

Asset Management Plan

Stormwater Harvesting 2026-2035



This plan details critical information about our stormwater harvesting assets, including a profile of their support services and their attributes. We also outline how this group of assets has performed over the past five years and what funds may be required to meet the projected demands of the services over the next 10-year planning period.

Actual funding will be guided by the capital investment plan of the Long-Term Financial Plan and determined in the Annual Business Plan and Budget. The asset management plan supports long-term planning by defining the level of service to be provided, future demand, anticipated costs to deliver the service into the future and guide investment prioritisation for the asset class.

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Acknowledgement of traditional owners

We acknowledge the Ngarrindjeri people as the traditional owners of this land on which we meet and work. We respect and acknowledge their spiritual connection as the custodians of this land and that their cultural heritage beliefs are still important to the living people today. We recognise the living culture and combined energies of the Ngarrindjeri people our global pioneers and community members today for their unique contribution to the life of our region

Staff Roles and Responsibilities

Clearly defining roles and responsibilities and allocating them to the right people is critical to the effective management of our infrastructure assets. The key roles and responsibilities for managing our stormwater assets are summarised below:

Sponsor:	Manager City Assets & Capital Delivery	Asset Manager:	Coordinator Water & Wastewater
Service Manager:	Unit Manager Asset Strategy and Planning		

Role	Responsibility	Collaborators
Service Planning	Unit Manager Asset Strategy and Planning	Community Development Manager Growth & Future City City Operations Coordinator Water & Wastewater Unit Manager Environment & Waste
Service Operations	Leading Worker Water and Wastewater	Community Development Unit Manager Operations Team Leader Open Space Team Leader Civil
Asset Planning	Coordinator Water and Wastewater	Community Development Manager Growth & Future City Group Leader Civil Operation Technical Officer Civil
Asset Design	Unit Manager Capital Delivery	Manager Development & Regulation Coordinator Water & Wastewater Infrastructure Engineer
Asset Construction	Unit Manager Capital Delivery	Manager City Assets & Capital Delivery Unit Manager Asset Strategy & Planning Unit Manager Property & Procurement Coordinator Infrastructure Engineering Infrastructure Engineer Project Manager
Asset Maintenance	Unit Manager Operations	Team Leader Civil Team Leaders Open Space Coordinator Water & Wastewater Senior GIS Officer Technical Officer Civil
Asset Disposal	Unit Manager Property and Procurement Unit Manager Operations	Manager City Assets & Capital Delivery Group Leader Civil Operations Community Services

Asset Data	Senior GIS Officer (Acquisition/Disposal)	Unit Manager Asset Strategy and Planning
		Unit Manager Operations
	Coordinator Water & Wastewater (Schedules)	Team Leaders Open Space
	Leading Worker Water & Wastewater (Inspection/Operation/Maintenance)	
Asset Financials	Finance Officers	Coordinator Water & Wastewater
		Unit Manager Capital Delivery
		Unit Manager Asset Strategy & Planning
		Senior GIS Officer

Asset Services and Benefits

Stormwater harvesting delivers multiple community, environmental and water security benefits. Rather than treating stormwater solely as runoff to be discharged, Council captures, stores, treats and reuses it as a valuable non-potable water resource. Through an integrated network of basins, wetlands, underground pipes, pump stations, rising mains and treatment facilities, stormwater is harvested and reused primarily for irrigation of parks, reserves and sporting facilities. This reduces reliance on Murray River water supplies and strengthens resilience during drought conditions.

The harvesting system also supports flood mitigation by providing detention storage and controlled discharge, reducing peak flows and downstream flood risk. Water quality is improved through treatment and natural filtration processes before reuse or discharge, protecting local waterways.

Overall, stormwater harvesting transforms drainage infrastructure into a strategic water security and environmental sustainability initiative that supports urban growth and long-term community resilience.

The table below summarises the categories of stormwater harvesting assets owned and managed by Council and reflect the significant investment in this asset class (source: Assetic Dec 25).

TOTAL REPLACEMENT VALUE
Stormwater Harvesting

\$13.4M

\$4.2M



SW Harvesting Pipes

\$46k



SW Harvesting pits

\$2.7M



SW Harvesting equipment

\$2.6M



Irrigation

\$3.5M



Basins and other harvesting

\$300k



Other¹

¹ Includes electrical conduits, cabinets, fences, gates, unallocated water main pipes and nodes, ultrasonic algae equipment

¹ Includes electrical conduits, cabinets, fences, gates, unallocated water main pipes and nodes, ultrasonic algae equipment

Asset Category	Asset Type	Quantities	Unit	Written Down Value (\$'000)	Replacement Value (\$'000)
Pipes	Harvesting				
	Pipes	693	m	240	305
	Rising Mains	9,573	m	2,929	3,796
	Culverts	16	m	14	18
	Headwall/Outfall	11	each	35	44
Pits	Harvesting	7	each	35	46
Equipment	Pump/Pump Station	8	each	820	1,575
	Switchboard	7	each	274	506
	Valve system	7	each	166	306
	Surge Vessel	1	each	51	94
	Valves, Solar Panels	71	each	150	272
Storage	Basin ²	1	each	2,719	3,461
	Other ³	4	each	23	38
Irrigation	Pipes	4,652	each	738	1,283
	Rising Main	4,258	each	Incl above	Incl above
	Water Treatment Plant	10	each	955	1,334
	Pump Station	1	each		
	Other	37	each	4	8
Electrical Conduits	Electrical Conduits	4,604	m	66	96
Electrical Conduit Pits	Electrical Conduit Pits	30	each	56	67
Electrical	Power Cabinet	1	each		
Structures	Fence, Gates, Bollards	11	each	73	106
Water Mains	Pipes	57	m	26	28
Water Nodes	Air Valves	3	each	7	7
Water Treatment Facility	Ultrasonic Algae Control	1	each	7	12
Totals:	N/A			9,394	13,403

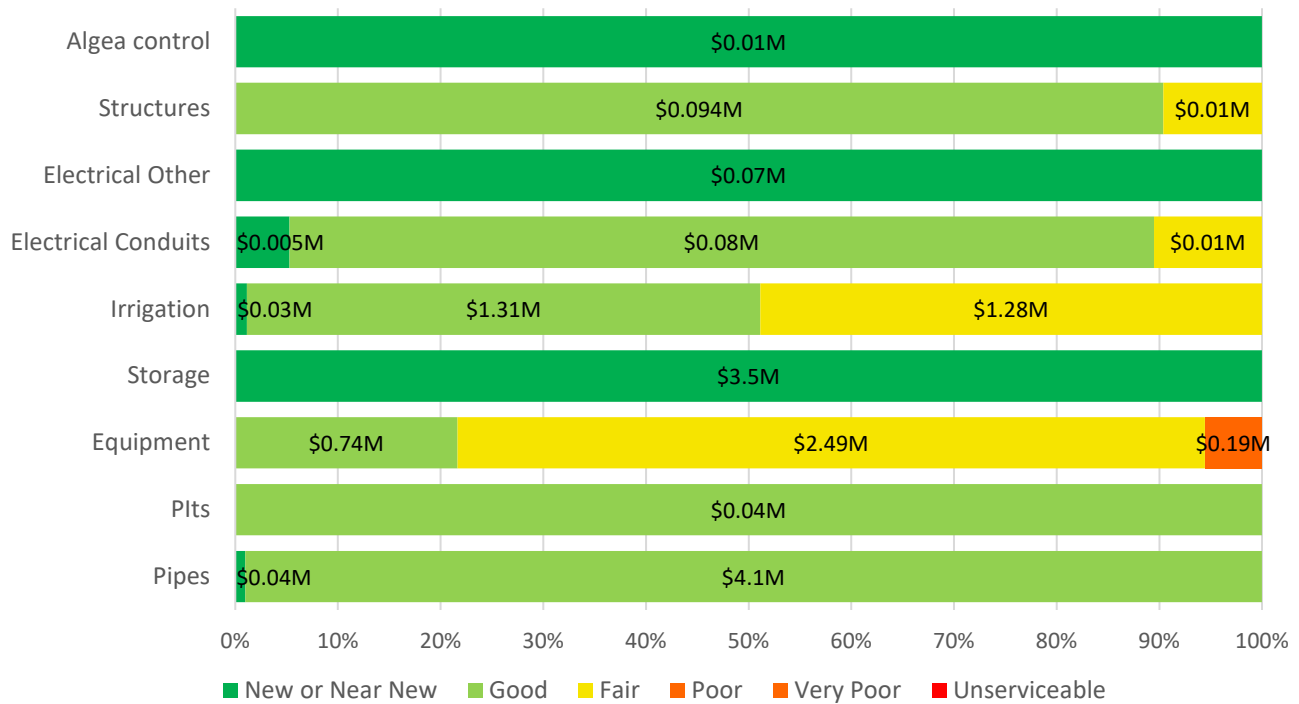
² Gifford Hill Lagoon

³ Storage assets - Gabion rock, ramp, spillway, level spreader

Age Profile/Condition

Portfolio Level Summary

98.5% of assets/components are in “fair” or better condition demonstrating that the assets are in good repair. Of these, 27% of assets/components are in “as new” condition, however 71 % of assets fall within the fair-good condition range indicating the need to start thinking about midlife maintenance and potential refurbishment options.



Components, Attributes and Useful Lives

For ease of management, our stormwater assets are broken into a series of sub-types. These types typically have different asset lives and require replacement as their condition or function deteriorates. The table below summarises the types, sub-types and useful life estimates.

Type	Sub-type	Useful Life (years)
Pipes	Pipes	100
	Rising Main	50
	Headwall	100
	Culvert	80
Pits	Pits	100
Stormwater Equipment	Pump/Pump Station	15, 25
	Switchboard	25
	Valve System	25
	Surge Vessel	25
	Valves, Solar Panels	25
Stormwater Storage	Basin	100
	Other	50 - 100
Irrigation	Pipes	100
	Rising Main	100
	Water Treatment Plant	15-30
	Pump Station	25
	Other ⁴	10-100
Electrical Conduits	Electrical Conduits	25
Electrical Conduit Pits	Electrical Conduit Pits	100
Electrical	Power Cabinet	25
Structures	Fence, Gates, Bollards	20-30
Open Space Furniture	Monument – Opening Date	100
Water Mains	Pipes	100
Water Nodes	Air Valves	30
Water Treatment Facility	Ultrasonic Algae Control Unit	5

⁴ Includes (pressure reducing) valves, hydrants, pits, tanks, camera, switchboard cabinet

Levels of Service Performance

We assess the performance of the asset class relative to customer's value from the service. The sections below define the overall service proposition, the critical elements of customer service levels and how they are related through activities and funding against the key phases of the asset lifecycle. Asset criticality and service risk are also assessed.

Customer Values

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

Customer Levels of Service

The Customer Levels of Service are considered in terms of the perspective of users. Three aspects are considered as listed below:

- **Condition** – the physical and technical state of harvesting assets, including basins, wetlands, underground pipes, pump stations, rising mains, storage lagoons and treatment facilities. This includes assessment of structural integrity of basins and wetlands, sedimentation and embankment condition, mechanical condition of pumps and valves, integrity of rising mains and underground pipelines, treatment plant performance and equipment deterioration and electrical and control system reliability.
- **Functionality** – the ability of stormwater harvesting assets to deliver the intended service outcomes — flood mitigation, water quality improvement and non-potable water supply. This includes reliable operation of pump stations during storm events, effective water quality treatment performance, delivery of harvested water to irrigation sites, environmental performance of wetlands and safe system operation during high flow events.
- **Capacity** – the ability of the stormwater harvesting system to accommodate future development, increased runoff volumes and increased irrigation demand. This includes lagoon storage capacity, pump station duty flow rates, rising main hydraulic capacity, treatment plant throughput and basin detention volumes.

The table below summarises how these attributes are measured and expected future trends

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend (Based on Planned Budget)	Confidence Level
Condition	Provide stormwater harvesting assets that reliably capture, store, treat and distribute stormwater for beneficial reuse.	• Secure & safe sites • Flow throughout network • Treatment system uptime. • Water drained from basins within 3 days after conclusion of rain event.	Major civil assets generally serviceable. Some mechanical and control assets approaching mid-life.	Renewal expenditure expected to increase as pump stations, treatment systems and control equipment reach replacement age. Basin desilting and refurbishment cycles emerging.	Medium
Functionality	Provide a harvesting system that maximises stormwater reuse, reduces flood risk and protects receiving environments. Controlled over-topping.	• Annual volume harvested (ML/year) • Irrigation supply reliability • Flood incidents attributable to harvesting assets • Water quality compliance	System operating within design intent. Harvested volumes generally meet irrigation demand in most years.	Harvested volumes expected to increase as new catchments connect. Mechanical reliability becomes increasingly critical as network expands.	Medium
Capacity	Maintain sufficient storage, conveyance and treatment capacity to support urban growth and expanded reuse.	• Lagoon storage utilisation (%) • Flooding events due to SWRS being at capacity • Additional ML required for future demand	Existing lagoon capacity near operational limits in peak seasons. Current pump capacity adequate for existing catchment but reaching operational limits.	Capacity pressure likely to increase with Code Amendment Area development. Future investment in storage, pump stations and rising mains may be required.	Low–Medium

Technical Levels of Service

By undertaking regular assessments, we determine which assets meet our levels of service and which require capital intervention – renewal, upgrade or expansion – to meet service level thresholds. Service and asset managers plan, implement and control technical service levels to influence the customer level of service outcomes. The table below shows the activities expected to be provided under the current planned budget allocation, and the forecast activity requirements being recommended in this AMP.

Lifecycle Activity	Budget	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance
Acquisition	No planned acquisitions, anticipating gifted assets	Develop and expand the stormwater harvesting system to maximise capture, storage, treatment and reuse of stormwater for open space irrigation. Acquisition may include expansion of existing basins.	Delivery of upgrade and expansion programs in accordance with Stormwater Management Plans, SMRS expansion strategies and Asset Management Plan/Long-Term Financial Plan.	Stormwater Management Plans are to be updated. Determination of stormwater upgrades and new assets are based on localised investigations. Population growth is contributing to capacity issues within existing networks.	Acquisition activities are delivered in accordance with Stormwater Management Plans and Stormwater Management & Reuse Scheme expansion strategies. Future growth areas assessed for integration into harvesting network.
Operation	Combined with Maintenance.	Undertake operational monitoring and inspection of basins, wetlands, pump stations, rising mains, treatment facilities and control systems to support harvesting performance and condition data collection. Pumping controls inflow	Pump and control system uptime. Completion of basin inspections indicating desilting not required. Pump performance is sufficient for peak inflow.	Aging infrastructure requires higher level of monitoring and response to alarms.	Inspections occur in line with operating manual. The network has sufficient contingencies to operate in times of partial equipment or power failures.

Maintenance	\$100,000 at current time with review needed as part of planning for gifted assets.	Maintain the serviceability of stormwater harvesting basins and wetlands.	Compliance with planned basin inspection and desilting program.	Basin, pit and pipe cleaning is undertaken at varying frequencies across the network.	Planned inspection and desilting program to be formalised and prioritised based on asset criticality.
		Maintain the serviceability of pump stations and rising mains within the harvesting network.	Frequency of planned mechanical and electrical maintenance.	Pump stations are subject to the following: yearly major services cleaning as required (generally yearly).	The current level of service is expected to be maintained with increased focus as network expands.
		Maintain the serviceability of treatment plant and irrigation within harvesting network.	Frequency of planned maintenance.	Planned maintenance is undertaken six monthly or annually.	The current level of service is expected to be maintained. Stormwater treatment devices at inlets/outlets are reviewed before and after rainfall events greater than 10mm.
Renewal	\$100,000 per annum	Provide a stormwater harvesting system that remains fit for purpose in terms of capture, treatment, storage and reuse.	Stormwater harvesting asset condition scores (civil, mechanical, electrical and control assets).	Renewals are currently undertaken as identified in the findings of periodic inspections.	Renewal of all stormwater harvesting assets of condition 4 or poorer over the 10-year period, with particular focus on mechanical and control assets.
Disposal	Nil	There are currently no plans for the disposal of stormwater harvesting assets.	-	-	-

Future Demand

We must respond proactively to the external and internal demands that relate to this asset class.

Demand for new services are 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 the table below:

Demand Driver	Current Position	Projection	Impact on services	Demand
Urban Growth & Code Amendment Areas	Existing harvesting scheme servicing established urban catchments. Lagoon storage and pump under capacity for current demand.	Code Amendment Areas (Area 1 West, Area 1 East, Area 2) expected to add significant impervious area and runoff volume over next 5–10 years.	Increased inflows to basins and wetlands; higher peak detention requirements; greater pump station duty; increased treatment throughput; potential storage capacity pressure.	• Stage harvesting integration into new precincts. • Require developer contributions for trunk drainage and basin works. • Upgrade pump stations and rising mains where modelling identifies constraint. • Monitor lagoon utilisation annually.
Water Security & Reduced River Reliance	Harvested stormwater supplements irrigation of parks and reserves; reduces potable demand in most years.	Strategic objective to increase self-sufficiency and reduce dependence on Murray River water during drought periods.	Increased expectation of reliability; pressure to maximise harvested volumes; potential requirement for expanded lagoon storage and improved distribution reliability.	• Optimise capture efficiency through improved basin management. • Investigate staged lagoon storage expansion. • Maintain high reliability of mechanical and electrical assets. • Annual review of harvested ML vs irrigation demand.

Climate Variability & Extreme Rainfall Events	System designed for historical rainfall patterns; sediment loads managed through routine maintenance.	More intense rainfall events and variable seasonal patterns likely to increase peak flows and sediment transport.	Higher risk of overtopping or bypass during extreme events; increased sediment accumulation in basins; higher wear on pumps and mechanical equipment.	• Periodic hydrological model review. • Implement sediment management program. • Strengthen inspection regime post-major storm events. • Design future upgrades for resilience rather than minimum compliance.
Environmental & Regulatory Expectations (Water Quality)	Wetlands and treatment processes in place to support water quality outcomes. Monitoring and compliance currently achieved.	Increasing regulatory and community expectation regarding pollutant reduction, environmental protection and integration in new developments.	Potential need for additional treatment stages, monitoring equipment and reporting; increased O&M complexity.	• Maintain compliance monitoring regime. • Integrate requirements into development conditions. • Upgrade treatment systems where pollutant loads exceed thresholds. • Implement periodic compliance audit review.
Irrigation Demand from Community Assets	Harvested water used for irrigation of parks, reserves and sporting facilities. Demand generally aligned with seasonal patterns.	Growth in open space provision and higher expectations for green amenity and urban cooling may increase irrigation demand.	Increased pumping hours; high mechanical wear; possible seasonal shortfalls; greater service experience during dry periods.	• Prioritise irrigation sites based on service hierarchy. • Implement smart irrigation controls. • Monitor seasonal supply–demand balance. • Review asset criticality for key pump stations supplying high-profile sites.
	Incorporating water sensitive urban design into capital projects to improve water quality and encourage stormwater reuse (passive and active)	Climate risk and resilience will take an increasingly important role with projected increased focus new techniques to promote water quality and efficiently capture and reuse stormwater for irrigation purposes as part of capital projects.	Increased maintenance	To be determined

Lifecycle Decision Making

Acquisition Plan

Council has secured approval to rezone approximately 97.5 hectares of land located less than 5km southwest of the Murray Bridge town centre.

The Code Amendment replaces the current mix of zones with the Suburban Neighbourhood Zone to enable future residential development. This zone will support low to medium density housing to be built in the future.

The land is currently made up of large allotments, rural living and abandoned horticultural and agricultural areas on the outskirts of Murray Bridge.

The land is located near other residential developments and major arterial roads. It consists of 84 allotments across three residential growth areas known as:

- Area 1 West (56 allotments),
- Area 1 East (8 allotments); and
- Area 2 (20 allotments).

A Capital Works Plan will need to be developed to reflect the growth in demand for services the timing of which will be linked with Developer led sub-division projects. Infrastructure modelling will guide need as part of development planning. Project level estimates will need to be prepared along with Whole Of Life Costing to inform stepped increase to Operations and Maintenance as steps are taken to manage additional run off not catered for in the current Stormwater Harvesting network.

Separate to the Code Amendment Areas, Council anticipates design and construction of a pump station and rising main linking Hindmarsh and Howard basins. This work is anticipated to commence in 2026/27.

Further information on works are expected in subsequent versions of the Stormwater Harvesting Asset Management Plan. It is important to note the role of Asset Management Plans are not to identify funding source. They are designed to plan current performance, current budget and highlight funding gaps and associated risks for discussion and wider business planning. For the purposes of high-level planning, additional infrastructure is considered possible after 2029.

Operations and Maintenance Plan

Maintenance includes all actions necessary for retaining stormwater harvesting assets as near as practicable to an appropriate service condition, including routine operational activities required to ensure reliable water capture, treatment, storage, and reuse. Stormwater harvesting systems include both conventional drainage components and mechanical and electrical plant, requiring integrated inspection, cleaning, and maintenance regimes. The table below represents the typical operations and maintenance activities undertaken for this asset class. Demands on Operations and Maintenance will grow as acquisitions are completed.

Category	Description
Harvesting System Inspections	Regular inspections of stormwater harvesting infrastructure, including pipes, rising mains, culverts, pits, basins, headwalls/outfalls, pumps, switchboards, electrical, onsite and remote monitoring/control systems and associated equipment. Inspections identify blockages, structural defects, mechanical issues, or operational anomalies that may affect system performance or harvested water availability
Debris and Sediment Removal	Removal of debris, litter, vegetation, and sediment from harvesting components such as pits, gross pollutant traps, basins, inlet structures, culverts, and pipework. Activities maintain hydraulic capacity, protect downstream pumps and equipment, and reduce wear on mechanical plant
Pipework and Rising Main Maintenance	Inspection and maintenance of pipes and rising mains used to convey harvested stormwater. This includes CCTV inspections, leak detection, joint inspections, repair of defects, and management of corrosion or wear to ensure reliable transfer of water to storage or reuse systems.
Pump and Mechanical Plant Maintenance	Operation and maintenance of pumps and associated mechanical equipment used for stormwater harvesting. This includes inspection of impellers, seals, bearings, valves, and couplings, testing duty/standby arrangements, lubrication, and planned servicing to ensure reliable operation.
Electrical Systems and Switchboards	Maintenance of electrical assets including switchboards, control panels, sensors, and cabling. Activities include inspection, testing of protections and alarms, verification of control logic, and ensuring safe and compliant operation of electrically driven harvesting systems.
Basins and Storage Asset Maintenance	Maintenance of harvesting basins, detention or retention storages, and associated inlet and outlet structures. This includes sediment removal, embankment inspections, erosion control, vegetation management, and maintaining access and safety features.
Culverts, Headwalls, and Outfalls	Inspection and maintenance of culverts, headwalls, and outfalls associated with harvesting systems to ensure structural integrity, prevent scour or erosion, and maintain safe discharge and overflow conditions.
Water Quality Management	Monitoring and management of harvested stormwater quality to support its intended reuse. This includes inspection and maintenance of treatment equipment (where installed), monitoring turbidity and pollutants, and managing sediment and contaminant sources within the harvesting catchment.
Emergency Response and Operational Contingencies	Preparedness and response for failures or incidents affecting harvesting systems, such as pump failures, blockages, flooding, electrical faults, or water quality events. This includes isolation procedures, emergency repairs, critical spares and coordination during major rainfall or flood events.

Renewal Plan

The merits of individual projects identified as candidates for upgrade can be assessed and ranked using the following table.

Criteria	Description
Asset Criticality	The degree to which an asset's failure would impact safety, service delivery, financial outcomes, and regulatory compliance, typically assessed by combining consequence and likelihood of failure
Level(s) of service	Fit for purpose Customer - Condition, functionality, capacity Technical - Acquisition, O&M, renewal, disposal
Climate Resilience	Evaluating the network's ability to withstand and adapt to changing climate conditions
Strategic Alignment and Community Impact	Ensuring alignment with strategic plans and addressing community concerns related to stormwater management.

Disposal Plan

There are presently no assets considered for disposal.

Risk Management

Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Similarly, critical failure modes are those which have the highest consequence. Failure modes may include physical failure, collapse, loss of harvesting capability, water quality failure, or essential service interruption. The table below shows critical stormwater harvesting assets, how they may fail, and the potential impact of their failure.

Critical Asset(s)	Failure Mode	Impact
Harvesting Pipes and Conveyance Pipework	Blockages or obstructions	Reduced or no transfer of harvested stormwater, upstream flooding, loss of reuse water supply
	Pipe leaks or cracks	Water loss, erosion of surrounding soils, reduced harvesting efficiency, potential infrastructure damage
	Structural deterioration or collapse	Loss of harvesting capability, sinkholes, safety hazards, major repair or replacement required
Rising Mains	Pipe rupture or joint failure	Sudden loss of harvested water, flooding, erosion, damage to surrounding infrastructure
	Air lock or pressure failure	Reduced pumping efficiency, system shutdown, increased wear on pumps
Stormwater Harvesting Basins and Storages	Sediment accumulation	Reduced storage capacity, decreased efficiency in managing stormwater runoff
	Embankment or structural failure	Uncontrolled release of water, downstream flooding, environmental damage, safety risks
Culverts (Harvesting Inlets and Transfers)	Blockages or obstructions	Restricted inflows to harvesting system, upstream flooding, reduced capture efficiency
	Structural failure or collapse	Loss of conveyance, road or pavement collapse, safety hazards
	Corrosion or material deterioration	Reduced structural integrity, increased risk of culvert failure

Headwalls and Outfalls	Structural damage or scour	Erosion, instability of connected assets, loss of system integrity
	Blockage or collapse	Disruption in stormwater management, increased risk of flooding, potential property damage
Pits and Inlet Structures	Debris or sediment blockage	Reduced inflow to harvesting system, increased localised flooding
	Structural failure	Surface collapse, public safety risks, interruption to harvesting operations
Stormwater Harvesting Pumps	Pump or motor failure	Inability to transfer harvested water, loss of supply to reuse systems, overflow of basins
	Seal or bearing failure	Leakage, reduced pump performance, unplanned outages
Electrical Systems and Switchboards	Power failure or electrical faults	Loss of pumping and control capability, system shutdown, reduced harvesting availability
	Switchboard or control panel failure	Inability to operate or monitor harvesting plant safely, extended downtime
Control, Sensor, and Automation Equipment	Sensor or control system malfunction	Inaccurate monitoring of levels or flows, inefficient operation, risk of overflow or pump damage
	Communication failure	Loss of remote monitoring and alarms, delayed response to failures
Mechanical Equipment and Valves	Valve failure or seizure	Inability to isolate or control flows, increased risk during maintenance or emergencies
	Mechanical wear or fatigue	Reduced reliability, increased risk of sudden failure

Risk Reduction Plans

A detailed assessment of risk associated with stormwater harvesting service delivery identifies risks that may result in loss or reduction of service, personal injury, environmental impacts, financial shock, reputational impacts, or other consequences. The risk assessment process identifies credible risks, their likelihood, and the consequences should the event occur. The table below considers all categories of stormwater harvesting assets, describes what can happen, and demonstrates how appropriate risk treatment strategies reduce asset and service risk.

Service or Asset at Risk	What can Happen	Risk Treatment Plan
Harvesting Pipes	Blockages or obstructions	Regular inspections and cleaning of harvesting pipes to remove debris and sediment and maintain conveyance capacity.
	Pipe leaks or cracks	Implement routine condition assessments, CCTV inspections, and timely repairs to prevent water loss and erosion.
	Structural deterioration or collapse	Periodic structural inspections and lifecycle renewal planning for aging harvesting pipework.
Rising Mains	Pipe rupture or joint failure	Preventive maintenance and pressure testing of rising mains; maintain isolation valves and emergency repair procedures.
	Air locking or pressure instability	Operational monitoring and maintenance of air release valves to ensure stable pumping performance.
Stormwater Harvesting Basins	Sediment accumulation	Implement sediment management programs, including regular inspections and scheduled sediment removal to maintain storage capacity.
	Embankment instability or failure	Routine inspections of basin embankments and spillways, including erosion control and prompt repair of defects.
Pits and Inlet Structures	Blockages from debris or litter	Regular inspection and cleaning of pits and inlet structures to maintain inflows to harvesting systems and reduce localised flooding.
	Structural deterioration	Periodic inspections and repairs to prevent surface collapse and safety hazards.
Culverts (Harvesting Inlets and Transfers)	Blockages or obstructions	Regular inspections and cleaning of culverts to ensure unrestricted flow into and through harvesting systems.
	Structural failure or collapse	Conduct regular structural assessments and undertake repairs or renewals where defects are identified.
	Corrosion or material deterioration	Apply protective coatings or liners and monitor material condition to reduce corrosion-related failures.
Headwalls and Outfalls	Scour or structural damage	Routine inspections and maintenance of headwalls and outfalls, including erosion protection and scour repairs.
Stormwater Harvesting Pumps	Pump or motor failure	Implement preventive maintenance programs for pumps and associated equipment, including regular inspections, servicing, and testing of duty/standby arrangements.
	Seal or bearing failure	Routine inspections and planned replacement of wear components to reduce unplanned outages.

Electrical Systems and Switchboards	Power failure or electrical faults	No current activities. Future – consider backup power systems or alternative power sources for critical harvesting assets.
	Switchboard or control failure	Regular inspections and testing of switchboards, control panels, and electrical protections to ensure safe operation.
Control Systems and Equipment	Sensor or control system malfunction	Routine testing, calibration, and maintenance of sensors and control systems to ensure accurate monitoring and reliable operation.
	Communication failure	Implement alarm and monitoring checks and establish manual response procedures in the event of communication loss.

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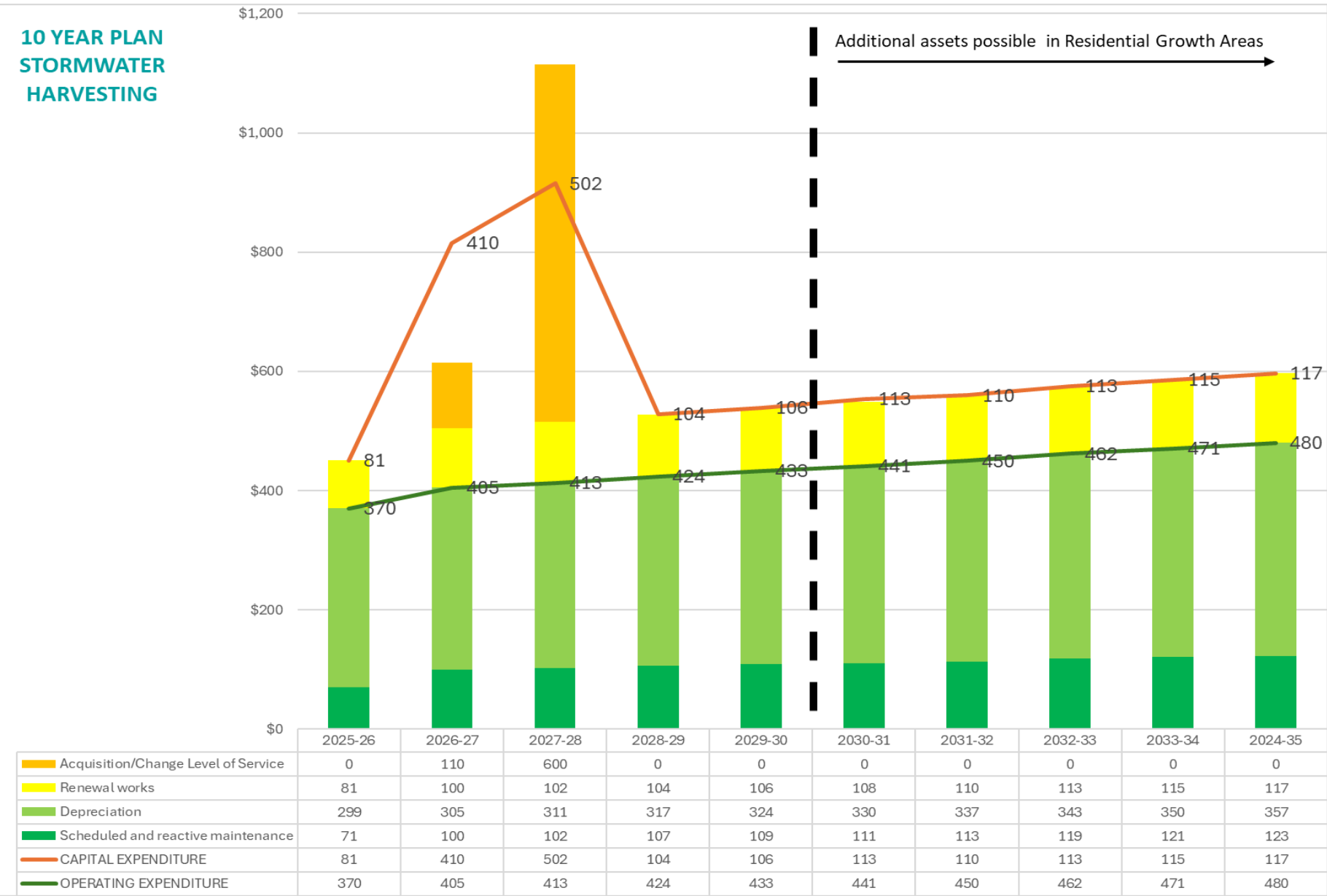
Financials – Past Performance

5-Year Summary

Item	2021–22 Actual (\$'000)	2022–23 Actual (\$'000)	2023–24 Actual (\$'000)	2024–25 Actual (\$'000)	2025–26 Forecast (\$'000)
Scheduled and reactive maintenance	48	95	168	95	71
Depreciation	297	297	256	298	299
Operating expenditure	345	392	424	393	370
Renewal works	0	0	80	184	81
Acquisition	0	0	0	0	0
Capital expenditure	0	0	80	184	81
Totals	345	392	504	577	451

Financials – Future Forecasts

10 YEAR PLAN STORMWATER HARVESTING



10-Year Outlook

Major investments through our Council Works program are in the process of being determined. Future plans will present information in the following manner:

Asset / sub-group	Works description	Works type	Cost estimate	Year
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Financial Summary

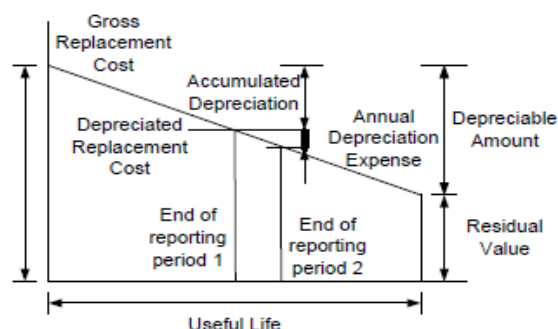
This section contains the financial requirements resulting from the information presented in the previous sections of this Asset Management Plan. The financial projections are improved as the discussion on desired levels of service and asset performance matures.

Financial Statements and Projections

Asset Valuations

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

Current (Gross) Replacement Cost	\$13,403,113
Depreciable Amount	\$4,009,370
Depreciated Replacement Cost (WDV)	\$9,393,743
Depreciation	\$299,000



In simple terms, our stormwater assets are just 30% through their asset lives.

Sustainability of Service Delivery

There are two key indicators of sustainable service delivery that are considered in this AMP for this asset class. The table below summarises what they mean and how well we are performing:

Ratio	Description	RCMB Target	RCMB Current	RCMB Forecast
Asset Renewal Funding Ratio	The extent to which assets are being replaced measured by comparing renewal/replacement capital expenditure with the optimal identified renewal requirements as defined in this AMP.	Renewal / Replacement Capex > 90% but <120%	95%	95%
Asset Consumption Ratio	The average proportion of "as new condition" left in assets. The ratio shows the written down current value of depreciable assets relative to their "as new" value in up-to-date prices.	>40% and <80%	70%	70%

Funding Strategies

The proposed funding for assets is outlined in Council's Annual Budget and Long -Term Financial Plan. The financial strategy determines how funding will be provided, whereas this AMP communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

Valuation Forecasts

Asset values are forecast to increase as additional assets are acquired and existing assets upgraded.

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.

Key Assumption made in Forecasts

Refer 10-Year Infrastructure Asset Plan Overview, Section 7.5.

Forecast reliability and Confidence

Refer 10-Year Infrastructure Asset Plan Overview, Section 7.6.

Plan Improvement and Monitoring

It is important that Council recognises areas of their Asset Management Plan and planning process that require future improvements to ensure effective asset management and informed decision making. The Improvement Plan generated from this Asset Management Plan is shown below:

Description	Function	Element	Responsibility
1 Confirm asset governance and accountability model for the SWH asset class, including clear ownership, roles and responsibilities	All	Governance	Unit Manager – Asset Strategy& Planning
2 Uplift asset information systems including asset register reconciliation, underground asset verification, condition baselining and documentation control	All	Governance/Business Process	Unit Manager – Asset Strategy& Planning
3 Develop and implement an integrated SWH risk management framework covering capacity, flooding, compliance, obsolescence and security risks	All	Risk Management/ Operational Planning	Unit Manager – Asset Strategy& Planning
4 Confirm Levels of Service (LoS), compliance requirements and operational control protocols (e.g. water quality, safety, environmental performance)	Operations & Maintenance	Service Delivery/ Compliance	Manager City Assets & Capital Delivery
5 Establish a reliability-centred maintenance framework including preventative maintenance programs, inspection regimes, critical spares strategy and O&M documentation standards	Operations & Maintenance	Asset Condition and Performance	Coordinator Water & Wastewater
6 Implement a consistent condition, criticality and performance assessment framework across all SWH assets (mechanical, electrical, civil and treatment systems)	All	Asset Condition and Performance	Unit Manager - Asset Strategy & Planning
7 Undertake system-wide hydraulic and capacity modelling to assess current performance, growth impacts and network constraints	Network Planning	Capital Works Planning	Infrastructure Engineer
8 Develop integrated lifecycle investment and renewal planning including 5-year and 10-year programs aligned to condition, risk and demand	Renewal	Renewals / Capital Works Planning	Unit Manager - Asset Strategy & Planning
9 Identify and prioritise critical asset upgrades and prepare business cases to address high-risk capacity, reliability and	Renewal	Capital Works Planning	Coordinator Water & Wastewater / Infrastructure

flooding issues			Engineer	
10	Develop and implement a SCADA, controls and digital enablement strategy to improve monitoring, automation and decision support across the SWH network	All	Asset Performance /Operational Planning	Coordinator Water & Wastewater

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