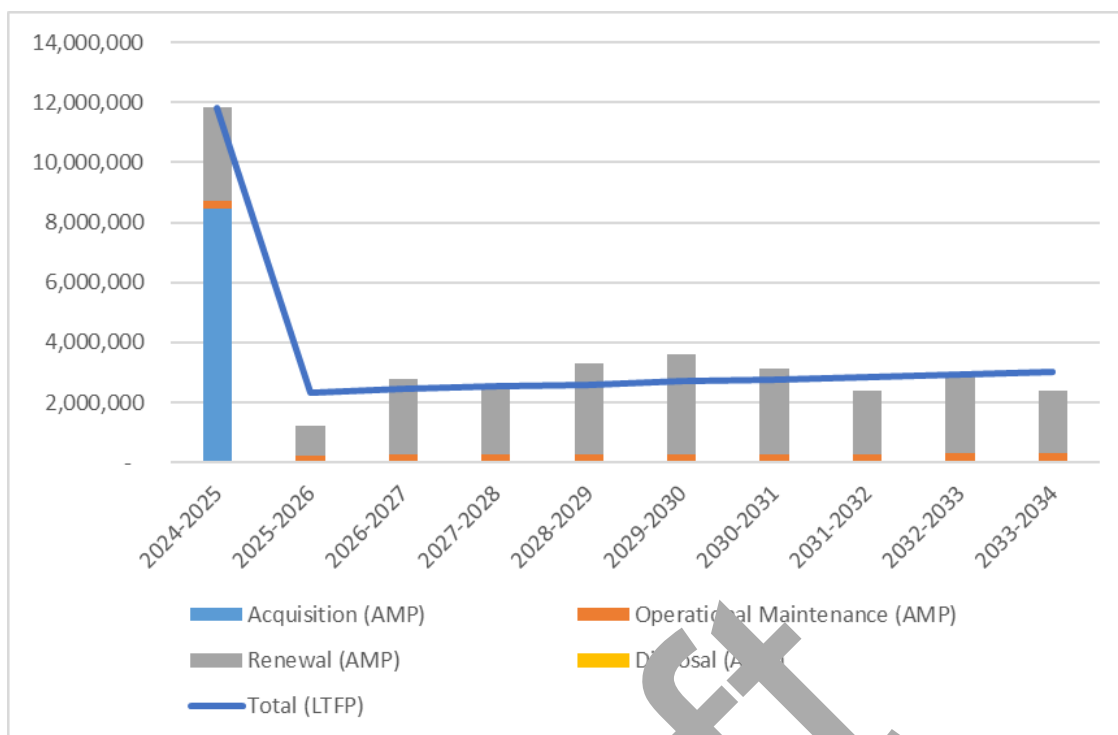
7.1.3 Forecast Costs (outlays) for the LTFP

A summary of the anticipated AMP forecast life-cycle costs compared with the LTFP planned budget are shown in Table 7.1.3 and Figure 7.1.3 below.

Table 7.1.3: FORECAST LIFE-CYCLE COSTS AND PLANNED BUDGETS

Year	Acquisition (AMP) (\$)	Operational Maintenance (AMP) (\$)	Renewal (AMP) (\$)	Disposal (AMP) (\$)	Total Budget (LTFP) (\$)
2024-2025	8,472,308	228,553	3,136,151	0	11,837,012
2025-2026	0	243,315	98,000	0	2,328,278
2026-2027	0	250,377	2,527,500	0	2,442,755
2027-2028	0	257,651	87,500	0	2,525,113
2028-2029	0	265,143	3,032,500	0	2,609,733
2029-2030	0	272,861	3,327,500	0	2,703,137
2030-2031	0	280,800	2,202,500	0	2,782,002
2031-2032	0	277,990	2,077,500	0	2,862,338
2032-2033	0	17,429	2,752,500	0	2,941,846
2033-2034	0	115	2,105,000	0	3,023,722

Figure 7.1.3: FORECAST LIFE-CYCLE COSTS AND PLANNED BUDGETS



7.2 Funding Strategy

The proposed funding for assets is outlined in the Council's Annual Budget and LTFP.

The Council's financial strategy outlines how funding will be provided, whereas the AMP communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

7.3 Valuation Forecasts

Asset values are forecast to increase as additional assets are added to service.

Additional assets will generally add to the operational 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.

7.4 Key Assumptions Made in Financial Forecasts

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

Key assumptions made in this AMP are:

- renewal costs have been based on professional judgement; and
- forecasted operational maintenance costs are based on previous expenditure for the same service levels.

7.5 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this AMP 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 an A to E level scale⁹ in accordance with Table 7.5.1 below.

⁹ IPWEA, 2015, IIMM, Table 2.4.6, p 2 | 71.

Table 7.5.1: DATA CONFIDENCE GRADING SYSTEM

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

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

Table 7.5.2: DATA CONFIDENCE ASSESSMENT FOR DATA USED IN AMP

Data	Confidence Assessment	Comment
Demand drivers	C	Based on development application trends, climate change data
Growth projections	C	Based on development application trends
Acquisition forecast	E	Future iterations of the AMP may incorporate opportunities to achieve acquisition through grant funding to enhance service level provision
Operational maintenance forecast	B	In line with previous years
Renewal forecast	B	As per approved methodology
- Asset values	B	
- Asset useful lives	B	Current estimates from asset register
- Condition modelling	C	Methodology and data capture to be updated
Disposal forecast	E	No disposal of assets anticipated

The estimated confidence level for and reliability of data used in this AMP is considered to be reliable.

8.0 PLAN IMPROVEMENT AND MONITORING

8.1 Status of Asset Management Practices

8.1.1 Accounting and financial data sources

The Council uses Authority and Conquest as its financial management and accounting systems. These systems have the capability to report the full lifecycle of assets, providing full transparency from acquisition to disposal.

8.1.2 Asset management data sources

The Council uses Conquest as its asset management system, and Spectrum Spatial as its geographical information system. There are plans to improve integration between the GIS data with the asset management register to provide a live and amalgamated asset data system.

8.2 Improvement Plan

It is important that the Council recognise areas of their AMP and planning process that require future improvements to ensure effective asset management and informed decision making. The improvement plan generated from this AMP is shown in Table 8.2 below.

Table 8.2: IMPROVEMENT PLAN

Task No.	Task	Responsibility	Resources Required	Timeline
1	Formalise ongoing monitoring and reporting of improvement plan tasks and performance measures	Project Manager, Assets	Manager, City Assets	1 year
2	Establish formal condition rating process of drainage infrastructure	Project Manager, Assets	Asset Consultants	1 year
3	Further develop risk assessment and management planning	Project Manager, Assets	Project Officer, Assets and Asset Consultants	2 years
4	Improve GIS data storage system, integrate with asset databases	Project Manager, Assets	Information Services, Consultants	3 years
5	Review resilience of critical infrastructure	Project Manager, Assets	City Assets and Asset Consultants	4 years

8.3 Monitoring and Review Procedures

The AMP will be reviewed and updated annually to ensure it represents the current service level, asset values, forecast operational maintenance, renewals, acquisition and disposal costs and proposed budgets. These forecast costs and proposed budget are incorporated into the LTFP or will be incorporated into the LTFP once completed.

The AMP has a maximum life of four (4) years and is due for complete revision and updating within two (2) years of each Council election.

8.4 Performance Measures

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

- the degree to which the required forecast costs identified in this AMP are incorporated into the LTFP;
- the degree to which the short-term detailed works programs, budgets, business plans and corporate structures take into account the 'global' works program trends provided by the AMP;
- the Asset Renewal Funding Ratio achieving the Organisational Target (this target is often 1.0).

9.0 REFERENCES

- IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM;
- IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/namsplus;
- IPWEA, 2015, 2nd edn., 'Australian Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/AIFMM;
- IPWEA, 2015, 3rd edn., 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM;
- IPWEA, 2012 LTFP Practice Note 6 PN Long-Term Financial Plan, Institute of Public Works Engineering Australasia, Sydney;
- ISO, 2018, ISO 31000:2018, Risk management – Guidelines;
- *CityPlan 2030: Shaping Our Future*;
- Long Term Financial Plan;
- Annual Business Plan;
- City Wide Floodplain Mapping and Long Term Drainage Program;
- Asset Management Policy; and
- City of Norwood Payneham & St Peters Community Survey Report.

Draft

10.0 APPENDICES

Appendix A

Acquisition Forecast

A.1 – Acquisition Forecast Assumptions and Source

The scheduling of identified acquisition projects is guided by Council’s City Wide Floodplain Mapping and Long Term Drainage Program.

A.2 – Acquisition Forecast Summary

Table A2: ACQUISITION FORECAST SUMMARY

Year	Acquisition (AMP) (\$)	Acquisition (LTFP) (\$)
2024-2025	8,472,308	0
2025-2026	0	0
2026-2027	0	0
2027-2028	0	0
2028-2029	0	0
2029-2030	0	0
2030-2031	0	0
2031-2032	0	0
2032-2033	0	0
2033-2034	0	0

Draft

Appendix B

Operational Maintenance Forecast

B.1 – Operational Maintenance Forecast Assumptions and Source

The operational maintenance forecast has been based on previous expenditure for the same service levels.

B.2 – Operational Maintenance Forecast Summary

Table B2: OPERATIONAL MAINTENANCE FORECAST SUMMARY

Year	Operational Maintenance (AMP) (\$)	Operational Maintenance (LTFP) (\$)
2024-2025	228,553	228,553
2025-2026	243,315	235,410
2026-2027	250,377	242,472
2027-2028	257,651	249,746
2028-2029	265,143	257,238
2029-2030	272,861	264,956
2030-2031	280,809	272,804
2031-2032	288,996	281,000
2032-2033	297,429	289,524
2033-2034	306,115	298,210

Draft

Appendix C

Renewal Forecast Summary

C.1 – Renewal Forecast Assumptions and Source

The scheduling of identified renewal proposals is guided by Council’s City Wide Floodplain Mapping and Long Term Drainage Program.

C.2 – Renewal Forecast Summary

Table C2: RENEWAL FORECAST SUMMARY

Year	Renewal (AMP) (\$)	Renewal (LTFP) (\$)
2024-2025	3,136,151	11,608,459
2025-2026	987,500	2,092,868
2026-2027	2,537,500	2,200,283
2027-2028	2,287,500	2,275,367
2028-2029	3,037,500	2,352,495
2029-2030	3,327,500	2,438,181
2030-2031	2,832,500	2,509,098
2031-2032	2,087,500	2,581,247
2032-2033	2,552,500	2,652,322
2033-2034	2,105,000	2,723,412

Draft

Appendix D

Disposal Summary

D.1 – Disposal Forecast Assumptions and Source

No disposals have been forecast over the AMP period.

D.2 – Disposal Forecast Summary

Table D2: DISPOSAL ACTIVITY SUMMARY

Year	Disposal (AMP) (\$)	Disposal (LTFP) (\$)
2024-2025	0	0
2025-2026	0	0
2026-2027	0	0
2027-2028	0	0
2028-2029	0	0
2029-2030	0	0
2030-2031	0	0
2031-2032	0	0
2032-2033	0	0
2033-2034	0	0

Draft