Ordinary Council Meeting

Tuesday, 13 October 2026

Attachments Under Separate Cover

Item 14.3.1 Asset Management Plans 2024-2028

Attachments Under Separate Cover

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City of Cockburn

Roads Asset Management Plan 2024–2028



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Front cover page photo is taken at Jandakot Road

Asset Management Plan				
Document ID: 12330786				
Date	**Revision Details**	**Author**	**Reviewed**	**Approved**
Sept 2021	Final Version 2020 - 2024	Property & Asset Services	Manager Engineering Services	Executive Committee / Council
April 2026	Final Version 2024 - 2028	Asset Services	Service Manager Infrastructure Assets	

Acknowledgement of country

The City of Cockburn acknowledges the Nyungar people of Beeliar Boodjar. Long ago, now and in the future they care for Country.

We acknowledge a continuing connection to Land, Waters and Culture and pay our respects to Elders, past and present.

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1 Executive summary

The City of Cockburn's community relies on a diverse portfolio of infrastructure assets, including roads, buildings, bridges, parks and footpaths. The roads assets covered by this Asset Management Plan are valued at approximately $1.1 billion.

The Asset Management Plan (AMP) provides a strategic framework for managing our community's infrastructure assets, ensuring they remain safe, reliable, and capable of meeting current and future demands.

1.1 Purpose of the plan

This AMP aims to:

- Provide a systematic approach to asset management
- Address critical risks associated with aging infrastructure and limited funding
- Ensure infrastructure supports the community's social, economic, and environmental goals.

This AMP details information about the City's road network, as well as defining the Level of Service (LOS) and outlining the funding required to maintain this LOS over a 10 year planning period.

This highlights any funding gaps between the planned and forecast expenditure, which assists in optimising expenditure on managing assets through the Long-Term Financial Plan.

1.2 Asset description

The road network comprises:

- Asphalt sealed roads 865km
- Brick paved roads 25km
- Spray seal roads 1km
- Unsealed roads 0.3km
- Kerbing 1,718km
- Traffic Management Devices (e.g. roundabouts, speed bumps, anti-skid surfaces) 69ha
- Car Parks 25ha
- Street Lights 245
- Street Signs 3152
- Safety Barriers 8.2km.

The above infrastructure assets have significant total renewal value estimated at $1,141,996,793.

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1.3 Levels of service

Levels of Services are typically split into 'Customer' and 'Technical' and each have their own metrics which the City is able to measure its performance against.

The City's overall customer LOS objective should be to maintain 70 per cent community satisfaction with road assets, which is based on scoring and targets outlined in the 2024 Strategic Community Plan Review by Place Score. Maintaining 70 per cent community satisfaction is expected to be financially sustainable over the short and medium term. However, there is a risk of not maintaining this towards the end of the 10 year planning period under current funding arrangements, as the current planned budget allocation is insufficient to maintain the level of service for the planning period.

The main service consequences of an insufficient planned budget are:

- Higher frequency of roads in poor condition, creating hazards to road users
- Increase in road closures required for emergency maintenance works (i.e. to repair potholes/cracking, etc.) which could result in more frequent instances of congestion
- Increased levels of driver frustration and potentially aggressive behaviour on the road.

1.4 Future demand

The main demands for new services are created by:

- Population growth
- Changes in the types of vehicles using the roads (i.e. heavier trucks, autonomous vehicles, etc.).

These demands will be approached using a combination of managing existing assets, upgrading of 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. Examples of non-asset based solutions to ensure the City's asset portfolio is sufficient to meet community need include:

- Manage existing assets through an appropriately prioritised Capital Works Program
- Ensure decisions to upgrade existing assets and construct new assets are supported with appropriate modelling to understand the long term impacts
- Continue to investigate alternative renewal treatments to lower lifecycle costs (e.g. recycled materials, more efficient construction practices, etc.)
- Ensure all developers are appropriately upgrading roads likely to be affected by new subdivisions
- Encourage use of public transport and cycling

- Maintain communication with a range of stakeholders that guide the City's decision making on road assets (i.e. community feedback, service providers, state and federal government bodies, other Councils, etc.).

1.5 Lifecycle management plan

How we plan to manage and operate the assets at the agreed levels of service throughout their lifecycle is contingent on 10-year Long-Term Financial Plan (LTFP). It is important to be aware of the 'Whole of Life' lifecycle costs associated with assets (i.e. cost of construction, operation and maintenance costs, renewal and upgrade costs and disposal costs at end of life).

1.5.1 What does it cost?

The lifecycle costs necessary to provide the services covered by this AMP include operation, maintenance, renewal and upgrade costs of existing assets, as well as the acquisition or construction of new assets to meet demand. Disposal of assets is also considered when it is no longer cost effective to continue to maintain/operate an asset.

When lifecycle costs are prepared for a minimum 10-year planning period, they can be used to inform the 10-year LTFP. The first 10-year lifecycle forecast is estimated to cost $213,658,800 or $21,365,880 on average per year.

Depreciation is excluded from these cost estimates.

1.5.2 What we will do

The funding made available in the first 10-years' of the LTFP is $175,703,072 or $17,570,306 on average per year which is approximately 78 per cent of the cost to undertake the lifecycle activities.

The reality is, only what is funded in the LTFP can be provided. Informed decision making depends on the AMP emphasising the consequences of planned budgets on the LOS provided and communicating the residual risks to decision makers. It is important to ensure the organisation is delivering the services in a financially sustainable manner.

The current 10-year LTFP results in a shortfall of $3,795,573 on average per year of the forecast lifecycle costs required to provide services. This is shown in Figure 1.1.

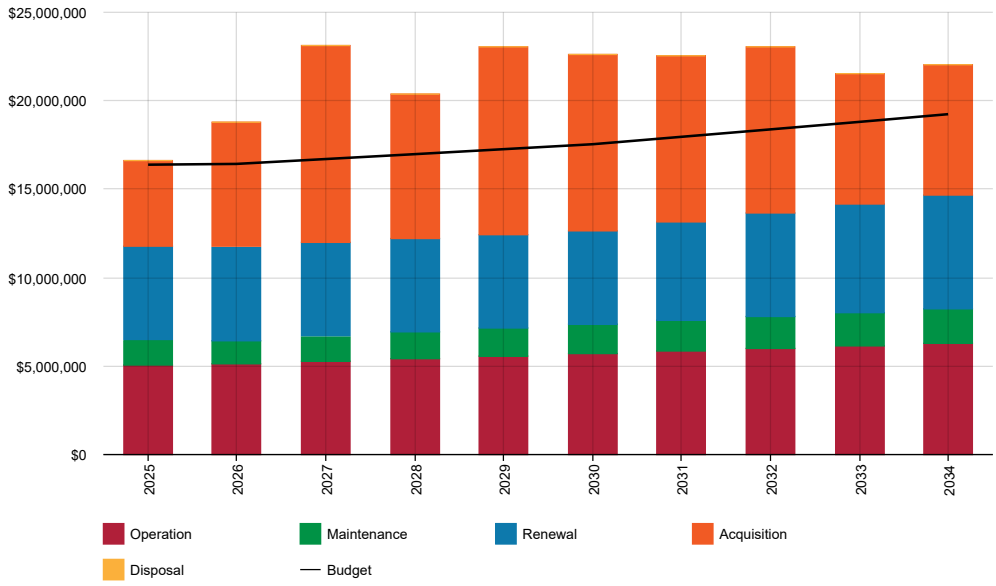


Figure 1.1: Forecast Lifecycle Costs and Planned Budgets

We plan to provide road asset services for the following:

- Operation, maintenance, renewal and upgrade of sealed roads, unsealed roads, traffic management devices, kerbing and car parks to meet service levels set in annual budgets
- Completion of key road renewals, upgrades and new construction projects within the 10 year planning period.

1.5.3 What we cannot do

We currently do not allocate enough budget to sustain services at the proposed standard including the provision of new assets. Works and services that cannot be provided under present funding levels are:

- Ensuring all road assets are in ‘Condition 3’ or better
- Maintain road assets at lowest lifecycle cost
- Complete all functionality and capacity upgrades that have been identified.

1.6 Risk management

The current planned budget is sufficient to continue to manage risks in the medium term, however in the longer term (approx. 8 years onwards) significant LOS impacts are expected. It is important to ensure that adequate budget is kept in reserve to achieve what is shown in the life cycle cost summary.

The main risk consequences are:

- Critical road assets are not adequately maintained, renewed or upgraded to meet demand
- Critical new road construction projects cannot occur to improve connectivity and alleviate locations of vehicular congestion
- Significant portions of the road network are not safe for road users, increasing instances of accidents that result in injury or death.

Strategies and actions to manage these risks are discussed in Section 6.

1.7 Financial summary

Providing financially sustainable and affordable services from infrastructure requires the careful management of service levels, costs and risks.

The 10-year Planned Expenditure is $17,570,306 per year on average, giving a 10 year funding shortfall of $3,795,573 per year. This indicates that 82 per cent of the forecast costs needed to provide the services documented in this AMP are accommodated in the LTFP.

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

1.8 Assumptions and improvement planning

Key assumptions made in this AMP are:

- Population and asset growth projections are assumed to be accurate
- Condition data and age data are assumed to be accurate (noting that this AMP is based on a ‘Reliable’ level of confidence information)
- Unit rates are representative of asset replacement costs
- Useful lives are an accurate representation of the behaviour of assets in the field and the City’s practices in renewing/replacing assets at their end of useful life.

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

- Establishing rigorously defined renewal intervention criteria for all asset classes and components
- Annual review and update of Risk Register
- Review asset custodianship across service units to better target ongoing operational asset maintenance and renewal expenditure
- Review asset registers to ensure data is up to date and relevant.

2 Introduction

2.1 Background

This AMP communicates the actions and necessary funds required to sustainably deliver 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.

The AMP is to be read in conjunction with the City's Asset Management Policy and Asset Management Strategy, along with the following strategic documents:

- City of Cockburn Strategic Community Plan 2025 – 2035
- City of Cockburn Corporate Business Plan 2024/25 – 2027/28
- City of Cockburn Annual Business Plan(s)
- City of Cockburn Long Term Financial Management Plan 2024/25 – 2033/34
- City of Cockburn Road Safety Management Plan (RSMP) 2021-2030
- City of Cockburn District Traffic Study (DTS) 2018.

The infrastructure assets covered by this AMP include asphalt sealed roads, chipseal roads, brick paved roads, unsealed roads, kerbing, traffic management devices, car parks, street lighting, street signs and safety barriers. For a detailed summary of the assets covered in this AMP refer to Table 5.1 in Section 5.

These assets are used to provide access and connectivity throughout the City of Cockburn and have a total replacement value of approximately $1.1 billion.

2.2 Stakeholders

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

Key Stakeholder	Role in Asset Management Plan
The Elected Council	Represent needs of community/shareholders, Allocate resources to meet planning objectives in providing services while managing risks, Ensure services are sustainable.
Chief Executive Officer (CEO)	Organisational direction and leadership
Executive Leadership Team (ELT)	Executive management endorsement, sign off and executive ownership
Group Manager Assets and Projects	Review and strategic management sign off

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Key Stakeholder	Role in Asset Management Plan
Service Manager Infrastructure Assets	Review and line management sign off
Infrastructure Asset Services	Asset Management Plan development, review, continuous improvement and implementation of the AMP maintenance actions
Community, Residents, Tourists & Business	Provide feedback to the City and Councillors on how the City is going in maintaining the agreed levels of service.
Public Transport Authority & Transperth	Work in conjunction with the City ensuring the City's network meets requirements
Insurers	Assist to manage financial risk of the City
State Emergency Services	Attendance to call-outs and security
Main Roads WA	Ownership and maintenance of some primary roads throughout the City
Developers	Required to ensure constructed infrastructure handed to the City is to approved standards and complies with legislation

Table 2.1: Key Stakeholders in the AMP

2.3 Principles, goals and objectives of asset management

The principles of asset management as per the International Standards for asset management are:

- **Value**: asset management focuses on the value assets provide to the organisation over time.
- **Alignment**: asset management aligns financial, technical and operational decisions with the organisational objectives, promoting vertical and horizontal coordination.
- **Leadership**: leadership and sustained commitment at all levels are crucial for successful asset management.[1]

Our goal for managing infrastructure assets is to deliver the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers.

[1] ISO 55000:2024 Asset Management – Vocabulary, overview, and principles

The key objectives of infrastructure asset management as defined by the International Infrastructure Management Manual are:

- Defining levels of service and monitoring performance
- Managing the impact of growth through demand management and infrastructure investment
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service
- Identifying, assessing and appropriately controlling risks
- Linking to a Long-Term Financial Plan which accommodates the required expenditure and how it will be funded.[2]

2.4 Plan framework

The 2024 - 2028 Roads AMP has been developed in accordance with the International Infrastructure Management Manual (IIMM) and complies with Department of Local Government & Communities Asset Management Framework.

As part of the City's Strategic Asset Management Planning Framework (SAMPF), the Roads AMP will be developed every 4 years and be subject to a 2-year desktop review. This AMP review will focus on core elements required by the LTFP, for example asset valuations, growth projections, financial analysis including operating, sustainability ratios and 10-year renewals. This will ensure that future revisions of the LTFP will be derived from a structured AMP development cycle that has received Executive and or Council approval, increasing confidence and integration of asset management data and methodologies into the City's long term financial planning and adopted service levels.

Figure 2.1 provides a visual representation and timeline of the SAMPF.

[2] IPWEA International Infrastructure Management Manual (IIMM), Sec 1.2.1

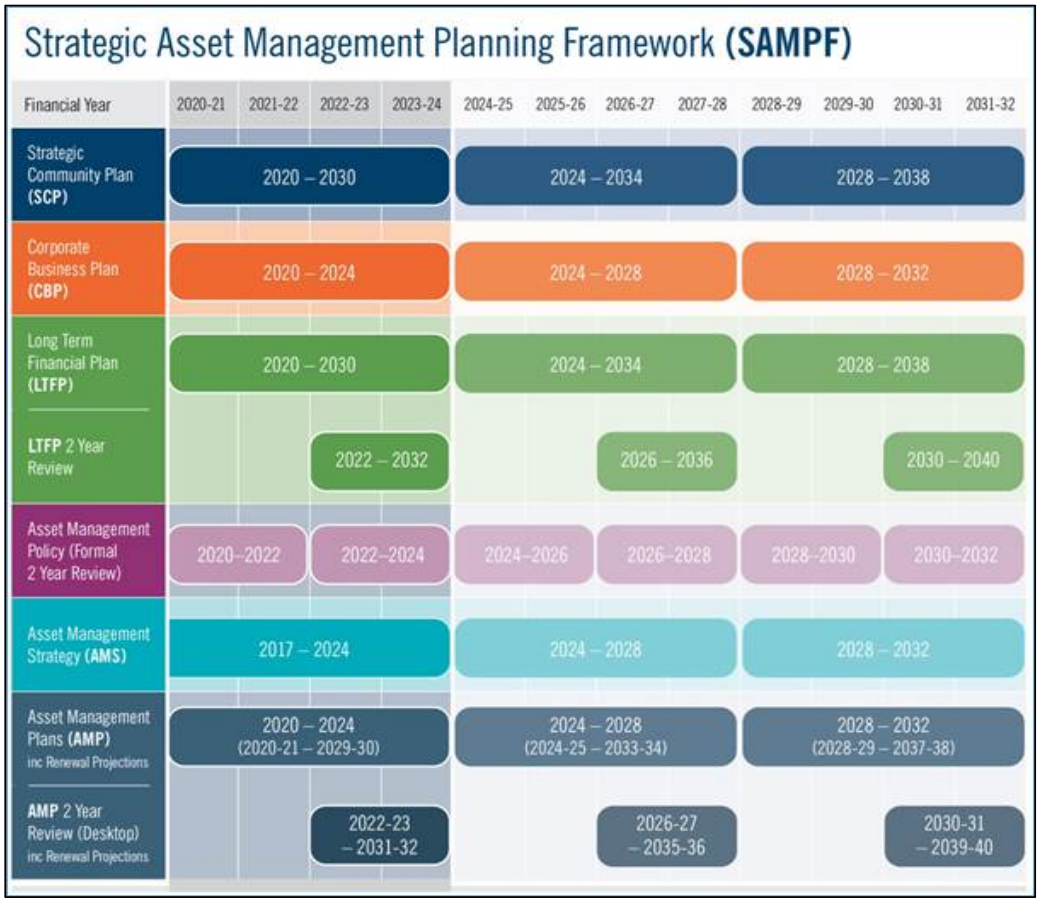


Figure 2.1: Strategic Asset Management Planning Framework (SAMPF)

- Level of Service and Enterprise Risk Management – outlines the level of service provided by council and identifies risks to the city
- Future Growth and Demand how this will impact on future service delivery and how this is to be met
- Lifecycle Management – how the city will manage its existing and future assets to provide the required services
- Financial Analysis – what funds are required to provide the required services
- Asset management practices – current systems and practices in place
- Improvement and monitoring – how the plan will be monitored and improved to ensure it is meeting Council's objectives.

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2.4.1 Corporate planning framework

The formalisation and alignment of the City's SAMPF within the Corporate Planning Framework reflects the City's increasing maturity and recognises the importance of Asset Management in supporting the City in delivering long term financial sustainability of services and capital asset renewal.

With the continued implementation of the SAMPF, the City will commence measuring service levels for planned and reactive maintenance to determine operational performance and asset utilisation.

The City strives to improve its strategic and operational asset management practices and to continue its journey towards advanced asset management. The Department of Local Government, Sport and Cultural Industries (DLGSC) has developed the Western Australia Local Government Integrated Planning and Reporting Framework. Accordingly, the future direction and need for advanced level practices are continually assessed.



Figure 2.2: City's Corporate Planning Framework

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3 Levels of service

Levels of service define the standards and performance targets that infrastructure assets are expected to meet to ensure they provide reliable, safe, and efficient services to the community.

3.1 Customer research and expectations

The City carries out the Place Score Liveability Survey bi-annually to gather and evaluate customer feedback across a range of services that the City provides. This allowed the City to measure its performance against community expectations.

The first and most recent Place Score Liveability Survey was undertaken in September 2024. In total, 1811 residents participated in the survey. The most relevant place score metric is 'Ease of driving and parking', with a Place Experience (PX) score of 7.5/10 as part of the most recent survey.

Table 3.1 summarises the results from our Customer Satisfaction Survey.

Performance Measure	Performance Score (PX)		
	Good PX ≥ 7	Average 6 ≤ PX < 7	Poor PX < 6
Ease of Driving and Parking	7.5		
Sustainable urban design			5.7
Evidence of City management (signage, street sweeping etc)		6.5	
Evidence of recent public investment		6.0	

Table 3.1: Customer Satisfaction Survey Levels

3.2 Strategic and corporate goals

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

Our vision is:

Cockburn, the best place to be.

Our mission is:

Support our communities to thrive by providing inclusive and sustainable services which reflect their aspirations.

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Strategic goals have been set by the City and are found in the City's Strategic Community Plan. The relevant goals and objectives and how these are addressed in this AMP are summarised in Table 3.2.

Strategic Outcome	Strategic Objective	Deliverable	Measure
Our Economy	Empower and support local businesses (through an efficient road network)	Streamlined process for negotiating road levels of service vs cost with businesses	Customer survey results
Our Environment	Enhance climate resilience and champion environmental initiatives to mitigate impacts	Encourage public transport, increase and encourage use of Electric Vehicle (EV) charging points through third party providers	Customer survey results
			Number of bus stop boardings per year across the City.
			Number of EV charge points available within the City.
Our Places	Plan for growth and sustainable development	Ensure traffic congestion is within agreed limits	Customer levels of service for capacity
	Enhance connectivity and mobility through integrated transport networks.		
Our Governance	Strive for financial sustainability and operational excellence	Ensure adequate funding to meet agreed service levels, optimise lifecycle cost	Asset Renewal Funding Ratio
	Strengthen engagement and communication and enhance customer experience.	Negotiate road levels of service vs cost with business and the community	Customer survey results

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

3.3 Legislative requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the road service are outlined in Appendix G.

While no longer a legislative requirement, the Asset Management Ratios are reasonable performance indicators of the ongoing financial sustainability of assets. The targets for these ratios are set by the Department of Local Government, Sport and Cultural Industries (DLGSCI) through the Integrated Planning and Reporting Framework (IPRF). The calculation methodology and targets for these ratios are outlined in Table 3.3.

Asset class	Consumption ratio	Sustainability ratio	Renewal funding ratio
Description	How much has the City used of its assets?	Is the City replacing assets as they wear out?	Is the City setting aside sufficient future funding for asset renewals?
Calculation	Depreciated replacement cost / current replacement cost	Capital renewal (one year) / annual depreciation (one year)	Planned capital renewal (10 years) / required capital renewal (10 years)
Target	50-75% standard 60-75% ideal	90-110% standard	75-95% standard 95-105% ideal
What it means	Lower than standard = assets are deteriorated and will result in a poor level of service Higher than ideal = assets are being replaced too early resulting in poor value for money*	Lower than standard = the City is under investing in asset renewal/replacement resulting in a poor level of service Higher than standard = the City is over investing in asset renewal/replacement resulting in poor value for money	Lower than standard = the City is allocating too little funding to long term asset renewal/replacement which will result in a lower level of service in future Higher than ideal = the City is allocating too much funding to long term asset renewal/replacement which will result in poor value for money in future

Table 3.3: Asset Ratios

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3.4 Customer values

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

Customer Values indicate:

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

Customer Values	Customer Satisfaction Measure	Customer Feedback	Expected Trend Based on Planned Budget
Roads provide a smooth ride	Strategic Community Plan or customer requests	Not terrible but room for improvement, many potholes forming and being repaired	Gradual worsening of ride quality
Minimise traffic jams		Some traffic jams during peak hour on major roads	Significant increase in traffic congestion
Can reasonably find a parking space		Good parking availability in general, CBD areas a bit more challenging	May worsen but depends on customer behaviour and technology tends (e.g. driverless cars)

Table 3.4: Customer Values

3.5 Customer levels of service

The Customer Levels of Service are considered in terms of:

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

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

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

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Overall	Community satisfaction of 70% or greater with the City's road network.	Community feedback	Score of 7.5/10 for "Ease of driving and parking" in recent community survey.	Maintain > 7.0 in short to medium term, may be at risk longer term
Condition	Complete condition assessment of full road network at least every three (3) years	Dates between condition assessments of road network	Condition inspections for all road assets every three (3) years.	Maintain
	Maintain at least 80% of the City's roads in Condition 3 or better.	Condition assessment scores	Percentage of road assets in condition 3 or better by replacement cost is 95.4%	Maintain
	Action customer requests (aim to acknowledge within 5 working days in line with the City's Customer Service Charter)	Volume of customer service requests received	177 requests for pothole repair per year [3] 268 requests for sweeping per year[3] 118 requests for kerb maintenance per year[3]	Maintain
	Confidence levels		High	Medium
Function	Suitability of roads (i.e. is the City's road network 'fit for purpose' given that the road network should	Severity of accidents	Less than 5% of accidents reported annually throughout the City Fatal or Serious Injury crashes	Maintain

[3] On average, between financial years 2021/2022 and 2023/2024 inclusive.

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
	facilitate safe travel?)	Number of accidents	Less than 1000 reported accidents per year	Maintain
	Confidence levels		High	Low
Capacity	At least 80% of City distributor roads above "LOS F" during AM and PM peak as defined in Austroads Guide to Traffic Management Part 3	Percentage of distributor roads over capacity	90%	70%
	Confidence levels		High	Low

Table 3.5: Customer Level of Service Measures

3.6 Technical levels of service

Technical Levels of Service – To deliver on the customer values, and impact they have on Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the lifecycle activities (see Section 5) and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

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

Table 3.6 shows the lifecycle activities related to the current 10 year planned budget, and the forecast costs recommended in this AMP.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **

[4] IPWEA, 2015, IIMM, p 2|28.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Acquisition	Provide new roads as required	Amount of City and/or developer funding allocated to new roads	Hammond Road Duplication not affordable	Hammond Road Duplication would alleviate congestion; source funding and stage as recommended in 10 Year CWP
	Upgrade existing roads as required	Amount of City and/or developer funding allocated to road upgrades	Only 67% of identified upgrades in 10 year CWP affordable	100% of identified upgrades would achieve objectives agreed in DTS and RSMP
		Budget	$4,425,241/year (excluding renewal portion of projects)	$8,514,920/year (excluding renewal portion of projects)
Operations	Keep roads clean	Frequency of road sweeping	Complete at least 4 sweeps per year for all suburbs	Current sweeping frequency is sufficient
	Maintain up to date road condition data	Frequency of condition inspections	Complete condition assessment every 3 years	Current inspection frequency is sufficient
		Budget	$87,317 for sweeping Last audit, done by Talis and including road surface, kerbs, TMD's and paths was $222,043	Ensure budget keeps up with asset stock and inflation
Maintenance	Minor pavement defects rectified on a priority basis to keep roads safe for use	Localised maintenance issues identified by community actioned within 15 working days	Current maintenance budget and resourcing is sufficient to enable action on localised defects within 15 business days.	Action defects within 10 working days.

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Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
		Budget	$1,170,161/year	To maintain current LOS average $1,589,832 required per year by year 10, this appears to be funded
Renewal	Keep roads in satisfactory and safe condition	Proportion of road assets in “poor” or “very poor” condition	$5,088,290 in 2024, reduces then increases over 10 years	$0 - intervention should occur before a road reaches very poor condition
	Allocate sufficient medium and long term renewal funding	Asset renewal funding ratio	97.5%	100%
		Budget	$5,494,128/year	$5,577,404/year
Disposal	Dispose of roads assets that are no longer required	Roads disposed of when opportunities identified	Nil allocated due to nil disposal opportunities identified	Continue reviewing opportunities to dispose of assets
		Budget	$0 per year	$0 per year

Table 3.6: Technical Levels of Service

Note: * Current activities related to planned budget.

** Expected performance related to forecast lifecycle costs.

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

4 Future demand

Future demand refers to the effects on infrastructure assets services driven by factors such as population movement, economic development, technological advancements, and changing environmental or community expectations.

4.1 Demand drivers

A demand driver refers to the factors or trends that influence the need for infrastructure services and capacity. Some examples of factors influencing future demand include (but are not limited to):

- Population growth
- Changing demographics
- Industry development/changes in technology
- Legislation changes.

Demand drivers help predict future infrastructure needs and guide planning and investment decisions.

4.2 Demand forecasts

The current position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 4.1.

4.3 Impacts and demand management plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.1.

The impact on service delivery will be managed through a combination of managing and upgrading existing assets and the provision of new assets to meet demand. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to manage demand are shown in Table 4.1. Further opportunities will be developed in future revisions of this AMP.

Demand factor	Present position	Projection	Impact on services	Management
Population	133,869 as at 2025	177,920 by 2046	Increased traffic volume on roads results in additional maintenance & renewal costs & requirements for traffic calming devices.	Monitor traffic volumes using traffic counts, encourage public transport and cycling, plan for upgrades accordingly
Demographics: Aging population	16,883 people 67 or older as at 2025	31,329 people 67 or older by 2046	Increased bus services resulting in damage to road pavement & requirement to upgrade local roads for turning movements.	Monitor traffic volumes, ensure pavement and road geometry can accommodate bus services as required
Industry	Existing industrial areas are expanding and reaching full potential	Extensive new industrial and commercial areas focused around Jandakot Airport and Latitude 32 Industrial area	Requirement for freight routes and upgrading of existing roads	Monitor traffic volumes, especially Equivalent Standard Axles (ESA), and upgrade pavement/geometry if required
Driverless Cars	Emerging technology with limited impact	Full driverless inevitable, but date unknown. People are expected to move from an ownership to a service-based model	Increase in traffic and a reduction in parking needs as number of cars reduce, but number of cars on roads increase	Monitor developments closely, ensure efficient integration with public transport, upgrade roads, repurpose car parks

Demand factor	Present position	Projection	Impact on services	Management
Electric Cars	Limited charging infrastructure, growing number of electric cars	Move to electric and hydrogen cars inevitable, timing highly reliant on government policy	Increase in demand for charging infrastructure	Ensure sufficient charging infrastructure, explore user pricing options / Vehicle to Grid / Western Power involvement

Table 4.1: Demand Management Plan

4.4 Asset programs to meet demand

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

Acquiring new assets will commit the City to ongoing operations, maintenance and renewal costs, and depreciation expenses for the period that the service provided from the assets is required. These future costs and expenses are identified and considered in developing the long-term financial plan.

4.5 Climate change adaptation

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

How climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which we respond and manage those impacts.[5]

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

Risk and opportunities identified to date are shown in Table 4.2.

[5] IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

Climate change risk	Projection	Impact on services	Climate Change Management Plan
More extreme flooding/storm events during winter months	Increase in the frequency and severity of flooding and storm events	Increased flooding will result in faster potholing over less time, putting additional pressure on maintenance resourcing More sediment washed onto roads, posing safety issues	Ensure roads are in good condition and less susceptible to potholing during storm events Consider increasing sweeping frequency during wet season and/or managing sediment wash-off via appropriate verge management
Hotter temperatures during summer months	Bitumen in spray seals could heat up and start to lose adhesion with stone (i.e. stripping). Hotter roads can be more susceptible to damage/wear and tear.	Increased maintenance and renewal requirements	Ensure road constructions, upgrades, renewals and maintenance is completed to a high degree of quality. Investigate/use bitumen/asphalt blends that are more resistant to high ambient temperatures.

Table 4.2: Managing the Impact of Climate Change on Assets and Services

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

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

Table 4.3 summarises opportunities to build climate change resilience into new and existing assets.

Asset Description	Climate Change Impacts to Road Network	Resilience Plan for New Assets	Resilience Plan for Existing Assets
Building new roads	Increased storm frequency/intensity could cause some roads to become flooded, which could block off access to certain routes.	Consider the provision of alternative routes when planning new road/intersection construction projects.	Consider the provision of alternative routes when planning road/intersection upgrade projects.

Table 4.3: Building Climate Change Resilience into New Assets

The impact of climate change on new and existing assets is evolving and new opportunities will be developed in future revisions of this AMP.

5 Lifecycle management plan

The lifecycle management plan details how the City plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) throughout their entire lifecycle, from acquisition or creation to disposal. The goal is to maximise the value of the assets while minimising costs and risks, ensuring they continue to meet performance requirements over time.

From a financial perspective, infrastructure activities tend to be classified as being either Operating or Capital. The lifecycle activities used in the asset management and financial planning and reporting process cover:

- Capital Expenditure
- Acquisition – the activities to provide a higher level of service (e.g., widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library).
- Renewal – the activities that replace or restore assets to the standard it had originally provided (e.g., road resurfacing and pavement reconstruction, pipeline replacement and building component replacement).
- Disposal – the decommissioning, removing, or repurposing of assets that are no longer cost-effective, safe, or necessary (e.g. shutting down an old water treatment plant, demolishing unsafe buildings, dismantling old bridges, etc.).
- Operating Expenditure
- Operations - the routine activities that keep services accessible and effective, balancing efficiency with user expectations (e.g. road sweeping, mowing grass, energy, inspections, etc.)
- Maintenance – the preventative and corrective actions to sustain asset functionality and minimise unexpected failures. Maintenance activities enable an asset to continue providing service for its useful life (e.g., road patching, pothole repairs, unsealed road grading, crack sealing).

A pictorial representation of the asset lifecycle activities is shown below in Figure 5.1.



Figure 5.1: Asset Lifecycle Activities

5.1 Background Data

5.1.1 Physical parameters

The assets covered by this AMP are shown in Table 5.1.

Asset category	Road Component	Measure	Unit	Replacement Value ($)
Road	Surface	6939121	m^2	311,826,693
	Base	7301842	m^2	292,073,677
	Sub Base	7301842	m^2	340,561,595
Kerbing	Kerbing	1718008	m	120,935,666
Parking	Surface	251796	m^2	14,022,838
(On street and off street)	Base	251796	m^2	5,227,288
	Sub-Base	251796	m^2	6,586,988
TMD's	Anti-skid surface	3420	m^2	855,108
	Bollard	406	No.	149,453

Asset category	Road Component	Measure	Unit	Replacement Value ($)
	Bus Embayment	4797	m^2	209,668
	Median Island	315265	m^2	8,702,874
	Roundabout	47097	m^2	3,082,296
	Safety Barriers	8209	m	3,768,943
	Splitter Island	30896	m^2	2,587,939
	Speed Plateau	6957	m^2	2,103,856
	Street Signs	3152	No.	716,113
	Surface	284323	m^2	27,869,019
Street Lighting	Luminaire	245	No.	291,928
	Pole	236	No.	424,854
Total				1,141,996,793

Table 5.1: Assets covered by this Plan

As at the valuation completed August 2024, the City is responsible for maintaining approximately 892km of road network.

An important distinction in the management of assets is the difference between ‘Design Life’ and ‘Useful Life’. Design Life refers to the length of time that an asset is design to last, based on engineering standards, analysis, testing and reporting. Useful life is simply the length of time that an asset is used. For example, the typical design life for an asphalt road surface is around 20 years, however, the timeframe it is actually used may be much longer than this due to applying ongoing maintenance to get more life out of the surface than it was initially designed for. The modelling in this AMP considered Useful Life.

The age profile of the assets included in this AMP are shown in Figure 5.2.

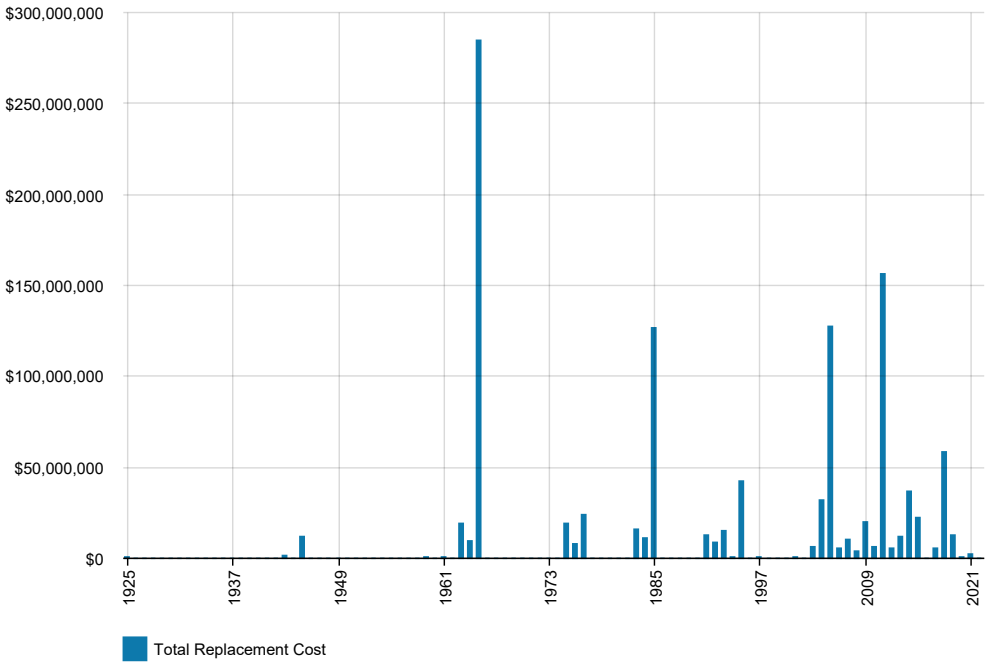


Figure 5.2: Asset Age Profile

Most of the construction has taken place this century. The shorter life and older assets will require regular monitoring.

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 5.2.

Infrastructure	Location	Service Deficiency
Road	Cockburn Road	Traffic currently exceeds capacity according to DTS (2018)
Road	Spearwood Avenue	Traffic currently exceeds capacity according to DTS (2018)
Road	Beeliar Drive	Traffic currently exceeds capacity according to DTS (2018)

Infrastructure	Location	Service Deficiency
Road	Berrigan Drive	Traffic currently exceeds capacity according to DTS (2018)
Road	Karel Avenue	Traffic currently exceeds capacity according to DTS (2018)
Road	Bibra Drive	Traffic currently exceeds capacity according to DTS (2018)
Road	Hammond Road	Traffic currently exceeds capacity according to DTS (2018)
Road	Tapper Road	Traffic currently exceeds capacity according to DTS (2018)
Road	Various (refer RSMP)	Roads with known crash history and deemed unsafe
Road	Utilities Contractors	Not reinstated within 5 days; however, have improved recently but ongoing with the growing expectation from residents on utilities plus continued growth

Table 5.2: Known Service Performance Deficiencies

The above service deficiencies were identified from the DTS, RSMP, operations staff and the public.

5.1.3 Asset condition

Condition ratings for the City's roads are currently monitored every five years, though the City is considering changing to every three years to remain eligible for federal disaster relief funding programs. The most recent condition survey of the City's road network was completed by Talis in December 2023.

Condition is measured using a 1 – 5 grading system[6] as detailed in Table 5.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AM plan results are translated to a 1 – 5 grading scale for ease of communication.

Condition Grading	Description of Condition

[6] IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

Condition Grading	Description of Condition
1	Very Good: free of defects, only planned and/or routine maintenance required
2	Good: minor maintenance required plus planned maintenance
3	Fair: defects requiring regular and/or significant maintenance to reinstate service
4	Poor: significant defects, renewal/rehabilitation required
5	Very Poor: physically unsound and/or beyond rehabilitation, immediate action required. Asset is at end of useful life.

Table 5.3: Condition Grading System

The condition profile of our road assets is shown in Figure 5.3.

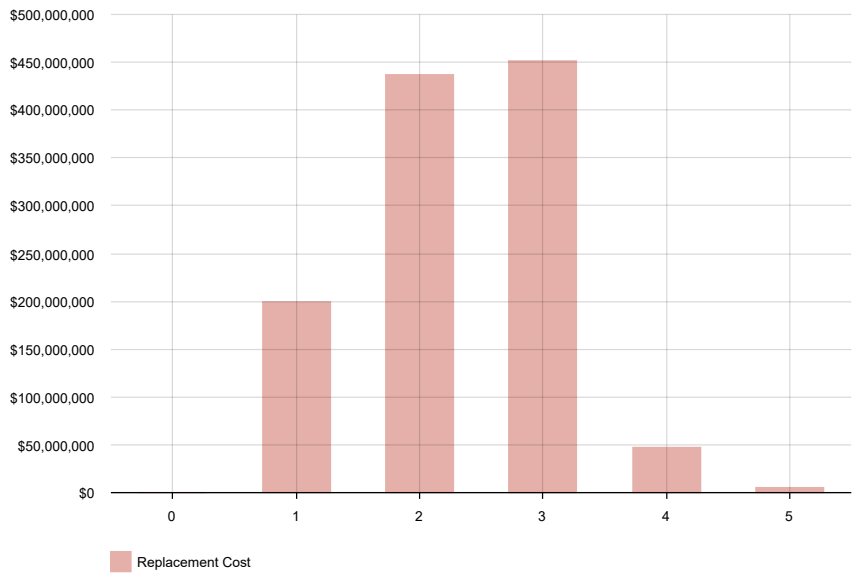


Figure 5.3: Asset Condition Profile

The City's road network is generally in fair condition with 95 per cent of the road assets currently rating as 1, 2 or 3 (Excellent, Good or Fair). However, if inadequate renewal funding is allocated through the Long-Term Financial Plan, the average condition of City roads will worsen over time, as road assets reach the end of their useful life. The challenge will be to either ensure there is enough funding to maintain the current service levels or to adjust agreed levels of service.

5.2 Operations and maintenance plan

For the purpose of modelling within this AMP, the following definitions apply:

Reactive maintenance is unplanned maintenance work carried out in response to service requests and management/supervisory directions. Examples include ad-hoc pothole repair, patching, crack sealing and road sweeping.

Planned maintenance is work that is identified and managed through a maintenance schedule. Examples include planned pothole repair, patching, crack sealing and road sweeping.

Operating expenditure is continuously required expenditure required to keep the asset functional. Examples include costs of power, fuel, staff, security patrols, plant equipment, on-costs and overheads.

The trends in maintenance expenditure are shown in Table 5.4.

Financial Year	Total Maintenance Expenditure ($)	Total Operating Expenditure ($)
2017/18	770,057	4,110,332
2018/19	821,690	4,052,060
2019/20	782,413	4,323,983
2020/21	765,801	4,461,696
2021/22	935,813	4,513,160
2022/23	865,853	4,632,107
2023/24	1,239,853	4,865,716

Table 5.4: Maintenance and Operating Expenditure Trends

The previous Operating and Maintenance budget levels are considered to have been adequate to meet service levels, however this needs to be continuously monitored into the future. Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement.

5.2.1 Asset hierarchy

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

The service hierarchy is shown is Table 5.5.

Service Hierarchy	Service Level Objective
Primary Distributor (PD)	Provide for major regional and inter-regional traffic movement and carry large volumes of generally fast moving traffic. All are state roads and are managed by Main Roads Western Australia. These are not included or considered within this AMP.
Regional Distributor (RD)	Roads that are not Primary Distributors, but which link significant destinations and are designed for efficient movement of people and goods within and beyond regional areas.
District Distributor A (DA)	Carry traffic between industrial, commercial and residential areas and generally connect to Primary Distributors. These are likely to be truck routes and provide only limited access to adjoining property.
District Distributor B (DB)	Perform a similar function to type A District Distributors but with reduced capacity due to flow restrictions from access to and roadside parking alongside adjoining property. These are often older roads with a traffic demand in excess of that originally intended.
Local Distributor (LD)	Roads that carry traffic within a cell and link District Distributors to access roads. These roads should accommodate buses but discourage trucks.
Access Roads (AR)	Provide access to abutting properties with amenity, safety and aesthetic aspects having priority over the vehicle movement function. These roads are bicycle and pedestrian friendly.

Table 5.5: Asset Service Hierarchy

5.2.2 Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.4 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance planned budget.

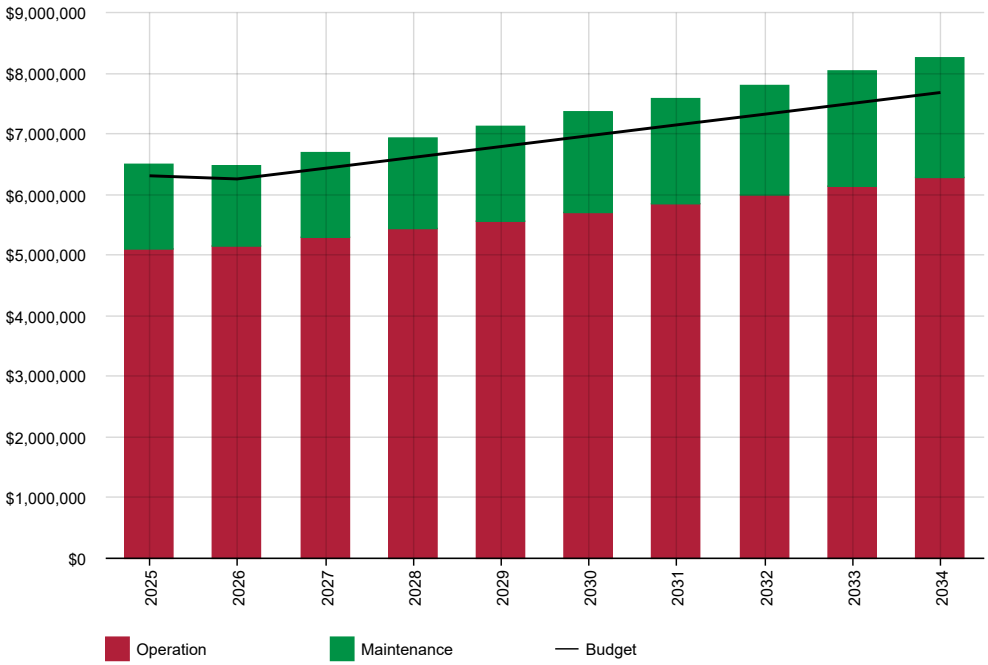


Figure 5.4: Operations and Maintenance Summary

Amounts are in today's dollars, i.e. exclude inflation.

5.3 Renewal plan

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

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

- The first method uses Asset Register data to project the renewal costs (replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year), or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 5.6. Asset useful lives were last reviewed in 2020.

Road Item type	Area (m²)	Useful Life (years)
Surface - DA	822,924	20
Surface - DB	475,802	22
Surface - LD	799,011	25
Surface - RD	216,345	30
Surface - AR	4,625,041	35
Base – DA, DB, LD, RD	2,314,081	80
Base - AR	4,625,041	100
Sub Base – All (inc. parking)	7,190,918	100
Anti-skid surface	3,420	As per road surface
Bus Embayment	4,797	As per road surface
Median Island	315,265	50
Parking - Surface	251,796	30
Parking - Base	251,796	80
Roundabout	47,097	50
Speed Plateau	6,957	50
Splitter Island	30,896	50

Table 5.6: Useful Lives of Assets

The estimates for renewals in this AMP were based on the alternative method.

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

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

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

Renewals are prioritised by identifying assets or asset groups that:

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

Criteria	Weighting (%)
Condition	70
High usage	25
Necessary to improve safety/efficiency/expenditure	5
Total	100

Table 5.7.

Criteria	Weighting (%)
Condition	70
High usage	25
Necessary to improve safety/efficiency/expenditure	5
Total	100

Table 5.7: Renewal Priority Ranking Criteria

5.3.2 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.5. A detailed summary of the forecast renewal costs is shown in Appendix D.

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

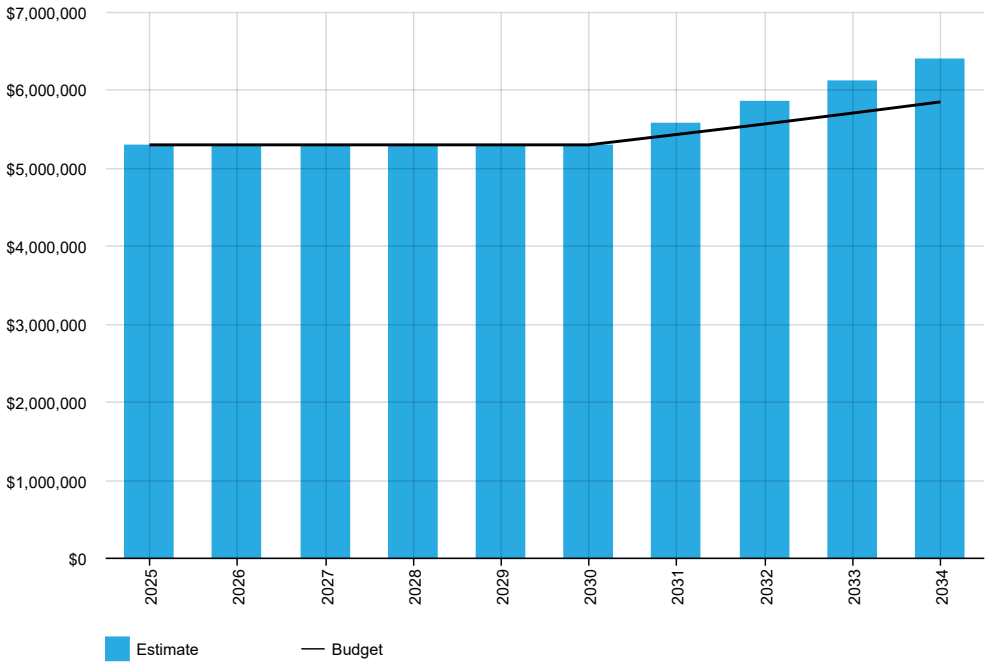


Figure 5.5: Forecast Renewal Costs

While the budget appears sufficient in the short term, the long-term funding requires attention.

Deferred renewal (assets requiring renewal and not scheduled in capital works programs) should be included in the risk analysis process in the risk management plan.

5.4 Acquisition plan

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its original service level. They may result from growth, demand, social or environmental needs. Assets may also be donated to the City by developers or third parties.

5.4.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to meet strategic needs of the community. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the

longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in

Criteria	Weighting (%)
New asset requirement identified in strategic documentation (e.g. Strategic Community Plan, Corporate Business Plan, Road Safety Management Plan, District Traffic Study or Infrastructure Plan)	50
Strong holistic community demand (e.g. community group, petition, etc).	25
Supported by empirical data such as population growth data, approved developments, gap in agreed level of service, etc.	25
Total	100

Table 5.8.

Criteria	Weighting (%)
New asset requirement identified in strategic documentation (e.g. Strategic Community Plan, Corporate Business Plan, Road Safety Management Plan, District Traffic Study or Infrastructure Plan)	50
Strong holistic community demand (e.g. community group, petition, etc).	25
Supported by empirical data such as population growth data, approved developments, gap in agreed level of service, etc.	25
Total	100

Table 5.8: Acquired Assets Priority Ranking Criteria

5.4.2 Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised in Figure 5.6 and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix A.

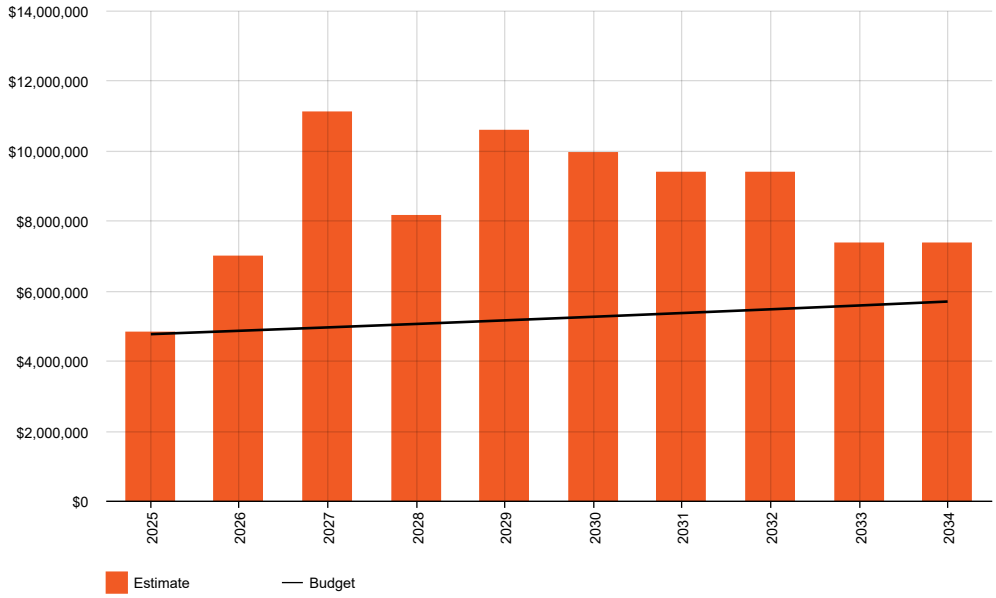


Figure 5.6: Acquisition (Constructed) Summary

Amounts are shown in real values (i.e., current values, net of inflation).

When the City of Cockburn commits to new assets, we must be prepared to fund future operations, maintenance and renewal costs. We must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in Figure 5.7.

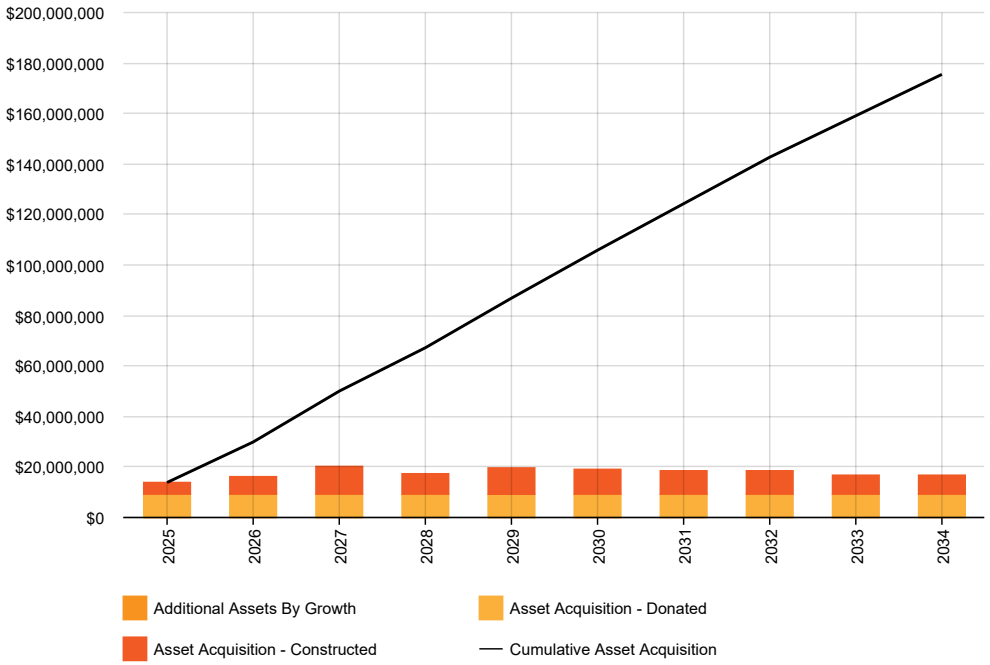


Figure 5.7: Acquisition Summary

Amounts are shown in real values (i.e., current values, net of inflation).

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

There is work to be done on clarifying and reconciling the LTFP budget for road acquisitions vs the 10 year capital works program. In fact, this is the largest ‘gap’ between proposed levels of service and proposed budget out of acquisition, renewal, operations and maintenance.

5.5 Disposal plan

No assets have been identified for disposal.

5.6 Summary of lifecycle costs and planned budget

The financial projections from this asset plan are shown in Figure 5.8. These projections include forecast costs for acquisition, operation, maintenance and renewal. These forecast costs are shown relative to the proposed budget.

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

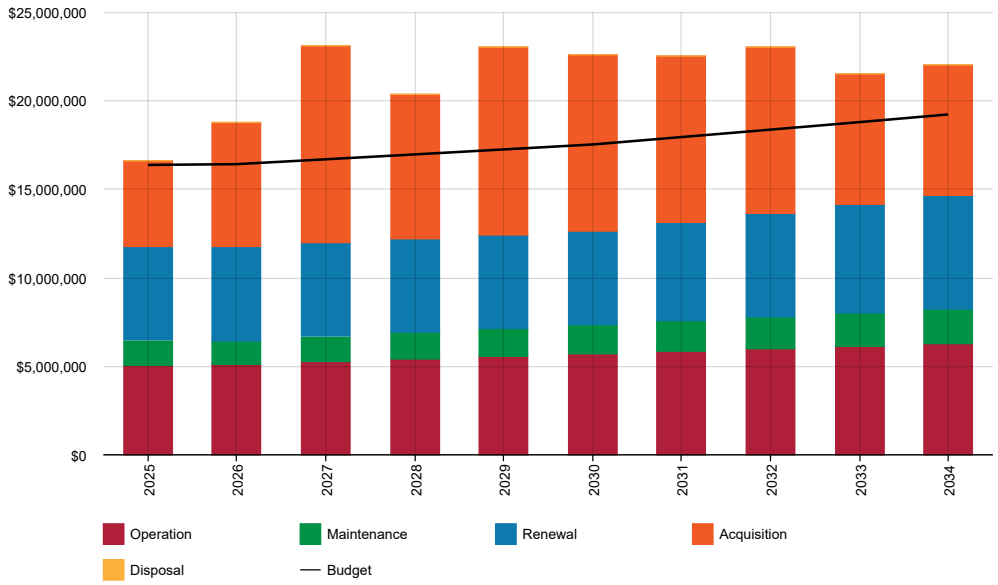


Figure 5.8: Lifecycle Costs and Planned Budget Summary

Overall, there is a consistent funding gap between the planned budget (black line) and the forecast expenditure required to maintain the current level of service (bars). A significant contributing factor to this gap is associated with acquisition (i.e. construction of new assets and/or a portion of the upgrades for existing assets).

To address this gap, the City must consider either increasing the planned budget to match the forecast expenditure, or reducing the level of service that is provided.

6 Risk management planning

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

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

An assessment of risks[10] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical assets

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

Critical Assets	Critical Failure Mode	Action
All roads/intersections with volume >15,000AWDT	Sudden defect (e.g. pothole) causing traffic to back up	Monitor overall condition during condition inspections. Prioritise defect rectification.
All roads/intersections with volume >15,000AWDT	Perform worse than LOS D during AM/PM peak	Monitor overall performance regarding traffic congestion, consider upgrade project(s) to improve LOS.

[9] ISO 31000:2009, p 2

[10] Enterprise Risk Management

Critical Assets	Critical Failure Mode	Action
All roads	Frequent or increased accidents occurring	Monitor overall performance regarding traffic safety, consider upgrade project(s) to improve safety.

Table 6.1: Critical Assets

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

6.2 Risk assessment

The risk management process used is shown in Figure 6.1 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.

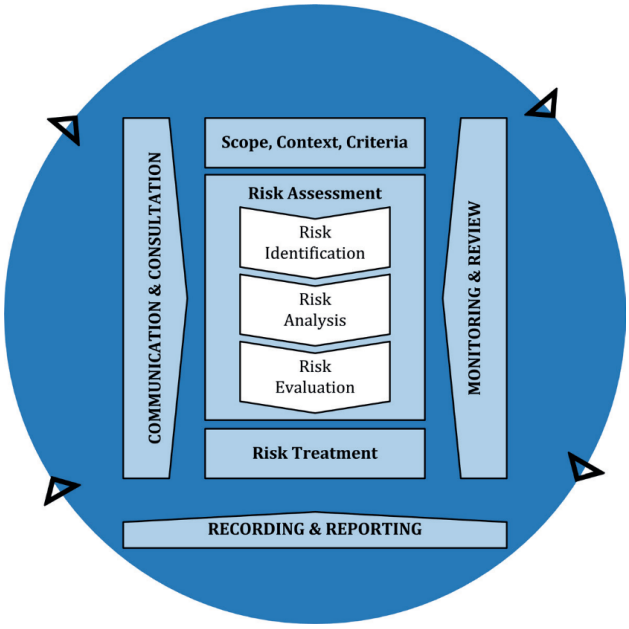


Figure 6.1: Risk Management Process – Abridged

Source: ISO 31000:2018, Figure 1, p9

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

An assessment of risks[11] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

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

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
All	Failure to effectively plan for capital works projects	H	1. Good project rigour and governance for each project, supported by effective systems and processes. 2. Embedding Planned Project Management and TechOne solution into the organisation. 3. Regular monitoring of major and minor projects by responsible staff. 4. Adequate staffing, training and systems to support the above	M	$150,000 per annum
			5. Ensure condition data is fit for purpose		$50,000-$100,000 per annum

Table 6.2: Risks and Treatment Plans

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

[11] Enterprise Risk Management

6.3 Infrastructure resilience approach

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

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

We do not currently measure our resilience in service delivery, though it is considered in the project scoping phase. 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 we cannot do

There are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years. These include:

- Ensuring 100 per cent of our roads are 'Condition 3' or better
- Maintaining our roads at the lowest lifecycle cost.

6.4.2 Service trade-off

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

- Critical road assets are not adequately maintained, renewed or upgraded to meet demand, resulting in a greater percentage of the road network being in poor condition (i.e. Condition 4 or 5)
- An increasing number of road assets become unfit for purpose, leading to a decline in usage and congestion on adjacent roads
- Critical new road construction projects cannot occur to improve connectivity and alleviate locations of vehicular congestion.

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Significant portions of the road network are not safe for road users due to their poor condition, likely increasing instances of accidents that result in injury or death.
- Mandatory road closures due to poor condition, resulting in increased demand/wear and tear on the surrounding network.
- Increased number of community complaints.

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

7 Financial summary

This section contains the financial and valuation forecasts resulting from the information presented in the previous sections of this plan. Forecasts will be improved as the discussion on sustainable levels of service, risk and cost matures in line with the financial strategy.

7.1 Financial statements and projections

7.1.1 Asset valuations

This AMP is based on the valuation completed August 2024. Assets are valued at 'greenfield replacement cost', based on a 'cost to construct' approach. The valuation considered inputs such as:

- Road components
- Unit rates
- Condition data
- Residual value (after depreciation was considered)

7.1.2 Sustainability of service delivery

There are three key indicators of sustainable service delivery that are considered in the AMP for this service area. The three indicators are the:

- Asset Consumption Ratio (Fair Value/Current Replacement Cost);
- Asset Sustainability Ratio (planned renewal budget for next year / annual depreciation expense); and
- Asset Renewal Funding Ratio (planned renewal budget for the next 10 years / forecast renewal outlays for the next 10 years)

Asset Consumption Ratio

Asset Consumption Ratio 63 per cent

This ratio shows the written down value of depreciable assets in relation to their 'as new' value in current prices. A ratio of less than 50 per cent indicates a rapid deterioration of the asset base, whilst a ratio greater than 75 per cent may indicate an over investment in the asset base.

Asset Sustainability Ratio

Asset Sustainability Ratio 66 per cent

The target ratio should be between 90-110 per cent. This low value indicates that the City needs to increase the amount of annual road renewal funding, as our roads are

depreciating faster than we are renewing them. It is noted that this percentage does not include the portion of road upgrades which renew portions of the road, nor does it include the portion of maintenance funding which constitutes road renewal (e.g. larger maintenance jobs like patching). If included, the ratio is expected to improve closer to the lower end of the 'ideal' range, though the City still needs to consider increasing its annual road renewal funding.

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio[12] 97.5 per cent

The Asset Renewal Funding Ratio illustrates that over the next 10 years we expect to have 97.52 per cent of the funds required for the optimal renewal of road surface assets.

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

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

Table 7.1 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan.

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

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AMP and/or financial projections in the LTFP.

We will manage any 'gap' by communicating the service performance, cost, and risk implications in consultation with the community and key stakeholders.

Forecast costs are in today's dollars, i.e. excluding inflation.

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

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)
24/25	4,826,655	5,090,305	1,401,961	5,303,140	0
25/26	7,002,454	5,143,880	1,319,420	5,303,140	0
26/27	11,106,490	5,285,594	1,401,973	5,303,140	0
27/28	8,151,599	5,427,307	1,484,526	5,303,140	0
28/29	10,597,000	5,569,020	1,567,079	5,303,140	0
29/30	9,965,000	5,710,734	1,649,633	5,303,140	0
30/31	9,380,000	5,852,447	1,732,186	5,577,404	0
31/32	9,380,000	5,994,160	1,814,739	5,851,669	0
32/33	7,370,000	6,135,874	1,897,292	6,125,933	0
33/34	7,370,000	6,277,587	1,979,846	6,400,197	0

Table 7.1: Forecast Costs (Outlays) for the Long-Term Financial Plan

7.2 Valuation forecasts

The best available estimate of the value of assets included in this AMP are shown below.

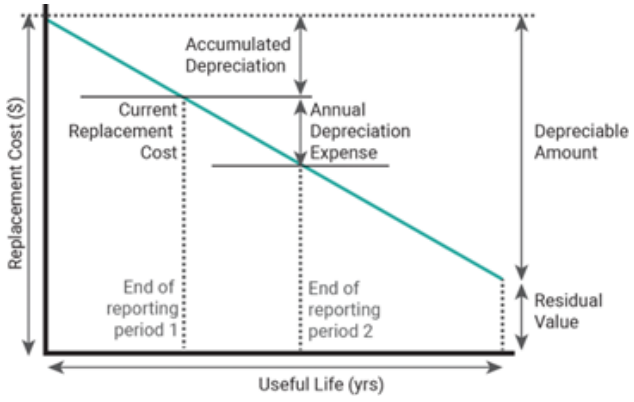


Figure 7.1: Valuation Terminology

These costs are shown in 2024 dollar values:

- Replacement Cost (Gross) $1,141,996,793
- Depreciable Amount $1,141,996,793
- Current Replacement Cost[13] $716,721,502
- Annual Depreciation Expense $21,616,949

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

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

8 Assumptions and improvement planning

8.1 Data and information sources

8.1.1 Accounting and financial data sources

This AMP utilises accounting and financial data sourced from Technology One CiAnywhere 2024A Release (775).

8.1.2 Asset management data sources

This AMP also utilises asset management data sourced from Technology One CiAnywhere 2024A Release (775).

8.2 Key assumptions

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

Key assumptions made in this AMP are:

- Renewal forecasts have been made by professional judgement
- Population and asset growth projections are assumed to be accurate
- The data supplied was as accurate as possible at the time of compilation of this asset management plan
- The breakdown of the actual reactive, planned and operational expenditure is assumed to be accurate.

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

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

The Asset Register method was used in IPWEA NAMS.PLUS initially, adjusted to accommodate practicality considerations then the Alternative Method used, with professional judgement.

8.3 Forecast reliability and confidence

The forecast demands, costs, planned budgets, and valuation projections in this AMP are based on the best available data. For effective asset management and financial planning and reporting, it is critical that the information is reliable and up to date. Data confidence is classified on an A to E level scale in accordance with the guidance provided in the International Infrastructure Management Manual. [14]

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

Table 8.1: Data Confidence Grading System

The estimated confidence level for and reliability of data used in this AMP is shown in Table 8.2.

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

Data	Confidence Assessment	Comment
Demand drivers	B	Professional judgement, corporate knowledge and id projections.
Growth projections	B	Id projections
Acquisition forecast	B	Professional judgement, corporate knowledge and Local Government projections.
Operation forecast	B	City records of past expenditure and professional judgement
Maintenance forecast	B	City records of past expenditure, feedback from C&M and professional judgement
Renewal forecast - Asset values	A	Latest asset valuation data.
- Asset useful lives	C	Useful lives are based on industry practice and condition ratings. However, there is not a high level of confidence with the 'Year Acquired' information for some older assets.
- Condition modelling	C	Completed in December 2023, ensure methodology aligns with City's levels of service
Disposal forecast	B	No planned road disposals at this moment in time, although this may change within the planning period and, if so, must be reflected in the AMP.

Table 8.2: Data Confidence Assessment for Data used in AMP

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

8.4 Improvement plan

It is important that we recognise gaps in the planning process that require improvement to ensure effective asset management and informed decision making. The improvement plan generated from this AMP is shown in Table 8.3.

Section	Project	Responsibility	Task
3.3	Monitoring performance measures against levels of service targets	Assets and Projects	Service Level Analysis workshops to review service delivery criteria Refine renewal intervention criteria
5.1	Clarification of asset ownership (eg. car parks, footpaths, lighting)	Assets and Projects	As part of the integration between Tech one and Intramaps clearly define a single point of responsibility for each asset classification
5.2	Review definition of operations and maintenance	Assets and Projects	Decide on the most useful definition of operations vs maintenance to support asset and operations management, e.g. the possibility for more accurate cost forecasting. Adjust systems to suit.
5.1	Continuous improvement of roads data for next revision of the Roads AMP	Assets and Projects	Network wide road surface condition audits, including access roads Use AI defect detection as a check / input to condition ratings
5.1	Useful Lives	Assets and Projects	Review all useful lives
5.4	Electric vehicle strategy	Waste and Fleet Services, Assets and Projects	Establish formal strategy for providing charging points

Table 8.3: Improvement Plan

8.5 Monitoring and review procedures

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

This AMP will be reviewed and updated to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

The AMP has a maximum life of 4 years and is next due for complete revision in 2028.

8.6 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 long-term financial plan,
- The degree to which the 1 to 5-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AMP,
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans,
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90-110 per cent).

9 References

- City of Cockburn – Asset Management Strategy 2017 – 2024
- City of Cockburn – Strategic Community Plan 2025 – 2035
- City of Cockburn – Long Term Financial Plan 2024-2025 to 2033-2034
- City of Cockburn – Management Budget 2024 - 2025
- City of Cockburn – Enterprise Risk Management
- City of Cockburn – Place Score – Liveability Survey 2024 - https://cockburn.t1cloud.com/T1Default/CiAnywhere/Web/COCKBURN/RedirectToFunction?sk.DocumentSetId=12111956&f=%24EMC.DOC.PROP.MNT&suite=ECM&h=10tdmvN6tA&t=191361DE
- City of Cockburn - Population forecast - https://forecast.id.com.au/cockburn/
- Government of Western Australia, Department of The Premier and Cabinet - Western Australian Legislation - Acts in force
- IPWEA, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/bookshop/iimm
- IPWEA, 'NAMS+ - A Toolkit for Asset Management Planning', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/namsplus
- IPWEA, 2024 'International Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/bookshop/iifmm
- IPWEA, 2018, Practice Note 12.1, 'Climate Change Impacts on the Useful Life of Assets', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/bookshop/pn12-1
- IPWEA, 2012, Practice Note 6 Long-Term Financial Planning, Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn6
- IPWEA, 2014, Practice Note 8 – Levels of Service & Community Engagement, Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn8
- ISO, 2024, ISO 55000:2024 Asset Management – Vocabulary, overview, and principles
- ISO, 2018, ISO 31000:2018 Risk management – Guidelines
- The Local Government and Municipal Knowledge Base - LGAM Knowledge Base
- Main Roads Western Australia - Welcome - Main Roads Western Australia
- DVC, 2006, 'Asset Investment Guidelines', 'Glossary', Department for Victorian Communities, Local Government Victoria, Melbourne, http://www.dvc.vic.gov.au/web20/dvclgv.nsf/allDocs/RWP1C79EC4A7225CD2FCA257170003259F6?OpenDocument
- Local Government of Western Australia – Asset Management Framework and Guidelines

10 Appendices

10.1 Appendix A Acquisition forecast

The new assets required to meet growth will be funded through a combination of municipal funding, grant funding and Developer Contribution Plans.

10.1.1 Acquisition forecast assumptions and source

The forecast for donated assets likely to be received from developers over the next 5 years has been calculated by averaging out the previous 5 years total donated assets received through subdivisions. This equates to approx. 8 km of new road worth $10m per year.

10.1.2 Acquisition project summary

Project	Estimated Expenditure for Financial Year Ending ($m)									
	25	26	27	28	29	30	31	32	33	34
Banjup LATM	0.6									
Bennet Ave Upgrade	1.1									
Rockingham Road & Phoenix Road Roundabout	1.0	1.5								
Rockingham Road Improvement - Coleville to Phoenix	3.4	3.4	1.7							
Beeliar Drive & Dunraven Drive Intersection	1.2	1.8								
Rowely Road, De Haer Road & Liddelow Road Intersection		0.5	1.9							
Orsino Boulevard & Pantheon Avenue Intersection		0.1	0.9							
Elderberry Drive, Berrigan Drive Intersection - Ngort Dr Roundabout		0.2	2.9							
Semple Court, Berrigan Drive Intersection - Ngort Dr Roundabout		0.2	2.4							

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Project	Estimated Expenditure for Financial Year Ending ($m)									
	25	26	27	28	29	30	31	32	33	34
Rowley Road & Lyon Road Intersection Upgrade			1.2	1.8						
Hammond Road Upgrade & Extension Stage 1 - Russell to Frankland		0.6	4.3	5.0						
North Lake Road & Discovery Drive Intersection			1.2	1.8						
Jandakot Road & Warton Road Intersection - Contribution to works by others.			0.2	0.3						
North Lake Road & Elderberry Drive Intersection				1.2	1.8					
Lyon Road & Gibbs Road Intersection				1.2	1.8					
Hammond Road Upgrade & Extension Stage 2 - Frankland to Rowley				0.6	4.5	3.6				
Road Safety Project - Major (Black Spot) - Initiative Budget - To be allocated					2.0	6.0	6.0	6.0	6.0	6.0
Jandakot Road Upgrade - Skotsch Road to Warton Road					3.5	3.5	4.5	3.5		
LATM Initiative budget (IPO) - To be allocated		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0
Road Network Improvement Project (MRRG) - Initiative Budget - To be allocated							3.5	4.5	5.0	5.0
Low Cost Road Safety Program Bibra Lake		1.5								

10.1.3 Acquisition forecast summary

Year	Constructed ($)	Donated ($)	Growth ($)
24/25	4,826,655	9,036,209	0
25/26	7,002,454	9,036,209	0
26/27	11,106,490	9,036,209	0
27/28	8,151,599	9,036,209	0
28/29	10,597,000	9,036,209	0
29/30	9,965,000	9,036,209	0
30/31	9,380,000	9,036,209	0
31/32	9,380,000	9,036,209	0
32/33	7,370,000	9,036,209	0
33/34	7,370,000	9,036,209	0

Table 10.1: Acquisition Forecast Summary

10.2 Appendix B Operation forecast

10.2.1 Operation forecast assumptions and source

Strictly speaking, operations is expenditure done on an asset that does not depend on its condition. In the case of roads, this would include sweeping. However, to date this has not been the practice. Currently this is the cost of 'supporting' aspects like power, fuel, staff, security patrols, plant equipment, on-costs and overheads. It is in the improvement plan to review this definition.

The planned annual operating expenditure was linearly extrapolated based on the previous five years of expenditure.

The majority of the O&M budget is classed as Operating, however this has been used heavily for maintenance as well. This is why both the maintenance and operating budgets have been combined in Figure 5.4.

10.2.2 Operation Forecast Summary

Table 10.2 provides a summary of Forecast Operations expenditure over the planning period.

Year	Operation Forecast ($)	Additional Operation Forecast ($)	Total Operation Forecast ($)
24/25	5,090,305	Included in forecast	5,090,305
25/26	5,143,880	Included in forecast	5,143,880
26/27	5,285,594	Included in forecast	5,285,594
27/28	5,427,307	Included in forecast	5,427,307
28/29	5,569,020	Included in forecast	5,569,020
29/30	5,710,734	Included in forecast	5,710,734
30/31	5,852,447	Included in forecast	5,852,447
31/32	5,994,160	Included in forecast	5,994,160
32/33	6,135,874	Included in forecast	6,135,874
33/34	6,277,587	Included in forecast	6,277,587

Table 10.2: Operation Forecast Summary

10.3 Appendix C Maintenance forecast

10.3.1 Maintenance forecast assumptions and source

The maintenance budget for 2023/2024 was $330k, however in practice it has been overspent, with the operation budget used for maintenance expenditure. Refer Appendix B. Maintenance covers:

- Expedient and heavy patching repairs to the road pavement
- Repairs to ancillary assets including street lights owned by the City, guard rails, kerb etc
- Sweeping and other forms of cleaning
- Graffiti removal
- Weed spraying
- Sign replacement
- Other

It is in the improvement plan to review this, in particular the inclusion of sweeping and cleaning related activities.

Similar to operating expenditure, maintenance expenditure was linearly extrapolated based on the previous five years of expenditure.

10.3.2 Maintenance forecast summary

Table 10.3 provides a summary of Forecast Maintenance expenditure over the planning period.

Year	Maintenance Forecast ($)	Additional Maintenance Forecast ($)	Total Maintenance Forecast ($)
24/25	1,401,961	Included in forecast	1,401,961
25/26	1,319,420	Included in forecast	1,319,420
26/27	1,401,973	Included in forecast	1,401,973
27/28	1,484,526	Included in forecast	1,484,526
28/29	1,567,079	Included in forecast	1,567,079
29/30	1,649,633	Included in forecast	1,649,633
30/31	1,732,186	Included in forecast	1,732,186
31/32	1,814,739	Included in forecast	1,814,739
32/33	1,897,292	Included in forecast	1,897,292
33/34	1,979,846	Included in forecast	1,979,846

Table 10.3: Maintenance Forecast Summary

10.4 Appendix D Renewal forecast

10.4.1 Renewal forecast assumptions and source

The NAMS.PLUS Asset Register method was used initially, with the criteria being renewal of all condition 5's and renewing critical assets (e.g. road surface of Distributor A road) while in condition 4. Practicality was then factored in and the Alternative method used to smooth the forecast, considering the majority of the required renewals are resurfacing of access roads.

In the future, Technology One prediction modelling is intended to be used. Technology One is capable of producing a *budget constrained* projection, where the

spread of asset conditions is predicted in response to budget constraints. This is worthy of further investigation; for now the Asset Renewal Funding Ratio is the main indicator of the suitability of the renewal budget.

It is in the improvement plan to review service levels and renewal intervention criteria.

10.4.2 Renewal project summary

Refer 10.4.4 Renewal plan.

10.4.3 Renewal forecast summary

Table 10.4 provides a summary of Forecast Renewal expenditure over the planning period.

Year	Renewal Forecast ($)	Renewal Budget ($)
24/25	5,303,140	5,303,140
25/26	5,303,140	5,303,140
26/27	5,303,140	5,303,140
27/28	5,303,140	5,303,140
28/29	5,303,140	5,303,140
29/30	5,303,140	5,303,140
30/31	5,577,404	5,435,719
31/32	5,851,669	5,571,612
32/33	6,125,933	5,710,902
33/34	6,400,197	5,853,675

Table 10.4: Renewal Forecast Summary

10.4.4 Renewal plan

Due to the size of the Renewal Plan, refer to https://cockburn.t1cloud.com/T1Default/CiAnywhere/Web/COCKBURN/RedirectToFunction?sk.DocumentSetId=12442916&f=%24EMC.DOC.PROP.MNT&suite=ECM&h=ldi6V8vbst&t=19643116

Forward Capital Works Plan

Draft - Forward Capital Works Plan (10year Plan) FY 26 - 35.xlsx

10.5 Appendix E Disposal summary

10.5.1 Disposal forecast assumptions and source

As of June 2025, it is assumed there are no road asset disposal projects required over the planning period. However, this AMP should be updated with any disposal projects identified during the planning period, as well as the life cycle cost summary.

10.5.2 Disposal project summary

Any disposal projects identified during the planning period should be listed here in future AMP updates.

10.5.3 Disposal forecast summary

No disposals have been identified.

10.6 Appendix F Budget summary by lifecycle activity

The budget summary shown in Table 10.5 is based on the renewal budget from the LTFP and the projected O&M budget, as discussed in Appendix B and C.

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)	Total ($)
24/25	4,775,098	5,663,224	645,000	5,303,140	0	16,386,462
25/26	4,870,600	5,612,696	643,396	5,303,140	0	16,429,832
26/27	4,968,012	5,700,486	733,753	5,303,140	0	16,705,391
27/28	5,067,372	5,788,275	824,110	5,303,140	0	16,982,897
28/29	5,168,719	5,876,065	914,468	5,303,140	0	17,262,392
29/30	5,272,094	5,963,854	1,004,825	5,303,140	0	17,543,913
30/31	5,377,535	6,051,644	1,095,182	5,435,719	0	17,960,080
31/32	5,485,086	6,139,433	1,185,540	5,571,612	0	18,381,671
32/33	5,594,788	6,227,223	1,275,897	5,710,902	0	18,808,810
33/34	5,706,684	6,315,012	1,366,254	5,853,675	0	19,241,625

Table 10.5: Budget Summary by Lifecycle Activity

10.7 Appendix G Legislative requirements

Legislation	Requirement
Aboriginal Heritage Act 1972 and Heritage Act of WA 1990	Provision for the preservation on behalf of the community of places and objects customarily used by or traditional to the original inhabitants of Australia or their descendants
Asset Management Framework and Guidelines for Western Australia Local Governments	A framework developed to assist local governments plan and manage assets to achieve long term goals
Australian Accounting Standards	These outline the financial reporting infrastructure for a variety of infrastructure: • AASB116 - Property, Plant and Equipment • AASB13 Fair Value Measurement • AASB136 - Impairment of Assets • ASB 140 Investment Property • AASB 5 Non-current Assets Held for Sale and Discontinued Operations
Australian Standards	Standards are published documents setting out specifications and procedures designed to ensure products, services and systems are safe, reliable and consistently perform the way they were intended to. They establish a common language which defines quality and safety criteria.
Code of Practice Working Hours 2006	Provides guidance for employers and workers on the management of Safety and Health hazards and risks commonly associated with working hour arrangements.
Conservation and Land Management Act 1984	Makes better provision for the use, protection and management of certain public lands and waters and the flora and fauna thereof, establishes authorities to be responsible therefore, and for incidental or connected purposes.
Contaminated Sites Act 2003	Provides for the identification, recording, management and remediation of contaminated sites, to consequentially amend certain other Acts and for related purposes.
Disability Services Act 1993	An Act for the establishment of the Disability Services Commission and the Ministerial Advisory Council on Disability, for the furtherance of principles applicable to people with disabilities, for the funding and provision of services to such people that meet certain objectives, for the resolution of complaints by such people, and for related purposes.

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Legislation	Requirement
Environmental Protection Act 1986	Provides for an Environmental Protection Authority, for the protection, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected to the foregoing.
Fire and Emergency Services Authority of WA Act 1998	Establishes an Authority with functions relating to the provision and management of emergency services, and for related purposes.
Local Government Act & Regulations 1996	Requirement that each local government is 'to plan for the future of the district' by developing and adopting a strategic community plan and a corporate business plan: • Local Government (Financial Management) Regulations 1996 • Local Government (Functions & General) Regulations 1996
Main Roads Act 1930	Consolidates and amends the law relating to and making provision for the construction, maintenance and supervision of highways, main and secondary roads, and other roads and the control of access to roads.
Main Roads WA – Code of Practice for traffic management for works on roads (April 2011)	To promote safe and consistent traffic management practice at work sites on roads in accordance with state legislation and national standards. Requires general compliance with the Australian Standard 1742.3-2009 and associated field guides, provides details of additional requirements necessary to meet WA requirements. Also outlines the competency requirements for personnel responsible for managing traffic on work sites.
Native Title (state provisions) Act 1999	Provides for the recognition and protection of native title and to establish ways in which future dealings affecting native title may proceed.
Occupational Safety and Health Act 1984 (WA)	Provides for the promotion, coordination, administration and enforcement of Safety and Health in WA. Places emphasis on the prevention of accidents and injury
Planning and Development Act 2005	Provides for a system land use planning and development in the State and for related purposes.
Rail Safety Act 2010	Requires Local Governments to develop an Interface Agreement with the rail manager/operator for every rail/road crossing in their area of responsibility by 1 February 2014
Soil and Land Conservation Act 1945	Relates to the conservation of soil and land resources, and to the mitigation of the effects of erosion, salinity and flooding.

Legislation	Requirement
Town Planning and Development Act 1928, Land Administration Act 1997, Transfer of Land Act 1893	Combined these outline the processes in the management and creation of roads
Transport Co-ordination Act 1966	Provides for the co-ordination, planning and advancement of all forms of transport in WA, to provide for the review, control and licensing of transport services and for incidental and other purposes.
Western Australia Local Government Act 1995	Provides for a system of Local Government by describing the functions of and providing a framework for the administration and financial management of Local Governments.

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Document Set ID: 12330786
Version: 23, Version Date: 11/09/2026

City of Cockburn

Footpaths Asset Management Plan 2024–2028



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Document Set ID: 12583379
Version: 25, Version Date: 28/08/2026

Asset Management Plan - Alternate Method				
Document Set ID: 12583379				
Date	**Revision Details**	**Author**	**Reviewed**	**Approved**
Sept 2021	Final Version 2020 – 2024	Asset Services	Service Manager Infrastructure Assets	Executive Leadership Team/ Council
April 2026	Final Version (NAMS+) 2024 – 2028	Asset Services	Service Manager Infrastructure Assets	Executive Leadership Team

NAMS+ offers several Asset Management templates.

The asset owner can choose the template that best suits their circumstances.

The structure and content of this template is aligned to the International Infrastructure Management Manual. In some instances, the asset owner may choose to reformat/restructure content or only use the Executive Summary. IPWEA takes no responsibility for the end product.

This Asset Management Plan should be prepared in line with the Strategic Asset Management Plan (also referred to as an AM Strategy) and AM Policy and used to inform the Long-Term Financial Plan.

DISCLAIMER: This template has been prepared for educational purposes as part of the Professional Certificate in Asset Management Planning course. The data and conclusions have not been reviewed for accuracy nor endorsed or adopted by the asset owner.

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Acknowledgement of Country
The Mayor, Councillors and staff of the City of Cockburn acknowledge the Whadjuk Nyungar people of Beeliar Boodja as the traditional custodians of this land. We pay our respect to the Elders, past and present.

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1.0 EXECUTIVE SUMMARY

The City of Cockburn's community relies on a diverse portfolio of infrastructure assets, including roads, buildings, bridges, parks, and footpaths. The footpath assets covered by this Asset Management Plan include footpaths, cycle paths, pram ramps, tactiles and bus shelters. The total Current Replacement Cost (CRC) for the footpaths asset class is approximately $209 million as based on 2023/24 city's revaluation.

Footpaths Asset Management Plan (AMP) provides a strategic framework for managing our community's infrastructure assets, ensuring they remain safe, reliable, and capable of meeting current and future demands.

1.1 Purpose of the Plan

The AMP aims to:

- Provide a systematic approach to asset management.
- Address critical risks associated with aging infrastructure and limited funding.
- Ensure infrastructure supports the community's social, economic, and environmental goals.

This AMP details information about the City's footpath network, as well as defining the Level of Service (LOS) and outlining the funding required to maintain this LOS over a 10-year planning period.

This highlights any funding gaps between the planned and forecast expenditure, which assists in optimizing expenditure on managing assets through the Long-Term Financial Plan

1.2 Asset Description

The City's footpath network covers approximately 898km and consists of the following assets:

- Asphalt Paths – 70 km
- Red Asphalt Paths – 21 km
- Concrete Paths – 734 km
- Brick Paths – 11 km
- Limestone Paths – 61km
- Wood – 42m
- No of Ramps and Tactiles – 6749
- No of Bus Shelters - 241

The above assets have replacement value estimated at $209,294,086.

1.3 Levels of Service

Levels of Service' are measurable targets which determine the type and extent of services delivered to the Community. Levels of Service are typically split into 'Customer' and 'Technical' and each have their own metrics which the city can measure its performance against.

The City of Cockburn Strategic Community Plan 2025 – 2035 set out five key Strategic Outcomes which are Our Economy, Our Environment, Our Community, Our Places and Our Governance to deliver on the vision for future of the local government area (LGA). The 2024 Cockburn liveability study by Place Score outlines community values that align with five key Strategic Outcomes as discussed in section 3.0.

Understanding your community values data (also known as CF) helps to identify where we are aligned and the key outcomes that matter the most and Place Experience (also known as PX or performance) reveals how people rate the lived experience of their current suburb or residence.

The City's overall customer LOS objective is to maintain 70% community satisfaction with road assets, which is based on scoring and targets outlined in the 2024 Strategic Community Plan Review by Place Score. Maintaining this level of service objective is expected to be financially sustainable over the short and medium term refer to

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Figure 1.5.2 that shows the Forecast Lifecycle Cost and Planned Budget. However, there is a risk that the current level of service cannot be achieved towards the end of the 10-year planning period as the current planned budget allocation is insufficient to maintain the level of service for the planning period.

The main service consequences of the planned budget are:

- Higher frequency of footpath assets in 'poor' or 'very poor' condition, creating hazards to the community
- Increase in footpath closures for reactive maintenance works (e.g. panel replacement, grinding, asphalt path patching, etc.) resulting in complaints from the community.
- Liability issues for the City if universal access is not maintained for mobility impaired individuals.

1.4 Future Demand

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

- Population Growth
- Aging Population
- Development Trends and Requirements
- Sustainable Transport Trends (e-Bikes, e-Scooters, etc).
- Changes in community expectations

Strategies to manage these demands are discussed in Section 4.0.

1.5 Lifecycle Management Plan

How we plan to manage and operate the assets at the agreed levels of service throughout their lifecycle is contingent on 10-year Long-Term Financial Plan (LTFP).

Furthermore, It is important to be aware of the 'Whole of Life' lifecycle costs associated with assets (i.e. cost of construction, operation and maintenance costs, renewal and upgrade costs and disposal costs at end of life).

1.5.1 What does it Cost?

The lifecycle costs necessary to provide the services covered by this AMP include Operations, Maintenance, Renewal and Upgrade of existing assets, and the acquisition of new assets to meet demand. Disposal of assets is also considered.

When lifecycle costs are prepared for a minimum 10-year planning period, they can be used to inform the 10-year LTFP. The first 10-year lifecycle forecast is estimated to cost $38,677,036 or $3,867,704 on average per year.

Depreciation is excluded from these cost estimates.

1.5.2 What we will do

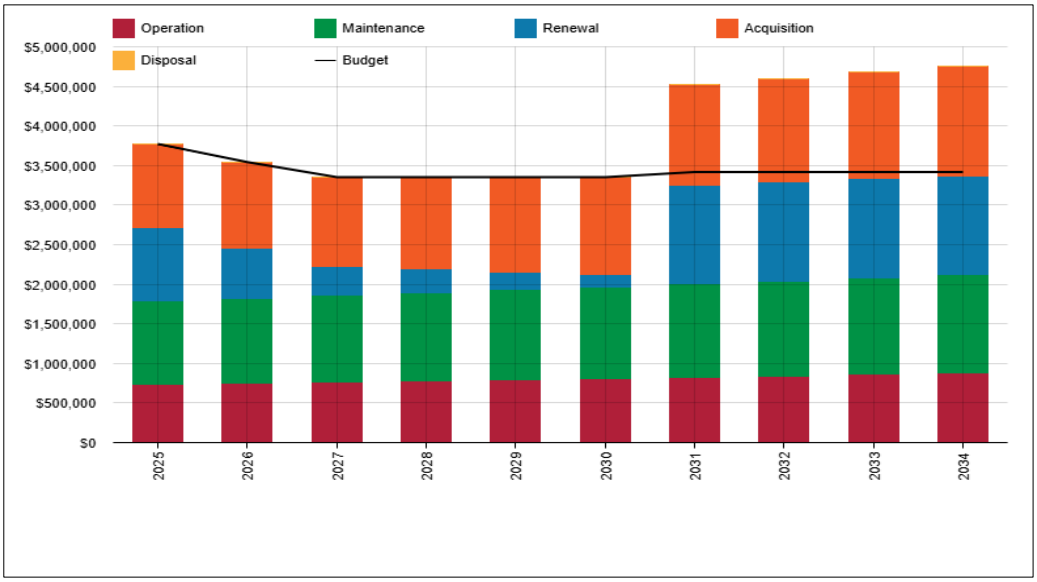
The funding made available in the first 10-years' of the LTFP is $34,332,180 or $3,433,218 on average per year which is approximately 88.77% of the cost to undertake the lifecycle activities.

The reality is, only what is funded in the LTFP can be provided. Informed decision making depends on the AMP emphasising the consequences of planned budgets on the service levels provided and communicating the residual risks. It is important to ensure the organisation is delivering the services in a financially sustainable manner.

The 10-year LTFP results in a shortfall of $-434,486 on average per year (i.e. approximately $4,344,860 over the 10-year period) of the forecast lifecycle costs required to provide services. This is shown in the figure 1.5.2 below.

Figure 1.5.2: Forecast Lifecycle Costs and Planned Budgets

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We plan to provide footpath asset services for the following:

- Operation, Maintenance, Renewal and Upgrade of existing footpath assets to meet service levels set in annual budgets.
- Completion of key footpath/cycle path renewals, upgrades, and new construction projects within the 10 Year planning period.

1.5.3 What we cannot do

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

- Ensuring all footpath assets are in 'Condition 3' or better.
- Build all new footpath/cycle path links that are requested by the community in medium to long term.
- Build all new bus shelters links that are requested by the community.
- Maintaining our footpaths infrastructure assets at the lowest lifecycle cost.

1.6 Risk Management

The current planned budget is sufficient to continue to manage risks in the medium term . However, in the long term (approximately from 2031 onwards) it is important to ensure that adequate budget is kept in reserve to achieve what is shown in the life cycle cost summary.

The main risk consequences are:

- Surface quality and safety of footpaths will be reduced, which could increase instances of injury.
- New footpath construction projects (cycling and walking plan implementation) cannot occur to improve footpath network connectivity.
- Due to lack of maintenance footpaths will be unserviceable with extended and higher severity of defect. That also tend to increase the traffic congestion.

Strategies and actions to manage these risks are discussed in Section 6.0.

1.7 Financial Summary

Providing financially sustainable and affordable footpath services requires the careful management of service levels, costs, and risks. The 10 year LTFP is approximately $4,344,860 over 10 year period and average per year giving a 10 year funding shortfall of $- 434,486 per year. This indicates that 88.77% of the forecast costs needed to provide the services documented in this AMP are accommodated in the LTFP.

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

1.8 Assumption, Decision, and Improvement Program

Key assumptions made in this AMP are:

- Population and asset growth are assumed to increase proportionally. Accordingly, acquisition forecasts incorporate an annual growth rate of 3.1%, while renewal forecasts included an annual CPI increase of 3.1% over the planning period proportionally to asset growth.
- Accordingly, 3.1% acquisition growth per year, additional operation and maintenance forecasts calculated by NAMS+ system as a percentage, based on the planned operation and maintenance budgets divided by the total replacement cost of the assets.
- The NAMS+ calculated additional maintenance 0.5% which is the percentage for maintenance that determines how much maintenance each dollar of new assets requires. This is based on the planned maintenance budget divided by the total replacement cost.
- The NAMS+ calculated additional operation 0.35% which is the percentage for operation that determines how much additional operation, each dollar of new assets requires. This is based on the planned operation budget divided by the total replacement cost.
- If City has estimate of the forecast percentage for operation and maintenance, it can be utilised in NAMS+.
- The average annual growth in total maintenance expenditure of Operation and Maintenance Forecast is approximately 4.04%.
- Funding by the City will be prioritised for Renewals over New/Acquisitions or upgrades and eventually distributed projected renewals over 10-year planning period to meet the budget constraints which makes city current funding level sufficient to maintain current level of service.
- Above strategy defined as Alternative Method that makes city able to maintain current level of service community satisfaction is expected to be financially sustainable over the short and medium term refers to Figure 1.5.2 shows the Forecast Lifecycle Cost and Planned Budget.
- Useful Lives (UL) are an accurate representation of the behaviour of assets in the field and the City's practices in renewing/replacing assets at their end of useful life.
- Condition data and age data are assumed to be accurate (noting that this AMP is based on a 'medium' level of confidence of relevant information).
- Asset condition rating (i.e. 1-5) has been used to determine Remaining Useful Life (RUL) and to evaluate renewal projection over 10-year planning period.
- Over the longer term, increasing expenditure on asset maintenance and renewal is anticipated to be necessary to ensure service levels are preserved as assets deteriorate and the network expands.
- Unit rates are representative of asset replacement costs.

The Alternate Method was used to forecast the renewal lifecycle costs for this AMP.

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

- Review asset registers to ensure data is up to date and relevant with New Capital Works.
- Investigate customer service expectations and expected levels of service.
- Improve the quality and accuracy of footpath condition surveys by incorporating new technology into inspection methodologies (e.g. Retina Road Visions and Path Vision Solution).

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2.0 INTRODUCTION

2.1 Background

This AMP communicates the actions and necessary funds required to sustainably deliver footpath infrastructure 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.

The AMP is to be read in conjunction with the City of Cockburn planning documents. This should include the Asset Management Policy and Asset Management Strategy, along with the following planning documents:

- City of Cockburn Strategic Community Plan 2025 – 2035
- City of Cockburn Annual Report 2024 – 2025 and 2025 -2026
- City of Cockburn Long Term Financial Plan 2024 -2034
- City of Cockburn Corporate Business Plan 2025/26 – 2028/29
- City of Cockburn Service Plans 20252026
- City of Cockburn Project Plans 2025 - 2026
- City of Cockburn Workforce Plan 2022 - 2026
- City of Cockburn Bicycle and Walking Network Plan 2016 – 2021

The infrastructure assets covered by this AMP include footpaths, pram ramps, tactiles and bus shelters. For a detailed summary of the assets covered in this AMP refer to Table 5.1.1 in Section 5.

These assets are used to provide access and connectivity throughout the City of Cockburn and have a total replacement value estimated at $209,294,086.

2.2 Stakeholders

Key stakeholders in the preparation and implementation of this AMP are shown in Table 2.2.

Table 2.2: Key Stakeholders in the AMP

Internal Stakeholders	Role in Asset Management Plan
The Elected Council	• Represent needs of community/shareholders. • Allocate resources to meet planning objectives in providing services while managing risks.
Chief Executive Officer (CEO)	• Organisational direction and leadership.
Executive Leadership Team (ELT)	• Executive management endorsement, sign off and executive ownership.
Group Manager Asset and Projects	• Review and strategic management sign off.
Service Manager Infrastructure Assets	• Review the Asset Management Plan and future planning strategic direction. Capital works projects, reactive and planned maintenance schedule and deliver.
Technical Officer Asset Management	• Responsibility to ensure asset management tasks and improvement plan are undertaken in line with objectives within AMP. • Drafting of Asset Management Plans for approval.
Financial Services	• Responsibility for providing short-, medium- and long-term financial services to facilitate effective asset management. •

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Internal Stakeholders	Role in Asset Management Plan
External Stakeholders	Role in Asset Management Plan
Community (Residents, Tourists & Business)	• Set the expectations for levels of service and participation in relevant community feedback
Main Roads WA	• Ownership and maintenance of some primary roads throughout the city.
Public Transport Authority & Transperth	• Work in conjunction with the city ensuring the City's network is meets requirement
Federal and State Governments	• Liaise for Funding opportunities through various Government Agencies. • Reporting body for any issues or service deficiencies for DIT infrastructure.
Developers	• Work in conjunction with the city ensuring the City's network is meets requirement
Insurers	• Assist to manage financial risk of the city

2.3 Principles, Goals and Objectives of Asset Management

The principles of asset management as per the International Standards for asset management are:

- **Value**: asset management focuses on the value assets provide to the organisation over time.
- **Alignment**: asset management aligns financial, technical, and operational decisions with the organisational objectives, promoting vertical and horizontal coordination.
- **Leadership**: leadership and sustained commitment at all levels are crucial for successful asset management.[1]

Our goal for managing infrastructure assets is to deliver the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers.

The key objectives of infrastructure asset management as defined by the International Infrastructure Management Manual are:

- Defining levels of service and monitoring performance
- Managing the impact of growth through demand management and infrastructure investment
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service.
- Identifying, assessing, and appropriately controlling risks
- Linking to a Long-Term Financial Plan which accommodates the required expenditure and how it will be funded.[2]

2.4 Plan Framework

The 2024 - 2028 Footpath AMP has been developed in accordance with the International Infrastructure Management Manual (IIMM) and complies with Department of Local Government & Communities Asset Management Framework.

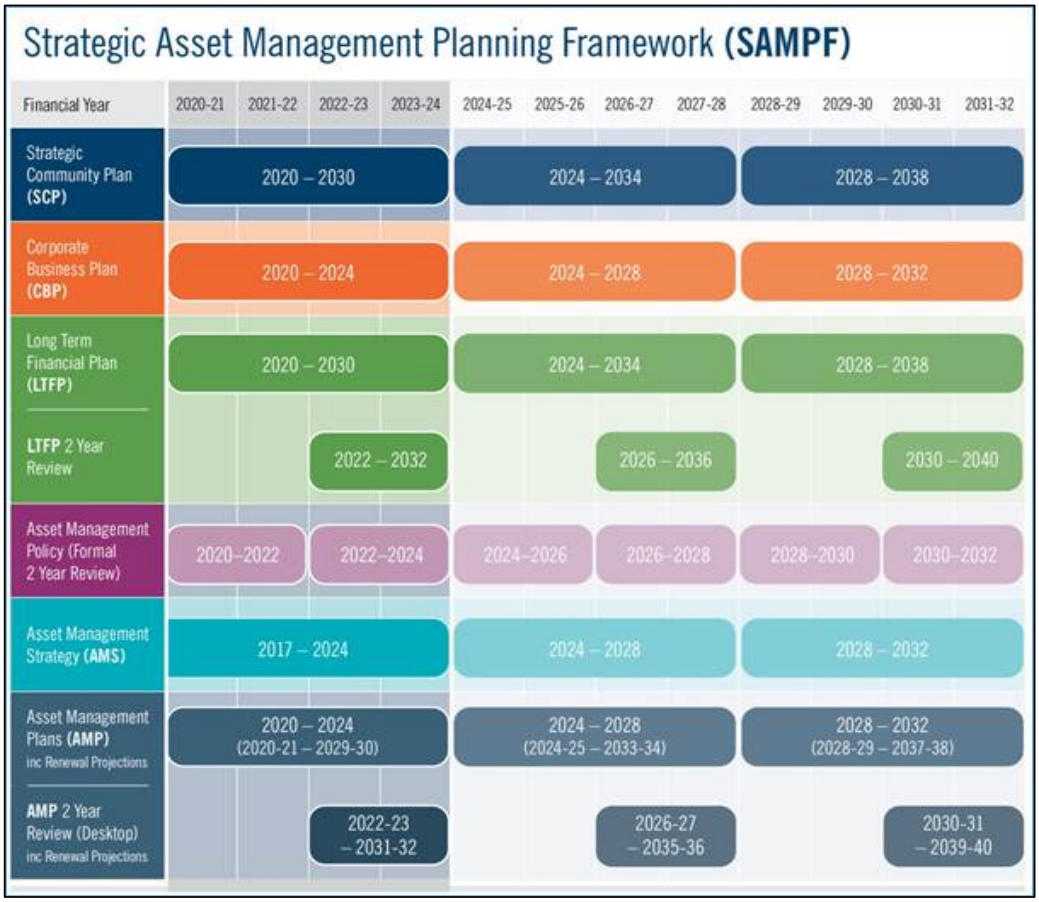
As part of the City's Strategic Asset Management Planning Framework (SAMPF), the Footpath AMP will develop every 4 year and be subject to a 2-year desktop review. The FAMP review will focus on core elements required by the LTFP, for example asset valuations, growth projections, financial analysis including operating, sustainability ratios and 10-year renewals. This will ensure that future revisions of the LTFP will be derived from a structured AMP

[1] ISO 55000:2024 Asset Management – Vocabulary, overview, and principles
[2] IPWEA International Infrastructure Management Manual (IIMM), Sec 1.2.1

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development cycle which has received Executive and or Council approval, increasing confidence and integration of asset management data and methodologies into the City's long term financial planning and adopted service levels. The Figure 2.4 below provides a visual representation and timelines of the Corporate Planning Frameworks Plans and Strategies.

Figure 2.4: Strategic Asset Management Planning Framework (SAMPF)



- Level of Service and Enterprise Risk Management – outlines the level of service provided by council and identifies risks to the city.
- Future Growth and Demand how this will impact on future service delivery and how this is to be met.
- Lifecycle Management – how the city will manage its existing and future assets to provide the required services.
- Financial Analysis – what funds are required to provide the required services.
- Asset management practices – current systems and practices in place
- Improvement and monitoring – how the plan will be monitored and improved to ensure it is meeting Council's objectives.

The formalisation and alignment of the City's SAMPF within the Corporate Planning Framework reflects the City's increasing maturity and recognises the importance of Asset Management in supporting the City in delivering long term financial sustainability of services and capital asset renewal.

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2.4.1 Corporate Planning Framework

The formalisation and alignment of the City's SAMPF within the Corporate Planning Framework reflects the City's increasing maturity and recognises the importance of Asset Management in supporting the City in delivering long term financial sustainability of services and capital asset renewal.

With the continued implementation of the Strategic Asset Management Planning Framework, the city will commence measuring service levels for planned and reactive maintenance to determine operational performance and asset utilisation.

The city strives to improve its strategic and operational asset management practices and to continue its journey towards advanced asset management. The Department of Local Government, Sport, and Cultural Industries (DLGSC) has developed the Western Australia Local Government Integrated Planning and Reporting Framework. The future direction and need for advanced level practices are continually assessed in accordance.

Figure 2.4.1: City's Corporate Planning Framework



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3.0 LEVELS OF SERVICE

Levels of service define the standards and performance targets that infrastructure assets are expected to meet to ensure they provide reliable, safe, and efficient services to the community.

3.1 Customer Research and Expectations

The City carries out the Place Score Liveability Survey bi-annually to gather and evaluate customer feedback across a range of services that the City provides. This allowed the City to measure its performance against community expectations.

The first and most recent Place Score Liveability Survey was undertaken in September 2024. In total, 1811 residents participated in the survey. The survey results indicates followings:

- Overall Community Familiarity (CF) for footpaths is at 68% and the community satisfaction percentage with the quality of footpaths is at 52% which required to consider to be improved.
- 51% of respondents highlighted concerns or feedback relating to access and the safety of walking.
- 22% of community suggestions focused on the need for additional footpaths and cycling lanes, emphasising a desire for a well-connected and well-maintained network.
- Respondents also expressed a preference for wider footpaths and improvements to car park line marking around shopping centres and schools to enhance pedestrian safety and accessibility.

Table 3.1 summarises the Place Experience (PX) score results according to Customer Satisfaction Place Score Liveability Survey.

Table 3.1: Customer Satisfaction Survey Levels

Performance Measure	Performance Score (PX)		
	Good PX ≥ 7	Average 6 ≤ PX < 7	Poor PX < 6
Access and Safety of walking, cycling and/or public transport	7.0		
Walking/jogging/bike paths that connect housing to communal amenity (shops, parks, etc.)	7.4		
Quality of Public Space (footpaths, verges, parks etc.)	7.2		
Amount of Public Space (footpaths, verges, parks etc.)		6.5	
Evidence of City management (signage, street and paths sweeping etc)		6.5	
General Condition (footpaths, street trees, parks etc.)	7.1		
Connectivity (neighbours, employment centres, shops etc.)	7.4		

3.2 Strategic and Corporate Goals

This AMP is prepared under the direction of the City of Cockburn vision, mission, goals and objectives.

Our vision is:

Cockburn, the best place to be.

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Our mission is:

Support our communities to thrive by providing inclusive and sustainable services which reflect their aspirations.

Strategic goals have been set out in the City of Cockburn Strategic Community Plan 2025 – 2035. The relevant goals and objectives and how these are addressed in this AMP are summarised in Table 3.2.

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

Strategic Outcome	Strategic Objective	Deliverable	Measure
Community, Lifestyle and Security: A vibrant, healthy, safe, inclusive, and connected community.	Accessible and inclusive community, recreation and cultural services and facilities that enrich our community. A vibrant, healthy, safe, inclusive, and connected community.	Provision and maintenance of community centres, recreational facilities, public safety infrastructure, parks, and inclusive amenities.	Customer survey results
Environment Responsibility:	A leader in environmental management that enhances and sustainably manages our local natural areas and resources.	Implementation of environmental management plans, protection of verges, and facilitate community to encourage use of Electric Vehicle (EV) (e.g. e bikes scooters)	Customer survey results
City Growth and Moving Around:	An attractive, socially connected and diverse built environment. An integrated, accessible, and improved footpaths network.	Development and renewal of urban spaces, streetscapes, and expansion of footpath and cycleway networks to enhance accessibility.	Customer survey results
Listening and Leading:	community focused, sustainable, accountable and progressive organisation.	Transparent decision-making, regular community engagement, performance reporting, and integration of community feedback into planning.	Customer survey results

3.3 Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the Footpaths Infrastructure service are outlined in Appendix G.

3.4 Customer Values

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

Customer Values indicate:

- what aspects of the service is important to the customer,
- whether they see value in what is currently provided and

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- the likely trend over time based on the current budget provision.

Table 3.4: Goals and how these are addressed in this AMP.

Strategic Outcome	Customer Satisfaction Measure	Community Values (CF) Score	Expected Trend Based on Planned Budget
Quality of Public Space (footpaths, verges, parks etc.)	Strategic Community Plan or customer requests	52%	Planning and funding for capital works requires attention.
Amount of Public Space (footpaths, verges, parks etc.)		37%	Planning and funding for new and upgrades capital works requires attention.
General Condition (footpaths, street trees, parks etc.)		68%	Ensure footpaths. Maintenance budgets keep up with demand.
Evidence of City management (signage, paths sweeping etc)		27%	Ensure street sweeping and Maintenance budgets keep up with demand.
Locally Owned and Operated business.		44%	Local businesses may be adversely affected by poorly performing infrastructure, disadvantaging them.

3.5 Customer Levels of Service

The Customer Levels of Service are considered in terms of:

Condition How good is the service … what is the condition or quality of the service?

Function Is it suitable for its intended purpose …. Is it the right service?

Capacity/Use Is the service over or under used … do we need more or less of these assets?

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

The City of Cockburn has defined service levels in two terms:

- Community/customer Levels of Service, which relate to how the community receives the service in terms of safety, quality, quantity, reliability, responsiveness, cost efficiency and legislative compliance.
- Operational/technical Levels of Service, which are measures of performance developed to ensure that at least the minimum customer levels of service are met. Technical Levels of Service relate to how the City provides the service using technical terms.

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

Table 3.5: Customer Levels of Service

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget

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Overall	Community satisfaction of 70% or greater with the City's Road network.	Community feedback	Play score survey indicates the PX Score of 7.1/10 for General Condition of footpaths.	Maintain > 7.0 in short to medium term, may be at risk longer term.
Condition	Safe, smooth and clean pathways free from safety hazards	Dates between condition assessments of footpath network. Volume of customer service requests received.	Complete condition assessment of full footpath infrastructure networks at least every five (3) years Percentage of footpaths infrastructure assets in condition 3 or better by replacement cost is 96.11%	Maintain
	Maintain at least 80% of the City's footpaths infrastructure in Condition 3 or better.	Community feedback	Play score survey indicates the PX Score of 7/10 for General Condition of footpaths.	Maintain
	Confidence levels		High	Medium
Function	Accessible and suitable for all users (prams, mobility scooters, wheelchairs).	Community feedback	Play score survey indicates PX Score of 7/10 Access and safety of walking, cycling and/or public transport.	Increasing requests for accessibility upgrades with aging population; budget pressure may delay upgrades.
		Accessibility compliance (ramps, tactiles, DDA standards).	Less than 5% of accidents reported annually throughout the City Fatal or Serious Injury crashes.	
	Confidence levels		High	Low
Capacity	Make footpaths wider and re do car park line marking at shopping and school. Well-connected, sufficient footpaths linking major activity centres. (e.g. schools, employment and shopping centres)	Community feedback. Community feedback.	Play score survey indicates the PX Score of 6.5/10 for capacity of Public Space (footpaths, verges, parks etc.) Play score survey indicates the 7.4 Walking/jogging/bike paths that connect housing to communal amenity (shops, parks, etc.)	Maintain Maintain
	Confidence levels		High Low	

3.6 Technical Levels of Service

These technical measures relate to the lifecycle activities (see Section 5) and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance. Service and asset managers plan, implement and control technical service levels to influence the service outcomes.

Table 3.6 shows the lifecycle activities related to the current 10 year planned budget, and the forecast costs recommended in this AMP.

Table 3.6: Technical Levels of Service

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance**
TECHNICAL LEVELS OF SERVICE				

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Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance**
Acquisition	New and upgraded paths to meet demand.	Identification of acquisition as in forward capital planning and deliver within approved budget.	Priority acquisitions and upgrades only can be delivered within the current planned budget, focusing on essential safety, compliance, and high-use and poor in condition assets.	The Acquisitions that we would like to do as per the Lifecycle Forecast that budget levels are sufficient in short to medium level. City required to minimise the level of service by limiting the Acquisition to match up with budget level or required to re assessed the planned budget to continue with the defined future Acquisition.
		Budget	$394,628	$121,4401
Operations	Routine cleaning of Pathways and ensure they are safe, accessible, clean and functional for community use.	Cleaning Frequency.	Scheduled footpath sweeping.	Increase operational activities in line with lifecycle forecast to support new and upgrades assets being acquired. Improved inspection quality and more consistent service delivery across the network.
		Budget	$741,150	$806,517
Maintenance	Maintain asset condition, manage defects, reduce safety risks and extend asset life through planned and reactive maintenance.	Percentage of assets in condition 3 or better Reactive vs planned maintenance ratio. Maintenance response times.	Hazards are reactively identified and prioritised for them repair within budget limitations.	Increase planned maintenance in line with lifecycle forecast to stabilise asset condition, reduce reactive maintenance, and minimise long-term lifecycle costs.
		Budget	$1,052,487	$1,145,869
Renewal	Renew or replace assets at the end of their useful life to maintain service levels, manage risk and avoid escalating costs.	Asset renewals are projected based on recent Footpath Condition Assessment Survey.	The Renewal activities that can be done within the current Planned Budget restraints as required.	Deliver the full renewal program identified in the lifecycle forecast to maintain asset condition, reduce renewal backlog, and sustain agreed levels of service.
		Budget	$1,244,953	$700,917
Disposal	There are currently no plans for the disposal of footpath assets.	Disposal planning	No disposal planned	N/A

Note: * Current activities related to planned budget.

** Expected performance related to forecast lifecycle costs.

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

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4.0 FUTURE DEMAND

Future demand refers to the effects on infrastructure service provision driven by factors such as population growth, economic development, technological advancements and changing environmental or community expectations.

4.1 Demand Drivers

A demand driver refers to the factors or trends that influence the need for infrastructure services and capacity. The factors influencing future demand are associated with following drivers.

- Population growth
- Changing demographics
- Development Trends (2015 Liveable Neighbourhoods study provides guidance on footpath provision).
- Sustainable Transport Trends (e.g. more people using eRideables)
- Legislation changes (e.g. Western Australia legalised the use of eRideables on shared paths in 2021)
- Impact of materials on climate change

Demand drivers help predict future infrastructure needs and guide planning and investment decisions.

4.2 Demand Forecast

The current position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 4.3.

4.3 Impacts 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.

The impact on service delivery will be managed through a combination of managing and upgrading existing assets and the provision of new assets to meet demand. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to manage demand are shown in Table 4.3. 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	Management
Population	The City of Cockburn current population in 2025 is 133,869. (Source: Australian Bureau of Statistics, Region Population Growth. Compiled and presented by .id Home | City of Cockburn | Population forecast)	The City's population is expected to increase to 177,920 by 2046. (Source: Australian Bureau of Statistics, Region Population Growth. Compiled and presented by .id Home | City of Cockburn | Population forecast)	Expansion and upgrades required to the footpath network	Lifecycle cost/benefit analysis on all acquisition proposals. With the current budget levels, manage construction of new and upgrades and encourage developers to be donated parks assets as these will become City assets.
Demographics	Aging Population	Between 2021 and 2031, the population age forecasts for City of Cockburn indicate a 20.9% increase in population under working age, a 51.5% increase in population of	Expected increase in accessibility requirements (DDA compliance) resulting in more ramps and road crossing points. (e.g.	Monitor age profile projections and consider during both long term acquisition planning and

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		retirement age, and a 16.7% increase in population of working age. Essentially, a large portion of the city population will be older in the future. (Source: Australian Bureau of Statistics, Region Population Growth. Compiled and presented by .id Home | City of Cockburn | Population forecast)	wheel chair excess & pram ramps) This will present higher risk associated with trip hazards. Inspection frequency may need to increase, and the time taken to resolve issues may need to decrease to mitigate such risk. This would be an increase in the current level of service, resulting in higher costs.	future level of service planning. Lifecycle cost/benefit analysis on all acquisition proposals.
Development Trends	Existing industrial areas are expanding and reaching full potential.	More Lifecycle cost is required to be undertaken.	If more cost-effective materials are used during renewal, this would result in a less aesthetically appealing path.	Lifecycle cost/benefit analysis on all acquisition proposals.
Sustainable Transport Trends	Walking and cycling are being strongly encouraged as an alternative to driving cars.	This may result in an increased demand for paths.	Increase in footpath network will increase lifecycle costs.	Monitor priorities arising from community consultation activities to determine whether demand is shifting to these options. Lifecycle cost/benefit analysis on all acquisition proposals.
Legislation changes	Rapidly increasing use of eRideables on footpaths since WA State Government legalised these in 2021.	Further increased use of eRideables, resulting in more requests for new footpaths, upgrades to existing footpaths and renewal of existing footpaths in poor condition.	Increase in footpath network will increase lifecycle costs.	Lifecycle cost/benefit analysis on all acquisition proposals. Align decision making to asset management strategy.
Impact of materials on climate change	Concrete, brick and asphalt are the most commonly used path materials.	Expectations of a move towards the use of recycled or more environmentally friendly materials.	There may be cost implications depending on the outcome of investigation.	Investigation into recycled materials added to improvement plan.

4.4 Asset Programs to meet Demand.

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

Acquiring new assets will commit the City of Cockburn to ongoing operations, maintenance and renewal costs, and depreciation expenses for the period that the service provided from the assets is required. These future costs and expenses are identified and considered in developing the long-term financial plan.

4.5 Climate Change Adaptation

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

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

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

Risk and opportunities identified to date are shown in Table 4.5.1

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

Climate change risk	Projection	Impact on services	Climate Change Management Plan
Warmer Climate (Summer)	Higher urban heat island effects from excessive heat held in concrete/asphalt footpaths.	Increased rate of degradation (i.e. ravelling on asphalt footpaths, cracking in concrete footpath panels due to heat expansion). Increased dust due to dry atmosphere	Monitor impact and were possible trial new innovations or products. Tree planting along footpaths to provide shade.
Increased Rain Events (Winter)	Higher frequency and intensity of rainfall events leading to increased surface water runoff and ground saturation.	Flooding of areas which impacts access provided by footpaths.	Improve storm water drainage systems near footpaths, increase inspection frequency after storm events, and adopt proactive maintenance planning.

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

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

The impact of climate change on new and existing assets is evolving and new opportunities will be developed in future revisions of this AMP.

Table 4.5.2 summarises opportunities to build climate change resilience into new and existing assets

Table 4.5.2 Building Climate Change Resilience into New Assets

Asset Description	Climate change Impacts to Footpaths Network	Resilience Plan for New Assets	Resilience Plan for Existing Assets
Concrete Paths	Surface cracking in concrete footpaths due to excessive heat. Increased surface runoff and erosion during rainfalls.	Use climate-resilient materials. (e.g., permeable concrete, asphalt, and pavers) Incorporate better drainage design to manage stormwater. Design with expansion joints to reduce heat stress cracking where it's possible.	Increase inspection frequency. Use climate-resilient materials (e.g., permeable concrete) for renewals.

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Asphalt Paths	Increased rate of degradation	Use heat resistance asphalt mixers	Patch, crack sealed and resurface with heat resistant asphalt and sealants.
Brick and Paved Paths	Displacement of ground due to weed growth.	Use interlocking pavement systems with flexible bedding, permeable pavers.	Re-level and replace damaged sections; apply weed control treatments.
Limestone Paths	Erosion and surface runoff heavy rain. Slippery surface leads to have serious accidents.	Stabilize with geotextiles and improve edge containment.	Regular grading and compaction; install erosion control barriers.
Bus Shelters	Structural degradation from UV and during storm events.	Use corrosion-resistant materials, design for wind resilience.	Use corrosion-resistant materials, design for wind resilience.

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5.0 LIFECYCLE MANAGEMENT PLAN

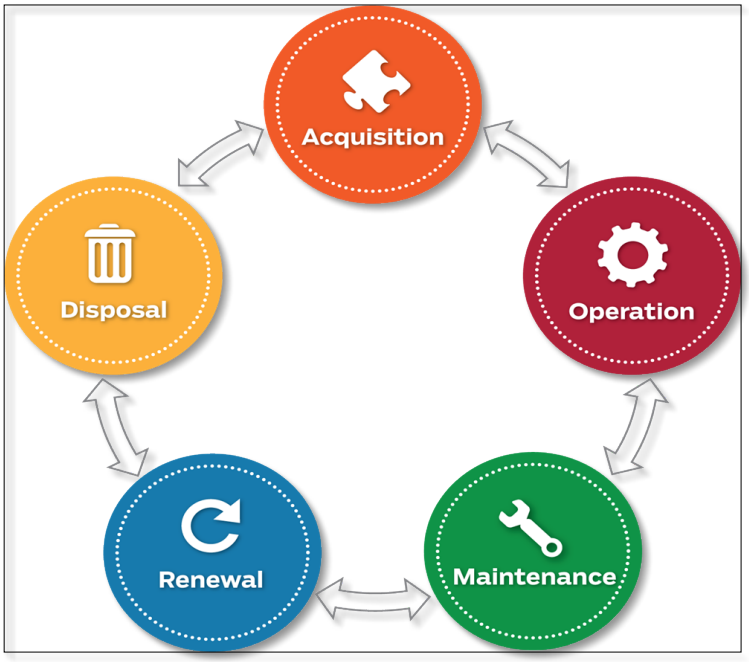
The lifecycle management plan details how the City of Cockburn plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) throughout their entire lifecycle, from acquisition or creation to disposal. The goal is to maximise the value of the assets while minimising costs and risks, ensuring they continue to meet performance requirements over time.

From a financial perspective, infrastructure activities tend to be classified as being either Operating or Capital. The lifecycle activities used in the asset management and financial planning and reporting process cover:

- **Capital**
  - **Acquisition** – the activities to provide a higher level of service (e.g., widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library).
  - **Renewal** – the activities that replace or restore assets to the standard it had originally provided (e.g., road resurfacing and pavement reconstruction, pipeline replacement and building component replacement).
  - **Disposal** – the decommissioning, removing, or repurposing of assets that are no longer cost-effective, safe, or necessary (e.g. shutting down an old water treatment plant, demolishing unsafe buildings, dismantling old bridges, etc.).
- **Operating**
  - **Operations** - the routine activities that keep services accessible and effective, balancing efficiency with user expectations (e.g. opening hours, cleaning, mowing grass, energy, inspections, etc.)
  - **Maintenance** – the preventative and corrective actions to sustain asset functionality and minimise unexpected failures. Maintenance activities enable an asset to provide service for its planned life (e.g., road patching, unsealed road grading, building and structure repairs).

A pictorial representation of the asset lifecycle activities is shown below in Figure 5.0.

Figure 5.0: Asset Lifecycle Activities



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5.1 Background Data

5.1.1 Physical parameters

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

Table 5.1.1: Assets covered by this Plan

Asset Category	Asset Type	Unit	Replacement Value ($)
Footpaths	Footpath Aggregate Concrete	m^2	1,250,193
	Footpath Asphalt	m^2	6,440,148
	Footpath Brick	m^2	3,117,465
	Footpath Brick Block	m^2	139,738
	Footpath Brick Faux	m^2	26,319
	Footpath Concrete	m^2	170,224,891
	Footpath Limestone	m^2	81,307
	Footpath Painted Concrete	m^2	94,4421
	Footpath Red Asphalt	m^2	3,129,331
	Footpath Wood	m^2	14,738
Firebreaks	Firebreaks Limestone	m^2	10,887,851
Pram Ramps	Pram Ramp	m^2	7,644,400
Tactiles	Tactile	Each	685,532
Stairs	Stair	Each	2,026,566
Bus Shelters	Bus Shelter	Each	2,590,152.36
		TOTAL	**$209,294,086**

As at the valuation completed August 2024, the city is responsible for maintaining approximately 898 km of footpath network.

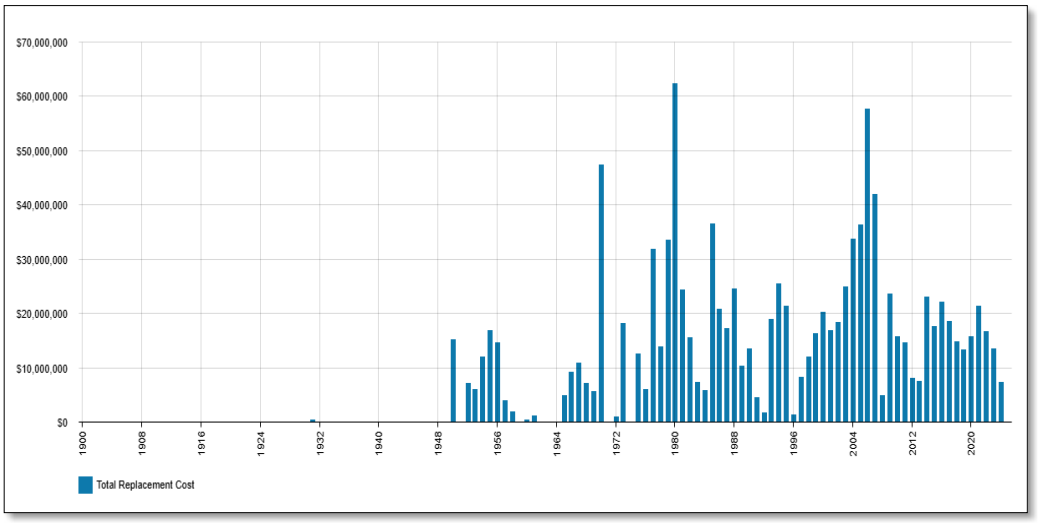
An important distinction in the management of assets is the difference between 'Design Life' and 'Useful Life'. Design Life refers to the length of time that an asset is design to last, based on engineering standards, analysis, testing and reporting. Useful life is simply the length of time that an asset is used. For example, the typical design life for an asphalt footpath surface is around 20 years, however, the timeframe it is used may be much longer than this due to applying ongoing maintenance to get more life out of the surface than it was initially designed for (i.e. Useful Life might be 30 years).

The modelling in this AMP considers Useful Life.

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

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Figure 5.1.1: Asset Age Profile



Most of the construction has taken place this century. The shorter life and older assets will require regular monitoring.

5.1.2 Asset capacity and performance

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

Table 5.1.2: Known Service Performance Deficiencies

Infrastructure	Location	Service Deficiency
Footpaths	Employment centres, schools, shopping centres, transport hubs	Safety hazards due to cracking, rutting, undulation, insufficient width in some locations to meet accessibility and community demand.
Footpaths	Localised throughout the city	Surface deterioration leading to unsafe conditions for cyclists and pedestrians; limited connectivity in parts of the network.
Ramps & Tactiles	Intersections and pedestrian crossing points.	Non-compliance with current Disability Discrimination Act (DDA) standards; worn or displaced tactiles; insufficient ramps for mobility access.
Footpaths – Poor Condition (Condition 4 - 5)	Localised throughout the city.	Significant defects requiring high-cost interventions; assets at or beyond useful life, increased reactive maintenance.
Bus Shelter	Location with significant boarding numbers.	Structural degradation and accessibility issues; not all shelters provide adequate protection or meet universal access standards.

5.1.3 Asset condition

Condition ratings for City footpath assets are currently monitored through condition surveys in accordance with the City's condition assessment schedule. Assessment of defects is based on relevant technical standards and guidelines. The most recent condition survey of the City's footpath network was completed in 2023/24 though this did not include bus shelters.

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

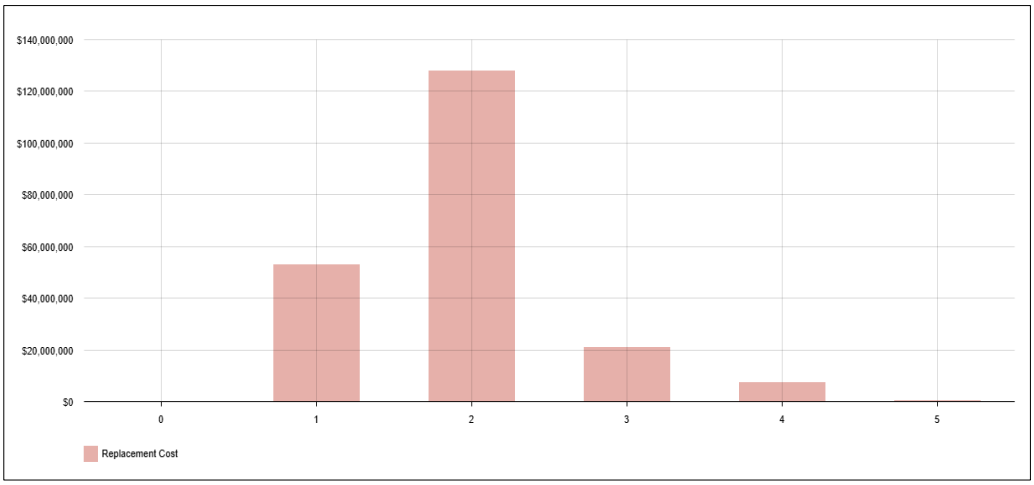
Table 5.1.3: Condition Grading System

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

The condition profile by assets value is shown in Figure 5.1.3.

Figure 5.1.3: Footpath Infrastructure Condition Profile



The condition profile indicates that most of the footpath network is in good to very good condition. However, if inadequate renewal funding is allocated through the Long-Term Financial Plan for medium to long term, the average condition of City roads will worsen over time, as road assets reach the end of their useful life. The challenge will be to either ensure there is enough funding to maintain the current service levels or to adjust agreed levels of service.

5.2 Operations and Maintenance Plan

For the purpose of modelling within this AMP, the following definitions apply:

Reactive maintenance is unplanned maintenance work carried out in response to service requests and management/supervisory directions. Examples include ad-hoc pothole repair, patching, crack sealing.
and footpath sweeping.

Planned maintenance is work that is identified and managed through a maintenance schedule. Examples include planned pothole repair, patching, crack sealing and footpath sweeping.

Operating expenditure is continuously required expenditure required to keep the asset functional. Examples include costs of power, fuel, staff, security patrols, plant equipment, on-costs, and overheads.

The trends in maintenance expenditure are shown in Table 5.2.

Financial Year	Budget	Total Maintenance Expenditure		Total Operating Expenditure ($)
		Planned ($)	Reactive ($)	
2017/18	1,216,910	473,858	110,184	436,562
2018/19	940,696	568,422	138,306	334,685
2019/20	1,159,355	714,499	180,769	153,136

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2020/21	1,205,178	190,840	34,397	37,609
2021/22	1,204,710	844,867	291,686	207,981
2022/23	1,328,252	612,699	689,691	207,047
2023/24	1,320,875	1,341,530	49,119	73,435
2024/25	1,793,637	1,041,413	62,845	777,606

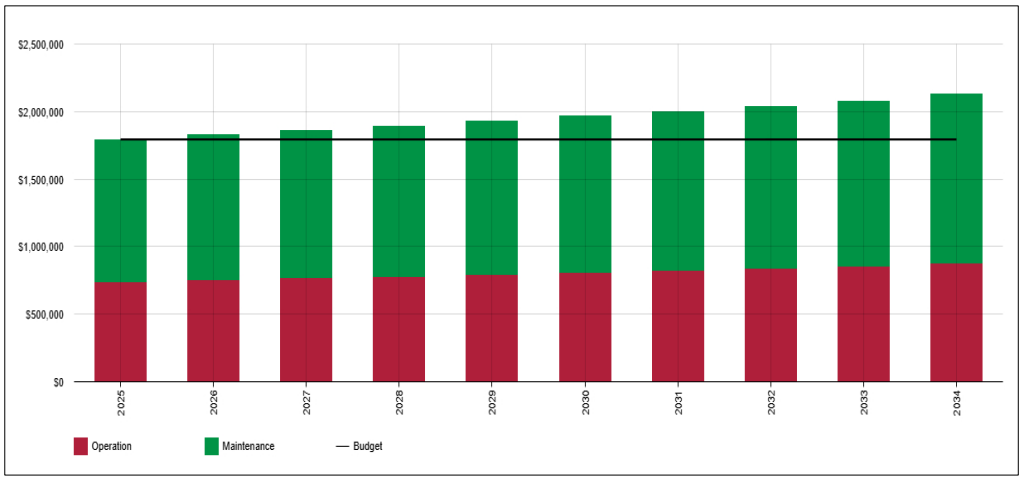
Table 5.2: Maintenance and Operation Expenditure and Budget Trends

Operating and Maintenance budget levels are considered to have been adequate to meet previous service levels, which may be less than or equal to current service levels. However, this needs to be continuously monitored into the future, as a gap between the planned budgets and forecast expenditure will result in more community complaints and risks of injury. Assessment and priority of reactive maintenance is undertaken by relevant staff using experience and judgement in accordance with the levels of service detailed in Appendix C.

5.2.1 Summary of forecast operations and maintenance costs

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

Figure 5.2.1: Operations and Maintenance Summary



Overall, the budget allocations appear broadly aligned with forecast requirements in the short to medium term, indicating that service levels can be sustained without significant funding gaps. However, the trend suggests a gradual increase in forecast operational and maintenance expenditure as the network expands and assets age. This reflects the impact of population growth, higher usage, and the ongoing need for responsive and preventative maintenance.

If additional assets are constructed or donated, the funding gap may widen unless future budgets are adjusted accordingly. Conversely, any asset disposals would slightly reduce cost pressures. To manage risk, deferred maintenance should continue to be monitored, as sustained underfunding could lead to reduced service levels, higher reactive maintenance costs, or accelerated asset deterioration over the longer term.

5.3 Renewal Plan

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

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

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- The first method uses Asset Register data to project the renewal costs (replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year)
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work.

The typical useful lives of depreciable assets used to develop condition-based asset renewal forecasts are shown in Table 5.3. Asset useful lives were last reviewed on 2024-2025 when revaluation carried out. Based on the straight-line depreciation rate a useful life has been applied to each footpath asset.

Table 5.3: Useful Lives of Assets

Asset (Sub)Category	Useful life
Footpath Asphalt	30
Footpath Brick / Concrete	50
Footpath Wood	45
Ramps & Tactiles	20
Bus shelters	20

The estimates for renewals in this AMP were based on the Alternate Method.

5.3.1 Renewal ranking criteria.

Asset renewal is typically undertaken to either:

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

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

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

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

Table 5.3.1: Renewal Priority Ranking Criteria

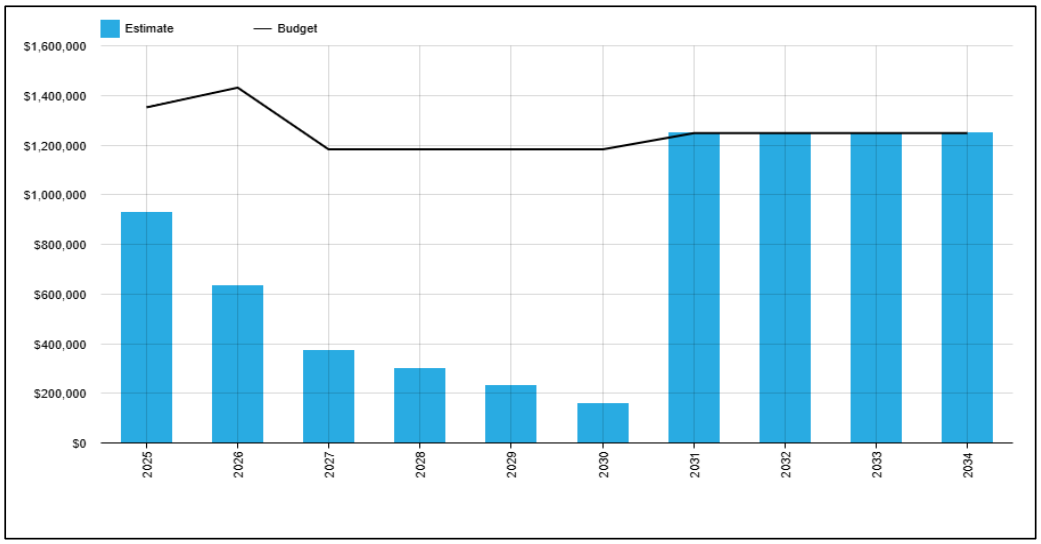
Criteria	Weighting
Condition	80%
High Usage	10%
Justification – Project Needs	10%
Total	100%

5.3.2 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.3.2. A detailed summary of the forecast renewal costs is shown in Appendix D.

Figure 5.3.2: Forecast Renewal Costs

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The graph above indicates that there is adequate planned budget over the next 10 years to meet the forecast renewal requirements. However, this does not account for the proportion of new/upgraded footpath assets (shown in Table 5.4.1) that are forecast to be constructed, which will then create the need for additional renewal expenditure in the long-term. It is essential that any proposed adjustment to the future budget allocation for footpath renewals is carefully considered along with the need to ensure there is adequate reserve funding set aside.

5.4 Acquisition Plan

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

5.4.1 Selection criteria

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

The priority ranking criteria is detailed in Table 5.4.1.

Table 5.4.1: Acquisition (Constructed) Summary

Criteria	Weighting
New/upgraded asset requirement identified in strategic documentation (e.g. Strategic Community Plan, Corporate Business Plan, Footpath/Cycle Strategy, or Infrastructure Plan)	50%
Strong holistic community demand (e.g. community group, petition, etc).	25%

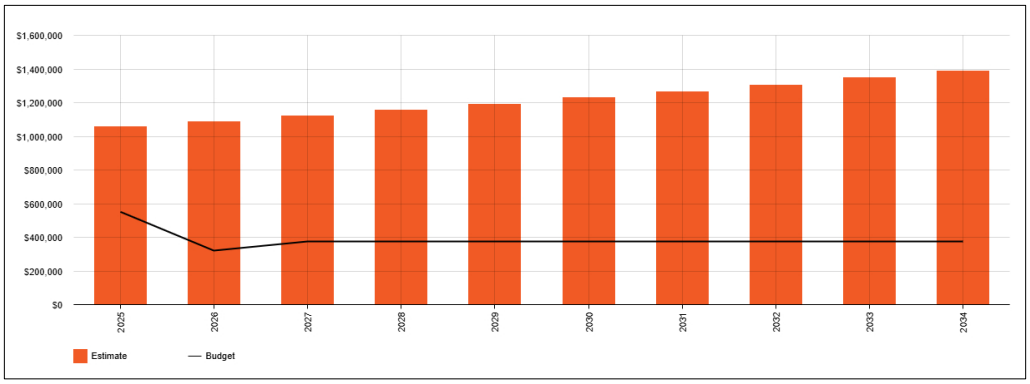
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Supported by empirical data such as population growth data, approved developments, gap in agreed level of service, etc.	25%
Total	**100%**

5.4.2 Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised / summarized in Figure 5.4.2(A) and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix A.

Figure 5.4.2(A): Acquisition (Constructed) Summary

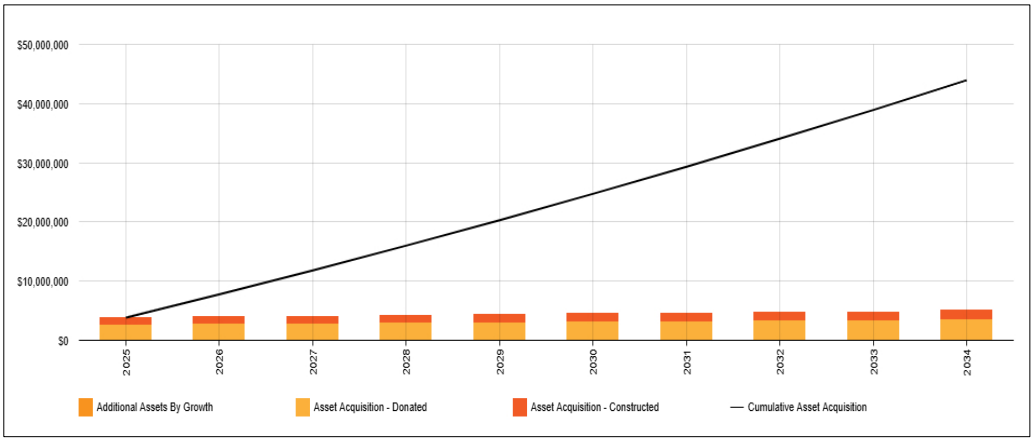


While the current planned budget appears to have a gap with the forecast expenditure for new/upgrade projects, it is essential to consider the 'Whole of Life" costs when constructing new footpath infrastructure. This is because every new section of footpath will create additional maintenance, operations, and renewal costs. It is recommended that the city prioritise funding footpath renewals over building new sections of footpath. It is expected that most of new footpaths shall be constructed by developers, not the City.

When the City of Cockburn commits to new assets, we must be prepared to fund future operational, maintenance and renewal costs. We must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the city. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in Figure 5.4.2(B).

Figure 5.4.2(B): Acquisition Summary

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

5.5 Disposal Plan

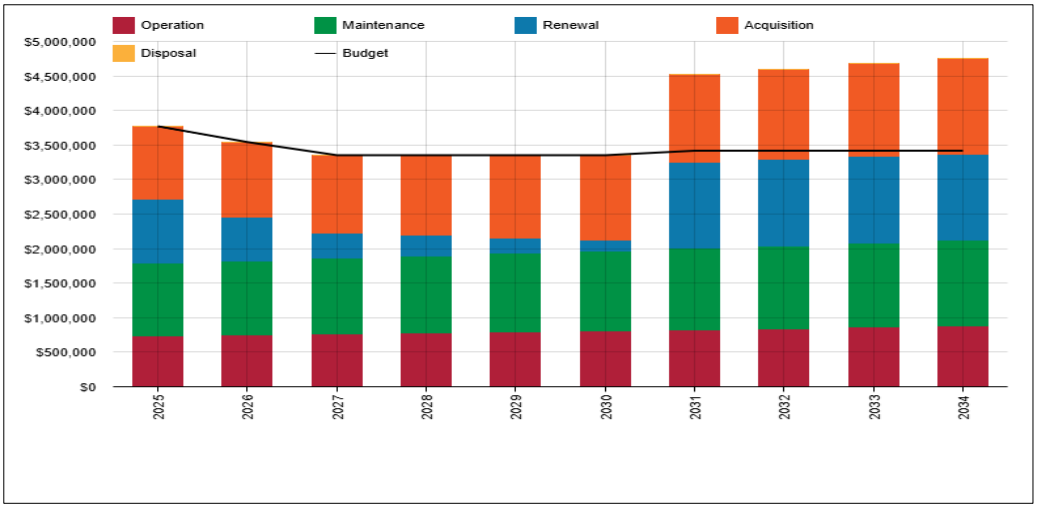
Disposal includes any activity associated with disposal or decommissioning of an asset including sale, demolition, or relocation. There are no disposals planned for any footpath assets at this time.

5.6 Summary of asset forecast costs.

The financial projections from this asset plan are shown in Figure 5.6. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

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

Figure 5.6: Lifecycle Summary



Overall, the planned budget (black line) appears to be sufficient to address the forecast expenditure (coloured bars) in the short-term to medium term. However, a funding gap can be seen forming in the long-term, which is of concern,

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as this will lead to level of service, reputational, safety and financial risks for the City and its community if not addressed. A significant contributing factor to this gap is associated with acquisitions (i.e. construction of new assets and/or a portion of the upgrades for existing assets).

To address this gap, the city must consider either increasing the planned budget to match the forecast expenditure or reducing the level of service that is provided.

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6.0 RISK MANAGEMENT PLANNING

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

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

An assessment of risks[3] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical Assets

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

Table 6.1 Critical Assets

Critical Asset(s)	Failure Mode	Impact
High-traffic footpaths (shopping centres, schools, transport hubs, commercial areas).	Cracking, level differences due to root lifting and other surface defects.	Safety hazards, disruption of access to key community facilities
Ramps & tactiles (DDA compliance infrastructure)	Wear, cracking, or displacement.	Reduced accessibility for disability users.
Paths are in poor to very poor condition which are in rating 4 to 5.	Extensive and high severity defects	Higher reactive maintenance costs and higher risk of unexpected failure.
Bus Shelters at Bus Stop locations with significant average boarding numbers	Extensive and high severity defects	Reduced amenity for users, complaints.

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

6.2 Risk Assessment

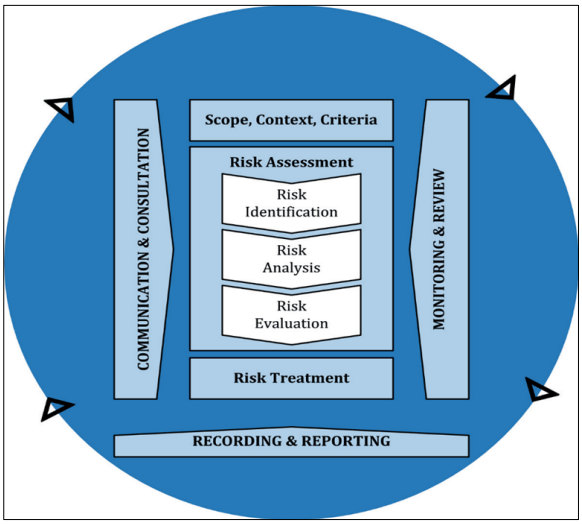
The risk management process used is shown in Figure 6.2 below.

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

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

Figure 6.2 Risk Management Process – Abridged

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Source: ISO 31000:2018, Figure 1, p9

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

An assessment of risks[4] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2 when failure to effectively plan for capital works projects align to current funding levels.

Table 6.2: Risks and Treatment Plans

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Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Budget
High-traffic footpaths (e.g. shopping centres, schools, parks, transport hubs and industrial areas)	Surface defects or failure cause hazards and safety incidents. Connectivity and space (width) is not sufficient as community expectation can be occurred traffic congestion in peak hours.	H	Prioritise renewal/maintenance in high-use areas; increase inspection frequency; apply proactive repairs.	M	Moderate – within renewal budget allocation.
Ramps & tactiles (accessibility infrastructure).	Wear or failure leads to DDA non-compliance and reduced accessibility.	H	Scheduled resurfacing and widening; proactive maintenance; prioritisation in Cycling & Walking Plan.	M	Moderate – renewal and upgrade costs included in program.
Dual-use paths (pedestrian & cycling routes).	Pavement deterioration increases safety hazards for cyclists and pedestrians.	H	Scheduled resurfacing and widening; proactive maintenance; prioritisation in Cycling & Walking Plan	H	High – due to larger surface areas and expansion demand.
Footpaths, ramps & tactiles and bus shelters are in poor to very poor condition which is in 4 to 5 ratings.	Unexpected failures leads to serious safety hazards and higher reactive maintenance	H	Based on condition surveys; prioritise renewals for paths in poor condition ratings.	M	Moderate to High – long-term renewal program funding required.

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

6.2.1 Infrastructure Resilience Approach

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

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

We do not currently measure our resilience in service delivery, though it is considered in the project scoping phase. This will be included in future iterations of the AMP.

6.2.2 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.

6.2.3 What we cannot do

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

- Ensuring all footpath assets are in 'Condition 3' or better.
- Build all new footpath/cycle path links that are requested by the community in medium to long term.
- Build all new bus shelters links that are requested by the community.
- Maintaining our footpaths infrastructure assets at the lowest lifecycle cost.

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6.2.4 Service Trade off.

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

- Critical footpaths assets are not adequately maintained, renewed, or upgraded to meet demand, resulting in a greater percentage of the road network being in poor condition (i.e. Condition 4 or 5).
- An increasing number of road assets become unfit for purpose, leading to a decline in usage and congestion on adjacent paths.
- Critical new footpaths construction projects cannot occur to improve connectivity and alleviate locations of vehicular congestion.

6.2.5 Risk Trade off.

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Significant portions of the road network are not safe for road users due to their poor condition, likely increasing instances of accidents that result in injury or death.
- Mandatory footpaths closure due to poor condition, resulting in increased demand/wear and tear on the surrounding network.
- Increased number of community complaints.

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

6.2.6 Enterprise Risk Management

In 2015 the city implemented a Risk Management & Safety System (RMSS) in which all operational and strategic risks are captured, rated, and receive ongoing monitoring based on their level of risk.
Additionally, in 2017 the Risk Management Framework was adopted with the aim of supporting an integrated and effective organisational wide approach to risk management.
The implementation of the Framework will:

- Ensure a consistent approach to the risk management process across Council.
- Establish a structured process for undertaking the risk management process to identify, assess and control/treat risk.
- Encourage the integration of risk management into the strategic and operational process across all Business Units.

There are currently no Extreme or High Risks identified that are associated to the Civil Infrastructure Service Unit (512).

Each of the risks are reviewed with current and proposed control measures being assessed yearly to ensure industry standards and potential advancements are considered and are incorporated as required.

The City uses a matrix based approach when addressing risk level, treatment and responsibility as detailed in Table 6.2.6.

Table : 6.2.6 Risk Treatment Matrix

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Risk Level	Code	Criteria	Treatment	Responsibility
LOW	L	Risk acceptable with adequate controls, managed by routine procedures. Subject to annual monitoring or continuous review throughout project lifecycle.	Management through routine operations/project, Risk Registers to be updated.	Service Unit Manager/Project Manager
MODERATE	M	Risk is acceptable with adequate controls, managed by specific procedures. Subject to semi-annual monitoring or continuous review throughout project lifecycle.	Communication and awareness of increasing risk provided to SM and Risk Registers to be updated.	Senior Manager/Project Manager
SUBSTANTIAL	S	Accepted with detailed review and assessment. Action Plan prepared and continuous review.	Assess impact of competing Service Unit/Business Unit Projects. Potential redirect of Service Unit/Business Unit resources. Risk registers to be updated.	Director/Steering Committee
HIGH	H	Risk is acceptable with effective controls, managed by senior management/executive. Subject to quarterly monitoring or continuous review throughout project lifecycle.	Escalate to CEO, report prepared for Audit & Strategic Finance Committee. Quarterly monitoring and review required. Risk Registers to be updated.	Executive/ Steering Committee/Project Sponsor
EXTREME	E	Risks are only acceptable with effective controls and all treatment plans to be explored and implemented where possible, managed by highest level of authority and subject to continuous monitoring.	Escalate to CEO, report prepared for Audit & Strategic Finance Committee. Monthly monitoring and review required. Risk Registers to be updated.	CEO/Council/Project Sponsor

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7.0 FINANCIAL SUMMARY

This section contains the financial and valuation forecasts resulting from the information presented in the previous sections of this plan. Forecasts will be improved as the discussion on sustainable levels of service, risk and cost matures in line with the financial strategy.

7.1 Financial Sustainability and Projections

7.1.1 Sustainability of service delivery

There are three key indicators of sustainable service delivery that are considered in the AMP for this service area. The three indicators are the:

- Asset Consumption Ratio (Fair Value / Current Replacement Cost).
- Asset Sustainability Ratio (planned renewal budget for the next year / annual depreciation expense).
- Asset Renewal Funding Ratio (planned renewal budget for the next 10 years / forecast renewal outlays for the next 10 years identified as warranted in the AMP).

The targets for these ratios are set by the Department of Local Government. The calculation methodology and targets for these ratios are outlined in the table 7.1.1 below.

Table :7.1.1 Asset Ratios

Asset class	Consumption ratio	Sustainability ratio	Renewal funding ratio
Description	How much has the City used of its assets?	Is the City replacing assets as they wear out?	Is the City setting aside sufficient future funding for asset renewals?
Calculation	Depreciated replacement cost / current replacement cost	Capital renewal (one year) / annual depreciation (one year)	Planned capital renewal (10 years) / required capital renewal (10 years)
Target	50-75% standard 60-75% ideal	90-110% standard	75-95% standard 95-105% ideal
What it means	Lower than standard = assets are deteriorated and will result in a poor level of service Higher than ideal = assets are being replaced too early resulting in poor value for money	Lower than standard = the City is under investing in asset renewal/replacement resulting in a poor level of service Higher than standard = the City is over investing in asset renewal/replacement resulting in poor value for money	Lower than standard = the City is allocating too little funding to long term asset renewal/replacement which will result in a lower level of service in future Higher than ideal = the City is allocating too much funding to long term asset renewal/replacement which will result in poor value for money in future

Consumption Ratio

Consumption Ratio **79.63%**

Consumption Ratio	=	Fair Value (Depreciated Replacement Cost) / Current Replacement Cost	x 100
	=	$ 166,598,128.00 / $ 209,204,086.00	x 100
		79.63%	

This ratio shows the written down value of depreciable assets in relation to their 'as new' value in current prices. A ratio of less than 50% indicates a rapid deterioration of the asset base, whilst a ratio greater than 75% may indicate an over investment in the asset base.

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This value indicates that the city assets (overall on average) still retain 79.23% of their service potential whist 20.37% assets are approaching or at their end of useful life.

Sustainability Ratio

Sustainability Ratio **19.43%**

Sustainability Ratio	=	Planned Renewal Budget (2025) / Annual Depreciation Expense	x 100
	=	$ 929,655 / $ 4,785,565	x 100
		19.43%	

The target ratio the city is expected to achieve is between 90% - 110%. The sustainability ratio value (19.43%) indicates that the amount planned by the City in renewing the footpaths assets covered in this AMP is currently low compared to the depreciation of the current year.

It is important to consider the positive effect of maintaining adequate renewal budgets, in the medium to long term timeframes, to avoid future renewal works which the City cannot sustain.

This value also indicates that current renewal expenditure is significantly below the rate at which assets are being consumed, indicating renewal shortfall and a risk of declining asset condition and service performance.

However, the Asset Renewal Funding Ratio is 163.51% suggesting that planned renewal funding for longer term is more than adequate. This may indicate a timing mismatch between annual renewal delivery and long term planned renewals needs.

Renewal Funding Ratio

Renewal Funding Ratio **163.51%**

Renewal Funding Ratio	=	Planned Renewal Budget (10 years) / Forecast Renewal Costs (10 years)	x 100
	=	$ 12,449,528 / $ 7,613,879	x 100
	=	**163.51%**	

The target ratio council expected to achieve is between 90% - 110%. But the Asset Renewal Funding Ratio illustrates that over the next 10 years we expect to have 163.51% of the funds required for the optimal renewal of assets.

However, as discussed in Section 5.3.2, this does not account for the proportion of new/upgraded footpath assets (shown in Figure 5.4.1) that are forecast to be constructed, which will then create the need for additional renewal expenditure in the long-term. It is essential that any proposed adjustment to the future budget allocation for footpath renewals is carefully considered along with the need to ensure there is adequate reserve funding set aside.

The forecast renewal works along with the planned renewal budget, is illustrated in Appendix D.

[1] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

Lifecycle Funding Ratio – 10-year financial planning period

This AM Plan identifies the forecast operations, maintenance and renewal costs required to provide the levels of service to the community over a 10-year period. This provides input into 10-year long-term financial plan (LTFP) aimed at providing the required services in a sustainable manner.

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

The forecast operations, maintenance and renewal costs over the 10 year planning period is $2,560,099 average per year.

The 10-year LTFP is $4,344,860 over 10 year period and average per year giving a 10 year funding shortfall of $-434,486 per year. This indicates that 88.77% of the forecast costs needed to provide the services documented in this AMP are accommodated in the proposed budget. Note, these calculations exclude depreciation and the acquisition of new and upgrade of existing assets.

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

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

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

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

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AMP and/or financial projections in the LTFP.

We will manage any 'gap' by communicating the service performance, cost, and risk implications in consultation with the community and key stakeholders.

Forecast costs are shown in according to the 2023-2025 financial year dollar values.

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

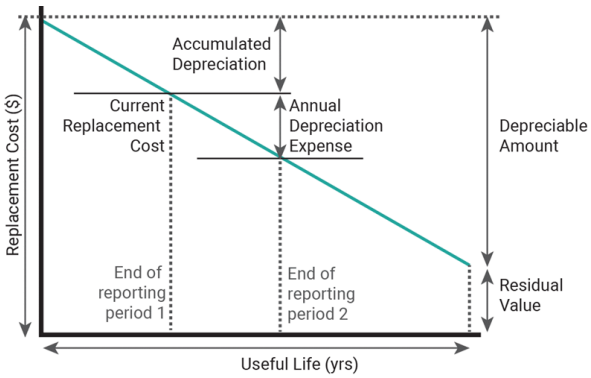
Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)
2025	1,054,459	741,150	1,052,487	929,655	0
2026	1,087,147	754,509	1,071,572	632,265	0
2027	1,120,848	768,283	1,091,249	370,671	0
2028	1,155,595	782,484	1,111,535	301,437	0
2029	1,191,418	797,124	1,132,451	230,058	0
2030	1,228,352	812,219	1,154,014	156,466	0
2031	1,266,431	827,782	1,176,247	1,238,332	0
2032	1,305,690	843,827	1,199,168	1,238,332	0
2033	1,346,167	860,369	1,222,800	1,238,332	0
2034	1,387,898	877,424	1,247,165	1,238,332	0

7.2 Valuation Forecasts

The best available estimate of the value of assets included in this AMP are shown below.

Figure 7.2.1: Valuation Terminology

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Replacement Cost (Gross)	**$209,204,086**
Depreciable Amount	**$209,204,086**
Current Replacement Cost (Depreciated Replacement Cost)	**$166,598,128**
Annual Depreciation Expense	**$4,785,565**

Asset values are forecast to increase as additional assets are constructed. Acquiring new assets will add to existing operations, maintenance, future renewal, and depreciation expenses.

[1]Also current replacement cost reported as Written Down Value, Carrying Amount or Net Book Value in some jurisdictions.

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8.0 ASSUMPTIONS AND IMPROVEMENT PLANNING

8.1 Data and Information Sources

8.1.1 Accounting and financial data sources

This AMP utilises accounting and financial data sourced from:

- City's Annual Management Budgets 2024 – 2025 and Expenditure Reports (Executive Management Report - EMR) available in Ci in CiAnywhere.
- 2024 – 2025 Sub Activity Breakdown Report for Maintenance and Operation breakdowns.
- City of Cockburn Forward 10-year Capital Works Plan 2026 – 2035.
- City of Cockburn Forward 10-year Capital Works Plan 2027 – 2036.

8.1.2 Asset management data sources

This AMP also utilises asset management data sourced from:

- City's GIS Registers, Strategic Asset Management (SAM) registers and other register data available with Ci in CiAnywhere and CiAnywhere.
- 2023 -2024 Road Revaluation Report, which includes the latest footpath valuations.
- Footpath Condition surveys conducted by third-party contractors (TALLIS) every five years (latest undertaken in 2023/24).
- Strategic documents including the Strategic Community Plan 2020–2030, Corporate Business Plan, Project Plan 2024 - 2025, Service Plans 2024 - 2025, and Cycling and Walking Network Plan 2016 – 2021.
- Community Satisfaction Surveys (e.g., 2024 PLACESCORE liveability survey and CATALYSE Pty Ltd scorecard 2023).

8.2 Key Assumptions

In compiling this AMP, it was 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 forecasts.

Key assumptions made in this AMP are:

- Renewal forecasts have been made by professional judgement.
- Population and asset growth projections are assumed to be accurate with all projection figures include 3.1% growth increase per year forward.
- The data supplied was as accurate as possible at the time of compilation of this asset management plan.
- The breakdown of the actual reactive, planned, and operational expenditure is assumed to be accurate.

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

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

The Asset Register method was initially used to determine the forecast renewal expenditure required based on remaining useful life. The Alternate Method was then used to adjust the distribution of forecast expenditure to better align with available City resources.

8.3 Forecast Reliability and Confidence

The forecast demands, costs, planned budgets, and valuation projections in this AMP are based on the best available data. For effective asset management and financial planning and reporting, it is critical that the

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information is reliable and up to date. Data confidence is classified on an A to E level scale in accordance with the guidance provided in the International Infrastructure Management Manual is shown in Table 8.3.1.

Table 8.3.1: Data Confidence Grading System

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

The estimated confidence level for and reliability of data used in this AMP is shown in Table 8.3.2.

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Table 8.3.2: Data Confidence Assessment for Data used in AMP

Data	Confidence Assessment	Comment
Renewal forecast	A	The Alternate Method (condition-based lifecycle modelling based with condition base renewal forecast) has been used to forecast renewal costs refers to 2023/24 revaluation data.
Demand drivers	B	Based on population, demographics, and transport trends from external forecasts (e.g., WA Planning Commission, ABS). Reasonably reliable but dependent on external factors.
Population Growth projections	B	City of Cockburn - Population and household forecast, 2021 to 2046, National Forecasting Program, id (informed decisions) June 2025.)
Acquisition forecast	B	Based on Cycling and Walking Plan priorities and LTFP allocations. Reliable in short term, but medium-to-long-term forecasts depend on funding availability and external contributions.
Operation forecast	B	Costs based on historic budgets and expenditure data, adjusted for growth. Reliable with minor uncertainty due to inflation and network expansion.
Maintenance forecast	B	Supported by historical expenditure and defect records. Confidence limited by variability in reactive maintenance demand.
Asset useful lives	B	Based on engineering estimates, IPWEA guidelines, and recommended by third party condition surveyors (e.g. TALIIS consultant). Generally reliable but may vary depending on materials and environmental impacts.
Condition modelling	C	Updated from 2023/24 condition survey; forecasts use the “Alternate Method”. Medium confidence due to reliance on periodic surveys (every 5 years) and extrapolation between surveys.
Disposal forecast	B	No planned road disposals at this moment in time, although this may change within the planning period and, if so, must be reflected in the AMP.

The estimated confidence level for and reliability of data used in this AMP is considered to be B - High Confidence Level.

8.4 Improvement Plan

It is important that we recognise gaps in the planning process that require improvement to ensure effective asset management and informed decision making. The improvement plan generated from this AMP is shown in Table 8.4.

Table 8.4: Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
1	Unit Rates Review	Assets, Infrastructure Civil and Projects	Update unit rates based on footpath construction to increase accuracy of the CRC prior to carried out 2025/26 revaluation and improve renewal modelling	2025/26

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2	Useful lives – review useful lives for components based on condition (expected vs actual)	Assets, Infrastructure Civil and Projects	Talis Consultant Condition data, Rawlinson guidance or our custodian technical judgement	2025/26
3	Complete Bus Shelter Condition Survey	Assets, Infrastructure and Projects	Responsible team members in civil infrastructure and asset services and external contractors	2025/2026
4	Internally reassess the higher risk rated footpath assets	Assets, Infrastructure and Projects	Reassess the condition 4 & 5 rated footpaths to form the list of projects for next 2 – 3 years	2027/28.
5	Asset T1 Register/GIS – review for missing and consolidated Attribute data to be updated or corrected.	GIS Team, Assets and Projects	GIS, Technical Officer Asset and Project manager	On going
6	Review and revised the capital work program to prioritise city funding renewals appropriately against new/upgrade. The more municipal funding the city spends on new assets. • The less municipal funds are available to renew existing assets. • The more additional assets there are to maintain. Both above relate to the need to consider "Whole of Life Cost" when considering the construction of new assets.	Assets, Infrastructure and Projects	Technical Officer Asset, Service Manager Infrastructure assets and Park	Over 10 year planning period of 2024/25 – 2023/34
7	Continue to investigate new AI technologies and tools which allow cheaper and more reliable capture of footpaths condition assessment survey. If implemented, these could enhance the City's ability to proactively identify both localised defects and overall condition for road renewal project prioritisation with improved confidence levels. (e.g. Retina Visions - AI Solutions for Infrastructure Management and Road metrics) Improve the quality and accuracy of asset condition inspection survey by implementing new applications for accurate and efficient field data pick up	GIS Team, Assets and Projects	Technical Officer Asset, GIS and external contractors	On going
8	Continue organisational education and implementation of asset management systems, asset management plans, and long-term financial plans. (e.g. Technology One Assets Module, XL One training, IPWEA training and NAMs+ modelling)	Assets and Projects and Learning and Development.	Service Manager Infrastructure, Learning and Development Team and Asset Services	On going

8.5 Monitoring and Review Procedures

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

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

The AMP has a maximum life of 4 years and is due for complete revision in 2028.

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8.6 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 long-term financial plan.
- The degree to which the 1 to 5-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AMP.
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans.
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90 – 110%).
- The Asset Sustainability Ratio achieving the Organisational target (this target is often 90 – 110%).
- The Asset Consumption Ratio achieving the Organisational target (this target is often 50 – 75%)

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9.0 REFERENCES

- City of Cockburn Strategic Community Plan 2025 – 2035
- City of Cockburn Annual Management Budget 2023/24 and 2024/25.
- City of Cockburn Annual Report 2024 – 2025.
- City of Cockburn forward 10-year Capital Works Plan 2026 – 2035.
- City of Cockburn forward 10-year Capital Works Plan 2027 – 2036.
- City of Cockburn 10-year Long-Term Financial Plan 2024/25 – 2033/34.
- 2023/24 Road Revaluation Report.
- Project Plan and Service Plan 2024 – 2025.
- City of Cockburn Bicycle and Walking Network Plan 2016 – 2021.
- ISO, 2024, ISO 55000:2024 Asset Management – Vocabulary, overview, and principles.
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10.0 APPENDICES

Appendix A Acquisition Forecast

A.1 – Acquisition Forecast Assumptions and Source

Population and asset growth projections are assumed to be accurate with all projection figures includes 3.1% growth increase per year forward.

A.2 – Acquisition Project Summary

Implementation of the Cycling and Walking Plan – expansion of dual-use and shared paths.

New footpaths in growth areas and subdivisions – largely delivered through donated developer assets.

Upgrades in key community hubs such as school precincts, shopping centres, and transport interchanges.

Accessibility improvements including wider paths and integration with ramps/tactiles to meet Disability Discrimination Act (DDA) standards.

A.3 – Acquisition Forecast Summary
Recommend using NAMS+ Outputs Summary for Acquisition

Table A3 - Acquisition Forecast Summary

Year	Constructed ($)	Donated ($)	Growth ($)
2025	1,054,459	2,762,529	0
2026	1,087,147	2,848,167	0
2027	1,120,848	2,936,460	0
2028	1,155,595	3,027,491	0
2029	1,191,418	3,121,343	0
2030	1,228,352	3,218,105	0
2031	1,266,431	3,317,866	0
2032	1,305,690	3,420,720	0
2033	1,346,167	3,526,762	0
2034	1,387,898	3,636,092	0

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A.3 – Acquisition Project Summary - Forward Capital Works10 year Plan

Project Name	New/Upgrade (%)	Estimated Budget Allocations ($)											
		FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
Cycling & Walking Plan Implementation - Initiative Budget - To be allocated	50%	550,863	320,444	375,000	375,000	375,000	375,000	375,000	375,000	375,000	375,000	375,000	375,000
Total		$550,863	$320,444	$375,000	$375,000	$375,000	$375,000	$375,000	$375,000	$375,000	$375,000	$375,000	$375,000

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Appendix B Operation Forecast

B.1 – Operation Forecast Assumptions and Source

Operation costs include routine activities such as inspections, cleaning, utility costs, street sweeping, and administration that ensure the footpath network remains safe and functional.

Operation forecasts are primarily based population growth and expected expansion of the footpath network of acquisitions.

Operation forecasts assume current levels of service will be maintained and that any new donated/constructed assets will add proportionately to operational requirements.

B.2 – Operation Forecast Summary
Recommend using NAMS+ Outputs Summary for Operation.

Table B2 - Operation Forecast Summary

Year	Operation Forecast ($)	Additional Operation Forecast ($)	Total Operation Forecast ($)
2025	741,150	13,359	741,150
2026	741,150	13,774	754,509
2027	741,150	14,201	768,283
2028	741,150	14,641	782,484
2029	741,150	15,095	797,124
2030	741,150	15,563	812,219
2031	741,150	16,045	827,782
2032	741,150	16,542	843,827
2033	741,150	17,055	860,369
2034	741,150	17,055	877,424

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Appendix C Maintenance Forecast

C.1 – Maintenance Forecast Assumptions and Source

Maintenance activities include routine and reactive works such as repairs of potholes patching, joint sealing, and minor reinstatements to ensure paths remain safe and functional.

The 2023/24 Footpath Condition Assessment Survey and defect reports inform prioritisation of maintenance works for the paths are in poor to very poor condition.

Assumes current service levels will continue, with maintenance budgets scaled proportionally as assets are added through new construction and donated infrastructure.

Maintenance forecasts assume current levels of service will be maintained and that any new donated/constructed assets will add proportionately to operational requirements.

C.2 – Maintenance Forecast Summary

Recommend using NAMS+ Outputs Summary for Maintenance.

Table C2 - Maintenance Forecast Summary

Year	Maintenance Forecast ($)	Additional Maintenance Forecast for New Acquisition ($)	Total Maintenance Forecast ($)
2025	1,052,487	19,085	1,052,487
2026	1,052,487	19,677	1,071,572
2027	1,052,487	20,287	1,091,249
2028	1,052,487	20,915	1,111,535
2029	1,052,487	21,564	1,132,451
2030	1,052,487	22,232	1,154,014
2031	1,052,487	22,921	1,176,247
2032	1,052,487	23,632	1,199,168
2033	1,052,487	24,365	1,222,800
2034	1,052,487	24,365	1,247,165

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Appendix D Renewal Forecast Summary

D.1 – Renewal Forecast Assumptions and Source

Renewal forecasts expenditures are based on the 2023/24 Footpath Condition Assessment Survey, the City's asset register, and the 2023/24 Road Revaluation Report.

The Alternate Method (condition modelling, staff judgement, and lifecycle analysis) was used rather than relying solely on the register method.

Renewal priorities are ranked using condition/risk criteria (high consequence of failure, usage levels, safety/accessibility, and maintenance cost trends).

Budgets in the Long-Term Financial Plan (LTFP) are generally above forecast renewal needs, giving an Asset Renewal Funding Ratio of 163.51%

D.2 – Renewal Forecast Summary
Recommend using NAMS+ Outputs Summary for Renewal.

Table D2 - Renewal Forecast Summary

Year	Renewal Forecast ($)	Renewal Budget ($)
2025	929,655	1,351,843
2026	632,265	1,431,412
2027	370,671	1,182,414
2028	301,437	1,182,414
2029	230,058	1,182,414
2030	156,466	1,182,414
2031	1,248,332	1,202,599
2032	1,248,332	1,223,289
2033	1,248,332	1,244,496
2034	1,248,332	1,266,233

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D.3 – Renewals Project Summary - Forward Capital Works10 year Plan

Project Name	New/Upgrade (%)	Estimated Budget Allocation ($)											
		FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
Cycling & Walking Plan Implementation - Initiative Budget - To be allocated	50%	550,863	320,444	375,000	375,000	375,000	375,000	375,000	375,000	375,000	375,000	375,000	375,000
Total		$550,863	$320,444	$375,000	$375,000	$375,000	$375,000	375,000	$375,000	$375,000	$375,000	$375,000	$375,000

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Appendix E Disposal Summary

E.1 – Disposal Forecast Assumptions and Source

At this stage, there are no significant asset disposal plans in the city.

E.2 – Disposal Forecast Summary
Recommend using NAMS+ Outputs Summary for Disposal

Table E2 – Disposal Activity Summary

Year	Disposal Forecast ($)	Disposal Budget ($)
2025	0	0
2026	0	0
2027	0	0
2028	0	0
2029	0	0
2030	0	0
2031	0	0
2032	0	0
2033	0	0
2034	0	0

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Appendix F Budget Summary by Lifecycle Activity

Renewal Planned budgets are derived from the City's Long-Term Financial Plan (LTFP 2024/25 – 2033/34).

All costs are referring to Road Revaluation Report in 2023/24.

Budgets include acquisitions, operations, maintenance, and renewals. Disposal is set at $0 as there are no planned disposals.

Acquisition budgets reflect a scaled-back level compared to lifecycle forecasts (Appendix A), particularly beyond 2030/31.

With alternative method to Renewal allocations are set higher than forecast requirements, ensuring a strong Renewal Funding Ratio (177.62%).

Operations and maintenance are assumed to increase gradually to account for new assets and inflation.

Table F1 – Budget Summary by Lifecycle Activity

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)	Total ($)
2025	625,837	741,150	1,052,487	1,358,277	0	3,702,777
2026	320,444	741,150	1,052,487	1,431,412	0	3,865,937
2027	375,000	741,150	1,052,487	1,182,414	0	3,351,051
2028	375,000	741,150	1,052,487	1,182,414	0	3,351,051
2029	375,000	741,150	1,052,487	1,182,414	0	3,351,051
2030	375,000	741,150	1,052,487	1,182,414	0	3,351,051
2031	375,000	741,150	1,052,487	1,202,599	0	3,371,236
2032	375,000	741,150	1,052,487	1,223,289	0	3,391,926
2033	375,000	741,150	1,052,487	1,244,496	0	3,413,133
2034	375,000	741,150	1,052,487	1,266,233	0	3,434,870

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Appendix G Legislative Requirements

Table G: Legislative Requirements

Legislation	Requirement
Local Government Act 1995	Provides for a system of Local Government by describing the functions of and providing a framework for the administration and financial management of Local Governments.
Main Roads Act 1930	Consolidates and amends the law relating to and making provision for the construction, maintenance and supervision of highways, main and secondary roads, and other roads and the control of access to roads.
Main Roads WA – Code of Practice for traffic management for works on roads (April 2011)	To promote safe and consistent traffic management practice at work sites on roads in accordance with state legislation and national standards. Requires general compliance with the Australian Standard 1742.3-2009 and associated field guides, provides details of additional requirements necessary to meet WA requirements. Also outlines the competency requirements for personnel responsible for managing traffic on work sites.
Transport Co-ordination Act 1966	Provides for the co-ordination, planning and advancement of all forms of transport in WA, to provide for the review, control and licensing of transport services and for incidental and other purposes.
Planning and Development Act 2005	Provides for a system land use planning and development in the State and for related purposes.
Environmental Protection Act 1986	Provides for an Environmental Protection Authority, for the protection, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected to the foregoing.
Development Act 1993 Disability Discrimination Act 1993	Sets out parameters for Developments, including what developments required Development Approval (Planning Consent/Building Rules Consent) and the process required to obtain such consents. Set outs requirements for equality of access to services and facilities.
Contaminated Sites Act 2003	Provides for the identification, recording, management, and remediation of contaminated sites, to consequentially amend certain other Acts and for related purposes.
Conservation and Land Management Act 1984	Makes better provision for the use, protection and management of certain public lands and waters and the flora and fauna thereof, establishes authorities to be responsible therefore, and for incidental or connected purposes.

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City of Cockburn

Drainage Asset Management Plan 2024–2028



www.cockburn.wa.gov.au

Document Set ID: 12330905
Version: 18, Version Date: 02/09/2026

Cover page photo is taken at Atwell Reserve of the open drain outlet

Asset Management Plan				
Document ID: 12330905				
Date	**Revision Details**	**Author**	**Reviewed**	**Approved**
Sept 2021	Final Version 2020 - 2024	Property & Asset Services	Manager Engineering Services	Executive Committee / Council
April 2026	Final Version 2024 - 2028	Asset Services	Service Manager Infrastructure Assets	

Acknowledgement of country

The City of Cockburn acknowledges the Nyungar people of Beeliar Boodjar. Long ago, now and in the future they care for Country.

We acknowledge a continuing connection to Land, Waters and Culture and pay our respects to Elders, past and present.

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1 Executive summary

The City of Cockburn's community relies on a diverse portfolio of infrastructure assets, including roads, buildings, bridges, parks and footpaths. The stormwater drainage assets covered by this Asset Management Plan are valued at approximately $458 million.

This Asset Management Plan (AMP) provides a strategic framework for managing our community's drainage infrastructure assets, ensuring they remain safe, reliable and capable of meeting current and future demands.

1.1 Purpose of the plan

The AMP aims to:

- Provide a systematic approach to asset management.
- Address critical risks associated with aging infrastructure and limited funding.
- Ensure infrastructure supports the community's social, economic, and environmental goals.

This AMP details information about the City's stormwater drainage network, as well as defining the Level of Service (LOS) and outlining the funding required to maintain this LOS over a 10 year planning period.

This highlights any funding gaps between the planned and forecast expenditure, which assists in optimising expenditure on managing assets through the Long-Term Financial Plan.

1.2 Asset description

The stormwater drainage network comprises:

- 562km of pipes
- 24,115 pits
- 562 On Site Detention Storages (OSDS)
- 225 infiltration chambers
- 10 storage tanks
- 22km fencing

The above infrastructure assets have a replacement cost estimated at $457,836,195.

1.3 Levels of service

Levels of Service are typically split into 'Customer' and 'Technical' and each have their own metrics, which the City is able to measure its performance against.

The City's overall customer LOS objective is to maintain 70 per cent community satisfaction with stormwater drainage assets. When compared against the most relevant scoring ('evidence of City management') from the September 2024 Place Score community survey, the City scored the equivalent of 65 per cent, which indicates that the City is not currently achieving this target.

The allocation in the planned budget is currently insufficient to meet community expectations.

The main service consequences of an insufficient planned budget are:

- Increased risk of flooding
- Increased risk of structural failure, which can create a sinkhole in the case of underground assets, posing a significant risk to the community and other nearby infrastructure/property
- Increased discharge of pollution into waterways – environmental management has been identified as a cause for concern by the community.

1.4 Future demand

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

- Population growth leading to increased new subdivision developments, which increase impervious areas and hence increase stormwater runoff
- Increased traffic and growth in industrial areas potentially increasing runoff pollution load
- Climate change increasing severity of storm events.

Strategies to manage these demands are discussed in Section 4.

1.5 Lifecycle management plan

How we plan to manage and operate the assets at the agreed levels of service throughout their lifecycle is contingent on the 10-year Long-Term Financial Plan (LTFP). It is important to be aware of the 'Whole of Life' lifecycle costs associated with assets (i.e. cost of construction, operation and maintenance costs, renewal and upgrade costs and disposal costs at end of life).

1.5.1 What does it cost?

The lifecycle costs necessary to provide the services covered by this AMP include operations, maintenance, renewal and upgrade costs of existing assets, as well as the acquisition or construction of new assets to meet demand. Disposal of assets is also considered when it is no longer cost effective to continue to maintain/operate an asset.

When lifecycle costs are prepared for a minimum 10-year planning period, they can be used to inform the 10-year LTFP. The first 10-year lifecycle forecast is estimated to cost $45,981,792 or $4,598,179 on average per year.

Depreciation is excluded from these cost estimates.

1.5.2 What we will do

The funding made available in the first 10-years' of the LTFP is $44,131,352 or $4,413,135 on average per year which is approximately 96 per cent of the cost to undertake the lifecycle activities.

The reality is, only what is funded in the LTFP can be provided. Informed decision making depends on the AMP emphasising the consequences of planned budgets on the LOS provided and communicating the residual risks to decision makers. It is important to ensure the organisation is delivering the services in a financially sustainable manner.

The current 10-year LTFP may struggle to keep up with demand, however more information is needed to give a more accurate projection. The projection in Figure 1.1 is based on available information:

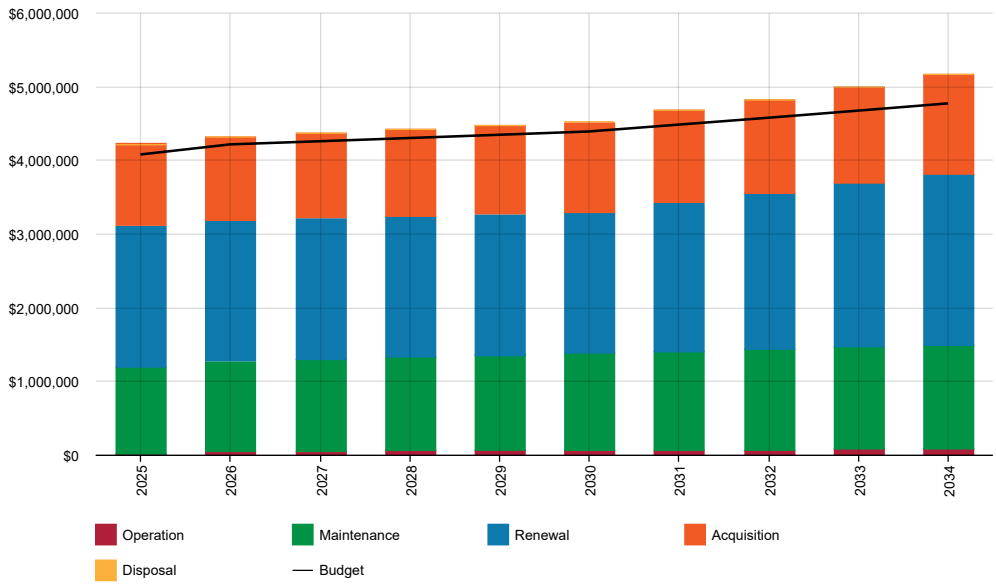


Figure 1.1: Forecast Lifecycle Costs and Planned Budgets

We plan to provide stormwater drainage services as per the following:

- Clear sand and debris out of underground drainage assets within the 10-year planning period

- Repair/maintain damaged infrastructure to prolong life, where there is opportunity to do so
- Replace significantly damaged pipes, upgrade sumps and install new underground stormwater infiltration tanks within the 10-year planning period.

1.5.3 What we cannot do

We currently do not allocate enough budget to sustain services at the proposed level of service in the longer term (i.e. 10 years and beyond). We also cannot collect condition data for our entire drainage network, as the cost of doing this would dramatically increase our operating costs, reducing available funding for drainage infrastructure renewals and upgrades.

1.6 Risk management

The current planned budget is insufficient to manage risks in a manner acceptable to the Community. In particular, if left as-is, climate change is a Very High risk and stormwater drainage management is a High risk.

The main risk consequences are:

- Increased risk of flooding
- Increased risk of structural failure, which can create a sinkhole in the case of underground assets, posing a significant risk to the community and other nearby infrastructure/property
- Increased discharge of pollution into ecosystems.

Strategies and actions to manage these risks are discussed in Section 6.

1.7 Financial summary

Providing financially sustainable and affordable services from infrastructure requires the careful management of service levels, costs and risks.

The 10-year LTFP is $4,413,135 on average per year, which is insufficient to maintain current service levels into the future. This indicates that 96 per cent of the forecast costs needed to provide the services documented in this AMP are accommodated in the LTFP.

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

1.8 Assumptions and improvement planning

Key assumptions made in this AMP are:

- Renewal forecasts have been made by professional judgement based on limited data
- Population and asset growth projections are assumed to be accurate
- Unit rates are representative of asset replacement costs
- Useful lives are an accurate representation of the behaviour of assets in the field and the City's practices in renewing/replacing assets at their end of useful life
- Operations and maintenance growth projections are assumed to be accurate.

An alternative method was used to forecast the renewal lifecycle costs for this AMP, due to the absence of condition data for the City's stormwater drainage assets.

This AMP is based on a 'reliable' level of confidence information.

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

- Establish an ongoing maintenance contract to facilitate inspections/repairs of drainage assets
- Capacity assessment of drainage assets – stormwater modelling
- Revise definition of operation and maintenance to align with best practice, for more accurate cost projections
- Adding missing stormwater drainage assets to the asset register.

2 Introduction

2.1 Background

This AMP communicates the actions and necessary funds required to sustainably deliver 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.

The AMP is to be read in conjunction with the City's Asset Management Policy and Asset Management Strategy, along with the following strategic documents:

- Strategic Community Plan 2025 – 2035
- Corporate Business Plan 2024/25 – 2027/28
- Annual Business Plan(s)
- Long Term Financial Management Plan 2024/25 – 2033/34
- Drainage Management Strategy 2018-2028 (DMS)
- Drainage Catchment Strategy 2017 (DCS)
- Engineering, Construction and Drainage Standards Policy
- Local Planning Strategy.

The infrastructure assets covered by this AMP include stormwater pipes, pits, onsite stormwater disposal systems (OSDS), water harvesting devices (WHD) and sump fencing. For a detailed summary of the assets covered in this AMP refer to **Error! Reference source not found.** in Section 5.

These assets are used to provide drainage of stormwater runoff from primarily roads and have a total replacement value of approximately $458 million.

2.2 Stakeholders

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

Key Stakeholder	Role in Asset Management Plan
Elected Members	Represent needs of community/shareholders Allocate resources to meet planning objectives in providing services while managing risks Ensure service is sustainable.
Chief Executive Officer (CEO)	Organisational direction and leadership
Executive Leadership Team (ELT)	Executive management endorsement, sign off and executive ownership

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Key Stakeholder	Role in Asset Management Plan
Group Manager Assets and Projects	Review and strategic management sign off
Service Manager Infrastructure Assets	Review and line management sign off
Infrastructure Asset Services	Asset Management Plan development, review, continuous improvement and implementation of the AMP maintenance actions
Community, Residents, Tourists & Business	Provide feedback to the City and Councillors on how the City is going in maintaining the agreed levels of service.
Public Transport Authority & Transperth	Work in conjunction with the City ensuring the City's network meets requirements
Insurers	Assist to manage financial risk of the City
State Emergency Services	Attendance to call-outs and security

Table 2.1: Key Stakeholders in the AMP

2.3 Principles, goals and objectives of asset management

The principles of asset management as per the International Standards for asset management are:

- **Value**: asset management focuses on the value assets provide to the organisation over time
- **Alignment**: asset management aligns financial, technical and operational decisions with the organisational objectives, promoting vertical and horizontal coordination
- **Leadership**: leadership and sustained commitment at all levels are crucial for successful asset management.[1]

Our goal for managing infrastructure assets is to deliver the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers.

[1] ISO 55000:2024 Asset Management – Vocabulary, overview, and principles

The key objectives of infrastructure asset management as defined by the International Infrastructure Management Manual are:

- Defining levels of service and monitoring performance
- Managing the impact of growth through demand management and infrastructure investment
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service
- Identifying, assessing and appropriately controlling risks
- Linking to a Long-Term Financial Plan which accommodates the required expenditure and how it will be funded.[2]

2.4 Plan framework

The 2024 - 2028 Drainage AMP has been developed in accordance with the International Infrastructure Management Manual (IIMM) and complies with Department of Local Government & Communities Asset Management Framework.

As part of the City's Strategic Asset Management Planning Framework (SAMPF), the Drainage AMP will be developed every 4 years and be subject to a 2-year desktop review. This AMP review will focus on core elements required by the LTFP, for example asset valuations, growth projections, financial analysis including operating, sustainability ratios and 10-year renewals. This will ensure that future revisions of the LTFP will be derived from a structured AMP development cycle that has received Executive and or Council approval, increasing confidence and integration of asset management data and methodologies into the City's long term financial planning and adopted service levels.

Figure 2.1 provides a visual representation and timeline of the SAMPF.

[2] IPWEA International Infrastructure Management Manual (IIMM), Sec 1.2.1

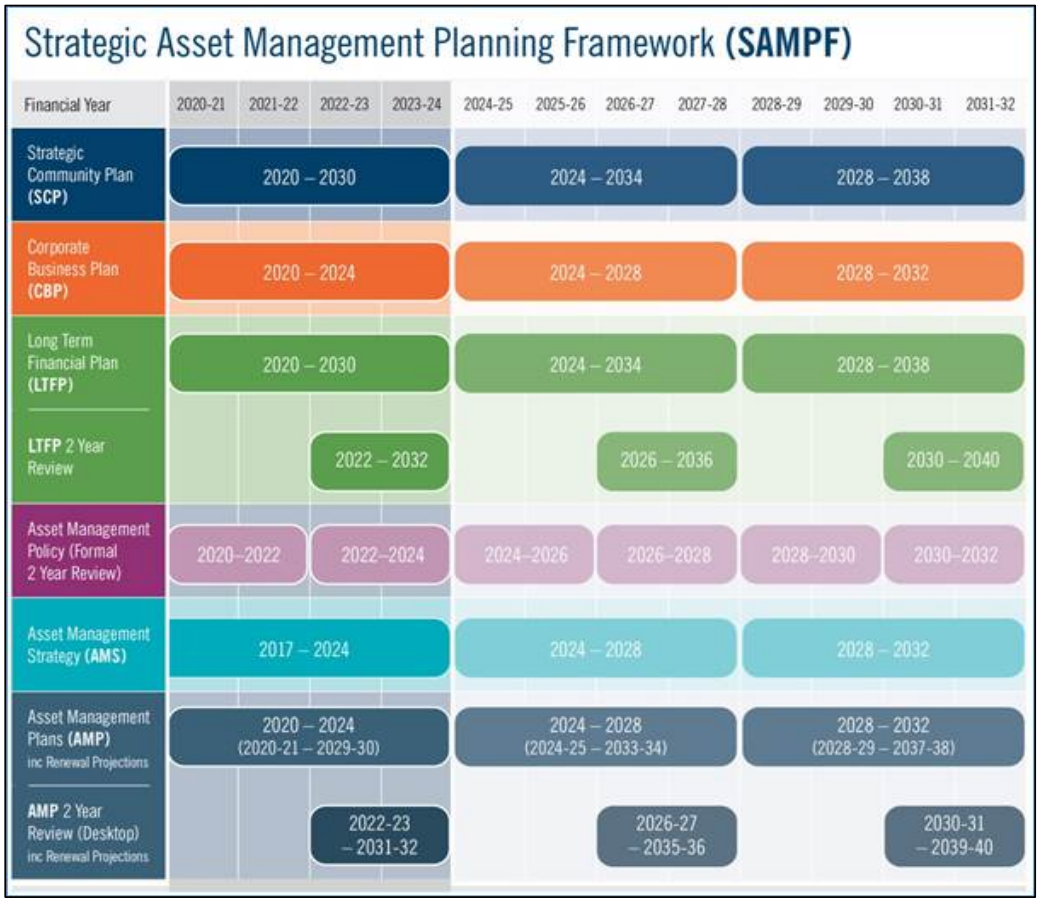


Figure 2.1: Strategic Asset Management Planning Framework (SAMPF)

- Level of Service and Enterprise Risk Management – outlines the level of service provided by council and identifies risks to the city
- Future Growth and Demand how this will impact on future service delivery and how this is to be met
- Lifecycle Management – how the city will manage its existing and future assets to provide the required services
- Financial Analysis – what funds are required to provide the required services
- Asset management practices – current systems and practices in place
- Improvement and monitoring – how the plan will be monitored and improved to ensure it is meeting Council's objectives.

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2.4.1 Corporate planning framework

The formalisation and alignment of the City's SAMPF within the Corporate Planning Framework reflects the City's increasing maturity and recognises the importance of Asset Management in supporting the City in delivering long term financial sustainability of services and capital asset renewal.

With the continued implementation of the SAMPF, the City will commence measuring service levels for planned and reactive maintenance to determine operational performance and asset utilisation.

The City strives to improve its strategic and operational asset management practices and to continue its journey towards advanced asset management. The Department of Local Government, Sport and Cultural Industries (DLGSC) has developed the Western Australia Local Government Integrated Planning and Reporting Framework. Accordingly, the future direction and need for advanced level practices are continually assessed.



Figure 2.2: City Corporate Planning Framework

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3 Levels of service

Levels of service define the standards and performance targets that infrastructure assets are expected to meet to ensure they provide reliable, safe, and efficient services to the community.

3.1 Customer research and expectations

The City carries out the Place Score Liveability Survey bi-annually to gather and evaluate customer feedback across a range of services that the City provides. This allowed the City to measure its performance against community expectations.

The first and most recent Place Score Liveability Survey was undertaken in September 2024. In total, 1811 residents participated in the survey. The most relevant place score metric is 'Evidence of City management', with a Place Experience (PX) score of 6.5/10 as part of the most recent survey.

Table 3.1 summarises the results from our Customer Satisfaction Survey.

Performance Measure	Performance Score (PX)		
	Good PX ≥ 7	Average 6 ≤ PX < 7	Poor PX < 6
Sustainable urban design			5.7
Protection of the natural environment		6.9	
Ease of Driving and Parking	7.5		
Evidence of City management (signage, street sweeping etc)		6.5	
Evidence of recent public investment		6.0	

Table 3.1: Customer Satisfaction Survey Levels

3.2 Strategic and corporate goals

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

Our vision is:

Cockburn, the best place to be.

Our mission is:

Support our communities to thrive by providing inclusive and sustainable services which reflect their aspirations.

Strategic goals have been set by the City and are found in the City's Strategic Community Plan. The relevant goals and objectives and how these are addressed in this AMP are summarised in Table 3.2.

Strategic Outcome	Strategic Objective	Deliverable	Measure
Our Economy Attracting investment, supporting business and visitor growth and boosting local jobs through vibrant hubs.	1A. Empower and support local businesses	Streamlined process for negotiating stormwater drainage levels of service vs cost with businesses	Customer survey results
Our Environment Valuing natural assets, building climate resilience and using resources sustainably.	2A. Protect and enhance our natural areas and streetscapes.	Meet environmental requirements for stormwater flows and pollutant loads.	Customer survey results
		Build and maintain Water Sensitive Urban Design stormwater drainage assets where required	Water quality results
			Extent of implementation of Water Sensitive Urban Design mentioned in DMS
	2C. Enhance climate resilience and champion environmental initiatives to mitigate impacts.	Manage flooding risk	Customer survey results
Our Places	4A. Plan for growth and sustainable development.	Delivery of upgrades in response to most up to date City Drainage Strategy.	Number of flooding complaints

Strategic Outcome	Strategic Objective	Deliverable	Measure
Enhancing distinctive, liveable areas with well-connected, safe transport options.	4C. Enhance connectivity and mobility through integrated transport networks.		
Our Governance Transparent leadership that listens, communicates openly and plans for a sustainable future.	5D. Strive for financial sustainability and operational excellence.	Ensure adequate funding to meet agreed service levels, optimise lifecycle cost	Asset Renewal Funding Ratio
	5B. Strengthen engagement and communication and enhance customer experience.	Negotiate stormwater drainage levels of service vs cost with the community and businesses	Customer survey results and feedback Business surveys

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

3.3 Legislative requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the drainage service are outlined in Appendix G.

While no longer a legislative requirement, the Asset Management Ratios are reasonable performance indicators of the ongoing financial sustainability of assets. The targets for these ratios are set by the Department of Local Government, Sport and Cultural Industries (DLGSCI) through the Integrated Planning and Reporting Framework (IPRF). The calculation methodology and targets for these ratios are outlined in Table 3.3.

Asset class	Consumption ratio	Sustainability ratio	Renewal funding ratio
Description	How much has the City used of its assets?	Is the City replacing assets as they wear out?	Is the City setting aside sufficient future funding for asset renewals?

Asset class	Consumption ratio	Sustainability ratio	Renewal funding ratio
Calculation	Depreciated replacement cost / current replacement cost	Capital renewal (one year) / annual depreciation (one year)	Planned capital renewal (10 years) / required capital renewal (10 years)
Target	50-75% standard 60-75% ideal	90-110% standard	75-95% standard 95-105% ideal
What it means	Lower than standard = assets are deteriorated and will result in a poor level of service Higher than ideal = assets are being replaced too early resulting in poor value for money*	Lower than standard = the City is under investing in asset renewal/replacement resulting in a poor level of service Higher than standard = the City is over investing in asset renewal/replacement resulting in poor value for money*	Lower than standard = the City is allocating too little funding to long term asset renewal/replacement which will result in a lower level of service in future Higher than ideal = the City is allocating too much funding to long term asset renewal/replacement which will result in poor value for money in future

Table 3.3: Asset Ratios

* Higher than standard can also mean the asset base is relatively young

3.4 Customer values

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

Customer Values indicate:

- What aspects of the service is important to the customer
- Whether they see value in what is currently provided
- The likely trend over time based on the current budget provision.

Customer Values	Customer Satisfaction Measure	Customer Feedback	Expected Trend Based on Planned Budget
Stormwater drainage is safe	Strategic Community Plan or customer requests	Some broken sump fences and grated pit lids reported	Maintain
Can reasonably drive on the road during a storm		Some flooding reported during major downpours	Increasing flooding
Customer's property is protected from flood damage		Property damage from flooding is very rare	Maintain but climate change a long term threat
Can use a park after a major storm		Flooded parks are a nuisance	Increasing flooding in parks
Protection of the natural environment		Natural environment currently appears OK	At risk of degrading but also due to other factors

Table 3.4: Customer Values

3.5 Customer levels of service

The Customer Levels of Service are considered in terms of:

Condition How good is the service … what is the condition or quality of the service?

Function Is it suitable for its intended purpose …. Is it the right service?

Capacity/Use Is the service over or under used … do we need more or less of these assets?

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

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

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Overall	Community satisfaction of 70% or greater with the City's drainage network.	Community feedback	Score of 6.5/10 for 'Evidence of City management' in recent community survey.	Continued underperformance
Condition	Maintain at least 80% of the City's drainage in Condition 3 or better	Indicative condition assessment scores (based on age and expected remaining useful life)	Percentage of drainage infrastructure in condition 3 or better is 99%, however it is majority aged based estimates, not actual	An increasing portion of our stormwater drainage network will reach end of useful life prior to Capital intervention based upon the increasing gap between planned budget and forecast expenditure, particularly between 2031 and 2035.
	Confidence levels		Medium	Medium
Function	Action customer requests relating to drainage structures (aim to acknowledge within 5 working days in line with the City's Customer Service Charter)	Number of drainage structure service requests received	201 requests relating to drainage structures in 2023/24 – six of the complaints in 2023/24 were of sinkholes	Number of customer requests expected to increase based on past 10 year trend (see Appendix C)

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
	Community satisfaction of 70% or greater with the City's environmental protection measures.	Community feedback	Score of 6.9/10 for 'Protection of the natural environment'	Score of 7/10 should be achievable but needs further investigation
	Pollution reduction targets met as per the DMS	Adherence to Engineering, Construction and Drainage Standards Policy	Some natural assets under stress	No significant change
	Confidence levels		High	High
Capacity	Action customer requests relating to flooding (aim to acknowledge within 5 working days in line with the City's Customer Service Charter)	Number of flooding complaints received	66 flooding complaints in 2023/24	Number of customer requests expected to increase slightly overall, with climate fluctuations, based on past 10 year trend (see Appendix B)
	Confidence levels		High	Medium

Table 3.5: Customer Level of Service Measures

3.6 Technical levels of service

Technical Levels of Service – To deliver on the customer values, and impact they have on Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the lifecycle activities (see Section 5) and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

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

Table 3.6 shows the lifecycle activities related to the current 10 year planned budget, and the forecast costs recommended in this AMP.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Acquisition	Provide new drainage as required	Identify new drainage required	In alignment with expected population and infrastructure requirements defined in Planning WA's 'Perth and Peel @ 3.5 million' framework	In alignment with expected population and infrastructure requirements defined in Planning WA's 'Perth and Peel @ 3.5 million' framework
	Upgrade existing drainage as required	Identify drainage upgrades required	As outlined in the City's Forward Capital Works Plan.	As outlined in the City's Forward Capital Works Plan.
		Budget	$781,979 average per annum	$1,170,214 average per annum
Operations	Keep drains clear of debris	Frequency of educting pits	Every 2.5 years	Annually
		Frequency of clearing sumps and swales	Annually	Maintain
		Frequency of cleaning bubble up pits	Every 3 years	Maintain
		Frequency of pipe jetting and flushing	5% of pipes annually	Implement risk managed Maintenance Management System and specify/monitor/adjust/report blockage risk levels

[3] IPWEA, 2015, IIMM, p 2|28.

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Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
		Budget	$1,304,031 per year on average	Increase
Maintenance	Keep drainage safe	Maintenance issues identified by community actioned within 20 working days	Current maintenance budget and resourcing is sufficient to enable action on localised defects within 20 business days.	Action defects within 15 working days.
		Budget	Captured under Operations budget	Captured under Operations budget
Renewal	Keep drainage in satisfactory and safe condition	Proportion of drainage assets in “poor” or “very poor” condition	<1% - however majority of condition is estimated from age, not actual condition	Maintain
	Allocate sufficient medium and long term renewal funding	Asset renewal funding ratio	97%	100%
		Budget	$1,926,416 per year on average	$2,015,829 per year on average
Disposal	Dispose of drainage assets that are no longer required	Drainage disposed of when opportunities identified	Nil allocated due to nil disposal opportunities identified	Continue reviewing opportunities to dispose of assets. This should be driven by updated Drainage Strategies.
		Budget	$0 per year	$0 per year

Table 3.6: Technical Levels of Service

Note: * Current activities related to planned budget.

** Expected performance related to forecast lifecycle costs.

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

4 Future demand

Future demand refers to the effects on infrastructure assets services driven by factors such as population movement, economic development, technological advancements, and changing environmental or community expectations.

4.1 Demand drivers

A demand driver refers to the factors or trends that influence the need for infrastructure services and capacity. Some examples of factors influencing future demand include (but are not limited to):

- Population growth
- Changing demographics
- Industry development/changes in technology
- Legislation changes
- Climate change.

Demand drivers help predict future infrastructure needs and guide planning and investment decisions.

4.2 Demand forecasts

The current position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Error! Reference source not found.**.

4.3 Impacts and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in **Error! Reference source not found.**.

The impact on service delivery will be managed through a combination of managing and upgrading existing assets and the provision of new assets to meet demand. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to manage demand are shown in **Error! Reference source not found.**. Further opportunities will be developed in future revisions of this AMP.

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Population	133,869 as at 2025	177,920 by 2046	Increased population demand for new developments creating additional impervious areas, leading to higher runoff. This will require additional drainage assets, resulting in additional maintenance and renewal costs.	Ensure maintenance and renewal budgets keep up with increase in asset stock.
Demo-graphics and infill	16,883 people 67 or older as at 2025	31,329 people 67 or older by 2046	Existing dwellings potentially redeveloped at a higher density, creating additional impervious areas, leading to higher runoff. This will require additional drainage assets, resulting in additional maintenance and renewal costs.	Ensure stormwater retained onsite – development controls. Also ensure verge policy adhered to.
Industry	Existing industrial areas are expanding and reaching full potential	Extensive new industrial and commercial areas focused around Jandakot Airport and Latitude 32 Industrial area	Requirement for freight routes and upgrading of existing roads. Increase in impervious areas resulting in increased requirement for effective drainage and stormwater management infrastructure.	Ensure adequate developer contributions for necessary stormwater drainage upgrades. City funded road upgrades should include adequate stormwater drainage design.
Climate Change	Severe storm events more frequent than approx. 30-50 years ago	Storm events will continue to become more severe	More frequent flooding impacting on road users and properties	Update Drainage Catchment Study at regular intervals to make use of latest climate models

Table 4.1: Demand Management Plan

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4.4 Asset programs to meet demand

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

Acquiring new assets will commit the City to ongoing operations, maintenance and renewal costs, and depreciation expenses for the period that the service provided from the assets is required. These future costs and expenses are identified and considered in developing the long-term financial plan.

4.5 Climate change adaptation

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

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

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

Risk and opportunities identified to date are shown in **Error! Reference source not found.**.

Climate change risk	Projection	Impact on services	Climate Change Management Plan
More extreme flooding/storm events during winter months	Increase in the frequency and severity of flooding and storm events	Existing stormwater drainage may struggle to keep up with increasing stormwater runoff flow rates	Regular (e.g. 5 yearly) stormwater modelling at the road segment and drainage asset level, making use of latest climate models, should be considered

Table 4.2: Managing the Impact of Climate Change on Assets and Services

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

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

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

Error! Reference source not found. summarises opportunities to build climate change resilience into new and existing assets.

Asset Description	Climate change risk	Resilience Plan for New Assets	Resilience Plan for Existing Assets
Pits and Pipes	Blockages have a more severe and less predictable flooding impact than previously	Novel designs that are less susceptible to blocking, e.g. poly pipes, streamlined pits, systems to mitigate root intrusion	Maintenance management system that takes into account leaf load and sediment load Debris baskets installed in problematic areas Verge management (see Roads AMP)
Open Infiltration and Conveyance Systems	Debris build up has a more severe and less predictable flooding impact than previously	Upstream capture of debris where possible	Debris clearing, controlled vegetation clearing/spraying, maintenance management system

Table 4.3: Building Climate Change Resilience into New and Existing Assets

The impact of climate change on new and existing assets is evolving and new opportunities will be developed in future revisions of this AMP.

5 Lifecycle management plan

The lifecycle management plan details how the City plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) throughout their entire lifecycle, from acquisition or creation to disposal. The goal is to maximise the value of the assets while minimising costs and risks, ensuring they continue to meet performance requirements over time.

From a financial perspective, infrastructure activities tend to be classified as being either Operating or Capital. The lifecycle activities used in the asset management and financial planning and reporting process cover:

Capital Expenditure:

- **Acquisition** – the activities to provide a higher level of service (e.g., widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library).
- **Renewal** – the activities that replace or restore assets to the standard it had originally provided (e.g., road resurfacing and pavement reconstruction, pipeline replacement and building component replacement).
- **Disposal** – the decommissioning, removing, or repurposing of assets that are no longer cost-effective, safe, or necessary (e.g. shutting down an old water treatment plant, demolishing unsafe buildings, dismantling old bridges, etc.).

Operating Expenditure:

- **Operations** - the routine activities that keep services accessible and effective, balancing efficiency with user expectations (e.g. cleansing, mowing grass, energy, inspections, etc.)
- **Maintenance** – the preventative and corrective actions to sustain asset functionality and minimise unexpected failures. Maintenance activities enable an asset to continue providing service for its useful life (e.g., structural repairs, grated lid replacement, table drain grading).

A pictorial representation of the asset lifecycle activities is shown below in Figure 5.1.



Figure 5.1: Asset Lifecycle Activities

5.1 Background data

5.1.1 Physical parameters

The assets covered by this AMP are shown in **Error! Reference source not found.**.

Asset Classification	Asset Type	Quantity	Unit	Replacement Value ($)
Pipes	Dia. <300	65289	m	49,037,388
	Dia. 300 - 550	449574	m	251,028,361
	Dia. 600 - 1200	40704	m	42,422,594
	Dia. - 1350 - 2050	5990	m	10,568,400
	Total	561557	m	353,056,743
Pits	Bubble up Pit	408	No.	2,743,935
	Chute	0	No.	0
	Combined catch pit and side entry pit	105	No.	432,776
	Double Grated Pit	36	No.	195,386

Asset Classification	Asset Type	Quantity	Unit	Replacement Value ($)
	Double Gully Pit	3	No.	12,371
	Double Grated Side Entry Pit	58	No.	379,609
	Double side entry Pit	88	No.	471,704
	End wall/Head wall	683	No.	1,963,659
	Gatic Cover Pit	44	No.	179,063
	Grated Gully Pit	3850	No.	15,016,456
	Grated Pit	423	No.	1,650,214
	Gross pollutant trap	164	No.	6,072,737
	Grated side entry pit	563	No.	2,536,325
	Grated Soak Well	35	No.	114,634
	Gully Pit	229	No.	944,350
	Junction Pit	6890	No.	24,741,694
	Junction with Chamber	14	No.	50,040
	Junction Pit with Drop	1	No.	3,574
	Side Entry Pit	9187	No.	36,290,492
	Side Entry / Gully Pit	957	No.	3,946,080
	Soak Well	371	No.	1,215,121
	Soakwall combined side entry pit	6	No.	19,652
	Total	24115	No.	98,979,873
OSDS (Area)	Basin	118	No.	
	Detention Basin	17	No.	
	Drain Gully	2	No.	
	Lake	15	No.	
	Linear Swale	7	No.	
	Open Drain	56	No.	

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Asset Classification	Asset Type	Quantity	Unit	Replacement Value ($)
	Retention Basin	25	No.	
	Spillway	6	No.	
	Sump	216	No.	
	Swale	98	No.	
	Wetland	1	No.	
	Total	561	No.	0
WHD	Infiltration Chamber	225	No.	1,583,032
	Storage Tank	10	No.	70,357
	Total	235	No.	1,653,389
Fences	Bollards	1871	m	214,066
	Colorbond	2268	m	200,129
	Chain Wire / Mesh	10035	m	722,467
	Railings	2272	m	791,513
	Wall (Brick / Concrete / Stone)	4214	m	2,218,015
	Total	20660	m	4,146,189
Total				457,836,195

Table 5.1: Assets covered by this Plan

The City's stormwater drainage consists of multiple asset types and each have different management considerations. The OSDS assets do not have an assigned value as they are deemed to not depreciate; they are excavated or natural assets.

The age profile of the assets included in this AMP are shown in Figure 5.2.

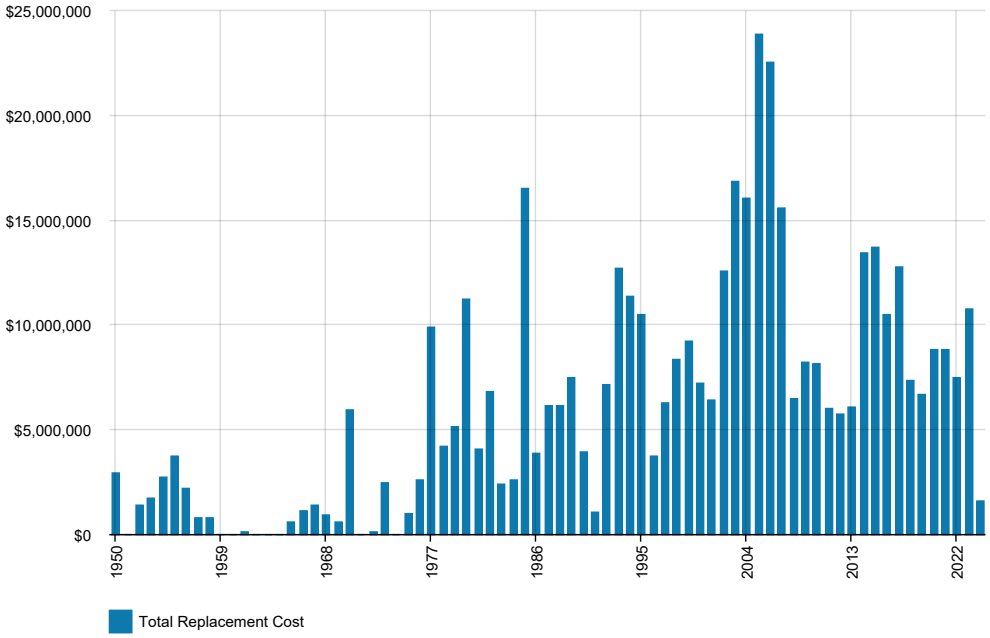


Figure 5.2: Asset Age Profile

The assets built between 1950-1959 should be prioritised for inspections/renewals and this has been included in the Improvement Plan.

Amounts are shown in real values (i.e., current values, net of inflation).

5.1.2 Asset capacity and performance

The City of Cockburn commissioned Cardno Consulting in 2017 to undertake a Drainage Catchment Study (DCS) to identify system deficiencies and provide a prioritised list of upgrade projects that could be undertaken to improve the aesthetics, performance and efficiency of stormwater disposal. A revision of the DMS is in progress (by UrbAqua).

Locations where deficiencies have been identified are in **Error! Reference source not found.**.

Location	Service Deficiency
DCS report – recommendations	Prioritised recommendations are detailed on pages 16 to 35 of the DCS report. The order of cost totalling $5,608,200 based on 2017 costings.
South Lake	

Location	Service Deficiency
Broadwater Gardens Reserve	Require a Gross Pollutant Trap (GPT) as untreated/ unmanaged water going into lake systems are having an environmental impact on the service
Spearwood Penn	
Lake Drive	

Table 5.2: Known Service Performance Deficiencies

The DCS has been used to develop a 10-year program to upgrade the capacity of underperforming sumps, with further investigation and detailed analysis by the City. Many sumps have already been upgraded.

5.1.3 Asset condition

The DMS stipulates use of CCTV to condition rate the pits and pipes. Resourcing this significant ongoing work appears to be an outstanding issue, with some approaches suggested in the DMS. A risk managed approach will be required, i.e. an approach that balances risk level against cost of inspection. Refer Section 6.

Condition is measured using a 1 – 5 grading system[5] as detailed in **Error! Reference source not found.**. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AMP results are translated to a 1 – 5 grading scale for ease of communication.

Condition Grading	Description of Condition
1	Very Good: free of defects, only planned and/or routine maintenance required
2	Good: minor maintenance required plus planned maintenance
3	Fair: defects requiring regular and/or significant maintenance to reinstate service
4	Poor: significant defects, renewal/rehabilitation required
5	Very Poor: physically unsound and/or beyond rehabilitation, immediate action required. Asset is at end of useful life.

Table 5.3: Condition Grading System

[5] IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

Drainage assets in the asset register have an assumed condition rating based on the construction date and useful life as detailed in **Error! Reference source not found.** below. Some fences have been audited and condition assessed in August 2019 providing a true condition of these assets.

Condition	Assumed Age (years)
1	1 to 20
2	21 to 40
3	41 to 60
4	61 to 80
5	81 to 100
Useful Life	100

Table 5.4: Assumed Age / Condition of Assets

The condition profile is shown in Figure 5.3:

- Fences around the sumps are 97% in excellent to moderate condition (1 to 3) and the only fencing in very poor condition has a total CRC of $13,653
- The pipes and pits are very young, with 93% still assumed to be in condition 1 and 2.

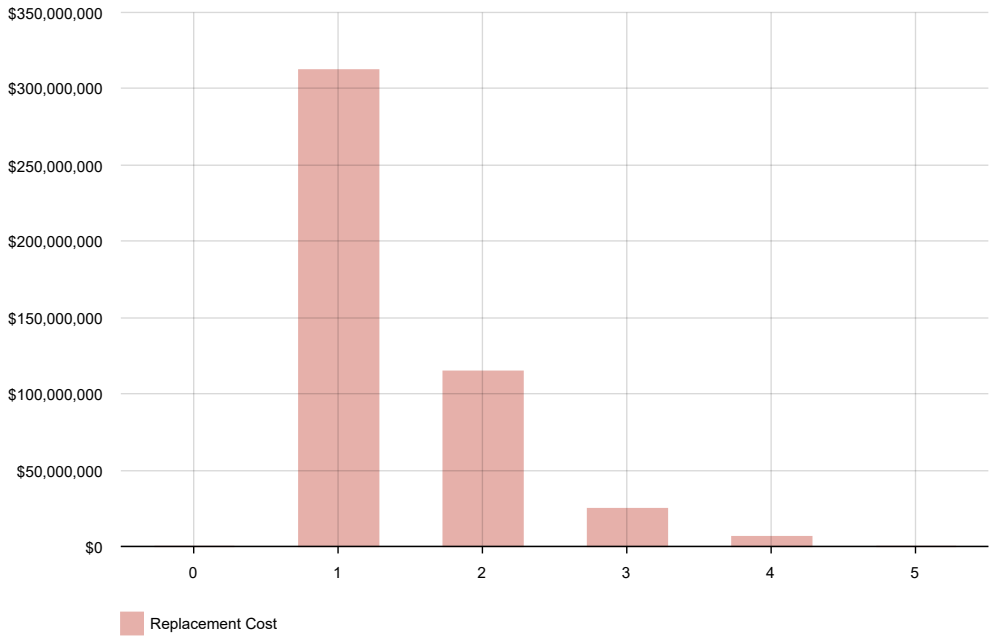


Figure 5.3: Condition Profile

5.2 Operations and maintenance plan

For the purpose of modelling within this AMP, the following definitions apply:

Reactive maintenance is unplanned maintenance work carried out in response to service requests and management/supervisory directions.

Planned maintenance is work that is identified and managed through a maintenance schedule. Examples include cleaning, inspection, assessing the condition against failure/breakdown and reporting the works to develop a maintenance history and improve service delivery performance.

Operating expenditure is continuously required expenditure e.g. power, fuel, staff, security patrols, plant equipment, on-costs and overheads.

The trend in maintenance and operating budgets are shown in **Error! Reference source not found.**.

Financial Year	Total Maintenance Expenditure ($)	Total Operating Expenditure ($)
2017/18	933,056	59,992
2018/19	1,155,025	15,440
2019/20	1,103,426	5,606
2020/21	1,112,478	12,269
2021/22	1,101,777	62,727
2022/23	1,148,878	61,661
2023/24	1,182,571	81,536

Table 5.5: Maintenance and Operating Budget Trends

These previous Operating and Maintenance budget levels are considered to have been adequate to meet service levels. Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement.

5.2.1 Asset hierarchy

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

Currently, the below hierarchy is defined for underground stormwater pipes:

Group	Diameter Min (mm)	Diameter Max (mm)
A	0	225
B	300	550
C	600	1200
D	1350	2050

Table 5.6: Asset Hierarchy for Underground Pipes

It is in the Improvement Plan to incorporate serviced catchment size, the hierarchy of the road that the pipe is under (if any) and other factors.

5.2.2 Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.4 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance planned budget.

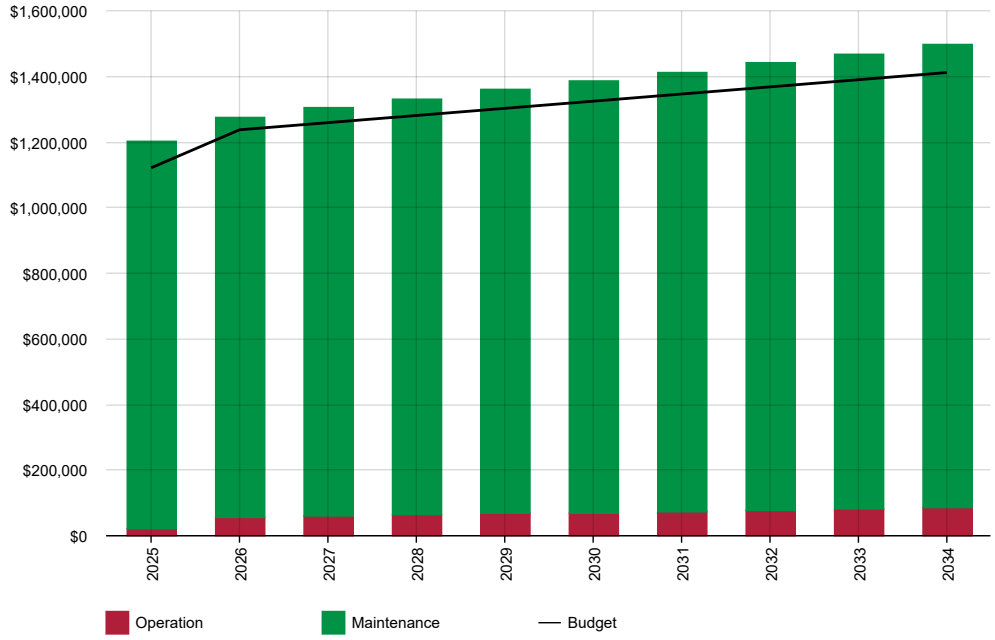


Figure 5.4: Operations and Maintenance Summary

Future maintenance and operating expenditure are forecast to grow in line with the value of the asset stock. With the City's continued asset growth, maintenance and operating expenditure needs to be budgeted to ensure new drainage is maintained to the service levels identified in section 3. According to this analysis this may not be the case going forward. This is further discussed in Section 7.2 of the Financial Analysis.

Please note the apparently low spend on operations reflects the current definition of Operations and Maintenance; it is in the improvement plan to review this definition in line with best practice.

5.3 Renewal plan

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

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

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

The Useful Life used for this plan has been based on the City of Cockburn's depreciation policy as represented in **Error! Reference source not found.**. The useful life of assets is to be reassessed in the future – for underground assets in particular - using deterioration modelling to better predict the useful life of the drainage assets. This will require data on the actual condition of the assets.[6]

Asset Classification	Useful Life (years)
Pits and Pipes	50
Fences – Steel Rail, Plastic Bollards,	15
Chain Wire, Colorbond, Steel Bollards,	20
Cyclone, Ringlock, Timber Bollards,	25
Stone, Removable Bollards,	40
Brick, Concrete, Limestone, Granite Bollards	50

Table 5.7: Useful Lives of Assets

The estimates for renewals in this AMP were based on the alternative method.

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

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

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

Renewals are prioritised by identifying assets or asset groups that:

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

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

Criteria	Weighting (%)
Age	50
Ongoing maintenance / capacity issues	50

Table 5.8: Renewal Priority Ranking Criteria

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Criteria	Weighting (%)
Age	50
Ongoing maintenance / capacity issues	50

Table 5.8: Renewal Priority Ranking Criteria

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

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

5.3.2 Summary of future renewal costs

Assets identified for the renewal plan have been aligned to the DMS report, as discussed in Section 3, and are estimated to be a proportion of the recommended upgrades based on capacity deficiency. As such the projected renewals past 2026/27 are estimated by extrapolating from the DMS. As the DMS is outdated (2018) and under review, engineering judgement has also been applied.

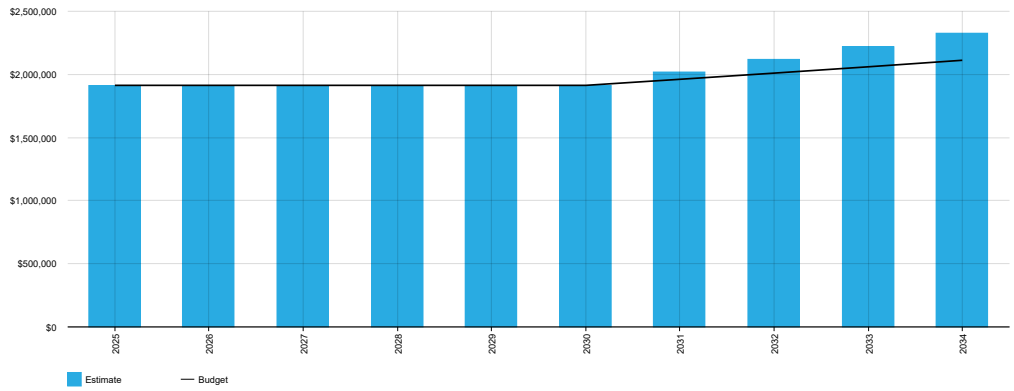


Figure 5.5: Forecast Renewal Costs

5.4 Acquisition plan

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its original service level. They may result from growth, demand, social or environmental needs. Assets may also be donated to the City by developers or third parties.

5.4.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to meet strategic needs of the community. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in **Error! Reference source not found.**.

Criteria	Weighting (%)
New asset requirement identified in strategic documentation (e.g. Strategic Community Plan, Corporate Business Plan, Drainage Management Strategy)	50
Strong community demand (e.g. community group, petition, etc).	25
Supported by empirical data such as population growth data, approved developments, gap in agreed level of service, etc.	25
Total	100

Table 5.9: Acquired Assets Priority Ranking Criteria

5.4.2 Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised in Figure 5.6 and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix A.

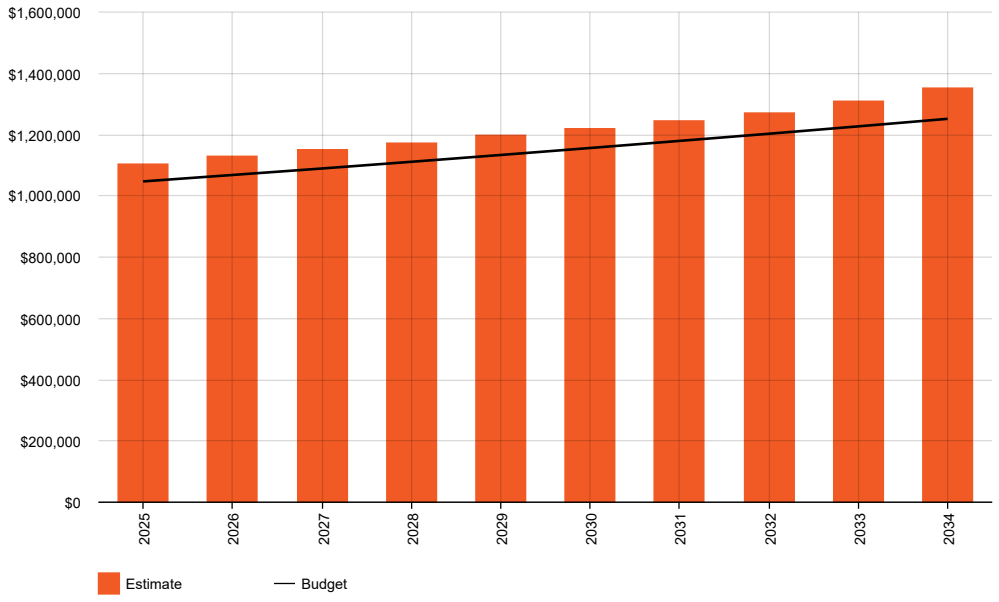


Figure 5.6: Acquisition (Constructed) Summary

Amounts are shown in real values (i.e., current values, net of inflation).

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When the City of Cockburn commits to new assets, we must be prepared to fund future operations, maintenance and renewal costs. We must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in Figure 5.7.

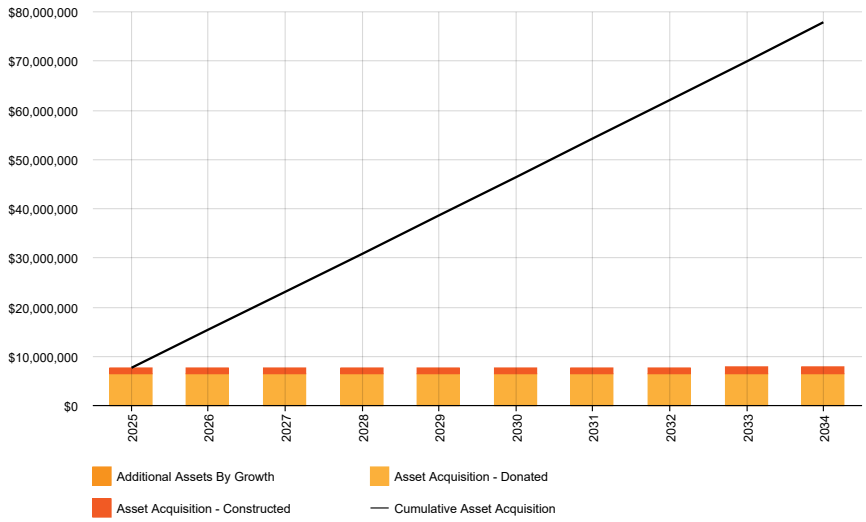


Figure 5.7: Acquisition Summary

Amounts are shown in real values (i.e., current values, net of inflation).

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

With the review of the DMS underway, identification of stormwater drainage projects – including new and upgrade – has largely been reactive. Reviewing the previous five years of stormwater drainage projects has highlighted that planning and budgeting for required acquisitions has been challenging. As such, in the absence of a revised DMS, future budgets and expenditures have been forecast based on previous budgets.

5.5 Disposal plan

No asset disposals have been identified.

5.6 Summary of lifecycle costs and planned budget

The financial projections from this asset plan are shown in Figure 5.8. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

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

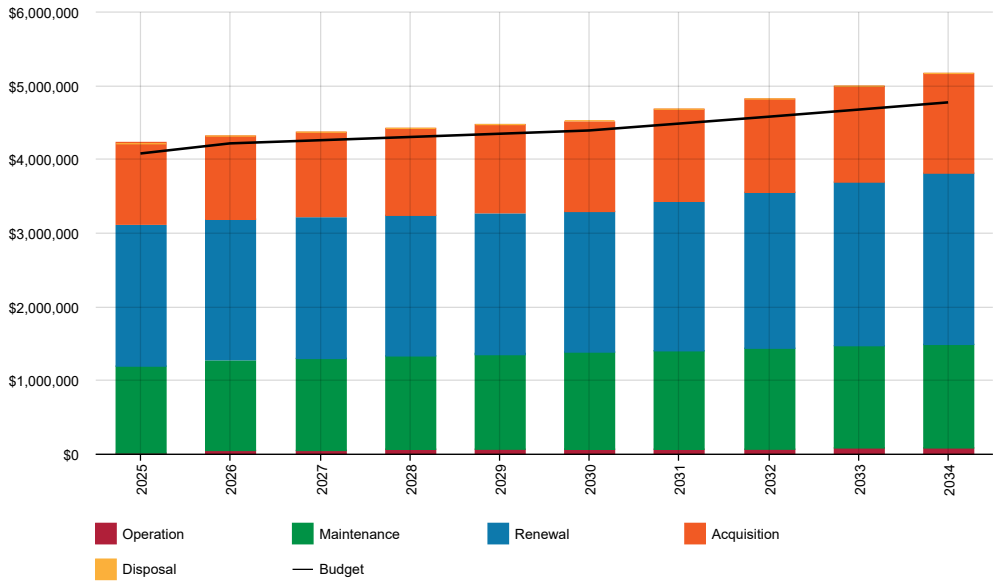


Figure 5.8: Lifecycle Costs and Planned Budget Summary

Amounts are in today's dollars, i.e. excluding inflation.

Forecasts were projected based on the previous five years of budgets and expenditures. It is consistent with the anecdotal message from the operations team that the budget is under stress, as well as reliance on customer complaints for identifying capital works projects.

6 Risk management planning

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

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

An assessment of risks[10] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical assets

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

Critical Asset(s)	Failure Mode	Impact
Assets servicing large catchment areas	Extensive flooding	Property damage and traffic hazards
Assets under distributor roads	Structural failure creating a sinkhole	Severe traffic hazard, insurance claims, death
Assets discharging directly into sensitive ecosystems	Excessive pollution	Algae blooms, native flora/fauna death, pests, media coverage and reputational damage

[9] ISO 31000:2009, p 2

[10] Enterprise Risk Management

Critical Asset(s)	Failure Mode	Impact
Major pipes (>900mm diameter)	Structural failure or blockage	Prevention of stormwater discharge at downstream end of network, resulting in flooding of upstream portions of network.

Table 6.1: Critical Assets

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

6.2 Risk assessment

The risk management process used is shown in Figure 6.1 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.

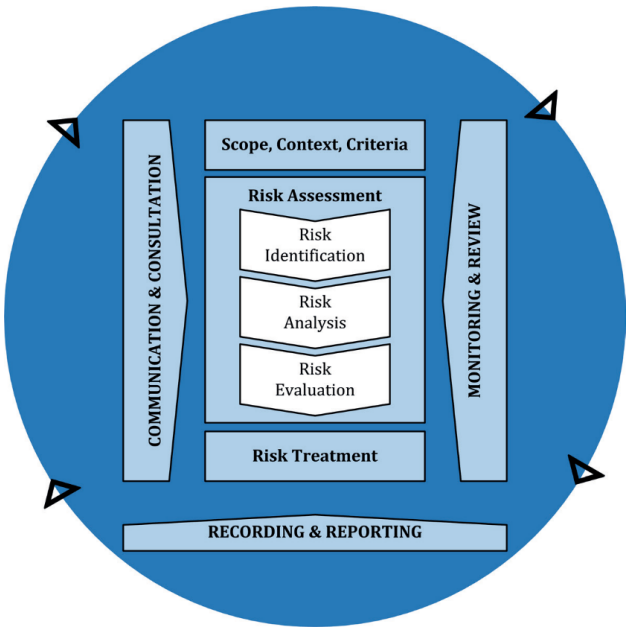


Figure 6.1: Risk Management Process – Abridged

Source: ISO 31000:2018, Figure 1, p9

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

An assessment of risks[11] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

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

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
All	Community infrastructure damage from climate change impacts	VH	Implement recommendations of DMS (pending review)	M	$1m-$10m
All	Failure to align the drainage design program with the Drainage Management Action Plan	H	Ensure DMS review is expedited – identify and resolve blockages	M	$10,000-$20,000 (note DMS review already procured)
			Implement recommendations of DMS		$1m-$10m
			Ongoing stormwater flow monitoring using monitoring devices (e.g. Internet of Things sensors) and supporting systems to identify drainage asset deficiencies		$100,000 per annum

[11] Enterprise Risk Management

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
All	Failure to effectively plan for capital works projects	H	Ensure sufficient project planning resources are available (e.g. stormwater drainage designers)	M	$150,000 per annum
			Drainage condition inspections		$500,000 per annum

Table 6.2: Risks and Treatment Plans

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

6.3 Infrastructure resilience approach

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

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

We do not currently measure our resilience in service delivery, though it is considered in the project scoping phase. 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 we cannot do

There are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years. These include:

- Condition inspection of all underground drainage assets
- Upgrade of all existing drainage assets that require it.

6.4.2 Service trade-off

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

- Critical drainage assets are not adequately maintained or renewed, resulting in a greater percentage of the drainage network being in poor condition (i.e. Condition 4 or 5)
- An increasing number of drainage assets become unfit for purpose, leading to an increase in flooding, unexpected failures and other hazards
- Critical new drainage construction projects cannot occur to improve drainage and alleviate locations of flooding
- Environmental impacts on ecosystems from poor management of stormwater runoff.

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Sudden formation of sinkholes render roads unsafe, likely increasing instances of accidents that result in injury or death
- Increased insurance claims and litigation from property damage due to flooding
- Increased community complaints
- Loss of biodiversity eroding trust and reputation.

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

7 Financial summary

This section contains the financial and valuation forecasts resulting from the information presented in the previous sections of this plan. Forecasts will be improved as the discussion on sustainable levels of service, risk and cost matures in line with the financial strategy.

7.1 Financial statements and projections

7.1.1 Asset valuations

The City's drainage assets were last valued in August 2024. Assets are valued at 'greenfield replacement cost', based on a 'cost to construct' approach. The valuation considered inputs such as:

- Drainage assets
- Unit rates
- Condition data
- Residual value (after depreciation was considered)

7.1.2 Sustainability of service delivery

There are three key indicators of sustainable service delivery that are considered in the AMP for this service area. The three indicators are the:

- Asset Consumption Ratio (Fair Value/Current Replacement Cost);
- Asset Sustainability Ratio (planned renewal budget for next year / annual depreciation expense); and
- Asset Renewal Funding Ratio (planned renewal budget for the next 10 years / forecast renewal outlays for the next 10 years)

Asset Consumption Ratio

Asset Consumption Ratio 81 per cent

This ratio shows the written down value of depreciable assets in relation to their 'as new' value in current prices. A ratio of less than 50 per cent indicates a rapid deterioration of the asset base, whilst a ratio greater than 75 per cent may indicate an over investment in the asset base. In the case of stormwater drainage, it simply indicates the asset stock is young in relation to its useful life.

Asset Sustainability Ratio

Asset Sustainability Ratio 111 per cent

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The target ratio should be between 90-110 per cent. A lower value indicates that at some time in the future, more renewal funding will be required. A higher value may indicate 'above average' renewal spending over the lifecycle of the asset base, which may simply correspond with peaks in new assets being added, depending on the useful lives of the assets.

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio[12] 97 per cent

The Asset Renewal Funding Ratio illustrates that over the next 10 years we expect to have 97 per cent of the funds required for the optimal renewal of assets. However, care needs to be taken – the projected renewals are based on limited data and so are subject to change.

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

7.1.3 Forecast costs (outlays) for the long-term financial plan

Error! Reference source not found. shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan.

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

A gap between the forecast outlays and the amounts allocated in the financial plan would indicate further work is required on reviewing service levels in the AMP and/or financial projections in the LTFP.

We will manage any 'gap' by communicating the service performance, cost, and risk implications in consultation with the community and key stakeholders.

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

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)
24/25	1,105,453	23,411	1,179,453	1,913,371	0
25/26	1,127,562	56,029	1,221,092	1,913,371	0
26/27	1,150,113	59,517	1,244,761	1,913,371	0
27/28	1,173,115	63,006	1,268,429	1,913,371	0
28/29	1,196,577	66,494	1,292,098	1,913,371	0
29/30	1,220,509	69,983	1,315,767	1,913,371	0
30/31	1,244,919	73,471	1,339,435	2,015,829	0
31/32	1,269,818	76,960	1,363,104	2,118,287	0
32/33	1,308,557	80,448	1,386,772	2,220,745	0
33/34	1,352,273	83,937	1,410,441	2,323,203	0

Table 7.1: Forecast Costs (Outlays) for the Long-Term Financial Plan

7.2 Valuation forecasts

The best available estimate of the value of assets included in this AMP are shown below.

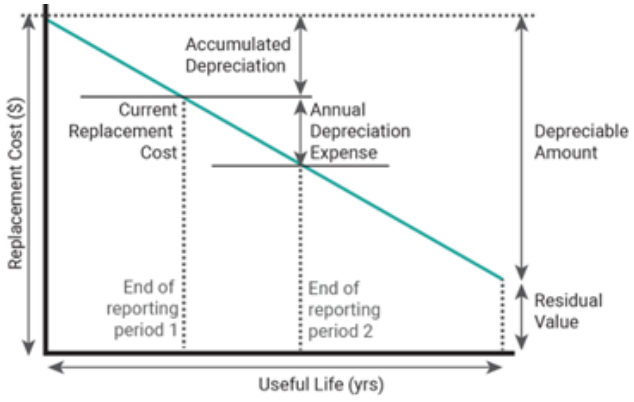


Figure 7.1: Valuation Terminology

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The assets are valued at depreciated replacement cost:

- Replacement Cost (Gross) $457,836,195
- Depreciable Amount $457,836,195
- Current Replacement Cost[13] $373,121,102
- Annual Depreciation Expense $4,690,149

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

Acquiring new assets will add to existing operations, maintenance, future renewal, and depreciation expenses.

Projected renewals are indicative only due to a lack of condition information. A risk managed approach will need to be taken with managing renewals, with improvements to the process to be investigated. Similarly, a risk managed approach should be taken with stormwater drainage infrastructure upgrades and additions.

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

8 Assumptions and improvement planning

8.1 Data and information sources

8.1.1 Accounting and financial data sources

This AMP utilises accounting and financial data sourced from Technology One CiAnywhere 2024A Release (775).

8.1.2 Asset management data sources

This AMP also utilises asset management data sourced from Technology One CiAnywhere 2024A Release (775).

8.2 Key assumptions

In compiling this AMP, it was 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 forecasts.

Key assumptions made in this AMP are:

- Renewal forecasts have been made by professional judgement.
- Population and asset growth projections are assumed to be accurate.
- The data supplied was as accurate as possible at the time of compilation of this asset management plan.
- The breakdown of the actual reactive, planned and operational expenditure is assumed to be accurate.

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

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

The Asset Register Method was used to forecast the renewal lifecycle costs for this AMP initially, however that identified no renewals other than sump fencing. Therefore, professional judgement was used, considering identification of renewals will be by a risk managed approach. This second revision used the Alternative Method.

8.3 Forecast reliability and confidence

The forecast demands, costs, planned budgets, and valuation projections in this AMP are based on the best available data. For effective asset management and financial planning and reporting, it is critical that the information is reliable and up to date. Data confidence is classified on an A to E level scale in accordance with the guidance provided in the International Infrastructure Management Manual. [14]

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

Table 8.1: Data Confidence Grading System

The estimated confidence level for and reliability of data used in this AMP is shown in **Error! Reference source not found.**.

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

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Data	Confidence Assessment	Comment
Demand drivers	B	Professional judgement, corporate knowledge and id projections.
Growth projections	B	Id projections
Acquisition forecast	B	Professional judgement, corporate knowledge and Local Government projections.
Operation forecast	B	City records of past expenditure and professional judgement
Maintenance forecast	B	City records of past expenditure, feedback from C&M and professional judgement
Renewal forecast - Asset values	A	Latest asset valuation data.
- Asset useful lives	C	Useful lives are based on industry practice and condition ratings. However, there is not a high level of confidence with the 'Year Acquired' information for some older assets.
- Condition modelling	D	Ad-hoc, reactive CCTV inspections with primary purpose to investigate customer complaints
Disposal forecast	B	No planned drainage disposals at this moment in time, although this may change within the planning period and, if so, must be reflected in the AMP.

Table 8.2: Data Confidence Assessment for Data used in AMP

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

8.4 Improvement plan

It is important that we recognise gaps in the planning process that require improvement to ensure effective asset management and informed decision making. The improvement plan generated from this AMP is shown in **Error! Reference source not found.**.

Section	Project	Responsibility	Task
3.2	Monitoring performance measures against levels of service targets	Asset Services	Drainage Management Strategy review meetings, update AMP with broad findings
5.2, 5.3	Condition and performance assessment of drainage assets (catchments, sumps)	Asset Services Design Services	External contractor to audit Link to performance deficiency Consider remaining life Consider risk consequence, e.g. concrete pipe under distributor road pavement Consider getting contractor to repair as well
5.2	Maintenance Expenditure Trends	Asset Services Finance Services	Improve allocation of budget to better represent maintenance types Review definition of operations and maintenance, adjust systems accordingly
5.2	Asset hierarchy	Asset Services	Consider overlying assets (e.g. road pavement) Update Criticality or other appropriate field in GIS and T1
6	Proactive risk assessment that incorporates tree root intrusion	Asset Services	Identify data we have on trees Identify pipes that have trees on or near them
5	Useful Lives	Asset Services	Revise and ensure consistency with adopted useful lives
5	Continuing capture of stormwater drainage not currently in asset register	Asset Services	Utilise as-con and design drawings where available Scan paper drawings Capture pits and sumps from GIS and Google Street View
5.1	Documenting 3D as construction drawings for sump earthworks	Planning Services Design Services	Ensure drainage sumps are installed according to design Ensure subdivisional Ascon drawings are handed over to the City

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Section	Project	Responsibility	Task
5.1	Digitising the missing drainage catchments	Asset Services Design Services	Analysing the existing drainage catchment layer in GIS and adding/ updating the drainage
6	Annual review and update of risk register	Asset Services Design Services	Workshop review and update of all relevant risks in risk register

Table 8.3: Improvement Plan

8.5 Monitoring and review procedures

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

This AMP will be reviewed and updated annually to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

The AMP has a maximum life of 4 years and is next due for complete revision in 2028.

8.6 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 long-term financial plan,
- The degree to which the 1 to 5-year detailed works programs, budgets, business plans and corporate structures consider the ‘global’ works program trends provided by the AMP,
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans,
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90-110 per cent).

9 References

- City of Cockburn – Asset Management Strategy 2017 – 2024
- City of Cockburn – Strategic Community Plan 2025 – 2035
- City of Cockburn – Long Term Financial Plan 2024-2025 to 2033-2034
- City of Cockburn – Management Budget 2024 - 2025
- City of Cockburn – Enterprise Risk Management
- City of Cockburn – Drainage Management Strategy 2018 – 2028
- City of Cockburn – Drainage Catchments Study by Cardno – 2017
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- ISO, 2024, ISO 55000:2024 Asset Management – Vocabulary, overview, and principles
- ISO, 2018, ISO 31000:2018 Risk management – Guidelines
- The Local Government and Municipal Knowledge Base - LGAM Knowledge Base
- Local Government of Western Australia – Asset Management Framework and Guidelines
- Main Roads Western Australia - Welcome - Main Roads Western Australia

10 Appendices

10.1 Appendix A Acquisition forecast

The new drainage assets and existing drainage assets that require upgrades to meet urban expansion/growth will be funded through a combination of municipal funding and Developer Contribution Plans.

10.1.1 Acquisition forecast assumptions and source

The forecast for donated assets likely to be received from developers over the next five years has been calculated by averaging out the previous five years total donated assets received through subdivisions. This equates to approx. 7km of new stormwater pipes, 373 new pits and other infrastructure totalling about $7m per year.

10.1.2 Acquisition (constructed) project summary

At present, the City does not have adequate drainage Capital project planning in place for future City-led New/Upgrade projects. These projects should be informed by the City's 2017 Drainage Catchment Study or an updated equivalent study. At minimum, the Civil Infrastructure team should provide advice regarding locations that would provide the most strategic benefit for Capital works intervention in terms of Whole of Life Costs. It is clear there is more work to be done to identify and cost stormwater drainage acquisition projects, particularly when comparing with budgets and expenditures over the past five years (see Section A.3 below).

10.1.3 Acquisition forecast summary

These were calculated by linearly projecting the previous five years of budgets and expenditures.

Year	Constructed ($)	Donated ($)	Growth ($)
24/25	1,105,453	6,573,278	0
25/26	1,127,562	6,573,278	0
26/27	1,150,113	6,573,278	0
27/28	1,173,115	6,573,278	0
28/29	1,196,577	6,573,278	0
29/30	1,220,509	6,573,278	0
30/31	1,244,919	6,573,278	0
31/32	1,269,818	6,573,278	0
32/33	1,308,557	6,573,278	0
33/34	1,352,273	6,573,278	0

Table 10.1: Acquisition Forecast Summary

10.2 Appendix B Operation forecast

10.2.1 Operation forecast assumptions and source

Strictly speaking, operations is expenditure done on an asset that does not depend on its condition. In the case of stormwater drainage, this would include cleaning and vegetation management. However, to date this has not been the practice. Currently this is the cost of ‘supporting’ aspects like power, fuel, staff, security patrols, plant equipment, on-costs and overheads. It is in the improvement plan to review this definition and allocation of funds.

The planned annual operating expenditure was linearly extrapolated from the previous five years of expenditure.

Flooding complaints appear to be increasing slightly, putting extra burden on Operating and Maintenance budgets:

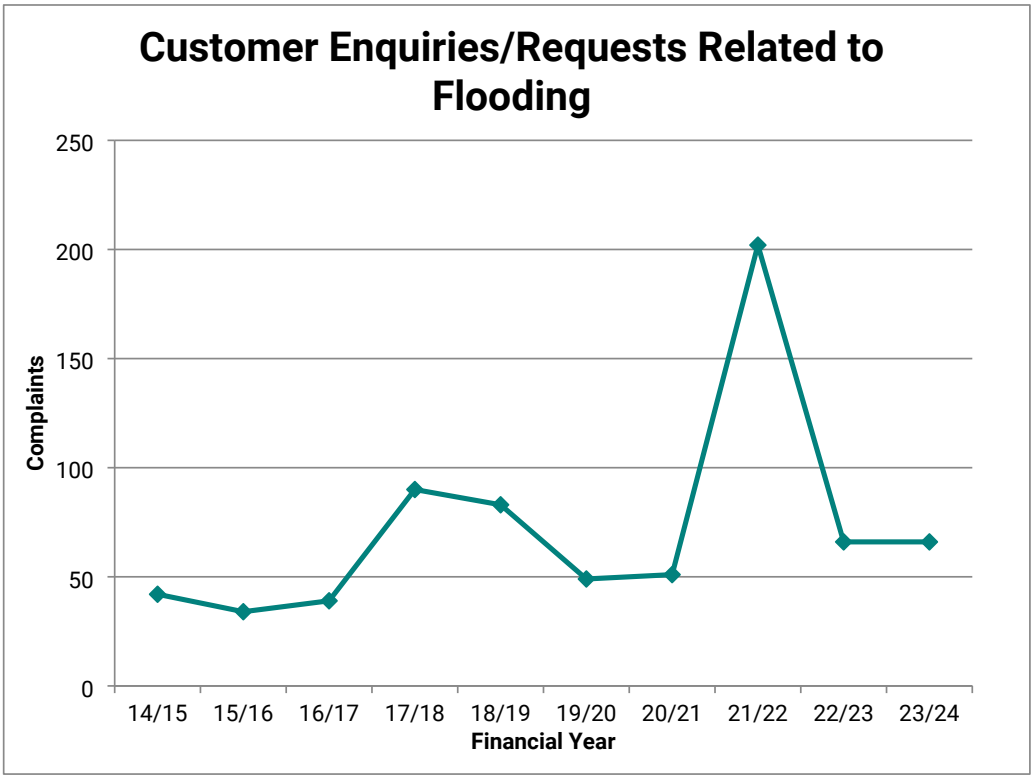


Figure 10.1: Customer Enquiries/Requests Related to Flooding over Previous Ten Years

The majority of the Operating and Maintenance budget is classed as Operating, however this has been used heavily for maintenance as well. This is why both the maintenance and operating budgets have been combined in Figure 5.2.1. The planned Operating and Maintenance budget is assumed to match the planned Operating and Maintenance expenditure.

10.2.2 Operation Forecast Summary

Error! Reference source not found. provides a summary of Forecast Operations expenditure over the planning period.

Year	Operation Forecast ($)	Additional Operation Forecast ($)	Total Operation Forecast ($)
24/25	23,411	Included in forecast	23,411
25/26	56,029	Included in forecast	56,029
26/27	59,517	Included in forecast	59,517
27/28	63,006	Included in forecast	63,006
28/29	66,494	Included in forecast	66,494
29/30	69,983	Included in forecast	69,983
30/31	73,471	Included in forecast	73,471
31/32	76,960	Included in forecast	76,960
32/33	80,448	Included in forecast	80,448
33/34	83,937	Included in forecast	83,937

Table 10.2: Operation Forecast Summary

10.3 Appendix C Maintenance forecast

10.3.1 Maintenance forecast assumptions and source

The 2023/24 adopted maintenance budget for addressing operational drainage issues was approximately $370,000, however it was overspent based on an a higher-than expected number of customer queries (refer Appendix B). Maintenance covers cleaning, inspection and repairs.

Similar to operating expenditure, maintenance expenditure forecasts were linearly extrapolated from past expenditure.

Drainage structure complaints have been steadily increasing:

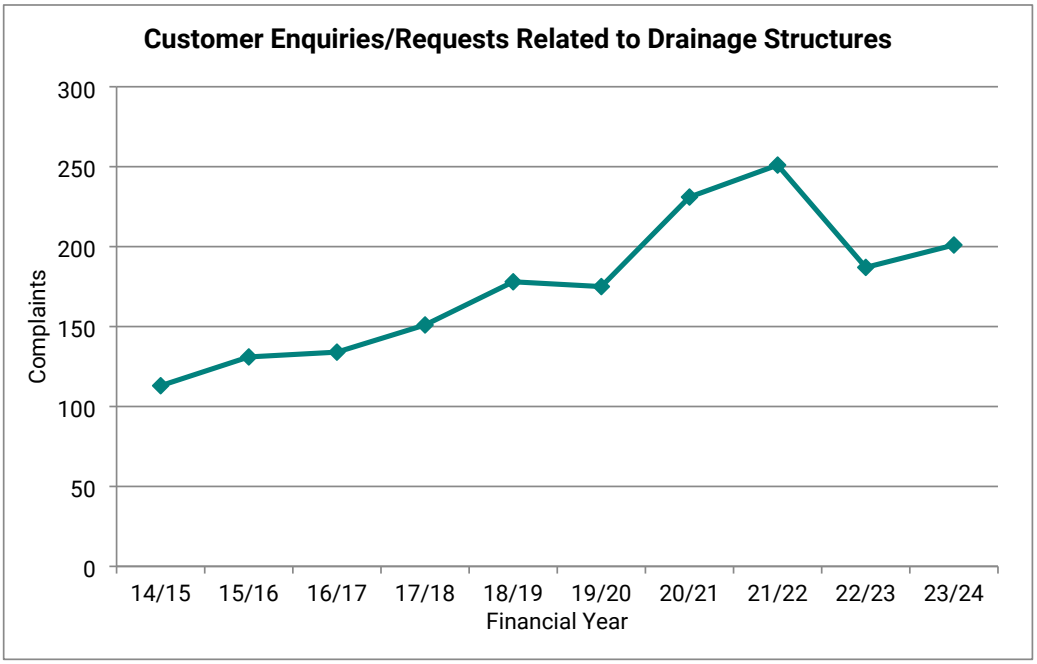


Figure 10.2: Customer Enquiries/Requests Related to Drainage Structures over Previous Ten Years

Of these, in 2023/24:

- Six were of sinkholes, possibly indicating structural failure of below ground infrastructure
- 76 were of damaged lids
- 20 were of damaged fences
- 5 were of requests for new stormwater drainage infrastructure due to localised flooding (i.e. requested acquisition)
- 4 were concerns about newly installed stormwater drainage infrastructure
- 61 were of debris causing blockages

The strong upwards trend (with a spike during the COVID-19 pandemic) suggests more frequent/extensive proactive inspections are required.

In addition, the lakes were reported to be silting up, making it progressively more expensive to keep the stormwater outlets clear and flowing.

10.3.2 Maintenance forecast summary

Error! Reference source not found. provides a summary of forecast maintenance expenditure over the planning period.

Year	Maintenance Forecast ($)	Additional Maintenance Forecast ($)	Total Maintenance Forecast ($)
24/25	1,199,550	Included in forecast	1,199,550
25/26	1,246,941	Included in forecast	1,246,941
26/27	1,295,953	Included in forecast	1,295,953
27/28	1,346,636	Included in forecast	1,346,636
28/29	1,399,043	Included in forecast	1,399,043
29/30	1,453,228	Included in forecast	1,453,228
30/31	1,509,249	Included in forecast	1,509,249
31/32	1,567,162	Included in forecast	1,567,162
32/33	1,627,028	Included in forecast	1,627,028
33/34	1,688,908	Included in forecast	1,688,908

Table 10.3: Maintenance Forecast Summary

10.4 Appendix D Renewal forecast summary

10.4.1 Renewal forecast assumptions and source

Method 1 was used to predict renewals initially. Due to the estimated age of the infrastructure and the assumption of fixed useful lives, only fence renewals were predicted. As underground drainage renewals are typically higher priority, this has made forecasting actual expenditure challenging. Therefore, the forecast renewals were taken to be a fixed proportion of the new and upgrade program from the DMS.

10.4.2 Renewal project summary

Project	Expenditure for Financial Year Ending ($m)									
	25	26	27	28	29	30	31	32	33	34
Drainage Renewal Program	1.7	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.0

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10.4.3 Renewal forecast summary

Error! Reference source not found. provides a summary of Forecast Renewal expenditure over the planning period.

Year	Renewal Forecast ($)	Renewal Budget ($)
24/25	1,913,371	1,913,371
25/26	1,913,371	1,913,371
26/27	1,913,371	1,913,371
27/28	1,913,371	1,913,371
28/29	1,913,371	1,913,371
29/30	1,913,371	1,913,371
30/31	2,015,829	1,961,205
31/32	2,118,287	2,010,235
32/33	2,220,745	2,060,491
33/34	2,323,203	2,112,003

Table 10.4: Renewal Forecast Summary

10.4.4 Renewal plan

Refer to Section 10.4.2.

10.5 Appendix E Disposal summary

10.5.1 Disposal forecast assumptions and source

As of June 2025, it is assumed there are no drainage asset disposal projects required over the planning period. However, this AMP should be updated with any disposal projects identified during the planning period, as well as the life cycle cost summary.

10.5.2 Disposal project summary

Any disposal projects identified during the planning period should be listed here in future AMP updates.

10.5.3 Disposal forecast summary

No asset disposals are planned.

10.6 Appendix F Budget summary by lifecycle activity

The budget summary shown in **Error! Reference source not found.** is based on the renewal budget from the LTFP and the projected O&M budget, as discussed in Appendix B and C.

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)	Total ($)
24/25	1,047,230	703,678	417,500	1,913,371	0	4,081,779
25/26	1,068,175	777,310	459,779	1,913,371	0	4,218,634
26/27	1,089,538	729,138	529,766	1,913,371	0	4,261,813
27/28	1,111,329	680,966	599,752	1,913,371	0	4,305,419
28/29	1,133,555	632,794	669,739	1,913,371	0	4,349,460
29/30	1,156,227	584,622	739,726	1,913,371	0	4,393,946
30/31	1,179,351	536,450	809,713	1,961,205	0	4,486,720
31/32	1,202,938	488,278	879,700	2,010,235	0	4,581,152
32/33	1,226,997	440,106	949,687	2,060,491	0	4,677,281
33/34	1,251,537	391,934	1,019,674	2,112,003	0	4,775,148

Table 10.5: Budget Summary by Lifecycle Activity

10.7 Appendix G Legislative requirements

Legislation	Requirement
Local Government Act 1995	Provides for a system of Local Government by describing the functions of and providing a framework for the administration and financial management of Local Governments.
Main Roads Act 1930	Consolidates and amends the law relating to and making provision for the construction, maintenance and supervision of highways, main and secondary roads, and other roads and the control of access to roads.
Main Roads WA – Code of Practice for traffic management for works on roads (April 2011)	To promote safe and consistent traffic management practice at work sites on roads in accordance with state legislation and national standards. Requires general compliance with the Australian Standard 1742.3-2009 and associated field guides, provides details of additional requirements necessary to meet WA requirements. Also outlines the competency requirements for personnel responsible for managing traffic on work sites.
Planning and Development Act 2005	Provides for a system land use planning and development in the State and for related purposes.
Transport Co-ordination Act 1966	Provides for the co-ordination, planning and advancement of all forms of transport in WA, to provide for the review, control and licensing of transport services and for incidental and other purposes.
Environmental Protection Act 1986	Provides for an Environmental Protection Authority, for the protection, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected to the foregoing.
Environment Protection and Biodiversity Conservation Act 1999	Provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places, defined in the Act as matters of national environmental significance.
Contaminated Sites Act 2003	Provides for the identification, recording, management and remediation of contaminated sites, to consequentially amend certain other Acts and for related purposes.

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Legislation	Requirement
Conservation and Land Management Act 1984	Makes better provision for the use, protection and management of certain public lands and waters and the flora and fauna thereof, establishes authorities to be responsible therefore, and for incidental or connected purposes.
Soil and Land Conservation Act 1945	Relates to the conservation of soil and land resources, and to the mitigation of the effects of erosion, salinity and flooding.
Rail Safety Act 2010	Requires Local Governments to develop an Interface Agreement with the rail manager/operator for every rail/road crossing in their area of responsibility by 1 February 2014
Fire and Emergency Services Authority of WA Act 1998	Establishes an Authority with functions relating to the provision and management of emergency services, and for related purposes.
Aboriginal Heritage Act 1972	Provision for the preservation on behalf of the community of places and objects customarily used by or traditional to the original inhabitants of Australia or their descendants
Native Title Act 1993 and amendments 1998	Provides for the recognition and protection of native title and to establish ways in which future dealings affecting native title may proceed.
Occupational Safety and Health Act 1984 (WA)	Provides for the promotion, coordination, administration and enforcement of Safety and Health in WA. Places emphasis on the prevention of accidents and injury
Disability Services Act 1993	An Act for the establishment of the Disability Services Commission and the Ministerial Advisory Council on Disability, for the furtherance of principles applicable to people with disabilities, for the funding and provision of services to such people that meet certain objectives, for the resolution of complaints by such people, and for related purposes.
Code of Practice Working Hours 2006	Provides guidance for employers and workers on the management of Safety and Health hazards and risks commonly associated with working hour arrangements.
Australian Standards	Standards are published documents setting out specifications and procedures designed to ensure products, services and systems are safe, reliable and consistently perform the way they were intended to. They establish a common language which defines quality and safety criteria.

Legislation	Requirement
Western Australian Planning Commission Act 1985	An Act to establish a body with responsibility for urban, rural and regional land use planning and land development and related matters in the State, and for connected purposes.
Local Government Guidelines for Subdivisional Development, 2011	To provide greater clarity and certainty of subdivisional engineering requirements, the Department of Planning has partnered with the Institute of Public Works Engineering Australia (WA Division) (IPWEA) to produce Edition No. 2.1 of the Local Government Guidelines for Subdivisional Development, 2011. These 2011 Guidelines are intended to underlie, and support subdivision conditions applied by the Western Australian Planning Commission pursuant to the Planning and Development Act 2005. The Guidelines encompass current legislation and best practice minimum engineering standards.

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City of Cockburn

Bridges Asset Management Plan 2024-2028



www.cockburn.wa.gov.au

August 2025

Document Set ID: 12463650
Version: 12, Version Date: 03/09/2026

Front cover page photo is taken of Cockburn Train Station and surrounds

Asset Management Plan				
Document ID: 12463650				
Date	**Revision Details**	**Author**	**Reviewed**	**Approved**
April 2026	Final Version 2024 - 2028	Asset Services	Service Manager Infrastructure Assets	

Acknowledgement of country

The City of Cockburn acknowledges the Nyungar people of Beeliar Boodjar. Long ago, now and in the future they care for Country.

We acknowledge a continuing connection to Land, Waters and Culture and pay our respects to Elders, past and present.

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1 Executive summary

The City of Cockburn's community relies on a diverse portfolio of infrastructure assets, including roads, buildings, bridges, parks and footpaths. The bridge assets covered by this Asset Management Plan are valued at approximately $23 million.

The Asset Management Plan (AMP) provides a strategic framework for managing our community's infrastructure assets, ensuring they remain safe, reliable, and capable of meeting current and future demands.

1.1 Purpose of the plan

This AMP aims to:

- Provide a systematic approach to asset management
- Address critical risks associated with aging infrastructure and limited funding
- Ensure infrastructure supports the community's social, economic and environmental goals.

This AMP details information about the City's bridges, as well as defining the Level of Service (LOS) and outlining the funding required to maintain this LOS over a 10 year planning period.

This highlights any funding gaps between the planned and forecast expenditure, which assists in optimising expenditure on managing assets through the Long-Term Financial Plan.

1.2 Asset description

The bridges consist of:

- Road Bridges 3
- Culverts 2
- Footbridges 781m
- Boardwalks 2381m
- Decking 372m.

The above infrastructure assets have a total renewal value estimated at $22,728,234.

1.3 Levels of service

This plan covers the infrastructure assets that provide connectivity and access via bridges and boardwalks.

The City is responsible for:

- Operations
- Maintenance

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- Renewal
- Upgrades and New.

As for bridges over or under a road with a Main Roads Western Australia (MRWA) number, MRWA arrange detailed (Level 2) inspections. These identify maintenance and renewal works for the City to fund and procure.

The City's overall customer LOS objective should be to maintain 70 per cent community satisfaction with bridge and boardwalk assets, which is based on scoring and targets outlined in the 2024 Strategic Community Plan Review by Place Score. Maintaining 70 per cent community satisfaction is expected to be financially sustainable for the foreseeable future.

The main service consequences of an insufficient budget are:

- Risk of structural failure of assets in Poor condition
- Load limits or road closures to prevent accidents
- Path closures to prevent access to unsafe assets
- Safety incidents, insurance claims, reputational damage.

1.4 Future demand

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

- Increased population and land development resulting in more parks with boardwalks and pedestrian bridges
- Aging population increasing the need for universal access.

Strategies to manage these demands are discussed in Section 4.

1.5 Lifecycle management plan

How we plan to manage and operate the assets at the agreed levels of service throughout their lifecycle is contingent on 10-year Long-Term Financial Plan (LTFP).

Furthermore, when the City commits to the upgrade of existing and acquisition of new assets, future operations, maintenance and renewal costs including depreciation will increase.

1.5.1 What does it cost?

The lifecycle costs necessary to provide the services covered by this AM Plan include operations, maintenance, renewal and upgrade of existing assets, and the acquisition of new assets to meet demand. Disposal of assets is also considered.

When lifecycle costs are prepared for a minimum 10-year planning period, they can be used to inform the 10-year LTFP. The first 10-year lifecycle forecast is estimated to cost $3,755,356 or $375,536 on average per year.

Depreciation is excluded from these cost estimates.

1.5.2 What we will do

The funding made available in the first 10-years' of the LTFP is $3,706,801 or $370,680 on average per year which is approximately 99 per cent of the cost to undertake the lifecycle activities.

The reality is, only what is funded in the LTFP can be provided. Informed decision making depends on the AM Plan emphasising the consequences of planned budgets on the service levels provided and communicating the residual risks. It is important to ensure the organisation is delivering the services in a financially sustainable manner.

The 10-year LTFP results in a shortfall of $4,855 on average per year of the forecast lifecycle costs required to provide services. This is shown in Figure 1.1.

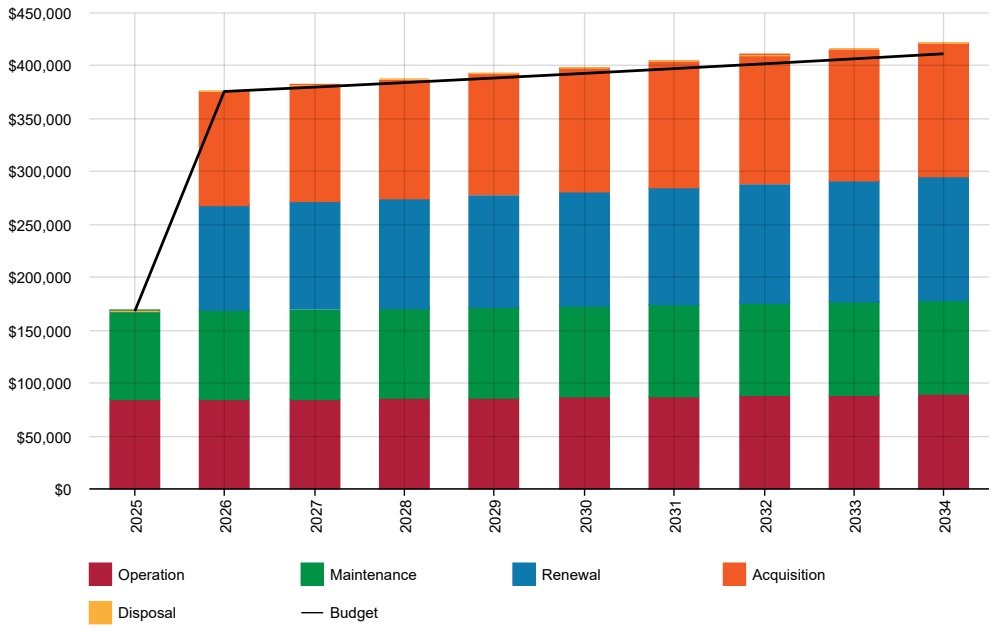


Figure 1.1: Forecast Lifecycle Costs and Planned Budgets

Amounts are shown in real values (i.e., current values, net of inflation).

We plan to provide bridge services for the following:

- Operation, maintenance, renewal and upgrade of road bridges, footbridges and boardwalks within the 10-year planning period
- Completion of key bridge and culvert renewals, upgrades and new construction projects within the 10-year planning period.

1.5.3 What we cannot do

Funding levels appear to be sufficient to perform the required activities. However, there needs to be additional rigour to ensure projects are adequately scoped over a 10 year planning period to inform the LTFP.

1.6 Risk management

The planned budget appears sufficient to continue to manage risks in the medium term.

The main risk consequences are:

- Critical bridges and culverts are not adequately maintained, renewed or upgraded to meet demand
- Some bridges and culverts may become unsafe, increasing instances of accidents that result in injury or death.

Strategies and actions to manage these risks are discussed in Section 6.

1.7 Financial summary

Providing financially sustainable and affordable services from infrastructure requires the careful management of service levels, costs and risks.

The 10-year LTFP is $370,680 on average per year giving a 10 year funding shortfall of $4,855. This indicates that 99 per cent of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the LTFP.

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

1.8 Assumptions and improvement planning

Key assumptions made in this AM Plan are:

- Population and asset growth projections are assumed to be accurate
- Condition data and age data are assumed to be accurate (noting that this AMP is based on a ‘Medium’ level of confidence information)
- Unit rates are representative of asset replacement costs

- Useful lives are an accurate representation of the behaviour of assets in the field and the City's practices in renewing/replacing assets at their end of useful life.

An alternative method was used to forecast the renewal lifecycle costs for this AM Plan.

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

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

- Ensure all assets have been condition rated in accordance with City's requirements
- Accessibility audit for all pedestrian bridges and boardwalks
- Accurately scope and plan for capital works projects in a long term plan.

2 Introduction

2.1 Background

This AM Plan communicates the actions and necessary funds required to sustainably deliver services through the careful management of assets for the foreseeable future.

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

- City of Cockburn Strategic Community Plan 2025 – 2035
- City of Cockburn Corporate Business Plan 2024/25 – 2027/28
- City of Cockburn Annual Business Plan(s)
- City of Cockburn Long Term Financial Management Plan 2024/25 – 2033/34.

While the City has relatively strong asset inventory information, translating into a coherent long term capital works program has been an area for improvement.

The infrastructure assets covered by this AM Plan include road bridges, footbridges, culverts and boardwalks. For a detailed summary of the assets covered in this AM Plan refer to Table 5.1 in Section 5.

These assets are used to provide access and connectivity throughout City of Cockburn for both vehicles and pedestrians, where watercourses or significant topography variations warrant a bridge or similar.

The infrastructure assets included in this plan have a total replacement value of $28 million.

2.2 Stakeholders

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

Key Stakeholder	Role in Asset Management Plan
Elected Members	Represent needs of community/shareholders, Allocate resources to meet planning objectives in providing services while managing risks, Ensure services are sustainable.
Chief Executive Officer (CEO)	Organisational direction and leadership

Key Stakeholder	Role in Asset Management Plan
Executive Leadership Team (ELT)	Executive management endorsement, sign off and executive ownership
Group Manager Assets and Projects	Review and strategic management sign off
Service Manager Infrastructure Assets	Review and line management sign off
Infrastructure Asset Services	Asset Management Plan development, review, continuous improvement and implementation of the AMP maintenance actions
Community, Residents, Tourists & Business	Provide feedback to the City and Councillors on how the City is going in maintaining the agreed levels of service.
Public Transport Authority & Transperth	Work in conjunction with the City ensuring the City's road bridges meet requirements
Insurers	Assist to manage financial risk of the City
State Emergency Services	Attendance to call-outs and security
Main Roads WA	Ownership and maintenance of some primary roads throughout the City, provide advice regarding inspection and maintenance of bridges over or under public roads
Developers	Required to ensure constructed infrastructure handed to the City is to approved standards and complies with legislation

Table 2.1: Key Stakeholders in the AMP

2.3 Principles, goals and objectives of asset management

The principles of asset management as per the International Standards for asset management are:

- **Value**: asset management focuses on the value assets provide to the organisation over time.
- **Alignment**: asset management aligns financial, technical and operational decisions with the organisational objectives, promoting vertical and horizontal coordination.
- **Leadership**: leadership and sustained commitment at all levels are crucial for successful asset management.[1]

[1] ISO 55000:2024 Asset Management – Vocabulary, overview, and principles

Our goal for managing infrastructure assets is to deliver the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers.

The key objectives of infrastructure asset management as defined by the International Infrastructure Management Manual are:

- Defining levels of service and monitoring performance
- Managing the impact of growth through demand management and infrastructure investment
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service
- Identifying, assessing and appropriately controlling risks
- Linking to a Long-Term Financial Plan which accommodates the required expenditure and how it will be funded.[2]

2.4 Plan framework

The 2024 - 2028 Bridges AMP has been developed in accordance with the International Infrastructure Management Manual (IIMM) and complies with Department of Local Government & Communities Asset Management Framework.

As part of the City's Strategic Asset Management Planning Framework (SAMPF), the Bridges AMP will be developed every 4 years and be subject to a 2-year desktop review. This AMP review will focus on core elements required by the LTFP, for example asset valuations, growth projections, financial analysis including operating, sustainability ratios and 10-year renewals. This will ensure that future revisions of the LTFP will be derived from a structured AMP development cycle that has received Executive and or Council approval, increasing confidence and integration of asset management data and methodologies into the City's long term financial planning and adopted service levels.

Figure 2.1 provides a visual representation and timeline of the SAMPF.

[2] IPWEA International Infrastructure Management Manual (IIMM), Sec 1.2.1

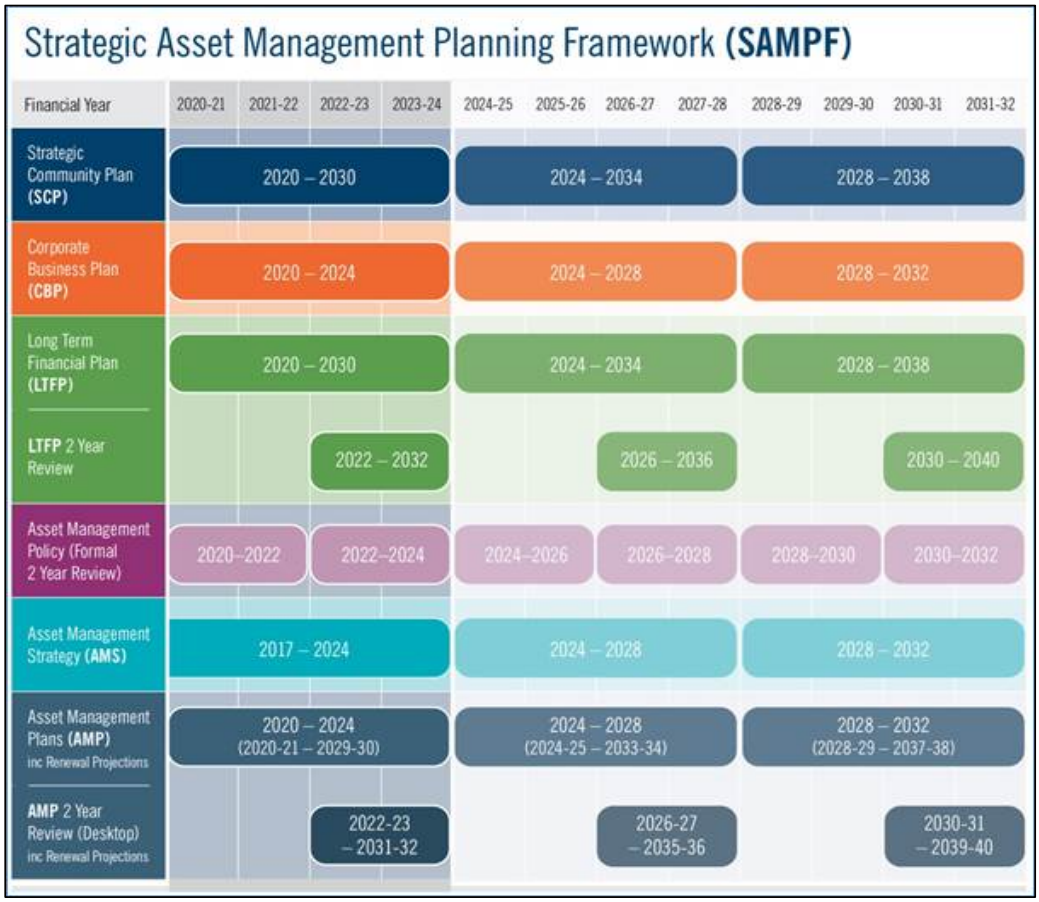


Figure 2.1: Strategic Asset Management Planning Framework (SAMPF)

- Level of Service and Enterprise Risk Management – outlines the level of service provided by council and identifies risks to the city
- Future Growth and Demand how this will impact on future service delivery and how this is to be met
- Lifecycle Management – how the city will manage its existing and future assets to provide the required services
- Financial Analysis – what funds are required to provide the required services
- Asset management practices – current systems and practices in place
- Improvement and monitoring – how the plan will be monitored and improved to ensure it is meeting Council's objectives.

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2.4.1 Corporate Planning Framework

The formalisation and alignment of the City's SAMPF within the Corporate Planning Framework reflects the City's increasing maturity and recognises the importance of Asset Management in supporting the City in delivering long term financial sustainability of services and capital asset renewal.

With the continued implementation of the SAMPF, the City will commence measuring service levels for planned and reactive maintenance to determine operational performance and asset utilisation.

The City strives to improve its strategic and operational asset management practices and to continue its journey towards advanced asset management. The Department of Local Government, Sport and Cultural Industries (DLGSC) has developed the Western Australia Local Government Integrated Planning and Reporting Framework. Accordingly, the future direction and need for advanced level practices are continually assessed.



Figure 2.2: City's Corporate Planning Framework

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3 Levels of service

Levels of service define the standards and performance targets that infrastructure assets are expected to meet to ensure they provide reliable, safe, and efficient services to the community.

3.1 Customer research and expectations

The City carries out the Place Score Liveability Survey bi-annually to gather and evaluate customer feedback across a range of services that the City provides. This allowed the City to measure its performance against community expectations.

The first and most recent Place Score Liveability Survey was undertaken in September 2024. In total, 1811 residents participated in the survey. The most relevant place score metric is 'Ease of driving and parking', with a Place Experience (PX) score of 7.5/10 as part of the most recent survey.

Table 3.1 summarises the results from our Customer Satisfaction Survey.

Performance Measure	Performance Score (PX)		
	Good PX ≥ 7	Average 6 ≤ PX < 7	Poor PX < 6
Access and safety of walking, cycling and/or public transport (signage, paths, lighting etc.)	7.0		
Ease of Driving and Parking	7.5		
Quality of public space (footpaths, verges, parks etc)	7.2		
Evidence of City management (signage, street sweeping etc)		6.5	
Evidence of recent public investment		6.0	

Table 3.1: Customer Satisfaction Survey Levels

3.2 Strategic and corporate goals

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

Our vision is:

Cockburn, the best place to be.

Our mission is:

Support our communities to thrive by providing inclusive and sustainable services which reflect their aspirations.

Strategic goals have been set by the City and are found in the City's Strategic Community Plan. The relevant goals and objectives and how these are addressed in this AMP are summarised in Table 3.2.

Goal	Objective	How Goal and Objectives are addressed in the AM Plan
Our Economy	Empower and support local businesses (through an efficient transport network)	Negotiate acceptable capacity, function, condition and cost to mitigate risks to disruption of access to businesses
Our Environment	Enhance climate resilience and champion environmental initiatives to mitigate impacts	Identify opportunities to ensure the transport network is resilient to the effects of increased storm severity and raised sea levels, at a cost acceptable to the Community – this AMP considers bridges and boardwalks, current and new
Our Places	Plan for growth and sustainable development	Ensure sufficient bridges and boardwalks for vehicle, cycle and pedestrian traffic and connectivity
	Enhance connectivity and mobility through integrated transport networks.	
Our Governance	Strive for financial sustainability and operational excellence	Ensure agreed service levels and funding are in alignment, optimise lifecycle cost
	Strengthen engagement and communication and enhance customer experience.	Negotiate bridge and boardwalk levels of service vs cost with business and the community

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

3.3 Legislative requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the road service are outlined in Appendix G.

While no longer a legislative requirement, the Asset Management Ratios are reasonable performance indicators of the ongoing financial sustainability of assets. The targets for these ratios are set by the Department of Local Government, Sport and Cultural Industries (DLGSCI) through the Integrated Planning and Reporting Framework (IPRF). The calculation methodology and targets for these ratios are outlined in Table 3.3.

Asset class	Consumption ratio	Sustainability ratio	Renewal funding ratio
Description	How much has the City used of its assets?	Is the City replacing assets as they wear out?	Is the City setting aside sufficient future funding for asset renewals?
Calculation	Depreciated replacement cost / current replacement cost	Capital renewal (one year) / annual depreciation (one year)	Planned capital renewal (10 years) / required capital renewal (10 years)
Target	50-75% standard 60-75% ideal	90-110% standard	75-95% standard 95-105% ideal
What it means	Lower than standard = assets are deteriorated and will result in a poor level of service Higher than ideal = assets are being replaced too early resulting in poor value for money*	Lower than standard = the City is under investing in asset renewal/replacement resulting in a poor level of service Higher than standard = the City is over investing in asset renewal/replacement resulting in poor value for money	Lower than standard = the City is allocating too little funding to long term asset renewal/replacement which will result in a lower level of service in future Higher than ideal = the City is allocating too much funding to long term asset renewal/replacement which will result in poor value for money in future

Table 3.3: Asset Ratios

3.4 Customer values

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

Customer Values indicate:

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

Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Safe, e.g. adequate guard rails, can use without fear of collapse	Customer surveys	Strong performance scores in Place Score survey	Maintain
Well lit at night time	Customer requests	Very few or no customer requests	Maintain
Adequate access and connectivity			Maintain

Table 3.4: Customer Values

3.5 Customer levels of service

The Customer Levels of Service are considered in terms of:

Condition How good is the service … what is the condition or quality of the service?

Function Is it suitable for its intended purpose …. Is it the right service?

Capacity/Use Is the service over or under used … do we need more or less of these assets?

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

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

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Overall	Community satisfaction of 70% or greater with the City's bridge and boardwalk network	Community feedback	Score of 7.0/10 for "Access and safety of walking, cycling and/or public transport" in recent community survey.	Maintain > 7.0 in short to medium term, may be at risk beyond 10 year horizon
Condition	Complete condition assessment of all bridges and boardwalks at least every five (5) years	Dates between condition assessments of bridges and boardwalks	Condition inspections for all bridge and boardwalk assets every five (5) years.	Maintain
	Maintain at least 80% of the City's bridges and boardwalks in Condition 3 or better.	Condition assessment scores	Percentage of bridge and boardwalk assets in condition 3 or better by replacement cost is 88.4%	Maintain but may be at risk beyond 10 year horizon
	Confidence levels		Medium	Low
Function	Bridges and boardwalks are safe	Compliance with Australian Standards and relevant guidelines	Most or all are compliant	Maintain
	Bridges and boardwalks are universally accessible	Compliance with Universal Access standards and guidelines	Most are compliant	Maintain
	Confidence levels		Low	Low

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Capacity	At least 80% of road bridges above "LOS F" during AM and PM peak as defined in Austroads Guide to Traffic Management Part 3	Traffic counts vs capacity	Road bridges are for access roads, none within City's jurisdiction are for distributor roads – deemed adequate	Maintain
	At least 80% of bridges and boardwalks do not require load limit signs	Percentage of assets requiring load limit signs	No known load limit signs	Maintain
	Confidence levels		High	Low

Table 3.5: Customer Level of Service Measures

3.6 Technical levels of service

Technical Levels of Service – To deliver on the customer values, and impact they have on Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the lifecycle activities (see Section 5) and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

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

Table 3.6 shows the lifecycle activities related to the current 10 year planned budget, and the forecast costs recommended in this AMP.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Acquisition	Provide new bridges and boardwalks as required	Cycling and Walking Plan Implementation	All recommended bridge and boardwalk expansion	All recommended bridge and boardwalk expansion
	Upgrade bridges and boardwalks as required	Integrated Transport Strategy Implementation	All recommended bridge and boardwalk upgrades	All recommended bridge and boardwalk upgrades
		Budget	$105,350 average per annum for bridges and boardwalks	$105,350 average per annum for bridges and boardwalks
Operations	Keep bridges and boardwalks clean	Frequency of cleaning	Six monthly cleaning (expansion joints for concrete beam road bridges monitored by MRWA)	Maintain

[3] IPWEA, 2015, IIMM, p 2|28.

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Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
	Regular bridge and boardwalk inspections	Frequency of maintenance inspections	Annual maintenance inspections	Maintain
		Budget	$84,048 per annum	$86,476 average per annum
Maintenance	Maintenance identified in annual inspections	Percentage of maintenance completed	All identified maintenance can be completed	Maintain
	Maintenance identified by Community	Localised maintenance issues identified by community actioned within 15 working days	Current maintenance budget and resourcing is sufficient to enable action on localised defects within 15 business days.	Action defects within 10 working days
		Budget	$84,048 per annum	$86,476 average per annum
Renewal	Keep bridges and boardwalks in satisfactory and safe condition	Proportion of bridge assets in “poor” or “very poor” condition	Proportion is 88%	Maintain
	Allocate sufficient medium and long term renewal funding	Asset renewal funding ratio	100%	100%
		Budget	$97,234 average per annum	$97,234 average per annum
Disposal	Dispose of road bridges and culverts that are no longer required	Bridges disposed of when opportunities identified	Nil allocated due to nil disposal opportunities identified	Continue reviewing opportunities to dispose of assets

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
	Dispose of pedestrian bridges and boardwalks that are no longer required	Footbridges and boardwalks disposed of when opportunities identified	Nil allocated due to nil disposal opportunities identified	Continue reviewing opportunities to dispose of assets
		Budget	$0	$0

Table 3.6: Technical Levels of Service

Note: * Current activities related to planned budget.

** Expected performance related to forecast lifecycle costs.

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

4 Future demand

Future demand refers to the effects on infrastructure assets services driven by factors such as population movement, economic development, technological advancements, and changing environmental or community expectations.

4.1 Demand drivers

A demand driver refers to the factors or trends that influence the need for infrastructure services and capacity. Some examples of factors influencing future demand include (but are not limited to):

- Population growth
- Changing demographics
- Industry development/changes in technology
- Legislation changes.

Demand drivers help predict future infrastructure needs and guide planning and investment decisions.

4.2 Demand forecasts

The current position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 4.1.

4.3 Impacts and demand management plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.1.

The impact on service delivery will be managed through a combination of managing and upgrading existing assets and the provision of new assets to meet demand. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to manage demand are shown in Table 4.1. Further opportunities will be developed in future revisions of this AMP.

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Population	133,869 as at 2025	177,920 by 2046	Greater demand for parks, marina expansion etc resulting in more bridges and boardwalks	Ensure operations, maintenance and renewal budgets keep up with an expanding asset base Consider lower cost designs that do not incorporate bridges or boardwalks (e.g. a culvert can have a lower lifecycle cost but be less attractive than a designer bridge)
Demographics: Aging population	16,883 people 67 or older as at 2025	31,329 people 67 or older by 2046	Increased demand for universally accessible road reserves, parks and marinas	Ensure adequate budget for accessibility upgrades for older assets Adequate signage for assets that do not comply

Table 4.1: Demand Management Plan

4.4 Asset programs to meet demand

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

Acquiring new assets will commit the City to ongoing operations, maintenance and renewal costs, and depreciation expenses for the period that the service provided from the assets is required. These future costs and expenses are identified and considered in developing the long-term financial plan.

4.5 Climate change adaptation

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

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

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

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

Risk and opportunities identified to date are shown in Table 4.2.

Climate change risk	Projection	Impact on services	Climate Change Management Plan
Increased stormwater flows under bridges and boardwalks	Greater velocity and water level in drains, basins, wetlands	Increased risk of washout and lack of access during major storms	Identify and budget for upgrades to increase resilience
Raised seawater levels	Varies but 1 m after a century plausible	Increased corrosion risk for coastal assets	Review maintenance practices and plan for increased expenditure

Table 4.2: Managing the Impact of Climate Change on Assets and Services

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

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

Table 4.3 summarises opportunities to build climate change resilience into new and existing assets.

Asset Description	Climate change risk	Resilience Plan for New Assets	Resilience Plan for Existing Assets
Bridges and Boardwalks over Drains and Wetlands	Damage and inaccessibility from flooding	Design to cater for appropriate flooding risk according to latest Australian Rainfall and Runoff revision	Adequate signage Ensure embankments etc not excessively vulnerable to erosion
Marina Bridges	Sea level rise	Design for appropriate storm surge height	Ensure adequate corrosion protection Close when unsafe

Table 4.3: Building Climate Change Resilience into New Assets

The impact of climate change on new and existing assets is evolving and new opportunities will be developed in future revisions of this AMP.

5 Lifecycle management plan

The lifecycle management plan details how the City plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) throughout their entire lifecycle, from acquisition or creation to disposal. The goal is to maximise the value of the assets while minimising costs and risks, ensuring they continue to meet performance requirements over time.

From a financial perspective, infrastructure activities tend to be classified as being either Operating or Capital. The lifecycle activities used in the asset management and financial planning and reporting process cover:

Capital Expenditure:

- **Acquisition** – the activities to provide a higher level of service (e.g., widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library)
- **Renewal** – the activities that replace or restore assets to the standard it had originally provided (e.g., road resurfacing and pavement reconstruction, pipeline replacement and building component replacement)
- **Disposal** – the decommissioning, removing, or repurposing of assets that are no longer cost-effective, safe, or necessary (e.g. shutting down an old water treatment plant, demolishing unsafe buildings, dismantling old bridges, etc.).

Operating Expenditure:

- **Operations** - the routine activities that keep services accessible and effective, balancing efficiency with user expectations (e.g. road sweeping, mowing grass, energy, inspections, etc.)
- **Maintenance** – the preventative and corrective actions to sustain asset functionality and minimise unexpected failures. Maintenance activities enable an asset to continue providing service for its useful life (e.g., road patching, pothole repairs, unsealed road grading, crack sealing).

A pictorial representation of the asset lifecycle activities is shown below in Figure 5.1.



Figure 5.1: Asset Lifecycle Activities

5.1 Background data

5.1.1 Physical parameters

The assets covered by this AMP are shown in Table 5.1.

Asset category	Type	Measure	Unit	Replacement Value ($)
Bridge - Road	Beam	2	No.	4,383,589
	Arch	1	No.	3,812,819
Culvert	Concrete	2	No.	2,609,811
Pedestrian	Boardwalk	2381	m	3,027,973
	Decking	372	m	674,760
	Footbridge	781	m	8,219,283
Total				22,728,234

Table 5.1: Assets covered by this Plan

The bridges and boardwalks covered by this AMP are managed by multiple business units including roads, parks and marina, even though the physical nature of these assets is similar. Clarifying responsibilities is an ongoing area for review, particularly for bridges and boardwalks. As such, this is the first AMP by the City that specifically addresses them.

The age profile of the assets included in this AM Plan are shown in Figure 5.2.

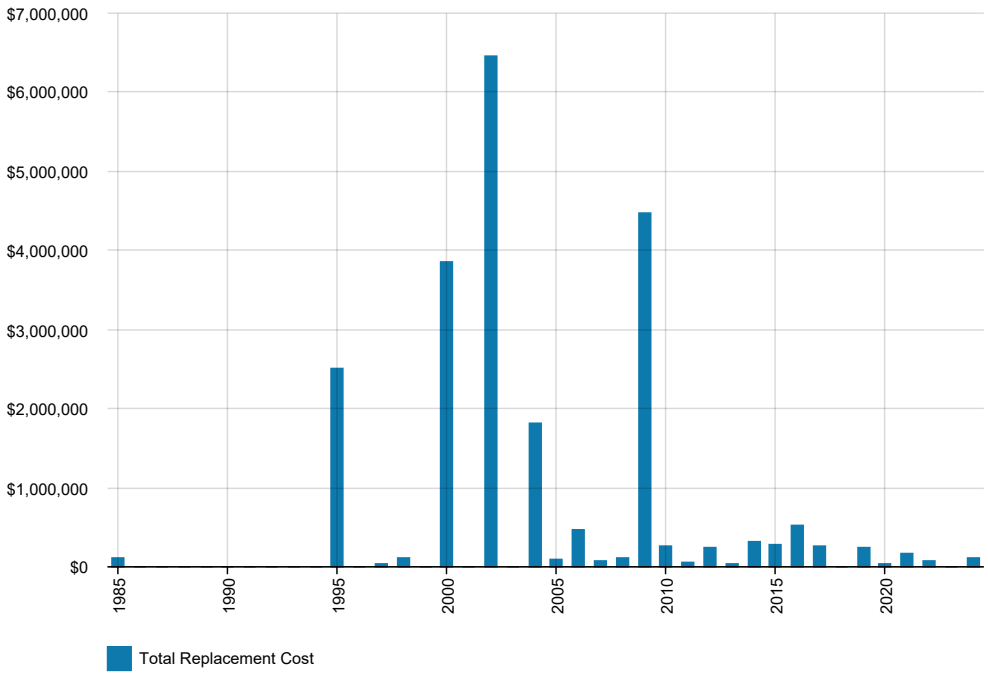


Figure 5.2: Asset Age Profile

Amounts are shown in real values (i.e., current values, net of inflation).

The bridge and boardwalk assets appear young, suggesting renewal of long lived road bridge assets (about 100 years) is not required for a long time. However, the condition data seems to disagree; this requires further investigation. There have been pedestrian bridges and boardwalks that have been renewed recently, consistent with the age distribution.

Condition inspected in the field takes precedence over age when determining renewals, as long as the condition data is accurate.

5.1.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available.

No performance deficiencies have been identified at this stage, however this is an area of ongoing review.

5.1.3 Asset condition

Condition is currently monitored every 5 years. Bridges over or under roads have been condition inspected by Main Roads WA and the City completes the annual maintenance inspections. For all other bridges and boardwalks, the City has been outsourcing condition inspections to Talis. The City needs to ensure the condition data meets its needs.

Condition is measured using a 1 – 5 grading system[5] as detailed in Table 5.2. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AM plan results are translated to a 1 – 5 grading scale for ease of communication.

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

Table 5.2: Condition Grading System

The condition profile of our assets is shown in Figure 5.3.

[5] IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

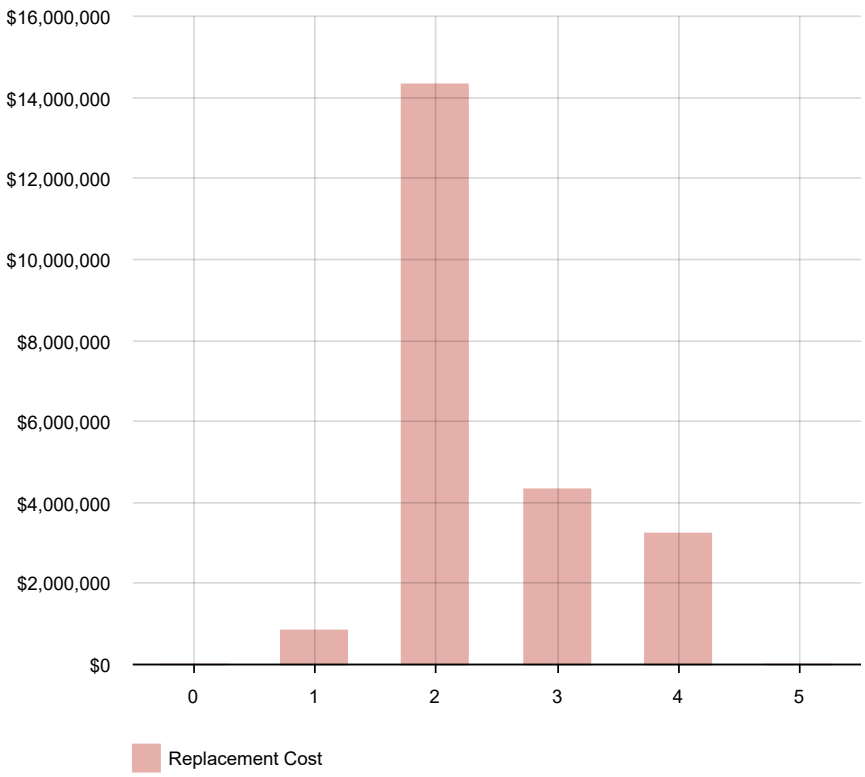


Figure 5.3: Asset Condition Profile

The ~$3 million of assets in Condition 4 have been verified by internal staff and high order cost intervention did not appear justifiable in the medium term.

Where renewals cannot be afforded within the planning period, disposal should be considered to minimise hazards and insurance claims.

5.2 Operations and maintenance plan

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

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include pipe repairs, asphalt patching, and equipment repairs.

The trend in maintenance budgets are shown in Table 5.3.

Year	Maintenance Budget ($)
2024-2025	84,048
2025-2026	84,316
2026-2027	84,908

Table 5.3: Maintenance Budget Trends

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

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

5.2.1 Asset hierarchy

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

The service hierarchy is shown is Table 5.4.

Service Hierarchy	Service Level Objective
Road Bridges and Culverts	Provide continuity of access for vehicles
Pedestrian Bridges	Provide continuity of access for pedestrians, with a deck height above ground level approx. 1 m or more
Pedestrian Boardwalks	Provide continuity of access for pedestrians, with a deck height above ground/water level approx. 1 m or less or with the drop only on one side

Table 5.4: Asset Service Hierarchy

5.2.2 Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.4 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance planned budget.

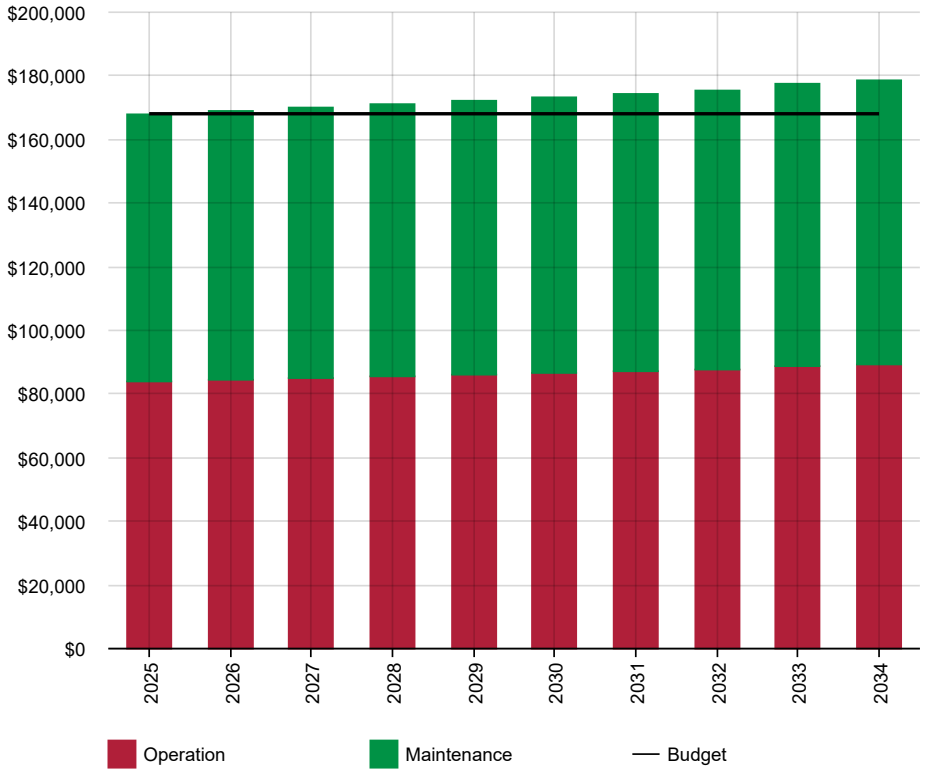


Figure 5.4: Operations and Maintenance Summary

Amounts are shown in real values (i.e., current values, net of inflation).

Operations and maintenance expenditure is not currently separated from road operations and maintenance. It is in the Improvement Plan to revise this in future, given bridges are critical assets.

5.3 Renewal plan

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

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

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

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 5.5. Due to lack of data and pending confirmation of condition ratings, industry standard useful lives were adopted.[6]

Asset (Sub)Category	Useful Life (years)
Guard Rail	20
Road Bridge Surface Footbridge Boardwalk Decking	30
Road Bridge Concrete Beam - Deck	50
Road Bridge Substructure Road Bridge Masonry Arch - Structure	100

Table 5.5: Useful Lives of Assets

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

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

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

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

Renewals are prioritised by identifying assets or asset groups that:

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

The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 5.6.

Criteria	Weighting (%)
Condition	70
High usage	25
Necessary to improve safety/efficiency/expenditure	5
Total	100

Table 5.6: Renewal Priority Ranking Criteria

5.3.2 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.5. A detailed summary of the forecast renewal costs is shown in Appendix D.

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

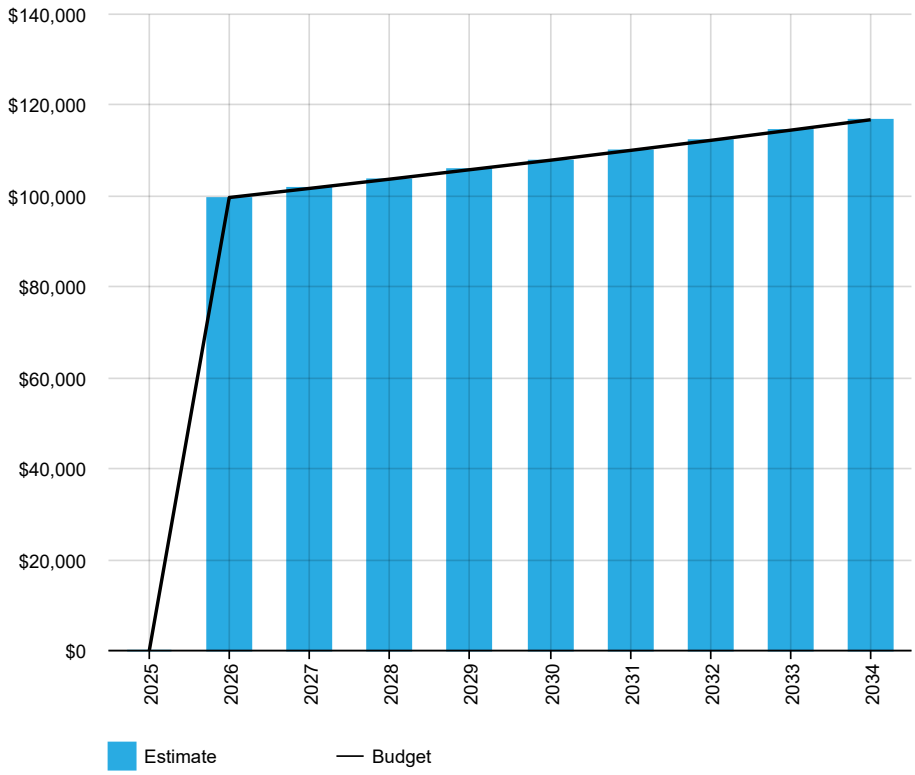


Figure 5.5: Forecast Renewal Costs

Amounts are shown in real values (i.e., current values, net of inflation).

Historically, renewals have been of boardwalks and decking, as they have a shorter useful life.

5.4 Acquisition plan

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its original service level. They may result from growth, demand, social or environmental needs. Assets may also be donated to the City by developers or third parties.

5.4.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to meet strategic needs of the community.

Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in Table 5.7.

Criteria	Weighting (%)
New asset requirement identified in strategic documentation (e.g. Strategic Community Plan, Corporate Business Plan, Road Safety Management Plan, District Traffic Study or Infrastructure Plan)	50
Strong holistic community demand (e.g. community group, petition, etc).	25
Supported by empirical data such as population growth data, approved developments, gap in agreed level of service, etc.	25
Total	100

Table 5.7: Acquired Assets Priority Ranking Criteria

5.4.2 Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised in Figure 5.6 and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix A.

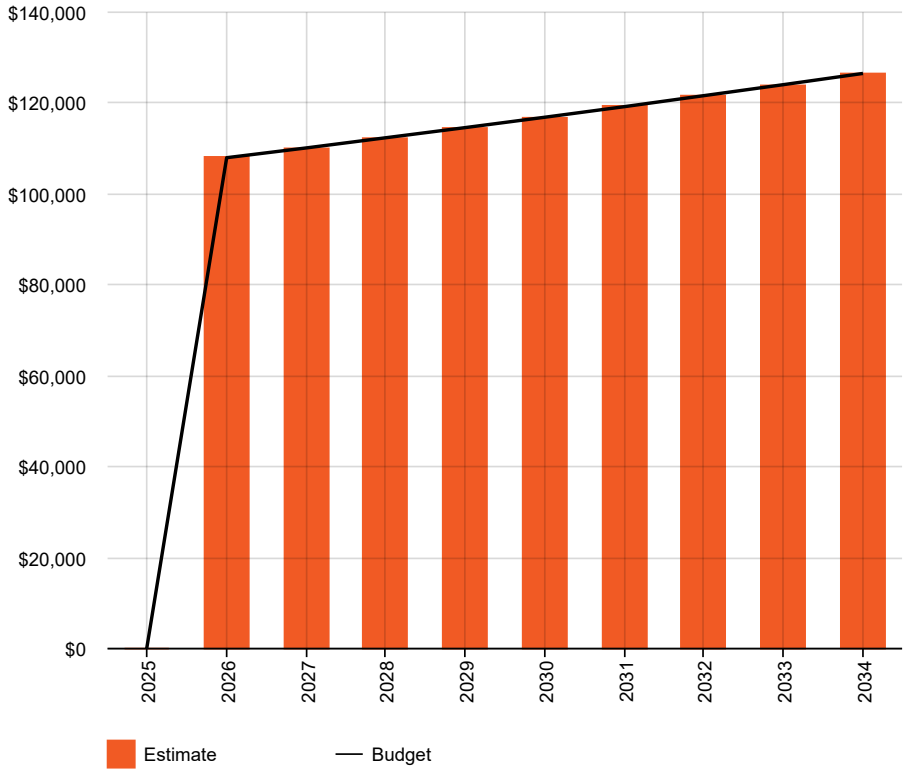


Figure 5.6: Acquisition (Constructed) Summary

Amounts are shown in real values (i.e., current values, net of inflation).

When the City of Cockburn commits to new assets, we must be prepared to fund future operations, maintenance and renewal costs. We must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity. The cumulative value of all acquisition work, including assets that are constructed and contributed, is shown in Figure 5.7.

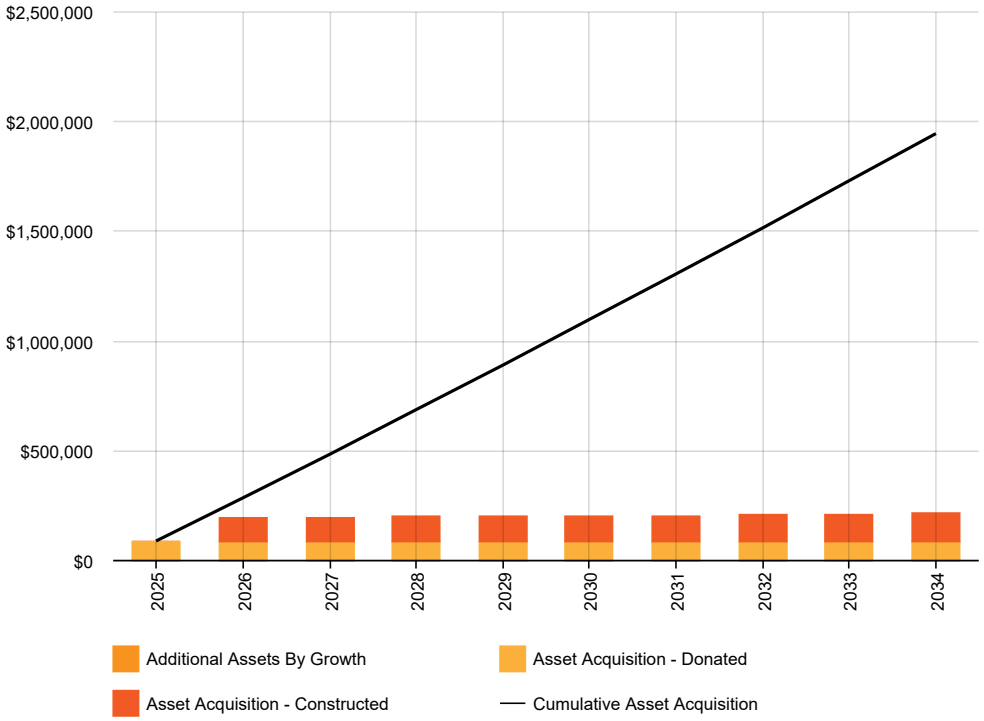


Figure 5.7: Acquisition Summary

Amounts are shown in real values (i.e., current values, net of inflation).

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

New and upgrade projects seem to have been selected on an ad-hoc basis in response to customer complaints and operational issues, e.g. illegal jumping from marina bridges.

5.5 Disposal plan

No assets have been identified for disposal.

5.6 Summary of lifecycle costs and planned budget

The financial projections from this asset plan are shown in Figure 5.8. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

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

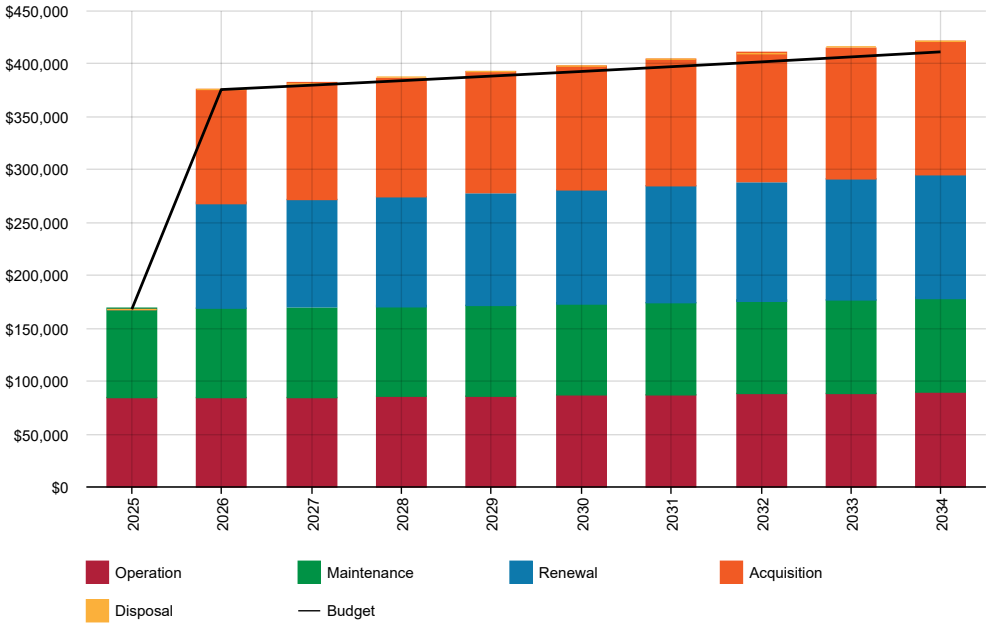


Figure 5.8: Lifecycle Costs and Planned Budget Summary

Amounts are shown in real values (i.e., current values, net of inflation).

These projections are based on the best available data and engineering judgement. Refer to the Improvement Plan for what the City intends to do to improve the accuracy of these projections.

6 Risk management planning

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

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

An assessment of risks[10] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical assets

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

Critical Asset(s)	Failure Mode	Impact
Bridges under roads	Structural failure	Hospitalisation, death
Major culverts under roads	Structural failure	Hospitalisation, major traffic disruption

Table 6.1: Critical Assets

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

[9] ISO 31000:2009, p 2

[10] Risk Management & Safety System (RMSS)

6.2 Risk assessment

The risk management process used is shown in Figure 6.1 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.

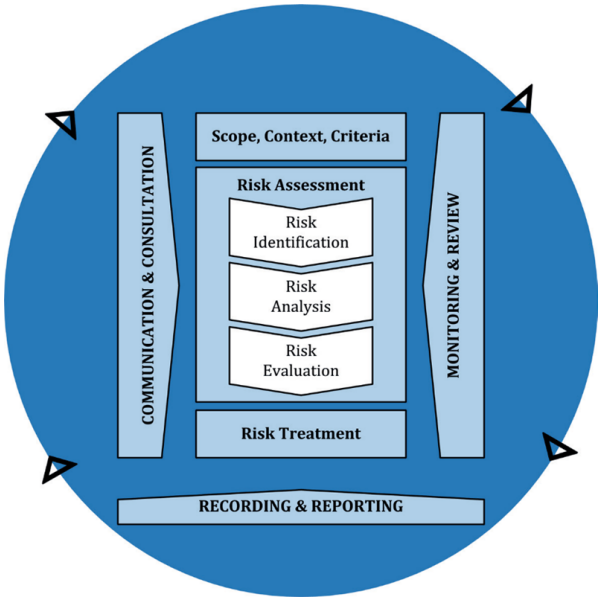


Figure 6.1: Risk Management Process – Abridged

Source: ISO 31000:2018, Figure 1, p9

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

An assessment of risks[11] 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.

[11] Enterprise Risk Management

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

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
All	Projects are not accurately identified for a 10 year planning period	H	Verify condition data Review project scoping criteria and identify opportunities to streamline processes Ensure major issues identified by field staff are captured and recorded	M	$50,000-$100,000 1 Full Time Equivalent (FTE) internal staff min.

Table 6.2: Risks and Treatment Plans

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

6.3 Infrastructure resilience approach

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

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

We do not currently measure our resilience in service delivery, though it is considered in the project scoping phase. 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 we cannot do

Funding levels appear to be sufficient to perform the required activities. However, there needs to be additional rigour to ensure projects are adequately scoped over a 10 year planning period to inform the LTFP.

6.4.2 Service trade-off

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

- Critical bridge assets are not adequately maintained, renewed or upgraded to meet demand, resulting in a greater percentage of bridges being in poor condition (i.e. Condition 4 or 5)
- An increasing number of bridges become unfit for purpose, leading to a decline in usage and congestion on adjacent roads or pathways.

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Significant number of bridges / critical bridges are not safe for users due to their poor condition, likely increasing instances of accidents that result in injury or death
- Mandatory road and path closures due to poor condition, resulting in increased demand/wear and tear on the surrounding network
- Increased number of community complaints.

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

7 Financial summary

This section contains the financial and valuation forecasts resulting from the information presented in the previous sections of this plan. Forecasts will be improved as the discussion on sustainable levels of service, risk and cost matures in line with the financial strategy.

7.1 Financial statements and projections

7.1.1 Asset valuations

The City's bridge assets were last valued in August 2025. Assets are valued at 'greenfield replacement cost', based on a 'cost to construct' approach. The valuation considered inputs such as:

- Components
- Unit rates
- Condition data
- Residual value (after depreciation was considered).

7.1.2 Sustainability of service delivery

There are three key indicators of sustainable service delivery that are considered in the AMP for this service area. The three indicators are the:

- Asset Consumption Ratio (Fair Value/Current Replacement Cost)
- Asset Sustainability Ratio (planned renewal budget for next year / annual depreciation expense)
- Asset Renewal Funding Ratio (planned renewal budget for the next 10 years / forecast renewal outlays for the next 10 years).

Asset Consumption Ratio

Asset Consumption Ratio 51 per cent

This ratio shows the written down value of depreciable assets in relation to their 'as new' value in current prices. A ratio of less than 50 per cent indicates a rapid deterioration of the asset base, whilst a ratio greater than 75 per cent may indicate an over investment in the asset base.

Asset Sustainability Ratio

Asset Sustainability Ratio 18 per cent

The target ratio should be between 90-110 per cent. A lower value indicates that at some time in the future, more renewal funding will be required, which is the case

here; the asset stock is young. A higher value may indicate 'above average' renewal spending over the lifecycle of the asset base, which may simply correspond with peaks in new assets being added, depending on the useful lives of the assets.

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio[12] 100 per cent

The Asset Renewal Funding Ratio illustrates that over the next 10 years we expect to have 100 per cent of the funds required for the optimal renewal of bridge assets.

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

7.1.3 Forecast costs (outlays) for the long-term financial plan

Table 7.1 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan.

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

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan and/or financial projections in the LTFP.

We will manage any 'gap' by communicating the service performance, cost, and risk implications in consultation with the community and key stakeholders.

Forecast costs are shown in 2024/2025 dollar values.

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

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)
2025	0	84,048	84,048	0	0
2026	108,000	84,316	84,316	99,680	0
2027	110,160	84,908	84,908	101,674	0
2028	112,363	85,506	85,506	103,707	0
2029	114,610	86,111	86,111	105,781	0
2030	116,903	86,723	86,723	107,897	0
2031	119,241	87,341	87,341	110,055	0
2032	121,626	87,967	87,967	112,256	0
2033	124,058	88,599	88,599	114,501	0
2034	126,539	89,239	89,239	116,791	0

Table 7.1: Forecast Costs (Outlays) for the Long-Term Financial Plan

7.2 Valuation forecasts

The best available estimate of the value of assets included in this AMP are shown below.

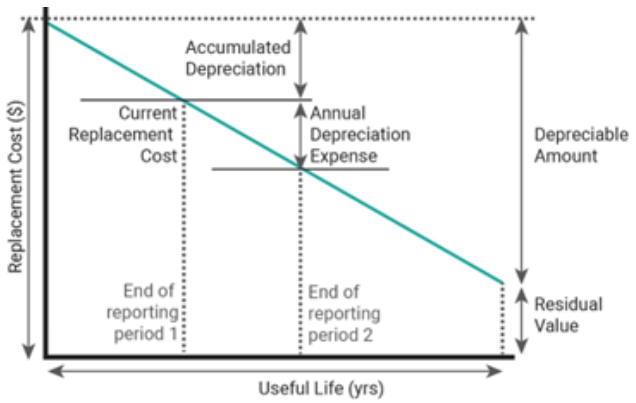


Figure 7.1: Valuation Terminology

These costs are shown in 2025 dollar values:

- Replacement Cost (Gross) $22,728,234
- Depreciable Amount $22,728,234
- Current Replacement Cost[13] $11,641,411
- Annual Depreciation Expense $556,604

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

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

8 Assumptions and improvement planning

8.1 Data and information sources

8.1.1 Accounting and financial data sources

This AMP utilises accounting and financial data sourced from Technology One CiAnywhere 2024A Release (775).

8.1.2 Asset management data sources

This AMP also utilises asset management data sourced from Technology One CiAnywhere 2024A Release (775).

8.2 Key assumptions

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

Key assumptions made in this AMP are:

- Renewal forecasts have been made by professional judgement
- Population and asset growth projections are assumed to be accurate
- The data supplied was as accurate as possible at the time of compilation of this asset management plan
- The breakdown of the actual reactive, planned and operational expenditure is assumed to be accurate.

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

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

The Alternative Method was used.

8.3 Forecast reliability and confidence

The forecast demands, costs, planned budgets, and valuation projections in this AMP are based on the best available data. For effective asset management and financial planning and reporting, it is critical that the information is reliable and up to date. Data confidence is classified on an A to E level scale in accordance with the guidance provided in the International Infrastructure Management Manual. [14]

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

Table 8.1: Data Confidence Grading System

The estimated confidence level for and reliability of data used in this AMP is shown in Table 8.2.

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

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Data	Confidence Assessment	Comment
Demand drivers	B	Professional judgement, corporate knowledge and id projections.
Growth projections	B	id projections from 2021
Acquisition forecast	C	Professional judgement, corporate knowledge and Local Government projections.
Operation forecast	D	Professional judgement
Maintenance forecast	D	Professional judgement
Renewal forecast - Asset values	B	Unit rates for road bridges supplied by MRWA and City of Swan Boardwalks and footbridges in parks from 2024 asset valuation data
- Asset useful lives	C	Useful lives are based on industry practice and condition ratings. However, there is not a high level of confidence with the 'Year Acquired' information for some older assets.
- Condition modelling	C	Completed in December 2023, requires further verification by internal staff
Disposal forecast	B	No planned bridge disposals at this moment in time, although this may change within the planning period and, if so, must be reflected in the AMP.

Table 8.2: Data Confidence Assessment for Data used in AMP

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

8.4 Improvement plan

It is important that we recognise gaps in the planning process that require improvement to ensure effective asset management and informed decision making. The improvement plan generated from this AMP is shown in **Error! Reference source not found.**.

Task	Description	Responsibility	Resources Required
1	Accurately capture bridge and boardwalk operations and maintenance costs	Asset Services, Operations	Staff time (change management)
2	Accommodate the Level 1 Bridge Inspection Reports	Asset Services	Staff time
3	Ten year bridge and boardwalks capital works program	Asset Services	Staff time
4	Verification of condition data by operational staff	Asset Services, Parks Maintenance	Staff time
5	Clarify 10 year budget allocation for bridge and boardwalk acquisition, renewal, maintenance and operation; finalise LTFP	Asset Services, Finance	Staff time
6	Prediction modelling and scenario modelling to more clearly communicate consequences of budget allocation	Asset Services	Staff time
7	Safety and universal access audits – review and update	Asset Services	Consider outsourcing

Table 8.3: Improvement Plan

8.5 Monitoring and review procedures

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

This AMP will be reviewed and updated to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

The AMP has a maximum life of 4 years and is next due for complete revision in 2028.

8.6 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 long-term financial plan
- The degree to which the 1 to 5-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AMP
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90-110 per cent).

9 References

- City of Cockburn – Asset Management Strategy 2017 – 2024
- City of Cockburn – Strategic Community Plan 2020 – 2030
- City of Cockburn – Long Term Financial Plan 2024-2025 to 2033-2034
- City of Cockburn – Management Budget 2024 - 2025
- City of Cockburn – Enterprise Risk Management
- City of Cockburn – Place Score – Liveability Survey 2024 - https://cockburn.t1cloud.com/T1Default/CiAnywhere/Web/COCKBURN/RedirectToFunction?sk.DocumentSetId=12111956&f=%24EMC.DOC.PROP.MNT&suite=ECM&h=10tdmvN6tA&t=191361DE
- City of Cockburn - Population forecast - https://forecast.id.com.au/cockburn/
- Government of Western Australia, Department of The Premier and Cabinet - Western Australian Legislation - Acts in force
- IPWEA, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/bookshop/iimm
- IPWEA, 'NAMS+ - A Toolkit for Asset Management Planning', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/namsplus
- IPWEA, 2024 'International Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/bookshop/iifmm
- IPWEA, 2018, Practice Note 12.1, 'Climate Change Impacts on the Useful Life of Assets', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/bookshop/pn12-1
- IPWEA, 2012, Practice Note 6 Long-Term Financial Planning, Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn6
- IPWEA, 2014, Practice Note 8 – Levels of Service & Community Engagement, Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn8
- ISO, 2024, ISO 55000:2024 Asset Management – Vocabulary, overview, and principles
- ISO, 2018, ISO 31000:2018 Risk management – Guidelines
- The Local Government and Municipal Knowledge Base - LGAM Knowledge Base
- DVC, 2006, 'Asset Investment Guidelines', 'Glossary', Department for Victorian Communities, Local Government Victoria, Melbourne, http://www.dvc.vic.gov.au/web20/dvclgv.nsf/allDocs/RWP1C79EC4A7225CD2FCA257170003259F6?OpenDocument
- Local Government of Western Australia – Asset Management Framework and Guidelines

10 Appendices

1.1 Appendix A Acquisition forecast

The new assets required to meet growth will be funded through a combination of municipal funding, grant funding and Developer Contribution Plans.

10.1.1 Acquisition forecast (donated) assumptions and source

The forecast for donated assets likely to be received from developers over the next 5 years has been calculated by averaging out the previous 5 years total donated assets received through subdivisions. This equates to approx. $89,278 of donations per year. In reality, in some years there will be ‘spikes’ in donated bridge and/or boardwalk assets – perhaps one or two - and in other years no donated assets.

10.1.2 Acquisition (constructed) project summary

At present, bridge and boardwalk acquisition projects funded by the City are a combination of a few major projects (e.g. foreshore improvements) and somewhat ad-hoc projects in response to operational issues, e.g. illegal jumping from bridges. These initiatives are positive but a more structured approach would be beneficial. At minimum, the Civil Infrastructure team should provide advice regarding locations that would provide the most strategic benefit in terms of Whole of Life Costs versus value to the community. There is more work to be done to identify and cost bridge and boardwalk acquisition projects.

10.1.3 Acquisition forecast summary

These were calculated by linearly projecting the previous five years of budgets and expenditures.

Year	Constructed ($)	Donated ($)	Growth ($)
2025	0	89,278	0
2026	108,000	89,278	0
2027	110,160	89,278	0
2028	112,363	89,278	0
2029	114,610	89,278	0
2030	116,903	89,278	0
2031	119,241	89,278	0
2032	121,626	89,278	0
2033	124,058	89,278	0
2034	126,539	89,278	0

Table 10.1: Acquisition Forecast Summary

10.2 Appendix B Operation forecast

10.2.1 Operation forecast assumptions and source

Bridge operational costs, e.g. cleaning and inspections, were not separated from road operational costs in the budgets. It is in the Improvement Plan to revise this. To estimate costs, the road operational and maintenance costs were referenced as a proportion of replacement cost. This ratio was calculated as 0.6 per cent per year. This was adopted for bridges and boardwalks and half of this was assumed to be operations costs, i.e. 0.3 per cent of replacement cost per year.

10.2.2 Operation forecast summary

Error! Reference source not found. provides a summary of Forecast Operations expenditure over the planning period.

Year	Operation Forecast ($)	Additional Operation Forecast ($)	Total Operation Forecast ($)
2025	84,048	268	84,048
2026	84,048	592	84,316
2027	84,048	598	84,908
2028	84,048	605	85,506
2029	84,048	612	86,111
2030	84,048	619	86,723
2031	84,048	626	87,341
2032	84,048	633	87,967
2033	84,048	640	88,599
2034	84,048	640	89,239

Table 10.2: Operation Forecast Summary

10.3 Appendix C Maintenance forecast

10.3.1 Maintenance forecast assumptions and source

Maintenance costs were assumed to be a proportion of replacement cost due to lack of clear information. Refer Section B.1.

10.3.2 Maintenance forecast summary

Error! Reference source not found. provides a summary of Forecast Maintenance expenditure over the planning period.

Year	Maintenance Forecast ($)	Additional Maintenance Forecast ($)	Total Maintenance Forecast ($)
2025	84,048	268	84,048
2026	84,048	592	84,316
2027	84,048	598	84,908
2028	84,048	605	85,506
2029	84,048	612	86,111
2030	84,048	619	86,723
2031	84,048	626	87,341
2032	84,048	633	87,967
2033	84,048	640	88,599
2034	84,048	640	89,239

Table 10.3: Maintenance Forecast Summary

10.4 Appendix D Renewal forecast summary

10.4.1 Renewal forecast assumptions and source

Method 1 (Asset Register) was used to predict renewals initially; Figure 5.3 highlights $3.2 million of assets in condition 4. This is in fact:

- Decking in Costa Park
- A culvert under Hammond Road
- Maraboo Wharf Road Bridge Substructure.

All three were reviewed internally and none were identified to need major remediation; the MRWA Level 2 inspection of Maraboo Wharf Bridge in 2019 only identified maintenance works. Due to the long useful life of concrete culverts and bridges, Method 1 only predicted the renewal of the timber decking in Costa Park within the LTFP period of 10 years. This did not appear to align with previous expenditure on renewals and so the Alternative Method was used with engineering judgement.

10.4.2 Renewal project summary

There is more work to be done to identify bridge and boardwalk renewals as outlined in Section D.1. In the previous five years renewals had been identified and completed; a structured approach to give a 10 year forward program is recommended.

10.4.3 Renewal forecast summary

Error! Reference source not found. provides a summary of forecast renewal expenditure over the planning period.

Year	Renewal Forecast ($)	Renewal Budget ($)
2025	0	0
2026	99,680	99,680
2027	101,674	101,674
2028	103,707	103,707
2029	105,781	105,781
2030	107,897	107,897
2031	110,055	110,055
2032	112,256	112,256
2033	114,501	114,501
2034	116,791	116,791

Table 10.4: Renewal Forecast Summary

10.4.4 Renewal plan

Refer Section D.2.

10.5 Appendix E Disposal summary

10.5.1 Disposal forecast assumptions and source

As of June 2025, it is assumed there are no bridge asset disposal projects required over the planning period. However, this AMP should be updated with any disposal projects identified during the planning period, as well as the life cycle cost summary.

10.5.2 Disposal project summary

Any disposal projects identified during the planning period should be listed here in future AMP updates.

10.5.3 Disposal forecast summary

No asset disposals have been identified.

10.6 Appendix F Budget summary by lifecycle activity

The budget summary shown in **Error! Reference source not found.** is based on previous expenditure and projects.

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)	Total ($)
24/25	0	84,048	84,048	0	0	168,096
25/26	108,000	84,048	84,048	99,680	0	375,776
26/27	110,160	84,048	84,048	101,674	0	379,930
27/28	112,363	84,048	84,048	103,707	0	384,166
28/29	114,610	84,048	84,048	105,781	0	388,488
29/30	116,903	84,048	84,048	107,897	0	392,896
30/31	119,241	84,048	84,048	110,055	0	397,392
31/32	121,626	84,048	84,048	112,256	0	401,977
32/33	124,058	84,048	84,048	114,501	0	406,655
33/34	126,539	84,048	84,048	116,791	0	411,426

Table 10.5: Budget Summary by Lifecycle Activity

Appendix G Legislative requirements

Legislation	Requirement
Aboriginal Heritage Act 1972 and Heritage Act of WA 1990	Provision for the preservation on behalf of the community of places and objects customarily used by or traditional to the original inhabitants of Australia or their descendants
Asset Management Framework and Guidelines for Western Australia Local Governments	A framework developed to assist local governments plan and manage assets to achieve long term goals
Australian Accounting Standards	These outline the financial reporting infrastructure for a variety of infrastructure: • AASB116 - Property, Plant and Equipment • AASB13 Fair Value Measurement • AASB136 - Impairment of Assets • ASB 140 Investment Property • AASB 5 Non-current Assets Held for Sale and Discontinued Operations
Australian Standards	Standards are published documents setting out specifications and procedures designed to ensure products, services and systems are safe, reliable and consistently perform the way they were intended to. They establish a common language which defines quality and safety criteria.
Code of Practice Working Hours 2006	Provides guidance for employers and workers on the management of Safety and Health hazards and risks commonly associated with working hour arrangements.
Conservation and Land Management Act 1984	Makes better provision for the use, protection and management of certain public lands and waters and the flora and fauna thereof, establishes authorities to be responsible therefore, and for incidental or connected purposes.
Contaminated Sites Act 2003	Provides for the identification, recording, management and remediation of contaminated sites, to consequentially amend certain other Acts and for related purposes.
Disability Services Act 1993	An Act for the establishment of the Disability Services Commission and the Ministerial Advisory Council on Disability, for the furtherance of principles applicable to people with disabilities, for the funding and provision of services to such people that meet certain objectives, for the resolution of complaints by such people, and for related purposes.

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Legislation	Requirement
Environmental Protection Act 1986	Provides for an Environmental Protection Authority, for the protection, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected to the foregoing.
Fire and Emergency Services Authority of WA Act 1998	Establishes an Authority with functions relating to the provision and management of emergency services, and for related purposes.
Local Government Act & Regulations 1996	Requirement that each local government is 'to plan for the future of the district' by developing and adopting a strategic community plan and a corporate business plan: • Local Government (Financial Management) Regulations 1996 • Local Government (Functions & General) Regulations 1996
Main Roads Act 1930	Consolidates and amends the law relating to and making provision for the construction, maintenance and supervision of highways, main and secondary roads, and other roads and the control of access to roads.
Main Roads WA – Code of Practice for traffic management for works on roads (April 2011)	To promote safe and consistent traffic management practice at work sites on roads in accordance with state legislation and national standards. Requires general compliance with the Australian Standard 1742.3-2009 and associated field guides, provides details of additional requirements necessary to meet WA requirements. Also outlines the competency requirements for personnel responsible for managing traffic on work sites.
Native Title (state provisions) Act 1999	Provides for the recognition and protection of native title and to establish ways in which future dealings affecting native title may proceed.
Occupational Safety and Health Act 1984 (WA)	Provides for the promotion, coordination, administration and enforcement of Safety and Health in WA. Places emphasis on the prevention of accidents and injury
Planning and Development Act 2005	Provides for a system land use planning and development in the State and for related purposes.
Rail Safety Act 2010	Requires Local Governments to develop an Interface Agreement with the rail manager/operator for every rail/road crossing in their area of responsibility by 1 February 2014

Legislation	Requirement
Soil and Land Conservation Act 1945	Relates to the conservation of soil and land resources, and to the mitigation of the effects of erosion, salinity and flooding.
Town Planning and Development Act 1928, Land Administration Act 1997, Transfer of Land Act 1893	Combined these outline the processes in the management and creation of roads
Transport Co-ordination Act 1966	Provides for the co-ordination, planning and advancement of all forms of transport in WA, to provide for the review, control and licensing of transport services and for incidental and other purposes.
Western Australia Local Government Act 1995	Provides for a system of Local Government by describing the functions of and providing a framework for the administration and financial management of Local Governments.

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Document Set ID: 12463650
Version: 12, Version Date: 03/09/2026

City of Cockburn

Coastal Asset Management Plan 2024–2028



www.cockburn.wa.gov.au

Document Set ID: 12558637
Version: 10, Version Date: 04/09/2026

Front cover page photo is taken at the Coogee Beach Jetty

Asset Management Plan				
Document ID: 12558637				
Date	**Revision Details**	**Author**	**Reviewed**	**Approved**
April 2026	Final Version 2024 - 2028	Asset Services	Service Manager Infrastructure Assets	

Acknowledgement of country

The City of Cockburn acknowledges the Nyungar people of Beeliar Boodjar. Long ago, now and in the future they care for Country.

We acknowledge a continuing connection to Land, Waters and Culture and pay our respects to Elders, past and present.

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1 Executive summary

The City of Cockburn's community relies on a diverse portfolio of infrastructure assets, including roads, buildings, bridges, parks, footpaths, marina, and beaches. The coastal assets covered by this Asset Management Plan are valued at approximately $42 million.

The Asset Management Plan (AMP) provides a strategic framework for managing our community's infrastructure assets, ensuring they remain safe, reliable, and capable of meeting current and future demands. It will help Council to make informed decisions and help the community to understand the context of City expenditure and budgets.

1.1 Purpose of the plan

This AMP aims to:

- Provide a systematic approach to asset management
- Address critical risks associated with aging infrastructure and limited funding
- Ensure infrastructure supports the community's social, economic and environmental goals.

This AMP details information about the City's coastal assets, as well as defining the Level of Service (LOS) and outlining the funding required to maintain this LOS over a 10-year planning period.

This highlights any funding gaps between the planned and forecast expenditure, which assists in optimising expenditure on managing assets through the Long-Term Financial Plan (LTFP).

1.2 Asset description

The coastal assets comprise:

- Public jetties 1
- Breakwaters 5
- Sea walls 2
- Engineered fringing reef 2 stages
- Edge and retaining walls 12
- Sand bypass pipe 2
- Geotextile sandbag retaining walls 2
- Disabled access ramps and matting 3
- Swimming pontoons 4
- Coogee Maritime Trail 1
- Shark barrier 1 (leased)
- Navigation buoys 5
- Beaches 5

The above infrastructure assets (excluding beaches) have a total renewal value estimated at $41,831,383. Refer Section 5.1 for a detailed breakdown including replacement costs by asset type.

1.3 Levels of service

Levels of Services (LOS) are typically split into 'Customer' and 'Technical' and each have their own metrics which the City is able to measure its performance against.

The City's overall customer LOS objective is to maintain 70 per cent community satisfaction with coastal assets, which is sustainable for the foreseeable future. However, risks and treatment costs should continue to be actively monitored due to the critical assets involved.

The main service consequences of an insufficient planned budget are:

- Critical assets are not adequately maintained, renewed or upgraded to meet demand, resulting in a greater proportion of coastal assets being in poor condition (i.e. Condition 4 or 5)
- An increasing number of assets become unfit for purpose, leading to a reduction in usage
- Critical coastal capital works projects cannot occur to meet demand.

1.4 Future demand

The main demands for new services are created by:

- Sea level rise and coastal processes
- Population growth
- Customer interest and preferences.

These demands will be approached using a combination of managing existing assets, upgrading of 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. Examples of solutions to ensure the City's asset portfolio is sufficient to meet community need include:

- Manage existing assets through an appropriately prioritised Capital Works Program
- Ensure decisions to upgrade existing assets and construct new assets are supported with appropriate modelling to understand the long-term impacts
- Continue to monitor community interests and preferences, e.g. demand for swimming pontoons, universal access to beach, demand on parking etc.

1.5 Lifecycle management plan

How we plan to manage and operate the assets at the agreed LOS throughout their lifecycle is contingent on the 10-year LTFP. It is important to be aware of the 'Whole of Life' (lifecycle) costs associated with assets (i.e. cost of construction, operation and maintenance costs, renewal and upgrade costs and disposal costs at end of life).

1.5.1 What does it cost?

The lifecycle costs necessary to provide the services covered by this AMP include operation, maintenance, renewal and upgrade costs of existing assets, as well as the acquisition or construction of new assets to meet demand. Disposal of assets is also considered when it is no longer cost effective to continue to maintain/operate an asset.

When lifecycle costs are prepared for a minimum 10-year planning period, they can be used to inform the 10-year LTFP. The first 10-year lifecycle forecast is estimated to cost $23,305,802 or $2,330,580 on average per year.

Depreciation is excluded from these cost estimates.

1.5.2 What we will do

The funding made available in the first 10-years' of the LTFP is $22,254,634 or $2,225,463 on average per year which is approximately 95 per cent of the cost to undertake the lifecycle activities.

The reality is, only what is included in the LTFP can be funded. Informed decision making depends on the AMP emphasising the consequences of planned budgets on the LOS provided and communicating the residual risks to decision makers. It is important to ensure the organisation is delivering the services in a financially sustainable manner.

The current 10-year LTFP results in a shortfall of $105,117 on average per year of the forecast lifecycle costs required to provide services. This is shown in Figure 1.1.

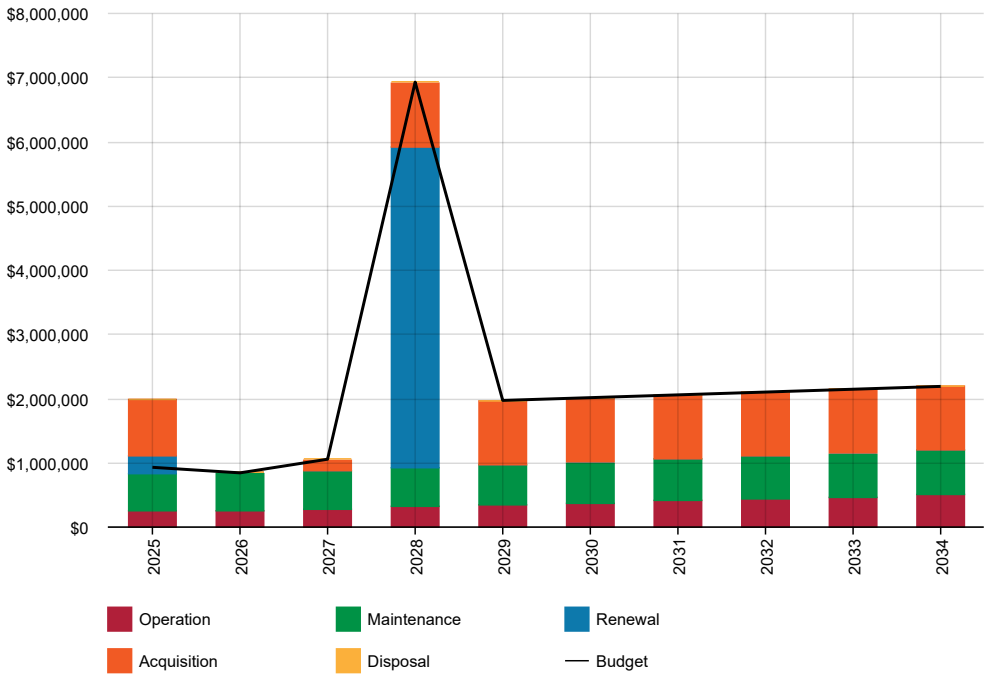


Figure 1.1: Forecast Lifecycle Costs and Planned Budgets

We plan to provide coastal asset services for the following:

- Operation, maintenance, renewal and upgrade of sea walls, breakwaters, edge and retaining walls, groynes, beaches, engineered fringing reef, pontoons, maritime trail, disabled beach access ramps, boardwalks, gangways, jetties and related assets to meet service levels set in annual budgets
- Completion of key coastal renewals, upgrades and new construction projects within the 10-year planning period.

1.5.3 What we cannot do

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

- Elimination of the coastal risk posed by climate change – risk treatment will need to be balanced against available budget.

1.6 Risk management

The current planned budget is sufficient to continue to manage risks for the foreseeable future, however continued monitoring, hazard modelling and community consultation is essential.

The main consequences if risks aren't adequately managed are:

- Increased environmental and property damage and reduced recreational opportunities caused by worsening coastal erosion
- Injuries caused by hidden sharp edges or submerged objects
- Injuries caused by structural failure
- Insurance claims, injuries, death.

Strategies and actions to manage these risks are discussed in Section 6.

1.7 Financial summary

Providing financially sustainable and affordable services from infrastructure requires the careful management of service levels, costs and risks.

The 10-year LTFP is $2,225,463 on average per year giving a 10-year funding shortfall of $105,117 per year. This indicates that 4.5 per cent of the forecast costs needed to provide the services documented in this AMP are not accommodated in the LTFP.

Total asset values are forecast to increase as additional assets are added.

1.8 Assumptions and improvement planning

Key assumptions made in this AMP are:

- Renewal forecasts have been made by professional judgement and are assumed to be accurate
- Population and asset growth projections are accurate
- Condition data and age data are accurate (noting that this AMP is based on a 'Medium' level of confidence information)
- Unit rates are representative of asset replacement costs
- Useful lives are an accurate representation of the behaviour of assets in the field and the City's practices in renewing/replacing assets at their end of useful life.

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

- Develop and refine 10-year coastal capital works program based on expert knowledge, the 10-year LTFP, and the recommendations and implementation plan resulting from the Coastal Hazard Risk Management and Adaptation Plan (CHRMAP, due mid 2026)
- Update asset condition data in 2026 where applicable and then five yearly, by external consultant
- Review asset registers annually and as new assets are acquired, with the City's Asset Management team, to ensure data is up to date and relevant.

2 Introduction

2.1 Background

This AMP communicates the actions and necessary funds required to sustainably deliver services through the management of assets, compliance with regulatory requirements, and required funding to provide the appropriate LOS over the long-term planning period.

The AMP is to be read in conjunction with the City's Asset Management Policy and Asset Management Strategy, and the following strategic documents:

- City of Cockburn Strategic Community Plan 2025 – 2035
- City of Cockburn Corporate Business Plan 2024/25 – 2027/28
- City of Cockburn Annual Business Plan(s)
- City of Cockburn Long Term Financial Management Plan 2024/25 – 2033/34
- City of Cockburn Coastal Adaptation Plan
- City of Cockburn Climate Change Strategy 2020-2030.

The infrastructure assets covered by this AMP include breakwaters, seawalls, edge and retaining walls, jetties, engineered fringing reef, swimming pontoons and navigation buoys. For a detailed summary of the assets covered in this AMP refer to **Error! Reference source not found.** in Section 5.

These assets are used to provide access, connectivity, recreation, and other amenity throughout the City of Cockburn and have a total replacement value of approximately $42 million.

2.2 Stakeholders

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

Key Stakeholder	Role in Asset Management Plan
The Elected Council	Represent needs of community/shareholders Allocate resources to meet planning objectives in providing services while managing risks Ensure service sustainable.
Chief Executive Officer (CEO)	Organisational direction and leadership
Executive Leadership Team (ELT)	Executive management endorsement, sign off and executive ownership
Group Manager Assets and Projects	Review and strategic management sign off
Service Manager Infrastructure Assets	Review and line management sign off
Group Manager Growth and Sustainability	Review and strategic management sign off
Service Manager Sustainability and Environment Service Lead Environment	Review and line management sign off
Senior Coastal Planner	Input to, and delivery of, AMP Oversee development and implementation of Coastal Hazard Risk Management and Adaptation Plan
Service Lead City Facilities	Input to, and delivery of, AMP
Infrastructure Asset Services	Asset Management Plan development, review, continuous improvement and implementation of the AMP maintenance actions
Insurers	Assist to manage financial risk of the City
City of Cockburn Community Coogee Beach Surf Lifesaving Club Port Coogee Community Association	Service and facility users
City of Cockburn Businesses Developers Frasers and Megara	Service and facility users Service and facility users
Emergency Services	Attendance to call-outs and security

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Key Stakeholder	Role in Asset Management Plan
Water Police Cockburn Sea Rescue DFES (Department of Fire and Emergency Services) MEER (Maritime Environmental Emergency Response)	
Government Agencies Department of Transport Department of Lands	Attend emergencies, provide assistance and security

Table 2.1: Key Stakeholders in the AMP

2.3 Principles, goals and objectives of asset management

The principles of asset management as per the International Standards for asset management are:

- **Value**: asset management focuses on the value assets provide to the organisation over time
- **Alignment**: asset management aligns financial, technical and operational decisions with the organisational objectives, promoting vertical and horizontal coordination
- **Leadership**: leadership and sustained commitment at all levels are crucial for successful asset management
- **Assurance**: Having confidence that the assets will consistently deliver their intended purpose and meet organisational objectives. It includes managing risks and ensuring that the assets are reliable and will perform as expected.[1]

Our goal for managing infrastructure assets is to deliver the defined level of service (as amended from time to time) in the most cost-effective manner for present and future consumers.

The key objectives of infrastructure asset management as defined by the International Infrastructure Management Manual are:

- Defining levels of service and monitoring performance
- Managing the impact of growth through demand management and infrastructure investment
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service
- Identifying, assessing and appropriately controlling risks

[1] ISO 55000:2024 Asset Management – Vocabulary, overview, and principles

- Linking to a LTFP which accommodates the required expenditure and how it will be funded.[2]

2.4 Plan framework

The 2024 - 2028 Coastal AMP has been developed in accordance with the International Infrastructure Management Manual (IIMM) and complies with Department of Local Government & Communities Asset Management Framework.

As part of the City's Strategic Asset Management Planning Framework (SAMPF), the Coastal AMP will be developed every 4 years and be subject to a 2-year desktop review. This AMP review will focus on core elements required by the LTFP, for example asset valuations, growth projections, financial analysis including operating, sustainability ratios and 10-year renewals. This will ensure that future revisions of the LTFP will be derived from a structured AMP development cycle that has received Executive and or Council approval, increasing confidence and integration of asset management data and methodologies into the City's long term financial planning and adopted service levels.

Figure 2.1 provides a visual representation and timeline of the SAMPF.

[2] IPWEA International Infrastructure Management Manual (IIMM), Sec 1.2.1

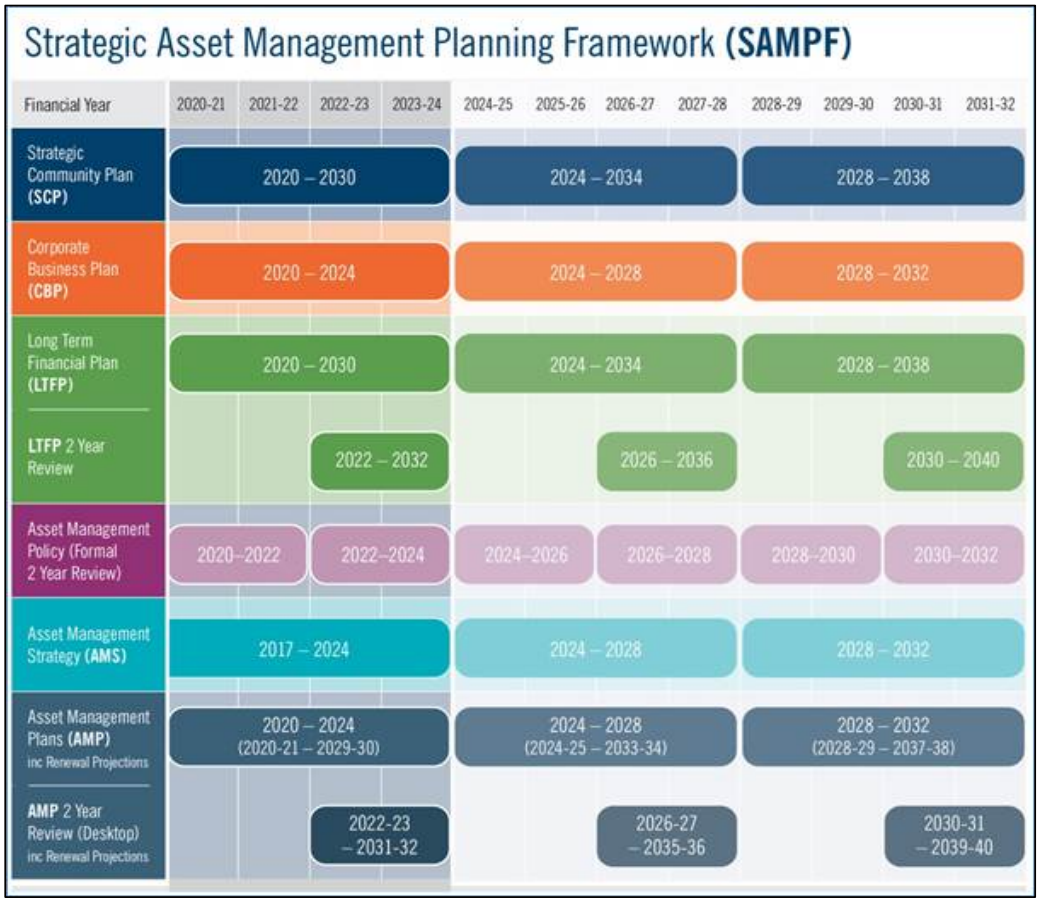


Figure 2.1: Strategic Asset Management Planning Framework (SAMPF)

- Level of Service and Enterprise Risk Management – outlines the level of service provided by council and identifies risks to the city
- Future Growth and Demand how this will impact on future service delivery and how this is to be met
- Lifecycle Management – how the city will manage its existing and future assets to provide the required services
- Financial Analysis – what funds are required to provide the required services
- Asset management practices – current systems and practices in place
- Improvement and monitoring – how the plan will be monitored and improved to ensure it is meeting Council's objectives.

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2.4.1 Corporate planning framework

The formalisation and alignment of the City's SAMPF within the Corporate Planning Framework reflects the City's increasing maturity and recognises the importance of Asset Management in supporting the City in delivering long term financial sustainability of services and capital asset renewal.

With the continued implementation of the SAMPF, the City will commence measuring service levels for planned and reactive maintenance to determine operational performance and asset utilisation.

The City strives to improve its strategic and operational asset management practices and to continue its journey towards advanced asset management. The Department of Local Government, Sport and Cultural Industries (DLGSC) has developed the Western Australia Local Government Integrated Planning and Reporting Framework. Accordingly, the future direction and need for advanced level practices are continually assessed.



Figure 2.2: City's Corporate Planning Framework

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3 Levels of service

Levels of service define the standards and performance targets that infrastructure assets are expected to meet to ensure they provide reliable, safe, and efficient services to the community.

3.1 Customer research and expectations

The City carries out the Place Score Liveability Survey bi-annually to gather and evaluate customer feedback across a range of services that the City provides. This allowed the City to measure its performance against community expectations.

The most recent Liveability Survey was undertaken in September 2024 by Place Score Pty Ltd. In total, 1811 residents participated in the survey.

Table 3.1 summarises the results from our Customer Satisfaction Survey.

Performance Measure	Performance Score (PX) (out of 10)		
	Good PX ≥ 7	Average 6 ≤ PX < 7	Poor PX < 6
Quality of public space	7.2		
Protection of the natural environment		6.9	
Sense of personal safety		6.5	
Landmarks, special features or meeting places			5.9
Evidence of City management (signage, street sweeping, etc)		6.5	
Evidence of recent public investment		6.0	

Table 3.1: Customer Satisfaction Survey Levels

3.2 Strategic and corporate goals

This AMP is prepared to align with the City's vision, mission, goals and objectives.

Our vision is:

Cockburn, the best place to be.

Our mission is:

Support our communities to thrive by providing inclusive and sustainable services which reflect their aspirations.

Strategic goals have been set by the City and are found in the City's Strategic Community Plan. The relevant goals and objectives and how these are addressed in this AMP are summarised in Table 3.2.

Strategic Outcome	Strategic Objective	Deliverable	Measure
Our Environment Valuing natural assets, building climate resilience and using resources sustainably.	2A. Protect and enhance our natural areas and streetscapes.	Protect coast from pollution	Customer survey results Compliance with Department of Environmental Regulation
		Protect coast from damage due to vehicles and pedestrians in sensitive areas	
	2C. Enhance climate resilience and champion environmental initiatives to mitigate impacts.	Protect coast from rising sea levels, stronger storm surge and storm events	CHRMAP implementation
Our Community Our community feels safe, secure and connected and is active and healthy.	3A. Strengthen and facilitate a safe and secure Cockburn.	Ensure coastal assets do not pose a hazard	Customer survey results
		Manage theft and vandalism with CCTV	Customer survey results
Our Places Enhancing distinctive, liveable areas with well-connected, safe transport options.	4A. Plan for growth and sustainable development.	Ensure parking availability meets demand	Customer survey results
	4B. Strengthen unique, liveable and adaptive spaces.	Beaches have adequate services, are attractive and accessible	
Our Governance Transparent leadership that listens,	5D. Strive for financial sustainability and operational excellence.	Ensure adequate funding to meet agreed service levels, optimise lifecycle cost	Asset Renewal Funding Ratio

Strategic Outcome	Strategic Objective	Deliverable	Measure
communicates openly and plans for a sustainable future.	5B. Strengthen engagement and communication and enhance customer experience.	Negotiate coastal levels of service vs cost with the community and businesses	Customer survey results and feedback Business surveys

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

3.3 Legislative requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the coastal service are outlined in Appendix G.

While no longer a legislative requirement, the Asset Management Ratios are reasonable performance indicators of the ongoing financial sustainability of assets. The targets for these ratios are set by the Department of Creative Industries, Tourism and Sport (CITS) through the Integrated Planning and Reporting Framework (IPRF). The calculation methodology and targets for these ratios are outlined in Table 3.3.

Asset class	Consumption ratio	Sustainability ratio	Renewal funding ratio
Description	How much has the City used of its assets?	Is the City replacing assets as they wear out?	Is the City setting aside sufficient future funding for asset renewals?
Calculation	Depreciated replacement cost / current replacement cost	Capital renewal (one year) / annual depreciation (one year)	Planned capital renewal (10 years) / required capital renewal (10 years)
Target	50-75% standard 60-75% ideal	90-110% standard	75-95% standard 95-105% ideal

Asset class	Consumption ratio	Sustainability ratio	Renewal funding ratio
What it means	Lower than standard = assets are deteriorated and will result in a poor level of service Higher than ideal = assets are being replaced too early resulting in poor value for money*	Lower than standard = the City is under investing in asset renewal/replacement resulting in a poor level of service Higher than standard = the City is over investing in asset renewal/replacement resulting in poor value for money	Lower than standard = the City is allocating too little funding to long term asset renewal/replacement which will result in a lower level of service in future Higher than ideal = the City is allocating too much funding to long term asset renewal/replacement which will result in poor value for money in future

Table 3.3: Asset Ratios

* Higher than standard can also mean the asset base is relatively young

3.4 Customer values

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

Customer Values indicate:

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

Customer Values	Customer Satisfaction Measure	Customer Feedback	Expected Trend Based on Planned Budget
Customer Service	Place Score Survey Complaints	Some complaints, have been addressed	Maintain – ensure adequate resourcing maintained
Adequate access and connectivity		Additional paths required – need universal access	Maintain as per capital works program

Customer Values	Customer Satisfaction Measure	Customer Feedback	Expected Trend Based on Planned Budget
Healthy waterways		Rubbish and algal blooms becoming more frequent Seaweed complaints	Declining satisfaction of beach users

Table 3.4: Customer Values

3.5 Customer levels of service

The Customer Levels of Service are considered in terms of:

Condition How good is the service … what is the condition or quality of the service?

Function Is it suitable for its intended purpose …. Is it the right service?

Capacity/Use Is the service over or under used … do we need more or less of these assets?

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

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

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Overall	Community satisfaction of 70% or greater with the City's coastal assets.	Place Score Liveability Survey – Quality of public space	Score of 7.2/10 for "Quality of public space" in recent community survey.	Maintain above 70%

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Condition	Complete condition assessment of all coastal assets at least every five (5) years	Dates between condition assessments of coastal assets	Condition inspections for all coastal assets every five (5) years. Annual inspections	Maintain
	Maintain at least 80% of the City's coastal assets in Condition 3 or better.	Condition assessment scores	Percentage of coastal assets in condition 3 or better by replacement cost is 100%	Maintain >80%
	Confidence levels		Medium	Low
Function	Accessibility of coastal services	Compliance with Universal Access	Coogee Beach is universally accessible Other beaches – requires investigation	Maintain
	Confidence levels		Low	Low
Capacity	Ability to mitigate sea level rise	Extent of coastal inundation / erosion	Significant coastal erosion and inundation expected over the next 100 years – refer to the Coastal Adaptation Plan	Maintain
	Confidence levels		High	Medium

Table 3.5: Customer Level of Service Measures

3.6 Technical levels of service

Technical Levels of Service – To deliver on the customer values, and impact they have on Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the lifecycle activities (see Section 5) and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

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

Table 3.6 shows the lifecycle activities related to the current 10 year planned budget, and the forecast costs recommended in this AMP.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Acquisition	Provide coastal protection measures as needed	Ability to fund Coastal Hazard Risk Management and Adaptation Plan (CHRMAP)	Over the ten period, the required acquisitions can be funded	No issues identified Subject to release of CHRMAP
		Budget	$727,300 average per annum	$805,323 average per annum
Operations	Deploy swimming pontoons	Number of swimming pontoons deployed	Five swimming pontoons deployed per annum	Maintain
	Maintain up to date condition data	Frequency of condition inspections	Complete condition assessment every 5 years	Current inspection frequency is sufficient
		Budget	$368,154 average per annum	No issues identified
Maintenance	Keep coastal assets safe, usable and attractive	Sand nourishment of beaches	Approx. 20,000 m^3 of sand nourishment per annum	Maintain
		Budget	$630,010 average per annum	No issues identified
Renewal	Keep assets in satisfactory and safe condition	Proportion of assets in “poor” or “very poor” condition	0%	Repair marina breakwater as required (pending report)

[3] IPWEA, 2015, IIMM, p 2|28.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
	Allocate sufficient medium and long term renewal funding	Asset renewal funding ratio	95%	100%
		Budget	$500,000 average per annum	$527,094 average per annum
Disposal	Dispose of assets that are no longer required	Assets disposed of when opportunities identified	Nil allocated due to nil disposal opportunities identified	Continue reviewing opportunities to dispose of assets
		Budget	$0 per year	$0 per year

Table 3.6: Technical Levels of Service

Note: * Current activities related to planned budget.

** Expected performance related to forecast lifecycle costs.

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

4 Future demand

Future demand refers to the effects on infrastructure assets services driven by factors such as population movement, economic development, technological advancements, and changing environmental or community expectations.

4.1 Demand drivers

A demand driver refers to the factors or trends that influence the need for infrastructure services and capacity. Some examples of factors influencing future demand include (but are not limited to):

- Population growth
- Changing demographics
- Industry development/changes in technology
- Legislation changes.

Demand drivers help predict future infrastructure needs and guide planning and investment decisions.

4.2 Demand forecasts

The current position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in **Error! Reference source not found.**.

4.3 Impacts and demand management plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in **Error! Reference source not found.**.

The impact on service delivery will be managed through a combination of managing and upgrading existing assets and the provision of new assets to meet demand. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to manage demand are shown in **Error! Reference source not found.**. Further opportunities will be developed in future revisions of this AMP.

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Population	133,869 as at 2025	177,920 by 2046	Increased demand for provision of new mooring facility assets, parking and traffic requirements, higher usage of public beaches, swimming pontoons and jetties	Acquisition of assets as required Ensure operations, maintenance and renewal budgets keep up with an expanding asset base
Demographics	Large attraction of families (0-9 and 25-39 years) as residential development continues in greenfield sites Some attraction of young singles and couples (18-24 years) to new apartments around Cockburn Central and housing opportunities close to Murdoch University for students	The development of higher density areas around Cockburn Central, with its rail links into inner Perth, Rockingham and Mandurah, and the proposed revitalisation and regeneration of Hamilton Hill, Spearwood and Coolbellup, are likely to provide housing opportunities to younger and older smaller household types in higher density developments	Increased demand for swimming pontoons, jetties, showers etc	Assess capacity Gauge private sector interest for market opportunities, e.g. paddle boat hire, canoe hire Upgrade and acquire additional assets
	16,883 people 67 or older as at 2025	31,329 people 67 or older by 2046	Increased demand for universal access from car to beach	Universal access audits Monitor usage by people with physical impairment Upgrade as required

Table 4.1: Demand Management Plan

4.4 Asset programs to meet demand

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

Acquiring new assets will commit the City to ongoing operations, maintenance and renewal costs, and depreciation expenses for the period that the service provided from the assets is required. These future costs and expenses are identified and considered in developing the long-term financial plan.

4.5 Climate change adaptation

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

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

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

Risk and opportunities identified to date are shown in **Error! Reference source not found.**.

Climate change risk	Projection	Impact on services	Climate Change Management Actions

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

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Climate change risk	Projection	Impact on services	Climate Change Management Actions
Raised seawater levels, stronger storm surge, and increased frequency of high-intensity storm events	An estimated increase of 0.9m in sea level by 2100, substantially increasing coastal erosion, storm-surge impacts, and inundation risks	Access may be severely affected, increased corrosion risk for coastal assets Damage or loss of pontoons and buoys Erosion of coast Reduction in beach areas Reduced effectiveness of breakwaters, seawalls and engineered fringing reef	Plan and budget for permanent raising, floating platforms etc. Beach sand replenishment and management Erosion protection measures CHRMAP reviews using most recent climate projections
Hotter temperatures and greater number of days over 35°C during summer months	Increased risk of heat stroke for beach users Increased concrete cancer from increased CO_2 levels Increased metal corrosion (e.g. jetties) through increased ocean temperatures and CO_2 levels	Shade requirements Structural weakening and reduced lifespan of metal and concrete structures	Education of risk of heat – hydration etc Provide adequate shade Implement Climate Change Strategy and Climate Change Action Plan, including designing new infrastructure for climate resilience

Table 4.2: Managing the Impact of Climate Change on Assets and Services

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

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

Error! Reference source not found. summarises opportunities to build climate change resilience into new and existing assets.

Asset Description	Climate Change Impacts to Coastal Assets	Resilience Plan for New Assets	Resilience Actions for Existing Assets
Jetties	Sea level rise and storm surge	Design for appropriate storm surge height and increasing air and sea temperature and CO_2 levels	Ensure adequate corrosion protection, considering higher sea level especially during storm surges
Coast		Provide protection measures e.g. seawall, artificial reefs and geotextile sand bags	Sand monitoring and management Engineered fringing reef trial and monitoring CHRMAP development to identify targeted control measures

Table 4.3: Building Climate Change Resilience into New Assets

The impact of climate change on new and existing assets is evolving and new opportunities will be developed in future revisions of this AMP, in line with the City's CHRMAP recommendations.

5 Lifecycle management plan

The lifecycle management plan details how the City plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) throughout their entire lifecycle, from acquisition or creation to disposal. The goal is to maximise the value of the assets while minimising costs and risks, ensuring they continue to meet performance requirements over time.

From a financial perspective, infrastructure activities tend to be classified as being either Operating or Capital. The lifecycle activities used in the asset management and financial planning and reporting process cover:

Capital Expenditure:

- **Acquisition** – the activities to provide a higher level of service (e.g., widening a jetty) or a new service that did not exist previously (e.g. a new swimming pontoon)
- **Renewal** – the activities that replace or restore assets to the standard it had originally provided (e.g., rock revetment/repair works on existing breakwaters, or replacement of navigational buoys and damaged signage)
- **Disposal** – the decommissioning, removing, or repurposing of assets that are no longer cost-effective, safe, or necessary (e.g. disposal of broken slides and stairs from swimming pontoons).

Operating Expenditure:

- **Operations** - the routine activities that keep services accessible and effective, balancing efficiency with user expectations (e.g. inspections of marine assets and monitoring of coastal erosion)
- **Maintenance** – the preventative and corrective actions to sustain asset functionality and minimise unexpected failures. Maintenance activities enable an asset to continue providing service for its useful life (e.g., repairs of the Coogee Beach jetty).

A pictorial representation of the asset lifecycle activities is shown below in Figure 5.1.

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Figure 5.1: Asset Lifecycle Activities

5.1 Background data

5.1.1 Physical parameters

The assets covered by this AMP are shown in **Error! Reference source not found.**.

Asset Group	Asset Type	No.	CRC ($)
Edge and Retaining Walls	High Edge Wall	2	2,257,500
	Low Edge Wall	2	2,415,000
	Retaining Wall	8	6,930,000
Gangways and Jetties	Central Jetty	1	2,967,450
	Swimming Pontoon	4	348,230
Piles	Marker Buoy	3	8,613
Sea Walls and Breakwaters	Breakwater	5	10,406,712
	Sea Wall	2	15,863,400
Service Lines	Sand Bypass Pipe	2	634,478
Total		29	41,831,383

Table 5.1: Assets covered by this Plan

As at August 2025, the City is responsible for maintaining approximately 29 coastal assets. While there are not many engineered coastal assets, the coastline itself is a very significant natural asset. Currently, financially valuing natural assets is beyond the scope of this AMP, but sand management has been included.

An engineered fringing reef has recently been constructed, completed in November 2024, to trial the mitigation of erosion, as a research project in partnership with the University of Western Australia.

An important distinction in the management of assets is the difference between 'Design Life' and 'Useful Life'. Design Life refers to the length of time that an asset is designed to last, based on engineering standards, analysis, testing and reporting. Useful life is simply the length of time that an asset is used. For example, the typical design life for an asphalt road surface is around 20 years, however, the timeframe it is actually used may be much longer than this due to applying ongoing maintenance to get more life out of the surface than it was initially designed for. The modelling in this AMP considered Useful Life.

The age profile of the assets included in this AMP are shown in Figure 5.2.

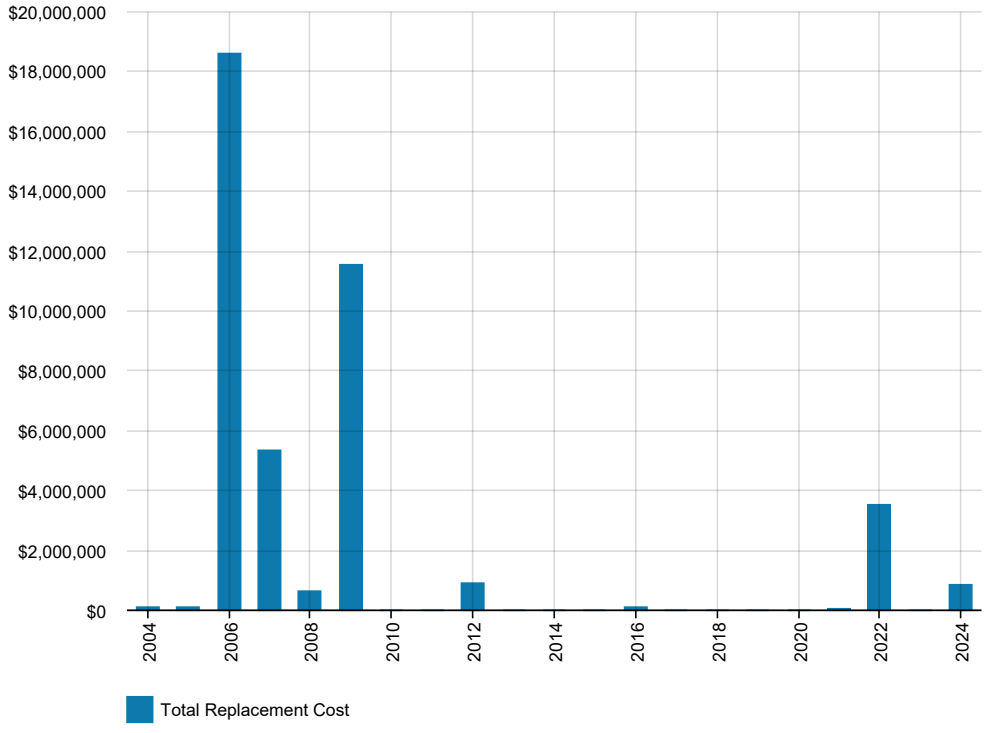


Figure 5.2: Asset Age Profile

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 **Error! Reference source not found.**.

Location	Service Deficiency
Marina	Breakwaters are suspected to be under-designed, compromising useful life. Investigation pending
C Y O'Connor Beach	High risk of coastal erosion – trialing an Engineered Fringing Reef. Research into effectiveness ongoing. Will also require additional geotextile sandbags as a minimum

Table 5.2: Known Service Performance Deficiencies

The above service deficiencies were identified from internal staff and the Coastal Adaptation Plan.

5.1.3 Asset condition

Condition ratings for the City's coastal assets are currently updated every five years. The most recent condition inspection of the City's coastal assets was at October 2025 by O2 Marine – of the seawalls, breakwaters, engineered fringing reef and the Coogee Beach jetty. The remainder, notably the edge and retaining walls within the marina, were last assessed September 2021 by M P Rogers and Associates.

Condition is measured using a 1 – 5 grading system[5] as detailed in **Error! Reference source not found.**. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AM plan results are translated to a 1 – 5 grading scale for ease of communication.

[5] IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

Condition Grading	Description of Condition
1	Very Good: free of defects, only planned and/or routine maintenance required
2	Good: minor maintenance required plus planned maintenance
3	Fair: defects requiring regular and/or significant maintenance to reinstate service
4	Poor: significant defects, renewal/rehabilitation required
5	Very Poor: physically unsound and/or beyond rehabilitation, immediate action required. Asset is at end of useful life.

Table 5.3: Condition Grading System

The condition profile of our coastal assets is shown in Figure 5.3.

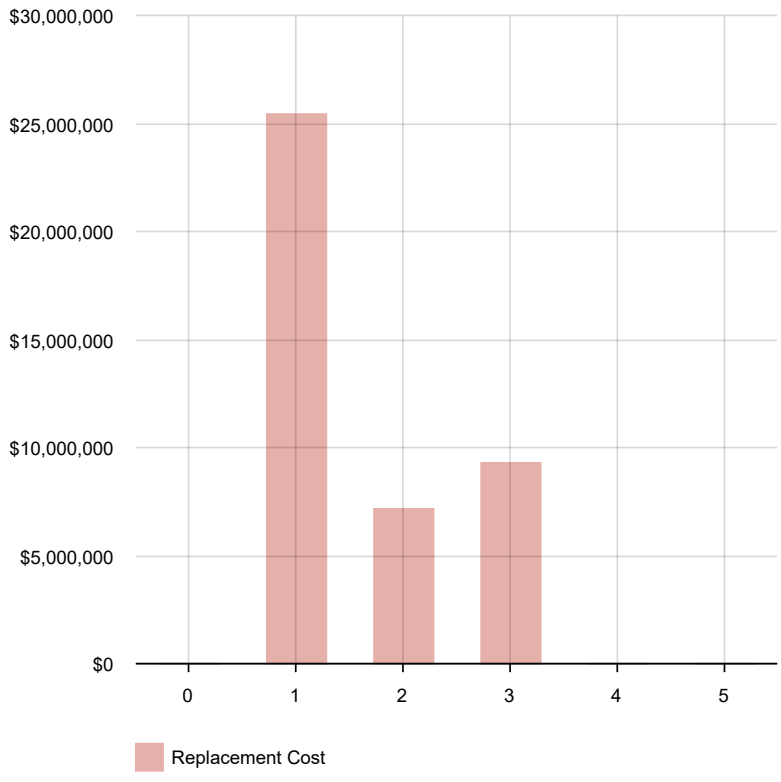


Figure 5.3: Asset Condition Profile

The City's coastal assets are generally in excellent condition with 61 per cent of the assets currently rating as 1. However, if inadequate renewal funding is allocated through the LTFP, the average condition of these assets will worsen over time, as they reach the end of their useful life. The assets in condition 3 last condition rated in 2021, namely the edge and retaining walls within the marina, will require particularly close monitoring. The challenge will be to either ensure there is enough funding to maintain the current service levels or to adjust agreed levels of service.

5.2 Operations and maintenance plan

For the purpose of modelling within this AMP, the following definitions apply:

Reactive maintenance is unplanned maintenance work carried out in response to service requests and management/supervisory directions. Examples include repairs of hazards reported by members of the public, such as missing navigational buoys, removal of sand under the Coogee Beach Jetty to facilitate surf lifesaving club vehicle access and sign replacement.

Planned maintenance is work that is identified and managed through a maintenance schedule. Examples include sand nourishment and beach re-profiling, breakwater repairs, and cleaning of maritime trail information plinths.

Operating expenditure is continuously required expenditure required to keep the asset functional. Examples include rubbish collection, inspections, drone monitoring, beach sweeping, deployment and storage of pontoons, pest control, cleaning, graffiti removal etc.

The trend in maintenance budgets is shown in **Error! Reference source not found.**.

Financial Year	Total Maintenance Expenditure ($)	Total Operating Expenditure ($)
2018/19	531,417	80,731
2019/20	217,775	97,859
2020/21	281,564	125,341
2021/22	522,832	27,118
2022/23	338,279	55,093
2023/24	336,025	305,113
2024/25	575,366	253,016

Table 5.4: Maintenance and Operating Budget Trends

These previous Operating and Maintenance budget levels are considered to have been adequate to meet service levels. Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement.

5.2.1 Asset hierarchy

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

The service hierarchy is shown is **Error! Reference source not found.**.

Service Hierarchy	Service Level Objective
Sea Walls and Breakwaters	Protect the coast from wave action
Groyne	Reduce beach erosion
Engineered Fringing Reef	Reduce beach erosion
Geotextile Sand Bags	Protect the coast from wave action
Surf Lookout Tower	Safety and security of beach users
Jetties and Swimming Pontoons	Provide amenity to beach users
Maritime Trail	Provide amenity for snorkellers
Navigational Buoys	Safety and security
Stairs	Provide safe beach access and protect coastal structures/vegetation
Wheelchair Beach Matting	Provide access to beach/jetty

Table 5.5: Asset Service Hierarchy

5.2.2 Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.4 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance planned budget.

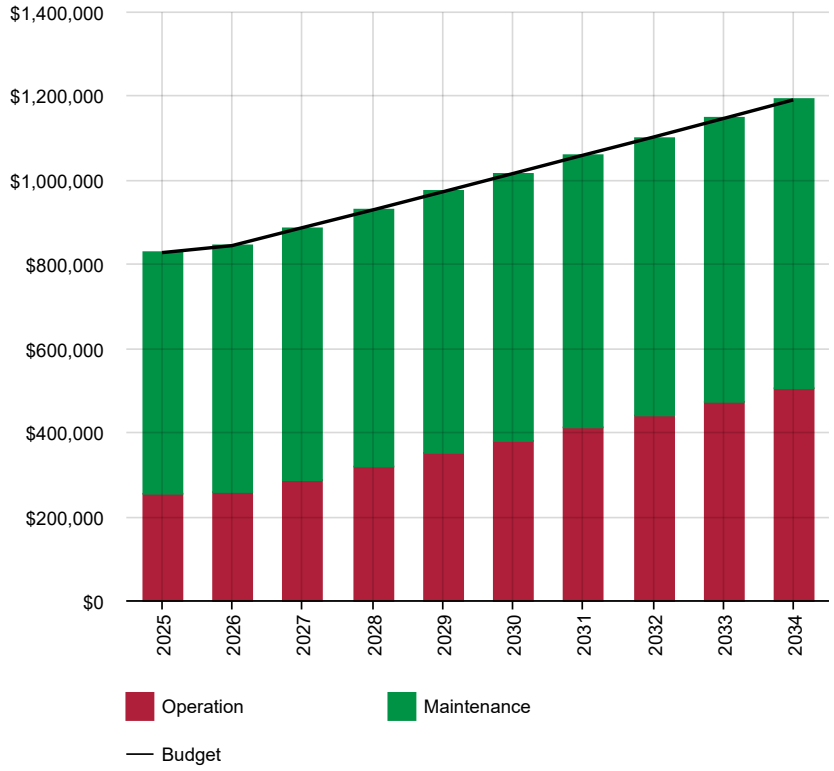


Figure 5.4: Operations and Maintenance Summary

All values are shown in current day dollars.

5.3 Renewal plan

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

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

- The first method uses Asset Register data to project the renewal costs (replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year), or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Error! Reference source not found.**. The estimates for renewals were based on an Alternative Method, in this case based on professional judgement. Asset useful lives were last reviewed in 2020.

Asset Classification	Useful Life (years)
Swimming pontoons	25
Sand bypass pipe system	40
Navigational buoys	50
Retaining walls, low and high edge walls, sea walls and breakwaters and the Coogee Beach jetty	100

Table 5.6: Useful Lives of Assets

The estimates for renewals in this AMP were based on the Alternative Method, with the approach being an estimate based on professional judgement.

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a jetty that has a load limit sign), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a swimming pontoon).[6]

Renewals are prioritised by identifying assets or asset groups that:

- Have a high consequence of failure
- Have high use and subsequent impact on users would be significant
- Have higher than expected operational or maintenance costs
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.[7]

The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 5.7: Renewal Priority Ranking Criteria

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[6] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

[7] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

Criteria	Weighting (%)
Condition	70
High usage	25
Upgrade required/efficiency/expenditure	5
Total	100

Table 5.7: Renewal Priority Ranking Criteria

5.3.2 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.5. A detailed summary of the forecast renewal costs is shown in Appendix D.

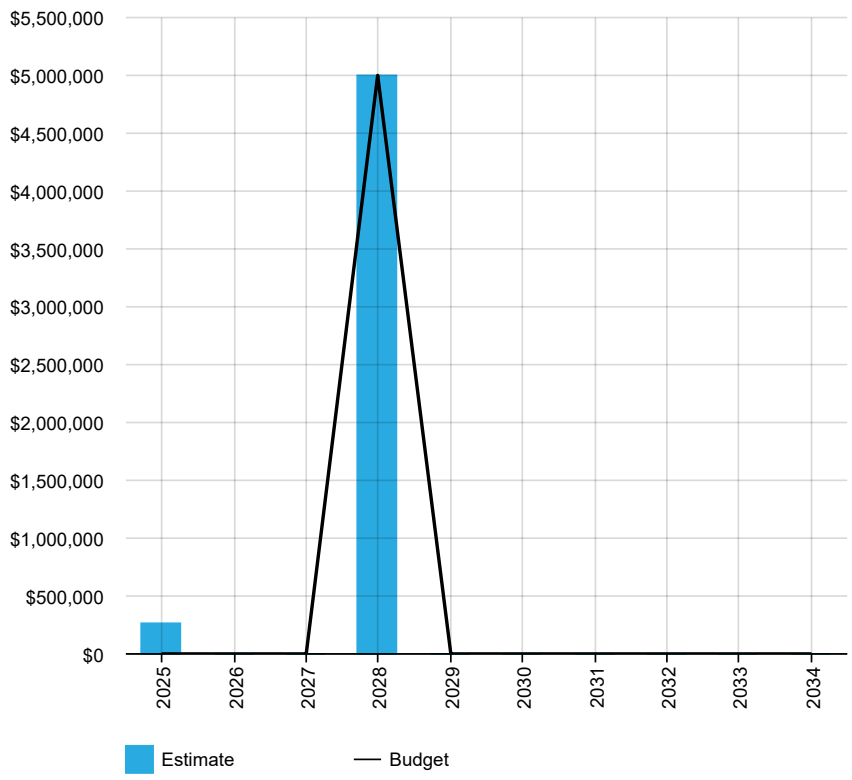


Figure 5.5: Forecast Renewal Costs

The marina breakwater is suspected to be under-designed, which may greatly shorten its useful life. Actual required expenditure is pending an investigation. If no issues are identified, the required expenditure would be zero.

Deferred renewal (assets requiring renewal and not scheduled in capital works programs) should be included in the risk analysis process in the risk management plan.

5.4 Acquisition plan

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its original service level. They may result from growth, demand, social or environmental needs. Assets may also be donated to the City by developers or third parties.

5.4.1 Selection criteria

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

Criteria	Weighting (%)
New asset requirement identified in strategic documentation (e.g. Strategic Community Plan, Corporate Business Plan, Coastal Adaptation Plan or Infrastructure Plan)	50
Strong community demand (e.g. community group, petition, etc).	25
Supported by empirical data such as population growth data, approved developments, gap in agreed level of service, etc.	25
Total	100

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Criteria	Weighting (%)
New asset requirement identified in strategic documentation (e.g. Strategic Community Plan, Corporate Business Plan, Coastal Adaptation Plan or Infrastructure Plan)	50

Criteria	Weighting (%)
Strong community demand (e.g. community group, petition, etc).	25
Supported by empirical data such as population growth data, approved developments, gap in agreed level of service, etc.	25
Total	100

Table 5.8: Acquired Assets Priority Ranking Criteria

5.4.2 Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised in Figure 5.6 and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix A.

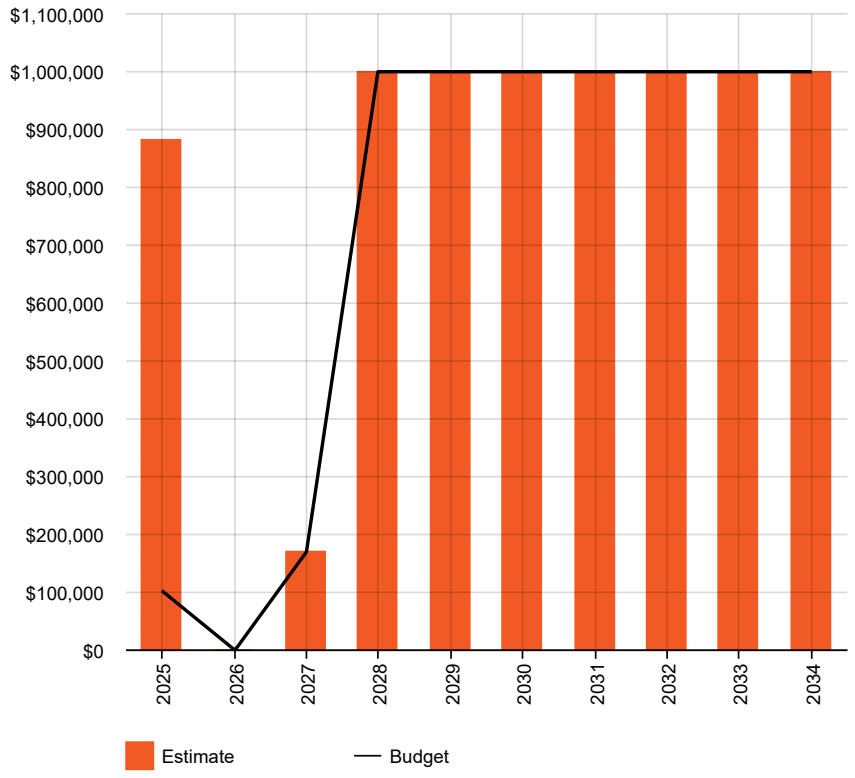


Figure 5.6: Acquisition (Constructed) Summary

Amounts are shown in real values (i.e., current values, net of inflation).

When the City of Cockburn commits to new assets, we must be prepared to fund future operations, maintenance and renewal costs. We must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in Figure 5.7.

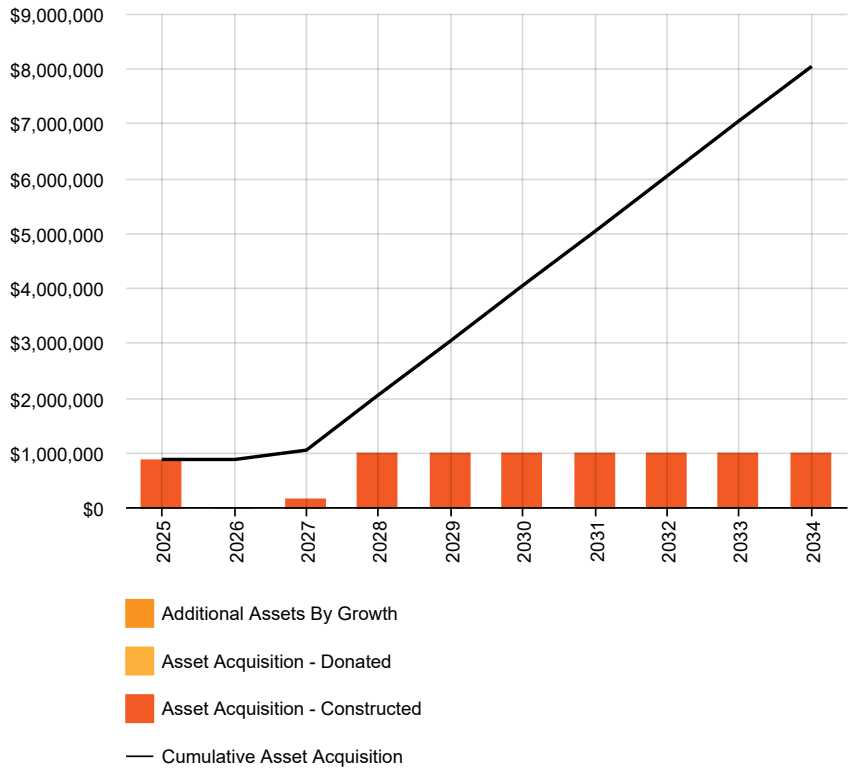


Figure 5.7: Acquisition Summary

Amounts are shown in real values (i.e., current values, net of inflation).

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

Ongoing acquisitions are anticipated for coastal projects, mainly relating to coastal protection measures as identified in the City's CHRMAP. These will commit the City to ongoing operations, maintenance and renewal. Coastal protection measures are to mitigate risk to the City, the environment and private property.

5.5 Disposal plan

No assets have been identified for disposal.

5.6 Summary of lifecycle costs and planned budget

The financial projections from this asset management plan are shown in Figure 5.8. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

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

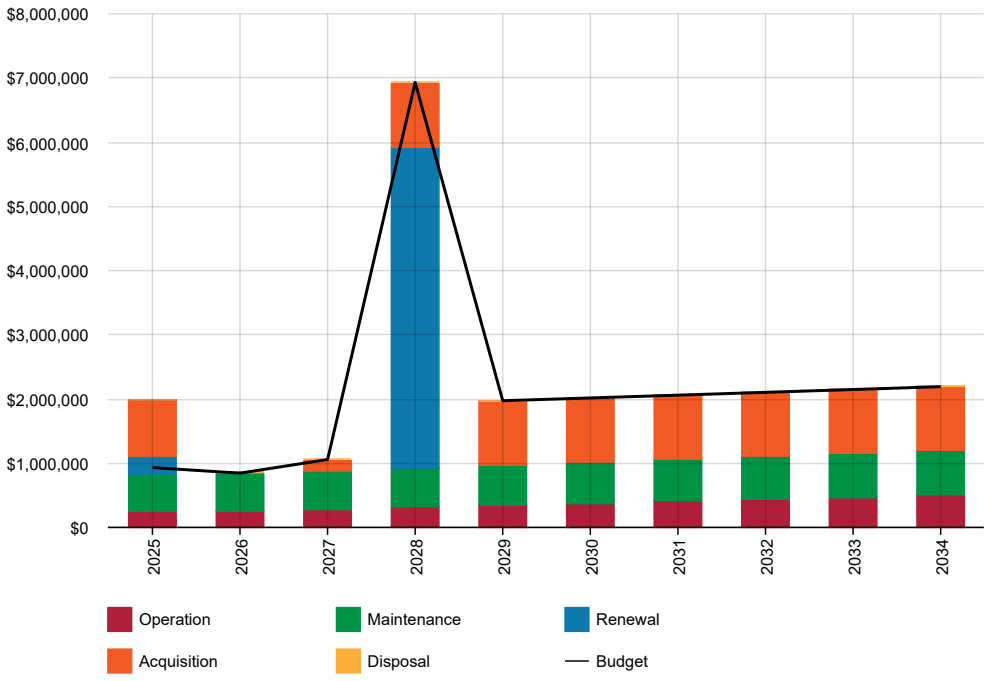


Figure 5.8: Lifecycle Costs and Planned Budget Summary

Overall, the proposed levels of service are affordable. However, as discussed previously, required expenditure is dependent on reports that are still pending.

6 Risk management planning

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

Risk management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'[8].

An assessment of risks[9] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a financial shock, reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical assets

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

Critical Asset(s)	Failure Mode	Impact
Seawalls, groynes and breakwaters	Damage from weather and wave action	Loss of integrity puts significant amount of property at risk; safety; exacerbated erosion
Engineered fringing reef	Damage from weather and wave action	

Table 6.1: Critical Assets

[8] ISO 31000:2009, p 2

[9] Enterprise Risk Management

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

6.2 Risk assessment

The risk management process used is shown in Figure 6.1 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.

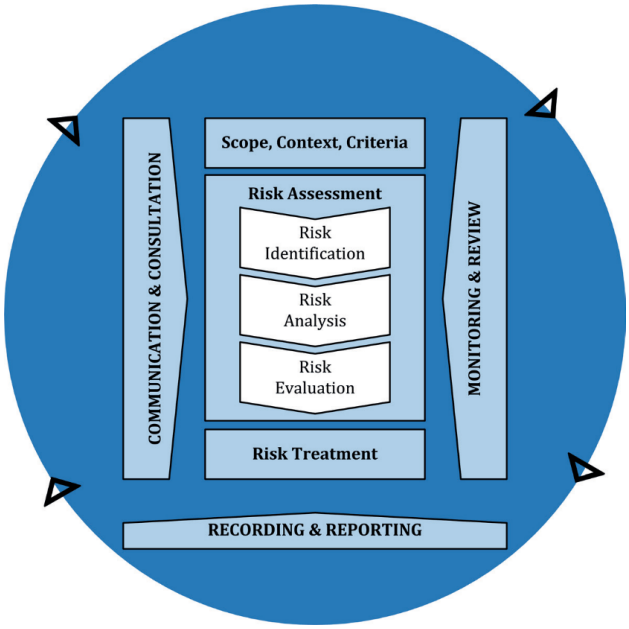


Figure 6.1: Risk Management Process – Abridged

Source: ISO 31000:2018, Figure 1, p9

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

An assessment of risks[10] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

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

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
All	Damage due to extreme weather events	H	Proactive monitoring of weather systems Preventative maintenance	M	$20,000/year approx.
Sea Walls and Breakwaters	Damage to assets, nearby infrastructure and residential and commercial areas from weather and lack of maintenance	H	Annual inspections and reporting via coastal monitoring program Periodic condition assessment by expert consultants Maintenance and renewal as required	M	Visual inspections covered by Coastal Monitoring Program $75,000 every 4 years for condition assessment (cost shared with other coastal assets) Renewal works >$3m if marina breakwaters under-designed

[10] Enterprise Risk Management

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Coogee Beach Jetty	Damage and premature deterioration due to weather damage and lack of maintenance	H	Regular walk-over inspections by staff Annual contractor in-water inspection & maintenance Annual visual inspection & reporting via coastal monitoring program Periodic condition assessment by expert consultants	L	$10,000/year contract inspection and maintenance $75,000 every 4 years for condition assessment (cost shared with other assets) Visual inspections covered by Coastal Monitoring Program
Car park Capacity	Decline of customer satisfaction	VH	Acquire land or designated area for beach car parking needs	M	$1m $10,000/year ongoing
Coastal lands and assets	Loss or damage to land and assets due to erosion	H	Annual coastal monitoring program	M	$100,000/year
Coastal interface	Failure to provide a safe, clean and amenable public environment, coastal interface	H	Meetings with other business and service units Maintain meetings with other stakeholders Signage Annual maintenance program	L	$200,000/year

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
All coastal infrastructure	Damage due to coastal hazards that are exacerbated by sea level rise	H	Follow guidance of CHRMAP	M	$250,000 every ten years for CHRMAP itself; mid-term review $150,000 Implementing recommendations ~$1m every year

Table 6.2: Risks and Treatment Plans

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

6.3 Infrastructure resilience approach

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

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

We do not currently measure our resilience in service delivery. This will be included in future iterations of the AM Plan.

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 we cannot do

There are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years. These include:

- Elimination of the coastal risk posed by climate change – risk treatment will need to be balanced against available budget.

6.4.2 Service trade-off

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

- Critical assets are not adequately maintained, renewed or upgraded to meet demand, resulting in a greater proportion of coastal assets being in poor condition (i.e. Condition 4 or 5)
- An increasing number of assets become unfit for purpose, leading to a reduction in usage
- Critical coastal capital works projects cannot occur to meet demand.

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Increased coastal erosion leading to environmental and property damage and reduced recreational opportunities
- Injuries caused by hidden sharp edges
- Injuries caused by structural failure
- Insurance claims, injuries, death.

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

7 Financial summary

This section contains the financial and valuation forecasts resulting from the information presented in the previous sections of this plan. Forecasts will be improved as the discussion on sustainable levels of service, risk and cost matures in line with the financial strategy.

7.1 Financial statements and projections

7.1.1 Asset valuations

The coastal assets are currently valued ‘at cost’, with a formal valuation process pending.

7.1.2 Sustainability of service delivery

There are three key indicators of sustainable service delivery that are considered in the AMP for this service area. The three indicators are the:

- Asset Consumption Ratio (Fair Value/Current Replacement Cost)
- Asset Sustainability Ratio (planned renewal budget for next year / annual depreciation expense)
- Asset Renewal Funding Ratio (planned renewal budget for the next 10 years / forecast renewal outlays for the next 10 years).

Asset Consumption Ratio

Asset Consumption Ratio 86 per cent

This ratio shows the written down value of depreciable assets in relation to their ‘as new’ value in current prices. A ratio of less than 50 per cent indicates a rapid deterioration of the asset base, whilst a ratio greater than 75 per cent may indicate an over investment in the asset base.

Asset Sustainability Ratio

Asset Sustainability Ratio 130 per cent

The target ratio should be between 90-110 per cent. A lower value indicates that at some time in the future, more renewal funding will be required.

A higher value may indicate ‘above average’ renewal spending over the lifecycle of the asset base, which may simply correspond with peaks in new assets being added, depending on the useful lives of the assets. For an asset portfolio with a small number of assets, like the coastal assets, this is common.

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio[11] 95 per cent

The Asset Renewal Funding Ratio illustrates that over the next 10 years we expect to have 95 per cent of the funds required for the optimal renewal of coastal assets.

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

7.1.3 Forecast costs (outlays) for the long-term financial plan

Error! Reference source not found. shows the forecast costs (outlays) required for consideration in the 10 year LTFP.

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

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AMP and/or financial projections in the LTFP.

We will manage any ‘gap’ by communicating the service performance, cost, and risk implications in consultation with the community and key stakeholders.

Forecast costs are shown in 2025 dollar values.

[11] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)
2025	883,226	253,016	575,366	270,943	0
2026	0	258,076	586,873	0	0
2027	170,000	288,666	598,611	0	0
2028	1,000,000	319,420	610,583	5,000,000	0
2029	1,000,000	350,174	622,795	0	0
2030	1,000,000	380,929	635,251	0	0
2031	1,000,000	411,683	647,956	0	0
2032	1,000,000	442,437	660,915	0	0
2033	1,000,000	473,191	674,133	0	0
2034	1,000,000	503,945	687,616	0	0

Table 7.1: Forecast Costs (Outlays) for the Long-Term Financial Plan

7.2 Valuation forecasts

The best available estimate of the value of assets included in this AMP are shown below.

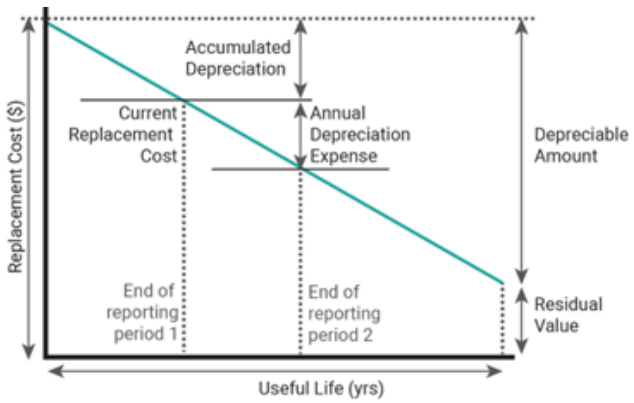


Figure 7.1: Valuation Terminology

These costs are shown in 2025 dollar values:

- Replacement Cost (Gross) $41,831,383
- Depreciable Amount $41,831,383
- Current Replacement Cost[12] $33,472,104
- Annual Depreciation Expense $438,364

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

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

8 Assumptions and improvement planning

8.1 Data and information sources

8.1.1 Accounting and financial data sources

This AMP utilises accounting and financial data sourced from Technology One CiAnywhere 2024A Release (775).

8.1.2 Asset management data sources

This AMP also utilises asset management data sourced from Technology One CiAnywhere 2024A Release (775).

8.2 Key assumptions

In compiling this AMP, it was 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 forecasts.

Key assumptions made in this AMP are:

- Renewal forecasts have been made by professional judgement
- Population and asset growth projections are assumed to be accurate
- The data supplied was as accurate as possible at the time of compilation of this AMP
- The breakdown of the actual reactive, planned and operational expenditure is assumed to be accurate
- Assets requiring renewal are identified from either the asset register or an alternative method
- The timing of capital renewals based on the asset register is applied by adding the useful life to the year of acquisition or year of last renewal
- Alternatively, an estimate of renewal lifecycle costs is projected from external condition modelling systems and may be supplemented with, or based on, expert knowledge. When doing so, the forecast remaining useful life in the asset register should be adjusted where necessary.

The Alternative method was used to forecast renewals, which in this case is based on expert knowledge.

8.3 Forecast reliability and confidence

The forecast demands, costs, planned budgets, and valuation projections in this AMP are based on the best available data. For effective asset management and financial planning and reporting, it is critical that the information is reliable and up to date.

Data confidence is classified on an A to E level scale in accordance with the guidance provided in the International Infrastructure Management Manual. [13]

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

Table 8.1: Data Confidence Grading System

The estimated confidence level for and reliability of data used in this AMP is shown in **Error! Reference source not found.**.

[13] IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

Data	Confidence Assessment	Comment
Demand drivers	B	Professional judgement, corporate knowledge and id projections.
Growth projections	B	Id projections
Acquisition forecast	C	Professional judgement, corporate knowledge and Local Government projections.
Operation forecast	B	City records of past expenditure and professional judgement
Maintenance forecast	B	City records of past expenditure and professional judgement
Renewal forecast - Asset values	C	Historical construction cost, use of unit rates to fill gaps. Assets missing from asset register. Formal valuation pending
- Asset useful lives	C	Useful lives are based on industry practice and condition ratings.
- Condition modelling	B	Completed in September 2021, many assets inspected 2025 also
Disposal forecast	B	No planned road disposals at this moment in time, although this may change within the planning period and, if so, must be reflected in the AMP.

Table 8.2: Data Confidence Assessment for Data used in AMP

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

8.4 Improvement plan

It is important that we recognise gaps in the planning process that require improvement to ensure effective asset management and informed decision making. The improvement plan generated from this AMP is shown in **Error! Reference source not found.**.

Section	Project	Responsibility	Task
5.3	Renewal Plan	Asset Services Coastal	Assessment of marina breakwater budgeted for next financial year - $70,000
5.4	Acquisition Plan	Coastal	CHRMAP expected mid 2026, budget for recommendations from 2027/28
5.1	Revaluation	Asset Services	Full revaluation of coastal assets
3.5	Measure beach safety	Coastal Asset Services	Discuss how safety could be measured, e.g. number of incidents and what type
3.5	Universal Access	Coastal Asset Services	Investigate Universal Access of beaches other than Coogee Beach
5.2	Clarification of responsibilities for maintenance	Coastal Asset Services	Clarify who is responsible for maintaining which assets
5.2	Maintenance Management System	Asset Services IT Services Coastal	Track what work has been done to which assets Use for planning maintenance, i.e. predictive maintenance
5.3	Clarify difference between renewal and acquisition for projects	Coastal Asset Services	Ensure capital projects are accurately classified into new, upgrade and renewal at the planning stage, using percentage estimates for each project if necessary
5.3	Review useful lives	Asset Services	In lieu of renewal intervention criteria / accepted levels of service, review useful lives by referring to assets budgeted for renewal Consider using statistics to calculate

Section	Project	Responsibility	Task
5.1	Condition Assessment	Asset Services	Update condition assessment
5.1	Ensure all new assets are added to the asset register	Coastal Asset Services	Inform of new assets (Coastal) Add to asset register (Asset Services)

Table 8.3: Improvement Plan

8.5 Monitoring and review procedures

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

This AMP will be reviewed and updated to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

The AMP has a maximum life of 4 years and is next due for complete revision in 2028.

8.6 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 1 to 5-year detailed works programs, budgets, business plans and corporate structures consider the ‘global’ works program trends provided by the AMP
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90-110 per cent).

9 References

- AIE Engineering, 2025 – Coastal Structures Condition Assessment
- City of Cockburn – Asset Management Strategy 2017 – 2024
- City of Cockburn – Strategic Community Plan 2025 – 2035
- City of Cockburn – Long Term Financial Plan 2024-2025 to 2033-2034
- City of Cockburn – Management Budget 2024 - 2025
- City of Cockburn – Enterprise Risk Management
- City of Cockburn – Place Score – Liveability Survey 2024 - https://cockburn.t1cloud.com/T1Default/CiAnywhere/Web/COCKBURN/RedirectToFunction?sk.DocumentSetId=12111956&f=%24EMC.DOC.PROP.MNT&suite=ECM&h=10tdmvN6tA&t=191361DE
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- City of Cockburn – Climate Change Strategy 2020-2030 - ECM_9832294_v6_Climate Change Strategy 2020-2030
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- Government of Western Australia, Department of The Premier and Cabinet - Western Australian Legislation - Acts in force
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- ISO, 2024, ISO 55000:2024 Asset Management – Vocabulary, overview, and principles
- ISO, 2018, ISO 31000:2018 Risk management – Guidelines
- The Local Government and Municipal Knowledge Base - LGAM Knowledge Base
- DVC, 2006, 'Asset Investment Guidelines', 'Glossary', Department for Victorian Communities, Local Government Victoria, Melbourne, http://www.dvc.vic.gov.au/web20/dvclgv.nsf/allDocs/RWP1C79EC4A7225CD2FCA257170003259F6?OpenDocument
- Local Government of Western Australia – Asset Management Framework and Guidelines

10 Appendices

10.1 Appendix A Acquisition forecast

The new assets required to meet growth will be funded through a combination of municipal funding, grant funding and Developer Contribution Plans.

10.1.1 Acquisition forecast assumptions and source

Acquisition will be via City construction projects. There are no further donated coastal assets anticipated to be handed to the City.

Coastal acquired assets are largely dependent on guidance from the CHRMAP and so become more certain after each plan update.

10.1.2 Acquisition project summary

Acquisition projects are pending the next CHRMAP finalisation and further investigation. The known upcoming projects are listed here:

	Cost Estimate for FY Ending ($000)									
Proposal Name	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**
Fringing Reef Stage 2	814									
Coogee Maritime Trail Swimming Pontoon	9									
C.Y. O'Connor Beach Geotextile Sand Bags	60		140							
C Y O'Connor Beach Swimming Pontoon			30							

10.1.3 Acquisition forecast summary

Year	Constructed ($)	Donated ($)	Growth ($)
24/25	883,226	0	0
25/26	0	0	0
26/27	170,000	0	0
27/28	1,000,000	0	0
28/29	1,000,000	0	0
29/30	1,000,000	0	0
30/31	1,000,000	0	0
31/32	1,000,000	0	0
32/33	1,000,000	0	0
33/34	1,000,000	0	0

Table 10.1: Acquisition Forecast Summary

10.2 Appendix B Operation forecast

10.2.1 Operation forecast assumptions and source

Operations includes the activities listed in Section 5.2.

Both the forecast and the budget are linearly extrapolated from previous budgets. It is in the Improvement Plan to review this approach.

10.2.2 Operation forecast summary

Error! Reference source not found. provides a summary of Forecast Operations expenditure over the planning period for the coastal infrastructure.

Year	Operation Forecast ($)	Additional Operation Forecast ($)	Total Operation Forecast ($)
24/25	253,016	0	253,016
25/26	258,076	0	258,076
26/27	288,666	0	288,666
27/28	319,420	0	319,420
28/29	350,174	0	350,174
29/30	380,929	0	380,929
30/31	411,683	0	411,683
31/32	442,437	0	442,437
32/33	473,191	0	473,191
33/34	503,945	0	503,945

Table 10.2: Operation Forecast Summary

10.3 Appendix C Maintenance forecast

10.3.1 Maintenance forecast assumptions and source

Maintenance includes the activities listed in Section 5.2.

Both the forecast and the budget are linearly extrapolated from previous budgets. It is in the Improvement Plan to review this approach.

10.3.2 Maintenance forecast summary

Error! Reference source not found. provides a summary of Forecast Maintenance expenditure over the planning period for the coastal infrastructure.

Year	Maintenance Forecast ($)	Additional Maintenance Forecast ($)	Total Maintenance Forecast ($)
24/25	575,366	0	575,366
25/26	586,873	0	586,873
26/27	598,611	0	598,611
27/28	610,583	0	610,583
28/29	622,795	0	622,795
29/30	635,251	0	635,251
30/31	647,956	0	647,956
31/32	660,915	0	660,915
32/33	674,133	0	674,133
33/34	687,616	0	687,616

Table 10.3: Maintenance Forecast Summary

10.4 Appendix D Renewal forecast summary

10.4.1 Renewal forecast assumptions and source

As all of the coastal assets are currently identified to be in condition 3 or better, only the marina breakwater has been identified to possibly require repair works. It is in the Improvement Plan to update condition information where required and review maintenance management.

10.4.2 Renewal project summary

The marina breakwater may not have been built to specification, with an assessment planned for the 2026/27 financial year for $70,000. If demonstrated to be correct, significant upgrade/renewal works are expected in the millions of dollars. Staging, timing and cost is dependent on release of the report.

For the 2024/2025 financial year, Port Coogee revetment renewals were completed as well as swimming pontoon repairs.

10.4.3 Renewal forecast summary

Error! Reference source not found. provides a summary of Forecast Renewal expenditure over the planning period.

Year	Renewal Forecast ($)	Renewal Budget ($)
24/25	270,943	0
25/26	0	0
26/27	0	0
27/28	5,000,000	5,000,000
28/29	0	0
29/30	0	0
30/31	0	0
31/32	0	0
32/33	0	0
33/34	0	0

Table 10.4: Renewal Forecast Summary

10.4.4 Renewal plan

See Section 10.4.2.

10.5 Appendix E Disposal summary

10.5.1 Disposal forecast assumptions and source

As of June 2025, it is assumed there are no coastal asset disposal projects required over the planning period. However, this AMP should be updated with any disposal projects identified during the planning period, as well as the life cycle cost summary.

10.5.2 Disposal project summary

Any disposal projects identified during the planning period should be listed here in future AMP updates.

10.5.3 Disposal forecast summary

No asset disposals have been identified.

10.6 Appendix F Budget summary by lifecycle activity

The budget summary shown in Table 10.5 is based on the renewal budget from the LTFP and the projected O&M budget, as discussed in Appendix B and C.

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)	Total ($)
2025	883,226	253,016	575,366	0	0	1,711,608
2026	0	258,076	586,873	0	0	844,949
2027	170,000	288,666	598,611	0	0	1,057,277
2028	1,000,000	319,420	610,583	5,000,000	0	6,930,003
2029	1,000,000	350,174	622,795	0	0	1,972,969
2030	1,000,000	380,929	635,251	0	0	2,016,180
2031	1,000,000	411,683	647,956	0	0	2,059,639
2032	1,000,000	442,437	660,915	0	0	2,103,352
2033	1,000,000	473,191	674,133	0	0	2,147,324
2034	1,000,000	503,945	687,616	0	0	2,191,561

Table 10.5: Budget Summary by Lifecycle Activity

10.7 Appendix G Legislative requirements

Legislation	Requirement
Local Government Act 1996 LG (Miscellaneous Provisions) Act 1960 (WA) LG Regulations 2008	Sets out role, purpose, responsibilities and powers of Local Governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Occupational Safety and Health Act 1984 (WA) OSH Regulations 1996	Provides for the promotion, coordination, administration and enforcement of Safety and Health in WA. Places emphasis on the prevention of accidents and injury.
Disability Discriminations Act 1992	Sets out requirements to eliminate as far as possible discrimination against persons on the grounds of disability in the areas of work, accommodation, clubs and sport and in the provision of facilities, services and land.
Disability Services Act 1993	An Act for the establishment of the Disability Services commission and the Ministerial Advisory Council on Disability, for the furtherance of principles applicable to people with disabilities, for the funding and provision of services to such people that meet certain objectives and for the resolution of complaints by such people.
Western Australian Marine Act 1982	Sets out rules and regulations in relation to marine and vessel operations; such areas like mooring licence, inspections and maintenance.
Land Administration Act 1997	Section 91: License to Occupy Crown Land - The licensee must keep the License Area (the engineered fringing reef) in good and safe repair and condition, and take all reasonable steps necessary to keep it safe and free from hazard to any property or person on or using the License Area.
Australian Accounting Standards	Sets out the financial reporting standards for the revaluation and depreciation of assets.
Emergency Management Act, 2005 (WA)	Requires lifeline utilities to function at the fullest possible extent during and after an emergency and to have plans for such functioning (business continuity plans)

Legislation	Requirement
Australian Standards	Standards are published documents setting out specifications and procedures designed to ensure products, services and systems are safe, reliable and consistently perform the way they were intended to. They establish a common language which defines quality and safety criteria.
Environmental Protection Act 1993	An act to provide for the protection of the environment, to establish the Environmental Protection Authority and define its functions, powers and other purposes.

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Paper from responsible sources.

Document Set ID: 12558637
Version: 10, Version Date: 04/09/2026

City of Cockburn

Buildings Asset Management Plan 2024–2028



www.cockburn.wa.gov.au

Document Set ID: 12795600
Version: 6, Version Date: 09/09/2026

Front cover page photo is taken at Treeby Community and Sports Centre

DRAFT

Asset Management Plan				
Document ID: 12795600				
Date	**Revision Details**	**Author**	**Reviewed**	**Approved**
Sept 2021	Final Version 2020 - 2024	Property & Asset Services	Manager Engineering Services	Executive Committee / Council
Sept 2026	Final Version 2024 - 2028	Asset Services		

Acknowledgement of country

The City of Cockburn acknowledges the Nyungar people of Beeliar Boodjar. Long ago, now and in the future they care for Country.

We acknowledge a continuing connection to Land, Waters and Culture and pay our respects to Elders, past and present.

Document Set ID: 12795600
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1 Executive summary

The City of Cockburn's community relies on a diverse portfolio of infrastructure assets, including roads, buildings, bridges, parks and footpaths. The building assets covered by this Asset Management Plan are valued at approximately $222 million.

The Asset Management Plan (AMP) provides a strategic framework for managing our community's infrastructure assets, ensuring they remain safe, reliable, and capable of meeting current and future demands.

1.1 Purpose of the plan

This AMP aims to:

- Provide a systematic approach to asset management
- Address critical risks associated with aging infrastructure and limited funding
- Ensure infrastructure supports the community's social, economic and environmental goals.

This AMP details information about the City's building network, as well as defining the Level of Service (LOS) and outlining the funding required to maintain this LOS over a 10 year planning period.

This highlights any funding gaps between the planned and forecast expenditure, which assists in optimising expenditure on managing assets through the Long-Term Financial Plan.

1.2 Asset description

The buildings comprise:

- Civic Buildings 35
- Community Buildings 78
- Recreation Buildings 28

The above 142 buildings have a total renewal value estimated at $221,679,945.

1.3 Levels of service

Levels of Services are typically split into 'Customer' and 'Technical' and each have their own metrics which the City is able to measure its performance against.

The City's overall customer LOS objective is to maintain 70 per cent community satisfaction with buildings assets, which is not sustainable over the medium and long term. This is because the current planned budget allocation is insufficient to maintain providing these services at current levels for the planning period.

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The main service consequences of an insufficient planned budget are:

- Increased public complaints and reputation damage
- Increased maintenance requirements
- Increased unplanned outages.

1.4 Future demand

The main demands for new services are created by:

- Population growth
- Changing demographics.

These demands will be approached using a combination of managing existing assets, upgrading of 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. Examples of non-asset based solutions to ensure the City's asset portfolio is sufficient to meet community need include:

- Manage existing assets through an appropriately prioritised Capital Works Program
- Ensure decisions to upgrade existing assets and construct new assets are supported with appropriate modelling to understand the long term impacts
- Continue to investigate alternative renewal treatments to lower lifecycle costs (e.g. recycled materials, more efficient construction practices, etc.)
- Investigate upgrades and repurposing of existing buildings before new buildings are built.

1.5 Lifecycle management plan

How we plan to manage and operate the assets at the agreed levels of service throughout their lifecycle is contingent on 10-year Long-Term Financial Plan (LTFP). It is important to be aware of the 'Whole of Life' lifecycle costs associated with assets (i.e. cost of construction, operation and maintenance costs, renewal and upgrade costs and disposal costs at end of life).

1.5.1 What does it cost?

The lifecycle costs necessary to provide the services covered by this AMP include operation, maintenance, renewal and upgrade costs of existing assets, as well as the acquisition or construction of new assets to meet demand. Disposal of assets is also considered when it is no longer cost effective to continue to maintain/operate an asset.

When lifecycle costs are prepared for a minimum 10-year planning period, they can be used to inform the 10-year LTFP. The first 10-year lifecycle forecast is estimated to cost $338,531,417 or $33,853,142 on average per year.

Depreciation is excluded from these cost estimates.

1.5.2 What we will do

The funding made available in the first 10-years' of the LTFP is $225,362,427 or $22,536,243 on average per year which is approximately 66 per cent of the cost to undertake the lifecycle activities.

The reality is, only what is funded in the LTFP can be provided. Informed decision making depends on the AMP emphasising the consequences of planned budgets on the LOS provided and communicating the residual risks to decision makers. It is important to ensure the organisation is delivering the services in a financially sustainable manner.

The current 10-year LTFP results in a shortfall of $11,316,899 on average per year of the forecast lifecycle costs required to provide services. This is shown in the Figure 1.1 below.

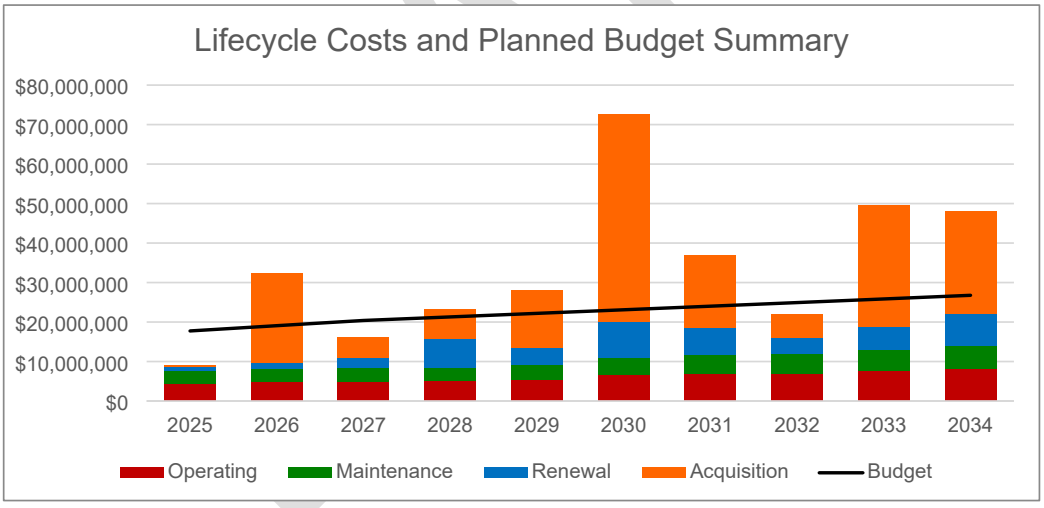


Figure 1.1: Forecast Lifecycle Costs and Planned Budgets

We plan to provide building services for the following:

- Operation, maintenance, renewal and upgrade of buildings and adjacent assets to meet service levels set in annual budgets
- Completion of key building renewals, upgrades and new construction projects within the 10 year planning period.

1.5.3 What we cannot do

We currently do not allocate enough budget to sustain services at the proposed standard including the provision of new assets. Works and services that cannot be provided under present funding levels are:

- Constructing all the proposed buildings in the absence of disposal of older buildings
- Maintaining our buildings at the lowest lifecycle cost.

1.6 Risk management

The current planned budget is insufficient to continue to manage risks in the medium to long term; significant LOS impacts are expected. It is important to ensure that adequate budget is kept in reserve to achieve what is shown in the life cycle cost summary or make decisions on levels of service.

The main risk consequences are:

- Buildings are not adequately maintained, renewed or upgraded to meet demand, resulting in a greater percentage of buildings being in poor condition (i.e. Condition 4 or 5)
- An increasing number of buildings become unfit for purpose, leading to a decline in usage and an increase in demand on nearby equivalent services and/or buildings, e.g. a malfunctioning public toilet leads to an increase in demand on the next closest public toilet
- New building construction projects cannot occur to fulfill community needs.

Strategies and actions to manage these risks are discussed in Section 6.

1.7 Financial summary

Providing financially sustainable and affordable services from infrastructure requires the careful management of service levels, costs and risks.

The 10-year LTFP is $22,536,243 on average per year giving a 10 year funding shortfall of $11,316,899 per year. This indicates that approximately 34 per cent of the forecast costs needed to provide the services documented in this AMP are not accommodated in the LTFP.

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

1.8 Assumptions and improvement planning

Key assumptions made in this AMP are:

- Population and asset growth projections are assumed to be accurate

- Condition data and age data are assumed to be accurate (noting that this AMP is based on a 'Reliable' level of confidence information
- Unit rates are representative of asset replacement costs
- Useful lives are an accurate representation of the behaviour of assets in the field and the City's practices in renewing/replacing assets at their end of useful life.

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

- Identify buildings surplus to needs for disposal, or identify other ways to close gap between expected levels of service and funding
- Quantify function and capacity performance more accurately and transparently – what is provided and what is expected
- Ensure accurate capture of detailed building component data
- Refine maintenance cost planning
- Ensure adequate resources for all of the above.

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2 Introduction

2.1 Background

This AMP communicates the actions and necessary funds required to sustainably deliver 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.

The AMP is to be read in conjunction with the City's Asset Management Policy and Asset Management Strategy, along with the following strategic documents:

- City of Cockburn Strategic Community Plan 2025 – 2035
- City of Cockburn Corporate Business Plan 2024/25 – 2027/28
- City of Cockburn Annual Business Plan(s)
- City of Cockburn Long Term Financial Management Plan 2024/25 – 2033/34
- City of Cockburn Community Infrastructure Plan 2024-2041.

The infrastructure assets covered by this AMP include civic buildings, community buildings and recreation buildings. For a detailed summary of the assets covered in this AMP refer to Table 5.1 in Section 5.

These assets are used to provide various services throughout the City of Cockburn and have a total replacement value of approximately $222 million.

2.2 Stakeholders

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

Key Stakeholder	Role in Asset Management Plan
The Elected Council	Represent needs of community/shareholders Allocate resources to meet planning objectives in providing services while managing risks Ensure service sustainable.
Chief Executive Officer (CEO)	Organisational direction and leadership
Executive Leadership Team (ELT)	Executive management endorsement, sign off and executive ownership
Group Manager Assets and Projects	Review and strategic management sign off
Service Manager Infrastructure Assets	Review and line management sign off

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Key Stakeholder	Role in Asset Management Plan
Infrastructure Asset Services	Asset Management Plan development, review, continuous improvement and implementation of the AMP maintenance actions
Community, Residents, Tourists & Business	Provide feedback to the City and Councillors on how the City is going in maintaining the agreed levels of service.
Insurers	Assist to manage financial risk of the City
State Emergency Services	Attendance to call-outs and security

Table 2.1: Key Stakeholders in the AMP

2.3 Principles, goals and objectives of asset management

The principles of asset management as per the International Standards for asset management are:

- **Value**: asset management focuses on the value assets provide to the organisation over time
- **Alignment**: asset management aligns financial, technical and operational decisions with the organisational objectives, promoting vertical and horizontal coordination
- **Leadership**: leadership and sustained commitment at all levels are crucial for successful asset management.[1]

Our goal for managing infrastructure assets is to deliver the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers.

The key objectives of infrastructure asset management as defined by the International Infrastructure Management Manual are:

- Defining levels of service and monitoring performance
- Managing the impact of growth through demand management and infrastructure investment
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service
- Identifying, assessing and appropriately controlling risks

[1] ISO 55000:2024 Asset Management – Vocabulary, overview, and principles

- Linking to a Long-Term Financial Plan which accommodates the required expenditure and how it will be funded.[2]

2.4 Plan framework

The 2024 - 2028 Buildings AMP has been developed in accordance with the International Infrastructure Management Manual (IIMM) and complies with Department of Local Government & Communities Asset Management Framework.

As part of the City's Strategic Asset Management Planning Framework (SAMPF), the Buildings AMP will be developed every 4 years and be subject to a 2-year desktop review. This AMP review will focus on core elements required by the LTFP, for example asset valuations, growth projections, financial analysis including operating, sustainability ratios and 10-year renewals. This will ensure that future revisions of the LTFP will be derived from a structured AMP development cycle that has received Executive and or Council approval, increasing confidence and integration of asset management data and methodologies into the City's long term financial planning and adopted service levels.

Figure 2.1 provides a visual representation and timeline of the SAMPF.

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[2] IPWEA International Infrastructure Management Manual (IIMM), Sec 1.2.1

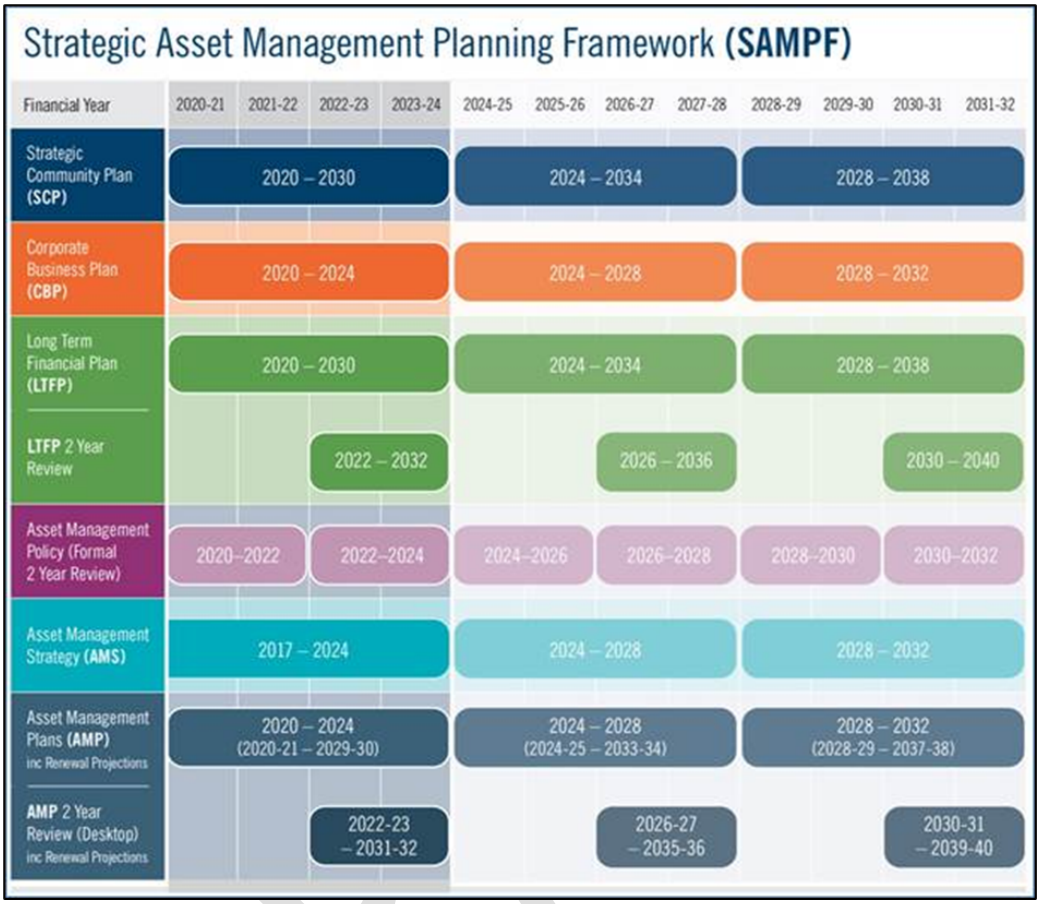


Figure 2.1: Strategic Asset Management Planning Framework (SAMPF)

- Level of Service and Enterprise Risk Management – outlines the level of service provided by council and identifies risks to the city
- Future Growth and Demand how this will impact on future service delivery and how this is to be met
- Lifecycle Management – how the city will manage its existing and future assets to provide the required services
- Financial Analysis – what funds are required to provide the required services
- Asset management practices – current systems and practices in place
- Improvement and monitoring – how the plan will be monitored and improved to ensure it is meeting Council's objectives.

2.4.1 Corporate planning framework

The formalisation and alignment of the City's SAMPF within the Corporate Planning Framework reflects the City's increasing maturity and recognises the importance of Asset Management in supporting the City in delivering long term financial sustainability of services and capital asset renewal.

With the continued implementation of the SAMPF, the City will commence measuring service levels for planned and reactive maintenance to determine operational performance and asset utilisation.

The City strives to improve its strategic and operational asset management practices and to continue its journey towards advanced asset management. The Department of Local Government, Sport and Cultural Industries (DLGSC) has developed the Western Australia Local Government Integrated Planning and Reporting Framework. Accordingly, the future direction and need for advanced level practices are continually assessed.



Figure 2.2: City's Corporate Planning Framework

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3 Levels of service

Levels of service define the standards and performance targets that infrastructure assets are expected to meet to ensure they provide reliable, safe, and efficient services to the community.

3.1 Customer research and expectations

The City carries out the Place Score Liveability Survey bi-annually to gather and evaluate customer feedback across a range of services that the City provides. This allowed the City to measure its performance against community expectations.

The most recent Liveability Survey was undertaken in September 2024 by Place Score Pty Ltd. In total, 1811 residents participated in the survey.

Table 3.1 summarises the results from our Customer Satisfaction Survey.

Performance Measure	Performance Score (PX)		
	Good PX ≥ 7	Average 6 ≤ PX < 7	Poor PX < 6
Access to shared community and commercial assets (library, bike/car share, sport facilities/gyms etc.)		6.8	
Family and community services		6.2	
Child services		6.5	
Sustainable urban design			5.7
Spaces suitable for specific activities or special interests	7.4		
Spaces for group or community activities and/or gatherings	7.0		
Evidence of recent public investment (roads, parks, schools etc.)		6.0	

Table 3.1: Customer Satisfaction Survey Levels

3.2 Strategic and corporate goals

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

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Our vision is:

Cockburn, the best place to be.

Our mission is:

Support our communities to thrive by providing inclusive and sustainable services which reflect their aspirations.

Strategic goals have been set by the City and are found in the City's Strategic Community Plan. The relevant goals and objectives and how these are addressed in this AMP are summarised in Table 3.2.

Strategic Outcome	Strategic Objective	Deliverable	Measure
Our Economy Our City attracts investment supporting commercial and business growth.	1D. Facilitate vibrant, connected commercial hubs and visitor experiences.	Buildings that meet the needs of the community and are close to or within commercial centres	Customer survey results
Our Environment We use our resources with a focus on conservation and mitigate the impacts of climate change.	2C. Enhance climate resilience and champion environmental initiatives to mitigate impacts.	Ensure buildings are resilient to climate change	Structural assessments
		Ensure buildings minimise greenhouse gas generation	Electricity use from the grid Use of generators powered by fossil fuels
Our Community Our community feels safe, secure and connected and is active and healthy.	3B. Promote and support active, healthy lifestyles through recreation and wellness.	Buildings that provide health, recreation and wellness services	Customer survey results
	3C. Celebrate and recognise Aboriginal and Torres Strait Islander and diverse cultures.	Buildings that are sensitive to Aboriginal and Torres Strait Islander culture and diverse cultures.	Customer survey results Consultation with relevant groups

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Strategic Outcome	Strategic Objective	Deliverable	Measure
	3D. Foster connected, accessible communities and services.	Buildings that support social interaction, are universally accessible and provide community services.	Customer survey results Compliance with Disability Access and Inclusion Plan (DAIP)
Our Places	4A. Plan for growth and sustainable development.	Buildings that keep up with demand	Customer survey results Capacity assessments
Our Governance Our City is governed through transparent and accountable leadership with a focus on open communication, listening and engaging with our community, with an eye on the future.	5D. Strive for financial sustainability and operational excellence.	Ensure alignment between agreed levels of service and funding, optimise lifecycle cost	Ratio of funding to projected cost of agreed levels of service
	5B. Strengthen engagement and communication and enhance customer experience.	Negotiate levels of service vs cost with the community and businesses	Customer survey results and feedback Business surveys

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

3.3 Legislative requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the road service are outlined in Appendix G.

While no longer a legislative requirement, the Asset Management Ratios are reasonable performance indicators of the ongoing financial sustainability of assets. The targets for these ratios are set by the Department of Local Government, Sport and Cultural Industries (DLGSCI) through the Integrated Planning and Reporting Framework (IPRF). The calculation methodology and targets for these ratios are outlined in Table 3.3: Asset Ratios.

Asset class	Consumption ratio	Sustainability ratio	Renewal funding ratio
Description	How much has the City used of its assets?	Is the City replacing assets as they wear out?	Is the City setting aside sufficient future funding for asset renewals?

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Asset class	Consumption ratio	Sustainability ratio	Renewal funding ratio
Calculation	Depreciated replacement cost / current replacement cost	Capital renewal (one year) / annual depreciation (one year)	Planned capital renewal (10 years) / required capital renewal (10 years)
Target	50-75% standard 60-75% ideal	90-110% standard	75-95% standard 95-105% ideal
What it means	Lower than standard = assets are deteriorated and will result in a poor level of service Higher than ideal = assets are being replaced too early resulting in poor value for money*	Lower than standard = the City is under investing in asset renewal/replacement resulting in a poor level of service Higher than standard = the City is over investing in asset renewal/replacement resulting in poor value for money	Lower than standard = the City is allocating too little funding to long term asset renewal/replacement which will result in a lower level of service in future Higher than ideal = the City is allocating too much funding to long term asset renewal/replacement which will result in poor value for money in future

Table 3.3: Asset Ratios

3.4 Customer values

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

Customer Values indicate:

- What aspects of the service is important to the customer
- Whether they see value in what is currently provided
- The likely trend over time based on the current budget provision.

Customer Values	Customer Satisfaction Measure	Performance	Expected Trend Based on Planned Budget
Safety	Place Score Survey	6.5/10	Maintain
Strong sense of belonging		6.9/10	Maintain
Spaces for specific activities		7.4/10	Maintain
Existing buildings meet needs	Building Maintenance Requests 2024/2025	4961	Increase

Table 3.4: Customer Values

3.5 Customer levels of service

The Customer Levels of Service are considered in terms of:

Condition How good is the service … what is the condition or quality of the service?

Function Is it suitable for its intended purpose …. Is it the right service?

Capacity/Use Is the service over or under used … do we need more or less of these assets?

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

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

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Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Overall	Community satisfaction of 70% or greater with the City's buildings.	Community feedback	Score of 6.8/10 for 'Access to shared community and commercial assets' in recent community survey	Maintain
Condition	Complete condition assessment of all buildings at least every five (5) years	Dates between condition assessments of buildings	Condition inspections for all buildings every five (5) years	Maintain
	Maintain at least 80% of the City's building assets in Condition 3 or better.	Condition assessment scores	Percentage of building assets in condition 3 or better by replacement cost is 90%	Increase
	Confidence levels		High (Professional Judgement supported by extensive data)	High (Professional Judgement supported by extensive data)
Function	Buildings are fit for purpose	Percentage of buildings not fit for purpose	Less than 5% of buildings are not fit for purpose Due to their age, some buildings have been identified as not being fit for purpose. Refer Community Infrastructure Plan.	Increase – may struggle to keep up with evolving needs
	Confidence levels		Medium (Professional judgement supported by data sampling)	Low (Professional Judgement with no data evidence)

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Capacity	Buildings have adequate capacity in accordance with capacity assessments	Percentage of buildings over capacity	5% of buildings over capacity –sporting upgrades have been identified as necessary Community centres have been identified as under provided Access to toilets identified as a concern Refer Community Infrastructure Plan.	Increase – may struggle to meet demand
	Confidence levels		Medium (Professional judgement supported by data sampling)	Medium (Professional judgement supported by data sampling)

Table 3.5: Customer Level of Service Measures

3.6 Technical levels of service

Technical Levels of Service – To deliver on the customer values, and impact they have on Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the lifecycle activities (see Section **Error! Reference source not found.**) and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

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

Table 3.6 shows the lifecycle activities related to the current 10 year planned budget, and the forecast costs recommended in this AMP.

[3] IPWEA, 2015, IIMM, p 2|28.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Acquisition	Provide new buildings as required	Number and type of buildings built in the 10 year period	Capital Works Program recently revised	Six new buildings to satisfy Customer Levels of Service
	Upgrade existing buildings as required	Number and type of buildings upgraded, nature of upgrade, in 10 year period	Capital Works Program recently revised	12 major building upgrades to satisfy Customer Levels of Service
		Budget	$8,858,766 average per annum	$18,410,187 average per annum
Operations	Keep buildings clean	Frequency of cleaning	On average, daily cleaning. Constantly monitored, adjusted accordingly	Maintain
	Maintain up to date building condition data	Frequency of condition inspections	Complete condition assessment every 5 years	Current inspection frequency is sufficient
		Budget	$6,086,373 average per annum	No issues identified with budget
Maintenance	Minor defects rectified on a priority basis to keep buildings safe for use	Localised maintenance issues identified by community actioned within 5 working days	Struggling with current resources	Resourcing and business system improvements to ensure service levels can be met into the future
		Budget	$4,211,182 average per annum	Monitor closely, ensure keeps up with CPI

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Renewal	Keep buildings in satisfactory and safe condition	Proportion of building assets in “poor” or “very poor” condition	Percentage of building assets in condition 4 or worse by replacement cost is 10%	Define and agree on risks, risk appetite
	Allocate sufficient medium and long term renewal funding	Asset renewal funding ratio	49%	100%
		Budget	$2,515,273 average per annum	$5,145,400 average per annum
Disposal	Dispose of buildings that are no longer required	Buildings disposed of when opportunities identified	Nil allocated due to nil disposal opportunities identified	Continue reviewing opportunities to dispose of assets
		Budget	$0 per year	$0 per year

Table 3.6: Technical Levels of Service

Note: * Current activities related to planned budget.

** Expected performance related to forecast lifecycle costs.

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

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4 Future demand

Future demand refers to the effects on infrastructure assets services driven by factors such as population movement, economic development, technological advancements, and changing environmental or community expectations.

4.1 Demand drivers

A demand driver refers to the factors or trends that influence the need for infrastructure services and capacity. Some examples of factors influencing future demand include (but are not limited to):

- Population growth
- Changing demographics
- Industry development/changes in technology
- Legislation changes.

Demand drivers help predict future infrastructure needs and guide planning and investment decisions.

4.2 Demand forecasts

The current position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 4.1.

4.3 Impacts and demand management plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.1.

The impact on service delivery will be managed through a combination of managing and upgrading existing assets and the provision of new assets to meet demand. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to manage demand are shown in Table 4.1. Further opportunities will be developed in future revisions of this AMP.

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Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Population	133,869 as at 2025	177,920 by 2046	Increased demand on existing buildings Upgrade and expansion of building portfolio to meet capacity	Ensure maintenance and renewal budgets keep up with increase in asset stock.
Demographics	Large attraction of families (0-9 and 25-39 years) as residential development continues in greenfield sites Some attraction of young singles and couples (18-24 years) to new apartments around Cockburn Central and housing opportunities close to Murdoch University for students	The development of higher density areas around Cockburn Central, with its rail links into inner Perth, Rockingham and Mandurah, and the proposed revitalisation and regeneration of Hamilton Hill, Spearwood and Coolbellup, are likely to provide housing opportunities to younger and older smaller household types in higher density developments	Increased demand for Sporting & Recreational facilities along with toilet blocks in Parks	Capacity assessments Liaise with sporting and recreational groups and businesses Upgrade and acquire additional assets
	16,883 people 67 or older as at 2025	31,329 people 67 or older by 2046	Increased demand for universally accessible buildings	Universal access audits Monitor usage by people with physical impairment Upgrade as required

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Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Climate Change	The City has achieved 20% renewable energy by 2020	A new Climate Change Strategy 2020-2030 was adopted by Council in September 2020 and sets a target of Net Zero Emissions by 2030	Upgrades to existing buildings Relevant requirements on additional buildings	Investment in renewable energy, waste management and energy efficiency improvements on all new/ upgrade buildings

Table 4.1: Demand Management Plan

4.4 Asset programs to meet demand

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

Acquiring new assets will commit the City to ongoing operations, maintenance and renewal costs, and depreciation expenses for the period that the service provided from the assets is required. These future costs and expenses are identified and considered in developing the long-term financial plan.

4.5 Climate change adaptation

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

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

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

Risk and opportunities identified to date are shown in Table 4.2.

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

Climate change risk	Projection	Impact on services	Climate Change Management Plan
More extreme flooding/storm events during winter months	Increase in the frequency and severity of flooding and storm events	Increased wind loading Increased gutter and downpipe flows	Review capacity of existing Council buildings to withstand more severe weather events in line with latest National Construction Code
More extreme bushfires	Increase in the frequency and severity of bushfires	Evacuation Property damage	Ensure all City owned buildings (within Bushfire Prone Areas) have Bushfire Risk Assessments completed Consistent with Planning Policy provisions continue to ensure: • All proposed Structure Plans are accompanied and informed by a Bushfire Management Plan • New building design approval process (within Bushfire Prone Areas) incorporate bush fire management; Review, update and implement the Bushfire Risk Management Plan and Local Emergency Risk Management Plan.
Hotter temperatures during summer months	More frequent and longer heatwaves	Impact on air conditioning Increased complaints Increased heat stroke risk where no air conditioning	Review thermal insulation Review HVAC suitability Improved energy management

Table 4.2: Managing the Impact of Climate Change on Assets and Services

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

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

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Table 4.3 summarises opportunities to build climate change resilience into new and existing assets.

Asset Description	Climate change Impacts	Resilience Plan for New Assets	Resilience Plan for Existing Assets
Buildings	Increased wind loading	Design according to latest Australian Standards for wind loading	Structural assessment and reinforcement (steel brackets, repair defects, additional structural members etc)
	Increased demand on air conditioning	Ensure capacity of air conditioners comply with latest guidelines Insulation according to latest guidelines, or greater Photovoltaics, energy storage etc including bespoke thermal storage	Maintain/renew/upgrade air conditioners Provide additional insulation inc. batts, double glazed windows depending on building usage Photovoltaics upgrade, energy storage

Table 4.3: Building Climate Change Resilience into New Assets

The impact of climate change on new and existing assets is evolving and new opportunities will be developed in future revisions of this AMP.

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5 Lifecycle management plan

The lifecycle management plan details how the City plans to manage and operate the assets at the agreed levels of service (Refer to Section **Error! Reference source not found.**) throughout their entire lifecycle, from acquisition or creation to disposal. The goal is to maximise the value of the assets while minimising costs and risks, ensuring they continue to meet performance requirements over time.

From a financial perspective, infrastructure activities tend to be classified as being either Operating or Capital. The lifecycle activities used in the asset management and financial planning and reporting process cover:

Capital Expenditure:

- **Acquisition** – the activities to provide a higher level of service (e.g., widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library)
- **Renewal** – the activities that replace or restore assets to the standard it had originally provided (e.g., road resurfacing and pavement reconstruction, pipeline replacement and building component replacement)
- **Disposal** – the decommissioning, removing, or repurposing of assets that are no longer cost-effective, safe, or necessary (e.g. shutting down an old water treatment plant, demolishing unsafe buildings, dismantling old bridges, etc.).

Operating Expenditure:

- **Operations** - the routine activities that keep services accessible and effective, balancing efficiency with user expectations (e.g. road sweeping, mowing grass, energy, inspections, etc.)
- **Maintenance** – the preventative and corrective actions to sustain asset functionality and minimise unexpected failures. Maintenance activities enable an asset to continue providing service for its useful life (e.g., road patching, pothole repairs, unsealed road grading, crack sealing).

A pictorial representation of the asset lifecycle activities is shown below in Figure 5.1.

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Figure 5.1: Asset Lifecycle Activities

5.1 Background data

5.1.1 Physical parameters

The assets covered by this AMP are shown in Table 5.1.

Building Group	Number	Current Replacement Cost ($)
Civic Buildings	35	95,747,100
Community Buildings	78	76,359,300
Recreation Buildings	28	49,573,545
Total	141	221,679,945

Table 5.1: Buildings Assets

As at the valuation completed June 2026, the City is responsible for maintaining approximately 142 buildings. Note that the Aquatic Recreation Centre (ARC) is excluded as it is covered under a separate AMP.

An important distinction in the management of assets is the difference between 'Design Life' and 'Useful Life'. Design Life refers to the length of time that an asset is design to last, based on engineering standards, analysis, testing and reporting. Useful life is simply the length of time that an asset is used. For example, the typical design life for an asphalt road surface is around 20 years, however, the timeframe it is actually used may be much longer than this due to applying ongoing maintenance to get more life out of the surface than it was initially designed for. The modelling in this AMP considered Useful Life.

The age profile of the assets included in this AMP are shown in Figure 5.2.

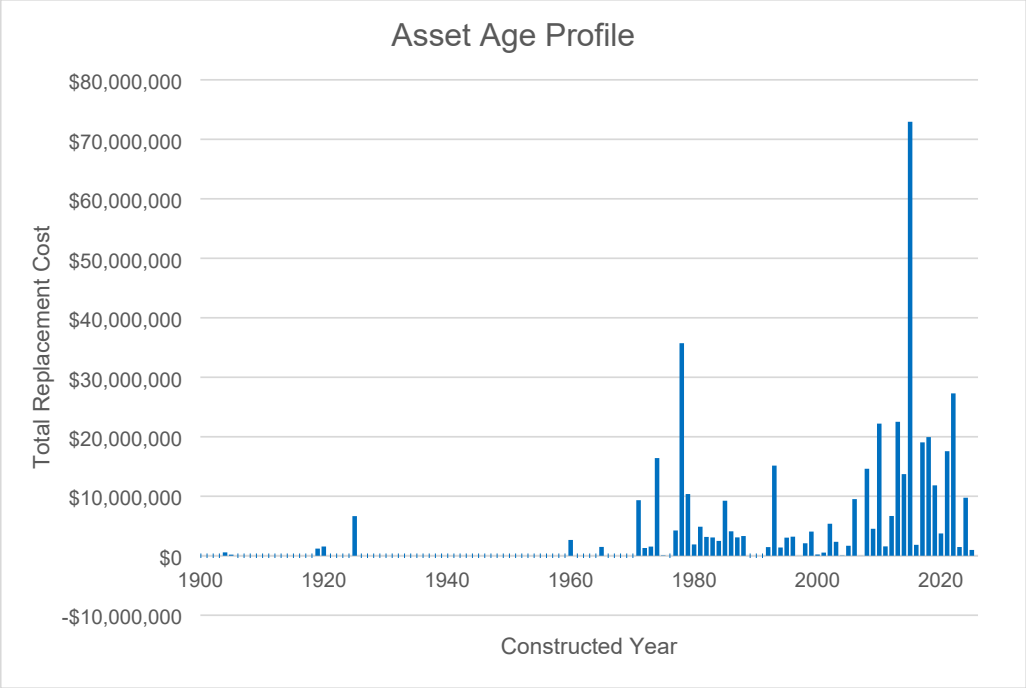


Figure 5.2: Asset Age Profile

The spike in 2015 is due to the construction of the Integrated Health building.

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 5.2.

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Location	Service Deficiency
Administration Building	Poor condition. Beyond end of life
Seniors Centre	Not fit for purpose
Wally Hagan Basketball Court	
Jean Willis Centre	

Table 5.2: Known Service Performance Deficiencies

The above service deficiencies were identified from facilities team.

5.1.3 Asset condition

Condition ratings for the City's buildings are currently monitored every five years. The most recent condition survey and valuation of the City's buildings was completed by JLL in June 2026. An updated detailed condition assessment was completed by RealBuilt in August 2026. The roof was not included in the contract due to budget constraints; building rooves will need to be assessed in the near future.

Condition is measured using a 1 – 5 grading system[5] as detailed in Table 5.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AM plan results are translated to a 1 – 5 grading scale for ease of communication.

Condition Grading	Description of Condition
1	Very Good: free of defects, only planned and/or routine maintenance required
2	Good: minor maintenance required plus planned maintenance
3	Fair: defects requiring regular and/or significant maintenance to reinstate service
4	Poor: significant defects, renewal/rehabilitation required
5	Very Poor: physically unsound and/or beyond rehabilitation, immediate action required. Asset is at end of useful life.

Table 5.3: Condition Grading System

[5] IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

The condition profile of our buildings is shown in Figure 5.3.

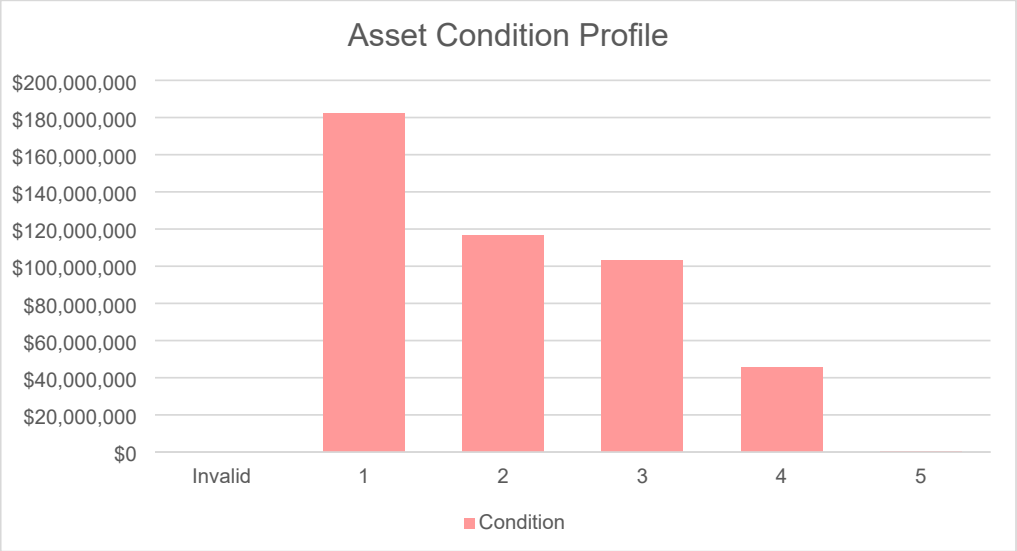


Figure 5.3: Asset Condition Profile

If inadequate renewal funding is allocated through the Long-Term Financial Plan, the average condition of City buildings will worsen over time, as building components reach the end of their useful life. Of concern is the $46 million of assets in Condition 4. The challenge will be to either ensure there is enough funding to maintain the current service levels or to adjust agreed levels of service.

5.2 Operations and maintenance plan

For the purpose of modelling within this AMP, the following definitions apply:

Reactive maintenance is unplanned maintenance work carried out in response to service requests and management/supervisory directions.

Planned maintenance is work that is identified and managed through a maintenance schedule. This includes prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Operating expenditure is continuously required expenditure required to keep the asset functional. Examples include inspection, costs of power, fuel, staff, security patrols, plant equipment, on-costs and overheads.

The trend in maintenance budgets is shown in Table 5.4.

Financial Year	Total Maintenance Expenditure ($)	Total Operating Expenditure ($)
2020/21	2,626,160	3,308,490
2021/22	2,561,537	3,376,891
2022/23	2,258,845	3,746,427
2023/24	2,389,229	4,408,118
2024/25	3,226,142	4,361,489

Table 5.4: Maintenance and Operating Budget Trends

These previous Operating and Maintenance budget levels are considered to have been adequate to meet service levels. Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement.

5.2.1 Asset hierarchy

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

The service hierarchy is shown in Table 5.5.

Service Hierarchy	Service Level Objective
Civic Buildings	Allow the City to provide core functions and administration. Includes the administrative building, operations centre and waste management facility buildings.
Community Buildings	Provide services specific to local government (e.g. library), accommodation, public conveniences etc
Recreation	Provide recreational services, e.g. sport club buildings.

Table 5.5: Asset Service Hierarchy

5.2.2 Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.4 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance planned budget.

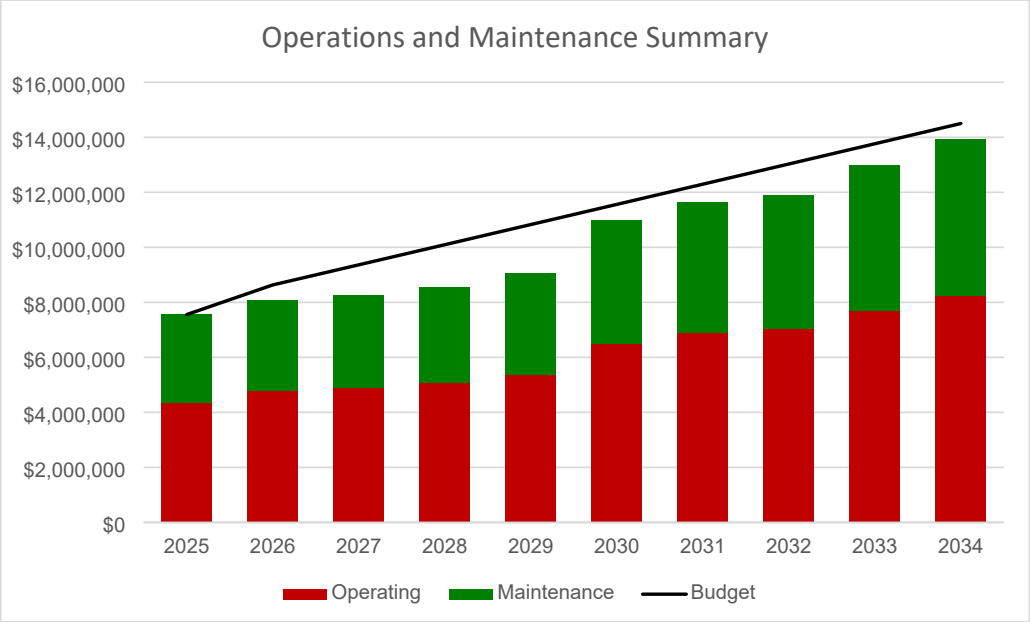


Figure 5.4: Operations and Maintenance Summary

All figure values are shown in current day dollars.

5.3 Renewal plan

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

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

- The first method uses Asset Register data to project the renewal costs (replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year), or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work.

The estimates for renewals in this AMP were based on the asset register method.

The Useful Life used for this plan has been extracted from the City's operational asset register and is based on the 2019 Rawlinsons Australian Construction Handbook, internal expertise from the City's Facilities Service Unit and the property management experience from the 2019 facilities condition audit conducted by NS Advisory.

Asset component useful lives have been provided Appendix H. These were last reviewed in 2020.

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a switchboard with usage limitations due to poor condition), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a HVAC system).[6]

Renewals are prioritised by identifying assets or asset groups that:

- Have a high consequence of failure
- Have high use and subsequent impact on users would be significant
- Have higher than expected operational or maintenance costs
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.[7]

The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 5.6.

Criteria	Weighting (%)
Condition	70
High usage	25
Necessary to improve safety/efficiency/expenditure	5
Total	100

Table 5.6: Renewal Priority Ranking Criteria

5.3.2 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.5. A detailed summary of the forecast renewal costs is shown in Appendix D.

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[6] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

[7] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

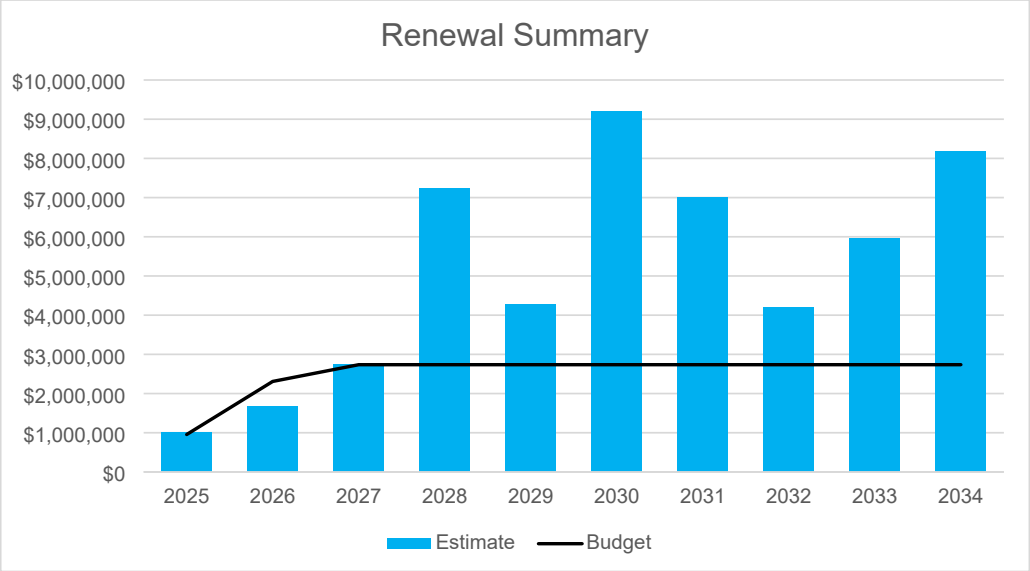


Figure 5.5: Forecast Renewal Costs

The renewal demand compared with the budget is a significant cause for concern.

Deferred renewal (assets requiring renewal and not scheduled in capital works programs) should be included in the risk analysis process in the risk management plan.

5.4 Acquisition plan

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its original service level. They may result from growth, demand, social or environmental needs. Assets may also be donated to the City by developers or third parties.

5.4.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to meet strategic needs of the community. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programs. The priority ranking criteria are detailed in Table 5.7**Error! Reference source not found.**.

Criteria	Weighting (%)
New asset requirement identified in strategic documentation (e.g. Strategic Community Plan, Corporate Business Plan or Community Infrastructure Plan)	50
Strong community demand (e.g. community group, petition, etc).	25
Supported by empirical data such as population growth data, gap in agreed level of service, etc.	25
Total	100

Table 5.7: Acquired Assets Priority Ranking Criteria

5.4.2 Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised in Figure 5.6 and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix A.

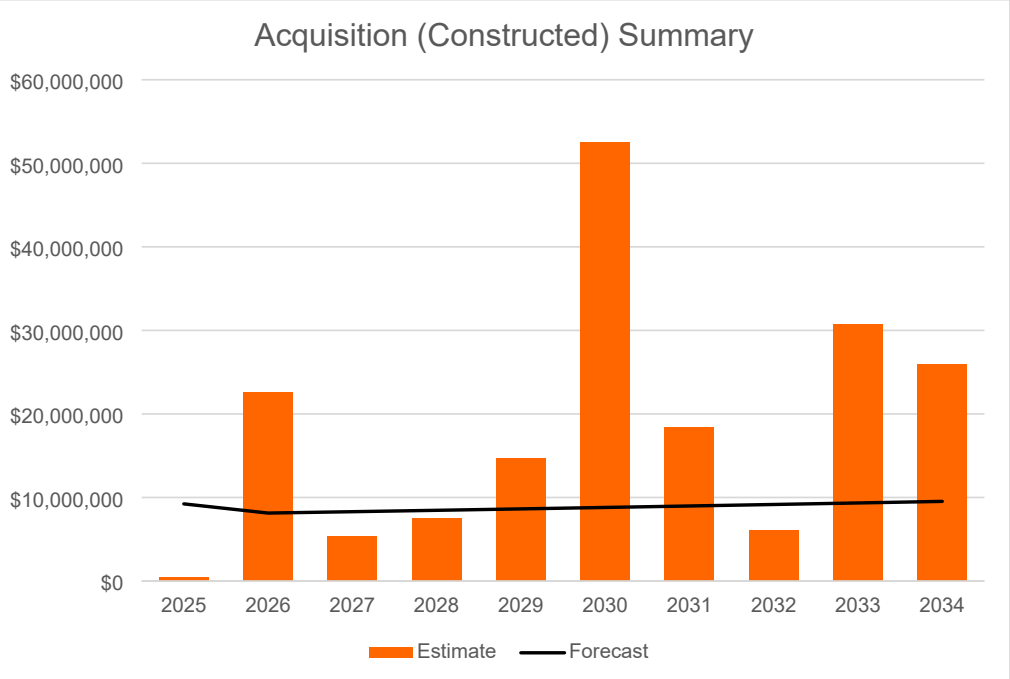


Figure 5.6: Acquisition (Constructed) Summary

Amounts are shown in real values (i.e., current values, net of inflation).

When the City of Cockburn commits to new assets, we must be prepared to fund future operations, maintenance and renewal costs. We must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the

acquired assets being taken on by the Entity. The cumulative value of all acquisition work, including assets that are constructed and contributed are shown in Figure 5.7.

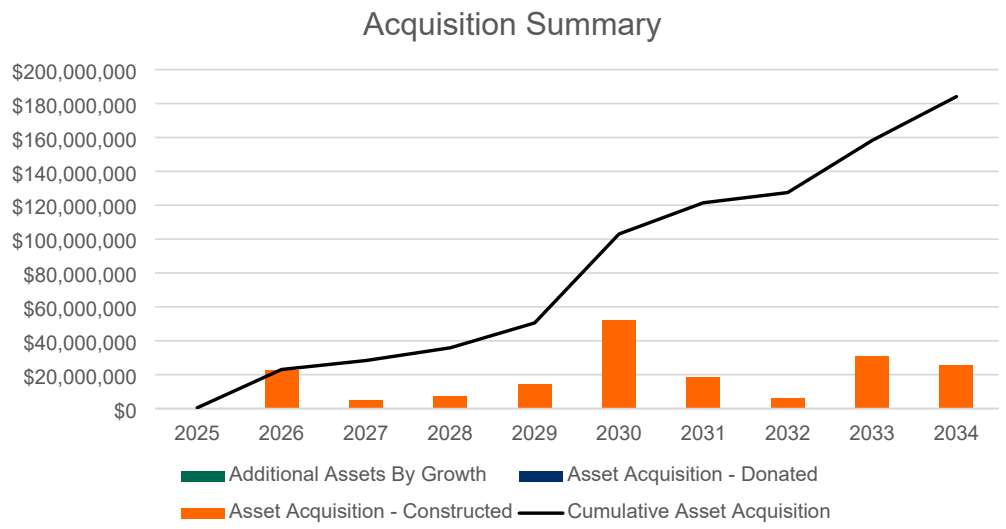


Figure 5.7: Acquisition Summary

Amounts are shown in real values (i.e., current values, net of inflation).

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

Significant new buildings have been planned for and these will commit the City to additional operations, maintenance and renewal costs. Both the funding for the new buildings themselves and these ongoing costs require further investigation.

5.5 Disposal plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.8. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined in Table 5.8. Any costs or revenue gained from asset disposals is included in the long-term financial plan.

Asset	Reason for Disposal	Timing	Disposal Costs	Operations & Maintenance Annual Savings
No buildings scheduled	N/A	N/A	N/A	N/A

Table 5.8: Assets Identified for Disposal

5.6 Summary of lifecycle costs and planned budget

The financial projections from this asset plan are shown in Figure 5.8. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

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

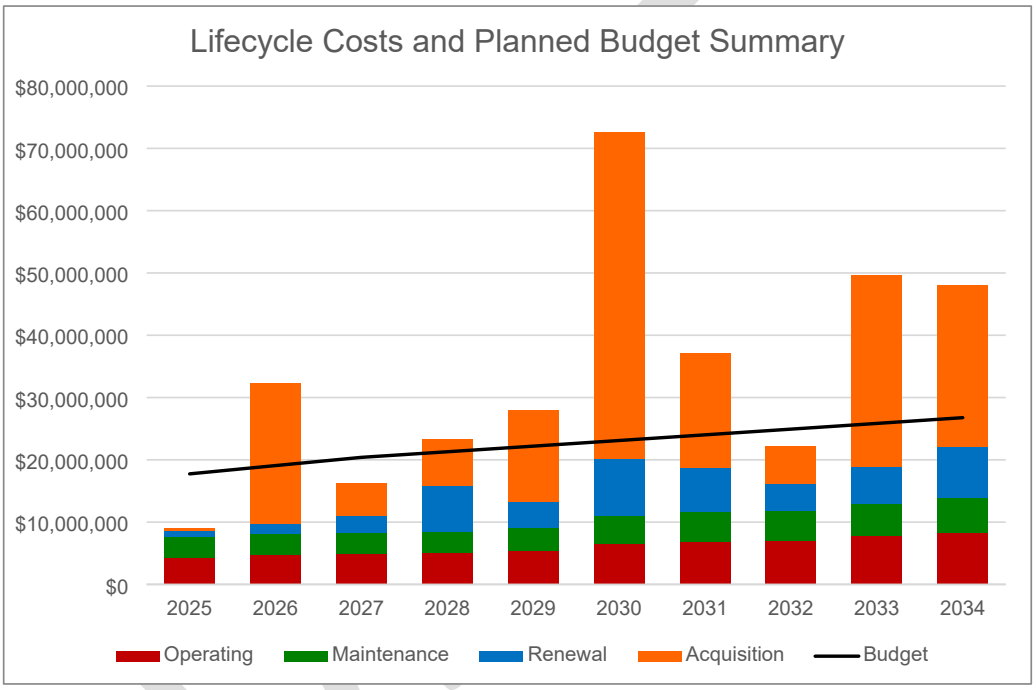


Figure 5.8: Lifecycle Costs and Planned Budget Summary

The capital works plan and LTFP are in the process of being reviewed.

6 Risk management planning

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

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'[8].

An assessment of risks[9] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical assets

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

Critical Asset(s)	Failure Mode	Impact
Administration Building	Structural	Severe, prolonged impact on most City functions and services Work from home and/or find alternative building Refer Business Continuity Plan
Operations Building	Structural	Severe, prolonged impact on operational services including waste collection Work from home and/or find alternative building Refer Business Continuity Plan

Table 6.1: Critical Assets

[8] ISO 31000:2009, p 2

[9] Enterprise Risk Management

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

6.2 Risk assessment

The risk management process used is shown in Figure 6.1 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.

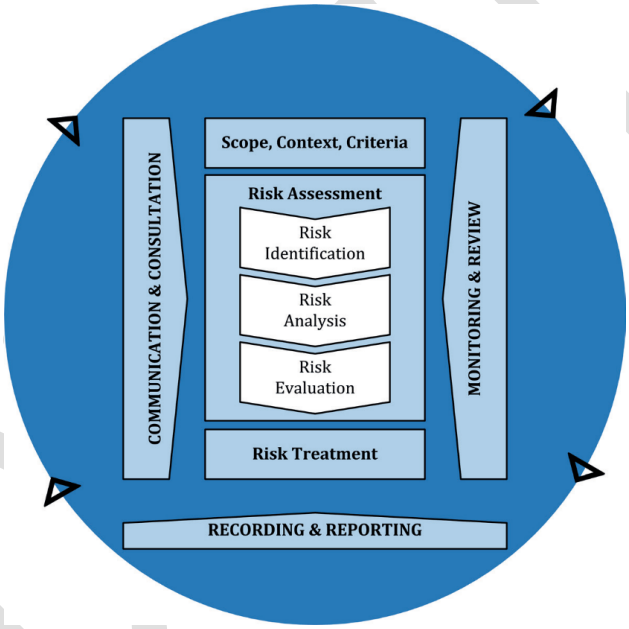


Figure 6.1: Risk Management Process – Abridged

Source: ISO 31000:2018, Figure 1, p9

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

An assessment of risks[10] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

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

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
All	Community infrastructure damage from climate change impacts (increased bushfires, extreme weather events and temperatures)	VH	Design building for climate resilience and improve energy management, through implementation of Environmentally Sustainable Development guidelines Review capacity of existing Council buildings to withstand more severe weather events, in line with latest National Construction Code	H	N/A
All	Degradation of building assets resulting in reputation damage, increased maintenance costs and unplanned service loss	H	Review Levels of Service against budget Consider disposal of old, dilapidated buildings where cost exceeds benefit	M	~$10,000 staff costs if lowering LoS
All	Failure to retain maintenance staff	H	Additional staff recommended Succession planning	M	1 Full Time Equivalent Min $10,000 staff costs

[10] Enterprise Risk Management

Table 6.2: Risks and Treatment Plans

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

6.3 Infrastructure resilience approach

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

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

We do not currently measure our resilience in service delivery. This will be included in future iterations of the AM Plan.

6.4 Service and risk trade-offs

The decisions made to adopt this AMP are based on the objective of achieving the optimum benefits from the available resources.

6.4.1 What we cannot do

There are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years. These include:

- Constructing all the proposed buildings in the absence of disposal of other buildings
- Maintaining our buildings at the lowest lifecycle cost.

6.4.2 Service trade-off

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

- Buildings are not adequately maintained, renewed or upgraded to meet demand, resulting in a greater percentage of buildings being in poor condition (i.e. Condition 4 or 5)
- An increasing number of buildings become unfit for purpose, leading to a decline in usage and an increase in demand on nearby equivalent services and/or buildings, e.g. a malfunctioning public toilet leads to an increase in demand on the next closest public toilet
- New building construction projects cannot occur to fulfill community needs.

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6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Significant portions of buildings are not safe for users due to their poor condition, likely increasing instances of accidents that result in injury or death
- Mandatory closures due to poor condition, resulting in increased demand/wear and tear on nearby equivalent services
- Increased number of community complaints.

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

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7 Financial summary

This section contains the financial and valuation forecasts resulting from the information presented in the previous sections of this plan. Forecasts will be improved as the discussion on sustainable levels of service, risk and cost matures in line with the financial strategy.

7.1 Financial statements and projections

7.1.1 Asset valuations

The City's building assets were last valued in June 2026. Where applicable, market based valuation was sourced. Otherwise, where this was not practical (e.g. administration building), assets were valued at 'greenfield replacement cost', based on a 'cost to construct' approach. This type of valuation considered inputs such as:

- Components
- Unit rates
- Condition data
- Residual value (after depreciation was considered).

7.1.2 Sustainability of service delivery

There are three key indicators of sustainable service delivery that are considered in the AMP for this service area. The three indicators are the:

- Asset Consumption Ratio (Fair Value/Current Replacement Cost)
- Asset Sustainability Ratio (planned renewal budget for next year / annual depreciation expense)
- Asset Renewal Funding Ratio (planned renewal budget for the next 10 years / forecast renewal outlays for the next 10 years).

Asset Consumption Ratio

Asset Consumption Ratio 64 per cent

This ratio shows the written down value of depreciable assets in relation to their 'as new' value in current prices. A ratio of less than 50 per cent indicates a rapid deterioration of the asset base, whilst a ratio greater than 75 per cent may indicate an over investment in the asset base.

Asset Sustainability Ratio

Asset Sustainability Ratio 33 per cent

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The target ratio should be 90-110 per cent. A lower value indicates that at some time in the future, more renewal funding will be required. A higher value may indicate 'above average' renewal spending over the lifecycle of the asset base, which may simply correspond with peaks in new assets being added, depending on the useful lives of the assets.

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio[11] 48 per cent

The Asset Renewal Funding Ratio illustrates that over the next 10 years we expect to have 48 per cent of the funds required for the optimal renewal of buildings assets.

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

7.1.3 Forecast costs (outlays) for the long-term financial plan

Table 7.1 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan.

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

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AMP and/or financial projections in the LTFP.

We will manage any 'gap' by communicating the service performance, cost, and risk implications in consultation with the community and key stakeholders.

Forecast costs exclude inflation.

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[11] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)
2025	472,725	4,361,489	3,226,142	1,011,575	0
2026	22,602,277	4,781,450	3,290,665	1,659,720	0
2027	5,283,066	4,895,402	3,369,088	2,736,135	0
2028	7,516,300	5,057,522	3,480,661	7,230,765	0
2029	14,674,500	5,374,039	3,698,493	4,276,317	0
2030	52,488,858	6,506,179	4,477,649	9,210,322	0
2031	18,406,142	6,903,184	4,750,873	6,991,828	0
2032	6,037,500	7,033,408	4,840,495	4,199,424	0
2033	30,737,500	7,696,390	5,296,769	5,950,149	0
2034	25,883,000	8,254,665	5,680,982	8,187,769	0

Table 7.1: Forecast Costs (Outlays) for the Long-Term Financial Plan

7.2 Valuation forecasts

The best available estimate of the value of assets included in this AMP are shown below.

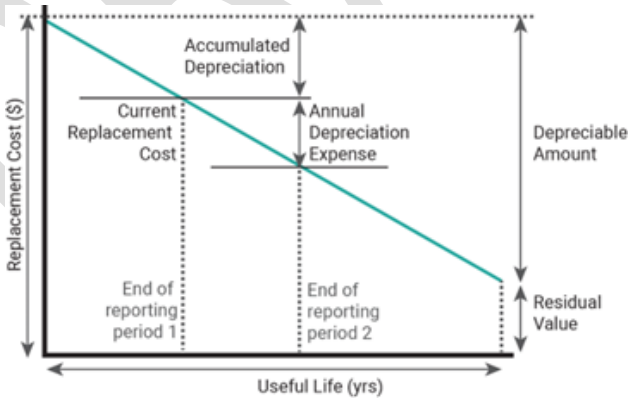


Figure 7.1: Valuation Terminology

These costs are shown in 2026 dollar values:

- Replacement Cost (Gross) $221,679,945
- Depreciable Amount $221,679,945
- Current Replacement Cost[12] $141,753,153
- Annual Depreciation Expense $6,949,893

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

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

8 Assumptions and improvement planning

8.1 Data and information sources

8.1.1 Accounting and financial data sources

This AMP utilises accounting and financial data sourced from Technology One CiAnywhere 2024A Release (775).

8.1.2 Asset management data sources

This AMP also utilises asset management data sourced from Technology One CiAnywhere 2024A Release (775).

8.2 Key assumptions

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

Key assumptions made in this AMP are:

- Population and asset growth projections are assumed to be accurate
- The data supplied was as accurate as possible at the time of compilation of this asset management plan
- The breakdown of the actual reactive, planned and operational expenditure is assumed to be accurate.

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

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

The asset register method was used to forecast renewals.

8.3 Forecast reliability and confidence

The forecast demands, costs, planned budgets, and valuation projections in this AMP are based on the best available data. For effective asset management and financial planning and reporting, it is critical that the information is reliable and up to date.

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Data confidence is classified on an A to E level scale in accordance with the guidance provided in the International Infrastructure Management Manual. [13]

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

Table 8.1: Data Confidence Grading System

The estimated confidence level for and reliability of data used in this AMP is shown in Table 8.2.

[13] IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

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Data	Confidence Assessment	Comment
Demand drivers	B	Professional judgement, corporate knowledge and id projections.
Growth projections	B	id projections.
Acquisition forecast	B	Ten year Capital Works Program.
Operation forecast	B	City records of past expenditure and professional judgement
Maintenance forecast	B	City records of past expenditure and professional judgement
Renewal forecast - Asset values	B	Latest asset valuation data.
- Asset useful lives	C	Useful lives are based on industry practice and condition ratings. However, there is not a high level of confidence with the 'Year Acquired' information for some older assets.
- Condition modelling	B	Detailed condition assessment completed August 2026, upload to asset register in progress HVAC condition upload to asset register in progress Roof condition assessment required
Disposal forecast	D	No planned disposals, but it is strongly recommended we consider

Table 8.2: Data Confidence Assessment for Data used in AMP

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

8.4 Improvement plan

It is important that we recognise gaps in the planning process that require improvement to ensure effective asset management and informed decision making. The improvement plan generated from this AMP is shown in Table 8.3.

Section	Project	Responsibility	Task
3.4	More detailed analysis of customer requests	Asset Services	Break down customer requests into acquisition, renewal/maintenance and operation related in Table 3.4 Consider graphing strong trends in appendix (overall trend in customer requests is strongly increasing)
3.5	Quantify Function and Capacity performance more accurately	Asset Services Various building custodians	Perform Function and Capacity assessments to a framework defined by Asset Services and approved by Group Manager Assets and Projects (e.g. as per IPWEA Practice Note 3: Buildings) Investigate Accessibility Audits
5.1	Ensure consistent componentisation	Asset Services Facilities Team	Ensure accurate capture of detailed building component data
5.2	Operations and maintenance planning	Asset Services Facilities Team	Maintenance cost planning Link maintenance costs to individual assets
5.5	Disposal Plan	Asset Services Building custodians	Identify buildings surplus to needs for disposal, or identify other ways to close gap between expected levels of service and funding
6	Detailed Risk Analysis	Asset Services	Quantify and describe impact of limited budget in greater detail

Table 8.3: Improvement Plan

8.5 Monitoring and review procedures

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

This AMP will be reviewed and updated to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

The AMP has a maximum life of 4 years and is next due for complete revision in 2028.

8.6 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 long-term financial plan
- The degree to which the 1 to 5-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AMP
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90-110 per cent).

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9 References

- City of Cockburn – Asset Management Strategy 2017 – 2024
- City of Cockburn – Strategic Community Plan 2025 – 2035
- City of Cockburn – Long Term Financial Plan 2024-2025 to 2033-2034
- City of Cockburn – Community Infrastructure Plan 2024-2041
- City of Cockburn – Management Budget 2024 - 2025
- City of Cockburn – Enterprise Risk Management
- City of Cockburn – Place Score – Liveability Survey 2024 - https://cockburn.t1cloud.com/T1Default/CiAnywhere/Web/COCKBURN/RedirectToFunction?sk.DocumentSetId=12111956&f=%24EMC.DOC.PROP.MNT&suite=ECM&h=10tdmvN6tA&t=191361DE
- City of Cockburn - Population forecast - https://forecast.id.com.au/cockburn/
- Government of Western Australia, Department of The Premier and Cabinet - Western Australian Legislation - Acts in force
- IPWEA, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/bookshop/iimm
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- IPWEA, 2018, Practice Note 12.1, 'Climate Change Impacts on the Useful Life of Assets', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/bookshop/pn12-1
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- IPWEA, 2014, Practice Note 8 – Levels of Service & Community Engagement, Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn8
- ISO, 2024, ISO 55000:2024 Asset Management – Vocabulary, overview, and principles
- ISO, 2018, ISO 31000:2018 Risk management – Guidelines
- The Local Government and Municipal Knowledge Base - LGAM Knowledge Base
- DVC, 2006, 'Asset Investment Guidelines', 'Glossary', Department for Victorian Communities, Local Government Victoria, Melbourne, http://www.dvc.vic.gov.au/web20/dvclgv.nsf/allDocs/RWP1C79EC4A7225CD2FCA257170003259F6?OpenDocument
- Local Government of Western Australia – Asset Management Framework and Guidelines

10 Appendices

10.1 Appendix A Acquisition forecast

The new assets required to meet growth will be funded through a combination of municipal funding, grant funding and user fees.

10.1.1 Acquisition forecast assumptions and source

The acquisition forecast is based on the 10 year Capital Works Program.

No donated assets are anticipated to be received at this stage.

10.1.2 Acquisition project summary

Proposal Name	Cost Estimate for FY Ending ($m)										
	27	28	29	30	31	32	33	34	35	36	37
Beale Park Redevelopment	5.2	0.0									
Atwell Reserve Building	4.0	0.0									
Naval Base Shacks	0.1	0.8	1.9								
Beeliar Community Centre	0.5	3.5	3.5	0.1							
Cockburn Coast	0.1	4.0	0.8	6.0	0.1						
Tempest Park		0.6	3.6	3.6	0.1						
Wally Hagan Recreation Centre	0.3	1.5	10.0	34.1	14.1	0.3					
Princep Park Development	0.3	0.4	0.4	3.5	3.5	0.1					
Port Coogee Community Space			0.5	5.0	3.0	0.1					
Cockburn Coast Oval				2.6							
Cockburn Central Clubroom			0.5	6.0	0.1						
Hamilton Hill Community Centre					0.5	3.8	3.8	0.1			

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Proposal Name	Cost Estimate for FY Ending ($m)										
	27	28	29	30	31	32	33	34	35	36	37
Yangebup Community Centre & Nicholson Reserve Building					0.6	5.8	3.8	0.1			
Civic Facility (Administration Centre)							25.0	25.0			
Success Regional Sports Reserve Upgrade building							0.5	0.5	11.0	0.1	
Coolbellup Community Facilities Upgrade							1.0	1.0	9.0	9.0	0.3
Lucius Park / Dalmatinac Club Upgrade Masterplan									1.5	1.5	3.8

Table 10.1: Acquisition Project Summary

Note these are the full project costs, including the renewal component.

10.1.3 Acquisition forecast summary

Year	Constructed ($)	Donated ($)	Growth ($)
24/25	472,725	0	0
25/26	22,602,277	0	0
26/27	5,283,066	0	0
27/28	7,516,300	0	0
28/29	14,674,500	0	0
29/30	52,488,858	0	0
30/31	18,406,142	0	0
31/32	6,037,500	0	0
32/33	30,737,500	0	0
33/34	25,883,000	0	0

Table 10.2: Acquisition Forecast Summary

10.2 Appendix B Operation forecast

10.2.1 Operation forecast assumptions and source

Operations includes the activities listed in Section 5.2.

The future budgets are linearly extrapolated from previous budgets, pending finalisation of the LTFP. The forecast expenditure is taken as a proportion of total CRC, calculated as 2.2 per cent.

10.2.2 Operation forecast summary

Table 10.3 provides a summary of Forecast Operations expenditure over the planning period.

Year	Operation Forecast ($)	Additional Operation Forecast ($)	Total Operation Forecast ($)
24/25	4,361,489	0	4,361,489
25/26	4,781,450	0	4,781,450
26/27	4,781,450	113,951	4,895,402
27/28	4,781,450	276,072	5,057,522
28/29	4,781,450	592,588	5,374,039
29/30	4,781,450	1,724,729	6,506,179
30/31	4,781,450	2,121,734	6,903,184
31/32	4,781,450	2,251,958	7,033,408
32/33	4,781,450	2,914,940	7,696,390
33/34	4,781,450	3,473,214	8,254,665

Table 10.3: Operation Forecast Summary

10.3 Appendix C Maintenance forecast

10.3.1 Maintenance forecast assumptions and source

Maintenance includes the activities listed in Section 5.2.

The future budgets are linearly extrapolated from previous budgets, pending finalisation of the LTFP. The forecast expenditure is taken as a proportion of total CRC, calculated as 1.5 per cent.

10.3.2 Maintenance forecast summary

Table 10.4 provides a summary of Forecast Maintenance expenditure over the planning period.

Year	Maintenance Forecast ($)	Additional Maintenance Forecast ($)	Total Maintenance Forecast ($)
24/25	3,226,142	0	3,226,142
25/26	3,290,665	0	3,290,665
26/27	3,290,665	78,423	3,369,088
27/28	3,290,665	189,997	3,480,661
28/29	3,290,665	407,828	3,698,493
29/30	3,290,665	1,186,984	4,477,649
30/31	3,290,665	1,460,209	4,750,873
31/32	3,290,665	1,549,831	4,840,495
32/33	3,290,665	2,006,105	5,296,769
33/34	3,290,665	2,390,317	5,680,982

Table 10.4: Maintenance Forecast Summary

10.4 Appendix D Renewal forecast summary

10.4.1 Renewal forecast assumptions and source

Renewal Forecast Assumptions:

- The optimal renewal strategy is assumed to be per building, renewing all components due for renewal within the next 10 years in one project.
- Renewal year is calculated as Asset Install Year + Useful Life using the City's building component register, with Useful Life adjusted based on condition.
- Only assets with valid CRC, Useful Life and Condition values are costed in the forecast.
- Assets with CRC = 0 or Useful Life = 0 are treated as placeholders pending further inspection and are excluded from cost forecasts.
- The forecast uses nominal CRCs (no escalation, discounting, or inflation applied).
- The 10-year renewal profile covers 2025–2034.
- The actual renewal expenditure was listed for 2024/2025 and 2025/2026.
- Renewal need is based on condition-based deterioration modelling where applicable, otherwise a fixed timeframe is used for compliance related assets (e.g. smoke detectors).
- Building structures have been integrated using the same methodology.

Data Sources:

- Renewal forecast derived from the City of Cockburn's Building Asset Register including:
  - Components (8,871 detailed building components)
  - Building Structure Dataset (142 structural asset records)
- Useful Life and CRC values sourced from the City's asset valuation schedule and contractor-supplied component libraries.
- Inspection dates and condition records sourced from the 2019–2026 building condition audits.
- Forecasting completed using the City's asset management modelling workflow (August 2026).

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10.4.2 Renewal project summary

Building Name	FY Ending	Estimate ($)
Council Administration Offices - Building	2028	9,966,900
Cockburn Youth Centre	2029	4,276,317
Integrated Health Building	2030	4,716,184
Operation Centre Administration Building	2030	4,494,138
Cockburn Seniors Centre	2031	3,728,100
Success Recreational Facility	2031	3,223,728
East Beeliar Community Centre	2032	2,029,634
Emergency Services Building Polettti Rd	2032	2,169,790
Atwell Community Centre	2033	2,016,650
Banjup Community Hall	2033	806,315
Bibra Lake Community Centre	2033	826,836
Bibra Lake Toilets - West	2033	278,802
Communications Office	2033	392,298
Len Packham Clubrooms	2033	1,242,383
Operations Centre - Fire Pump Compound	2033	189,750
Operations Centre - Storage Shed	2033	111,116
Coogee Beach Surf Life Saving Club	2034	3,932,783
Senior Citizens Centre Hamilton Hill	2034	960,160
Coogee Beach Cafe	2035	624,656
Coolbellup Community Hub	2035	4,790,496
Disability Resource Centre (Hub 6163)	2035	464,841
Memorial Hall	2035	1,515,306
Santich Park Clubrooms	2035	978,640
Tempest Park Changerooms	2035	772,765
219 Winterfold Road	2036	1,156,159

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Building Name	FY Ending	Estimate ($)
Atwell Reserve Clubrooms	2036	1,426,596
Aubin Grove Sporting Facility	2036	1,989,111
Azelia Ley House	2036	658,752
Beale Park Baseball Clubrooms	2036	399,021
Cockburn Cves Building – Old	2036	636,706
Harvest Lakes Community Centre	2036	1,372,544
Henderson Landfill - Recycle Shop	2036	423,289
Henderson Landfill - Workshop A	2036	655,069
Henderson Landfill - Workshop B	2036	191,066
Henderson Landfill - Workshop C	2036	196,336
Jandakot Hall	2036	795,679
Jean Willis Centre - Aged Care	2036	1,059,624
Operations Centre - Plant Parking Shed A	2036	485,621
Port Coogee Marina Building	2036	919,110
Santich Park Play Factory	2036	620,994
The Wetlands Centre	2036	1,367,281
Watson Reserve Changerooms	2036	581,650
Animal Care Facility	2037	784,831
Azelia Ley - Stables	2037	58,144
Bibra Lake Adventure Playground Toilet	2037	53,019
Bibra Lake Scout Group	2037	277,437
Bibra Lake Skate Park Toilet	2037	23,751
Botany Park Changerooms	2037	428,351
Cockburn Community Mens Shed	2037	583,014
Dwelling - 83 Hamilton Road	2037	681,937
Edwards Park Clubrooms	2037	217,795

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Building Name	FY Ending	Estimate ($)
Hazardous Chemicals Building	2037	555,448
Jandakot Fire Station	2037	267,803
Lucius Park Clubrooms	2037	323,995
Manning Park Toilets South	2037	132,010
Meller Park Changerooms	2037	736,208
Midge Lab	2037	97,489
Old Jandakot School - Demountable Toilet	2037	62,999
Operations Centre - Main Workshop	2037	1,405,603
Operations Centre - Staff Lunch Room	2037	292,674
Operations Centre - Training Room	2037	377,275
Port Coogee Toilet Block	2037	122,926
Rugby Club External Storeroom	2037	27,332
Spearwood Library	2037	2,289,933
WA Wildlife Education & Training Centre	2037	394,405
WA Wildlife Hospital	2037	1,397,532
Wetland Care Operations	2037	54,063

Table 10.5: Renewal Project Summary

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10.4.3 Renewal forecast summary

Table 10.6 provides a summary of Forecast Renewal expenditure over the planning period.

Year	Renewal Forecast ($)	Renewal Budget ($)
24/25	1,011,575	954,810
25/26	1,659,720	2,308,842
26/27	2,736,135	2,736,135
27/28	7,230,765	2,736,135
28/29	4,276,317	2,736,135
29/30	9,210,322	2,736,135
30/31	6,991,828	2,736,135
31/32	4,199,424	2,736,135
32/33	5,950,149	2,736,135
33/34	8,187,769	2,736,135

Table 10.6: Renewal Forecast Summary

10.5 Appendix E Disposal summary

10.5.1 Disposal forecast assumptions and source

As of August 2026, it is assumed there are no building asset disposal projects required over the planning period. However, this AMP should be updated with any disposal projects identified during the planning period, as well as the life cycle cost summary.

10.5.2 Disposal project summary

Any disposal projects identified during the planning period should be listed here in future AMP updates.

10.5.3 Disposal forecast summary

No disposals have been identified at this stage.

10.6 Appendix F Budget summary by lifecycle activity

The budget summary shown in Table 10.7 is based on the renewal budget from the LTFP and the projected O&M budget, as discussed in Appendix B and C.

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)	Total ($)
24/25	9,234,653	5,492,344	2,062,591	954,810	0	17,744,398
25/26	8,134,908	6,743,734	1,888,603	2,308,842	0	19,076,087
26/27	8,297,606	7,436,814	1,926,375	2,736,135	0	20,396,930
27/28	8,463,558	8,129,894	1,964,902	2,736,135	0	21,294,490
28/29	8,632,830	8,822,974	2,004,200	2,736,135	0	22,196,139
29/30	8,805,486	9,516,054	2,044,284	2,736,135	0	23,101,959
30/31	8,981,596	10,209,133	2,085,170	2,736,135	0	24,012,034
31/32	9,161,228	10,902,213	2,126,873	2,736,135	0	24,926,450
32/33	9,344,452	11,595,293	2,169,411	2,736,135	0	25,845,291
33/34	9,531,342	12,288,373	2,212,799	2,736,135	0	26,768,648

Table 10.7: Budget Summary by Lifecycle Activity

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10.7 Appendix G Legislative requirements

Legislation	Requirement
Local Government Act 1995 LG (Miscellaneous Provisions) Act 1960 & LG (Building Surveyors) Regulations 2008	Provides for a system of Local Government by describing the functions of and providing a framework for the administration and financial management of Local Governments.
Heritage of Western Australia Act 1990	Provides for and encourages the conservation of places which have significance to the cultural heritage of the state.
Disability Services Act 1993 (WA)	Is to ensure that services are provided and funded in conformity with the Act
Occupational Safety and Health Act 1984 (WA). OSH Regulations 1996	Provides for the promotion, coordination, administration and enforcement of Safety and Health in WA. Places emphasis on the prevention of accidents and injury.
Building Code of Australia 2010	Provides a set of minimum technical provisions for the design and construction of buildings and other structures throughout Australia. The provisions are performance based and cover issues such as health, safety, amenity and sustainability.
Building Regulations 1989	The regulations apply in each local government district in the area specified for that district.
Building Services (complaint resolution and administration) Act 2011	Provides a system for dealing with complaints about building services, home building work contract and disciplinary matters; provides a public officer with functions relating to building services and complaints; a levy in relation to certain authorisations for building services and a system for ensuring compliance with laws about building services.
Building Services Levy Act 2011	Imposes a levy in relation to certain authorisations for building services.
The Building Services (Registration) Act 2011	Provides for the following — • the registration of certain building service providers; • the approval of owner-builders; • the repeal of the Builders' Registration Act 1939, the Painters' Registration Act 1961 and various regulations;
Building Fire and Safety Regulation 1991	Sets out the regulations for fire safety such as means of escape, limitation of people in buildings, fire and evacuation plans and testing of special fire services and installations

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Legislation	Requirement
Australian Standards	Standards are published documents setting out specifications and procedures designed to ensure products, services and systems are safe, reliable and consistently perform the way they were intended to. They establish a common language which defines quality and safety criteria.
Environment Protection Act, 1993 (WA)	Regulations regarding noise, sustainability, land fill stormwater and groundwater resources.
Emergency Management Act, 2005 (WA)	Requires lifeline utilities to function at the fullest possible extent during and after an emergency and to have plans for such functioning (business continuity plans)
Crown Lands Act, 1929 (WA)	Sets out requirements for work and leases on Crown Land.
Code for the Management and Control Asbestos in the Workplace	Regulation 5.43 of the Occupational Safety and Health Regulations 1996 requires the identification assessment and control of risks from hazards in relation to asbestos in accordance with the Code of Practice for the Management and Control of Asbestos in Workplaces.
Liquor Control Act 1988	To regulate the sale, supply and consumption of liquor, the use of premises on which liquor is sold, and the services and facilities provided in conjunction with or ancillary to the sale of liquor, to minimise harm or ill health caused to people, or any group of people due to the use of liquor, to provide for orders that may prohibit persons from being employed at, or from entering, licensed premises, to repeal the Liquor Act 1970, and for related matters.
Food Act 2008	The objects of this Act include the following — (a) to ensure food for sale is both safe and suitable for human consumption; (b) to prevent misleading conduct in connection with the sale of food; (c) to provide for the application in this State of the Food Standards Code.
Health Act 1911	An Act to consolidate and amend the law relating to public health

Table 10.8: Legislative Requirements

10.8 Appendix H Useful life component classification breakdown

Building Component	Asset Group	Asset Type	Useful Life (years)
Electrical Services	Emergency Lighting	Not Applicable	15
	Exit Sign (illuminated)	All	15
	External Electrical	Ceiling Fan	15
		Distribution Board	30
		Lighting	10
	Internal Electrical	Ceiling Fan	15
		Distribution Board	30
		Lighting	15
		Switchboard	30
External Site	Backup Generator	Not Applicable	30
	EV Charger	Not Applicable	10
	External Paving	Access Ramp	25
		Asphalt / sealed areas	30
		Brick Paving	30
		Concrete	50
		Concrete Slab	50
		Decking	30
		Not Applicable	30
		Tactiles	25
		Tile	25
	External Site Pump	Not Applicable	7
	Fencing & Walls	Brick	50
		Chain Mesh	20

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Building Component	Asset Group	Asset Type	Useful Life (years)
		Colorbond	30
		Concrete	50
		Electric	10
		Other	15
		Steel Garrison	15
		Wall	40
	Floor Finish	Concrete	30
	Gate	All	15
	Handrail	Not Applicable	50
	Outbuildings	Carport	25
		Garage	50
		Gazebo	30
		Patio	30
		Shed	25
		Verandah	50
		Walkway	50
	Paint - External	Not Applicable	10
	Septic Tank	Not Applicable	25-50
	Water Tank	Not Applicable	20
Finishes	Ceiling Finish	Acoustic	30
		Lining - Gyprock	30
		Lining - Other	30
		Paint	10
		Plaster	30
		Prefinished Metal	40

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Building Component	Asset Group	Asset Type	Useful Life (years)
		Suspended	30
		Suspended Acoustic	30
	Floor Finish	Carpet	15
		Concrete	30
		Decking	30
		Epoxy	15
		Paint	10
		Rubber	10
		Stair Nosing	15
		Tactiles	15
		Tile	20
		Timber	30
		Vinyl	25
	Paint - External	Not Applicable	5-10
	Paint - Internal	Not Applicable	10
	Wall Finish - External	Brick	30
		Cladding	25
		Colorbond	25
		Concrete	30
		Louvres	25
		Polycarbonate	15
		Render	20
	Wall Finish - Internal	Brick	30
		Cladding	30
		Colorbond	25

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Building Component	Asset Group	Asset Type	Useful Life (years)
		Concrete	30
		Folding Partition	50
		Lining - Gyprock	50
		Lining - Other	50
		Other	30
		Paint	10
		Plaster	30
		Tile	30
		Vinyl	25
		Wallpaper	11
Fire Services	Fire - Fixed	Detectors	10
		Panel	15
	Fire - Portable	Not Applicable	10
	Fire Hose Reel	Not Applicable	10
	Fire Hydrant	Not Applicable	10
	Fire Services Assets	Detectors	10
		Panel	15
		Pump	20
Fitouts and Fittings	Boiling/Cold water unit	Not Applicable	10
	Doors - Auto	External	15
		Internal	30
	Doors - External	Double Door	20
		External	20-30
	Doors - Internal	Double Door	30
		Fire Door	50

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Building Component	Asset Group	Asset Type	Useful Life (years)
		Internal	20-30
	Doors - Roller	Auto Roller	15
		External	20
		Roller - Servery	20-30
		Roller - Shutter	20-35
		Security Shutters	20
	General Fittings	Not Applicable	15
	Kitchen Facility	Commercial	20
		Dishwasher	8
		Fridge	8
		Large	20
		Medium	20
		Not Applicable	20
		Ovens	10
		Small	20
		Whitegoods	8
	Signs	External	15
	Toilet Facility	Ceramic	10
	Whitegoods	Dryer	8
		Fridge	8
		Washing Machine	8
	Windows - External	Not Applicable	20
		Security Screens	25
	Windows - Internal	Not Applicable	30
	Air Handling Unit	Not Applicable	20

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Building Component	Asset Group	Asset Type	Useful Life (years)
HVAC Services	Cassette Unit	Not Applicable	15
	Chilled Water Fan Coil Unit	Not Applicable	15-20
	Chilled Water Pump	Not Applicable	20
	Condensing Unit	Not Applicable	15
	Cool Room	Not Applicable	25
	Evaporative Cooler	Not Applicable	10
	Exhaust Fan	Not Applicable	10-15
	Fan Coil Unit	Not Applicable	15
	Heating Water Pump	Not Applicable	20
	Hot Water Generator	Not Applicable	15
	Kitchen Exhaust Fan	Not Applicable	15
	Packaged System	Not Applicable	15
	Reciprocating Chiller - Air cooled	Not Applicable	15
	Return Air Fan	Not Applicable	15
	Room Air Conditioner	Not Applicable	7-10
	Run Around Pump	Not Applicable	20
	Split System	Not Applicable	10-15
	Split System Ducted	Not Applicable	10-15
	Supply Air Fan	Not Applicable	15
	Supply/return air fan	Not Applicable	15
	Thermal Storage Tank	Not Applicable	20
	Toilet Exhaust Fan	Not Applicable	15

Building Component	Asset Group	Asset Type	Useful Life (years)
	Variable Air Volume System	Not Applicable	15
	Ventilation System	Not Applicable	15
	VRF	Not Applicable	15
	VRV Condensing Unit	Not Applicable	15
Hydraulic Services	Water Heater	Electric	15-20
		Gas	15-20
		Not Applicable	15
		Other	20
		Solar	10
	Water Pump	All	10
Lifts	Lift	Not Applicable	20
Roof	Height Safety System	Not Applicable	15
	PV System	Not Applicable	15
	Roof Fittings	Louvres	20
		Skylight	25
		Soffit	30
	Roof Plumbing	Colorbond	25
		Not Applicable	8
		PVC	8
		Zincalume	20
	Roof Structure	Colorbond	25
		Concrete	25
		Steel	25

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Building Component	Asset Group	Asset Type	Useful Life (years)
		Timber	30
	Roof Surface	Cladding	25
		Colorbond	25
		Concrete	25
		Polycarbonate	15
		Skylight	25
		Tile	30
		Zincalume	20
	Suspended Ceiling	Not Applicable	15
Security Services	Security and Communication	All	10
Universal Access	Hoist	All	15
	Universal Access Lift	Not Applicable	15-20
	Universal Access Toilet	All	15

Table 10.9: Useful Life Component Classification Breakdown

DRAFT

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City of Cockburn

Parks & Environment Asset Management Plan 2024–2028



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Document Set ID: 12659324
Version: 27, Version Date: 11/09/2026

Parks and Environment Asset Management Plan - Alternate Method				
Document Set ID : 12659324				
Date	**Revision Details**	**Author**	**Reviewed**	**Approved**
Sept 2021	Final Version 2020 - 2024	Property & Assets	Manager Environment, Parks, and Landscape	Executive Committee / Elective Council
April 2026	Final Version (NAMS+) 2024 – 2028	Asset Services	Group Manager Parks, Fleet and Waste. Service Manager Infrastructure Assets	Executive Leadership Team / Elective Council

NAMS+ offers several Asset Management templates.

The asset owner can choose the template that best suits their circumstances.

The structure and content of this template is aligned to the International Infrastructure Management Manual. In some instances, the asset owner may choose to reformat/restructure content or only use the Executive Summary. IPWEA takes no responsibility for the end product.

This Asset Management Plan should be prepared in line with the Strategic Asset Management Plan (also referred to as an AM Strategy) and AM Policy and used to inform the Long-Term Financial Plan.

DISCLAIMER: This template has been prepared for educational purposes as part of the Professional Certificate in Asset Management Planning course. The data and conclusions have not been reviewed for accuracy nor endorsed or adopted by the asset owner.

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The Institute of Public Works Engineering Australasia

Acknowledgement of Country

The Mayor, Councillors and staff of the City of Cockburn acknowledge the Whadjuk Nyungar people of Beeliar Boodja as the traditional custodians of this land. We pay our respect to the Elders, past and present.

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1.0 EXECUTIVE SUMMARY

This Parks and Environment Asset Management Plan (PEAMP) has been developed by the City as one of the informing documents within the City's Strategic Asset Management Planning Framework (SAMPF). The PEAMP will be reviewed every four years in alignment with the Corporate Planning Framework ensuring that the City's long term financial planning (LTFP) is supported by timely and accurate asset information and financial projections derived from a structured and strategic asset management planning process.

With the implementation of the City's Integrated Corporate Planning Reporting Framework. The PEAMP has been developed to establish sustainable financial management, robust governance, continuous improvement, and best practice management of the City's infrastructure assets.

The PEAMP covers irrigation, playgrounds, shelters, sports fields and associated infrastructure. The total Current Replacement Cost (CRC) for the parks and environment infrastructure assets covered in this AMP is approximately $121 million as based on 2024/25 City's revaluation report.

This Asset Management Plan (AMP) provides a strategic framework for managing our community's infrastructure assets, ensuring they remain safe, reliable, and capable of meeting current and future demands.

1.1 Purpose of the Plan

The AM Plan aims to:

- Provide a systematic approach to asset management.
- Address critical risks associated with aging infrastructure and limited funding.
- Ensure infrastructure supports the community's social, economic, and environmental goals.

This AMP details information about the City's parks and environment assets, as well as defining the Level of Service (LOS) and outlining the funding required to maintain this LOS over a 10-year planning period.

This highlights any funding gaps between the planned and forecast expenditure, which assists in optimizing expenditure on managing assets through the Long-Term Financial Plan.

1.2 Asset Description

The City's Parks and Environment Infrastructure consists of the following assets. The parks and environment infrastructure assets values as at December 2025, covered by this AM Plan are shown in Table 1.2

Table 1.2: Asset Values Covered by this Plan.

Asset Class	Current Replacement Cost ($)	Annual Depreciation ($)	Accumulated Depreciation ($)	Fair Value (Depreciated Replacement Cost) ($)
Amenities	9,346,350	746,922	2,231,713	7,114,636
Bins	1,495,807	86,257	244,221	1,251,586
Bore Meters	7,571,273	302,456	1,697,503	5,873,770
Bore Pumps	2,266,659	226,666	891,901	1,374,758
Fence	26,116,870	1,064,618	6,862,435	19,254,435
Gates	613,046	40,686	163,361	449,685
Irrigation Line	2,546,794	128,146	699,533	1,847,260
Irrigation Point	11,088,444	905,451	2,253,882	8,834,562
Lighting Pole	3,475,504	138,438	664,022	2,811,481
Lumin	4,117,002	274,467	675,726	3,441,276

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Minor Structure	12,171,079	391,361	2,860,823	9,310,256
Playground Equipment	22,284,069	1,605,142	6,489,248	15,794,821
Playgrounds	3,286,913	314,722	815,353	2,471,560
Playing Fields	6,455,323	264,695	1,765,888	4,689,434
Public Art	2,758,214	118,311	417,660	2,340,554
Signs	2,418,794	161,066	761,549	1,657,245
Sporting Equipment	2,816,086	168,684	725,488	2,090,598
Grand Total	**$ 120,828,226**	**$ 6,938,088**	**$ 30,220,307**	**$ 90,607,919**

The above infrastructure assets have replacement value estimated at **$120,828,226**

1.3 Levels of Service

Levels of Service (LOS) are measurable targets which determine the type and extent of services delivered to the Community. Levels of Service are typically categorised as Customer and Technical measures, each with defined performance metrics used by the City to assess service delivery.

The City of Cockburn Strategic Community Plan 2025 – 2035 set out five key Strategic Outcomes which are Our Economy, Our Environment, Our Community, Our Places and Our Governance to deliver on the vision for future of the local government area (LGA). The 2024 Cockburn liveability study by Place Score outlines community values that align with five key Strategic Outcomes as discussed in section 3.0.

Understanding our community values data (also known as CF) helps to identify where we are aligned and the key outcomes that matter the most. Place Experience (also known as PX or performance score) reveals how people rate the lived experience of their current suburb or residence.

The City's overall customer LOS objective is to maintain a 70% community satisfaction with parks and environment infrastructure. Maintaining current community satisfaction levels is expected to be sustainable over the short and medium (see Figure 1.0). However, there is a risk that towards the end of the 10-year planning period, under current funding arrangements, the levels of service will not be as satisfactory as the current planned budget allocation is insufficient to maintain the level of service for the planning period.

The main service consequences of the planned budget are:

- More reactive and less proactive maintenance, resulting in a gradual decline in the presentation and functionality of parks assets (e.g., bins, fences, gates, minor structures), with longer response times for defects and community requests.
- Deterioration of high-use and safety-critical assets (e.g., playground equipment, amenities, lighting), increasing the likelihood of defects, higher risk exposure, and temporary closures or restricted access to manage safety.
- Deferred renewal/refurbishment backlogs leading to shorter effective asset lives and higher whole-of-life costs over time (work becomes more expensive when delayed), with more assets trending into poor condition.
- Community satisfaction may fall below the 70% target toward medium to long term of the planning period, as service standards become harder to sustain under current funding levels (more visible defects, reduced amenity, and increasing complaints).

1.4 Future Demand

Future demand and its impact on service delivery are influenced by the following factors:

- Population Growth
- Aging Population

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- Development Trends and Requirements
- Changes in community expectations

Strategies to manage these demands are discussed in Section 4.0.

1.5 Lifecycle Management Plan

How we plan to manage and operate the assets at the agreed levels of service throughout their lifecycle is contingent on 10-year Long-Term Financial Plan (LTFP) for the planning period of 2024/25 – 2033/34.

It is important to consider the whole-of-life costs associated with assets (i.e. cost of construction, operation and maintenance costs, renewal and upgrade costs and disposal costs at end of life).

1.5.1 What does it Cost?

The lifecycle costs necessary to provide the services covered by this AM Plan include operations, maintenance, renewal and upgrade of existing assets, and the acquisition of new assets to meet demand. Disposal of assets is also considered.

When lifecycle costs are prepared for a minimum 10-year planning period, they can be used to inform the 10-year LTFP. The first 10-year lifecycle forecast is estimated to cost $358,738,720 or $35,873,872 on average per year.

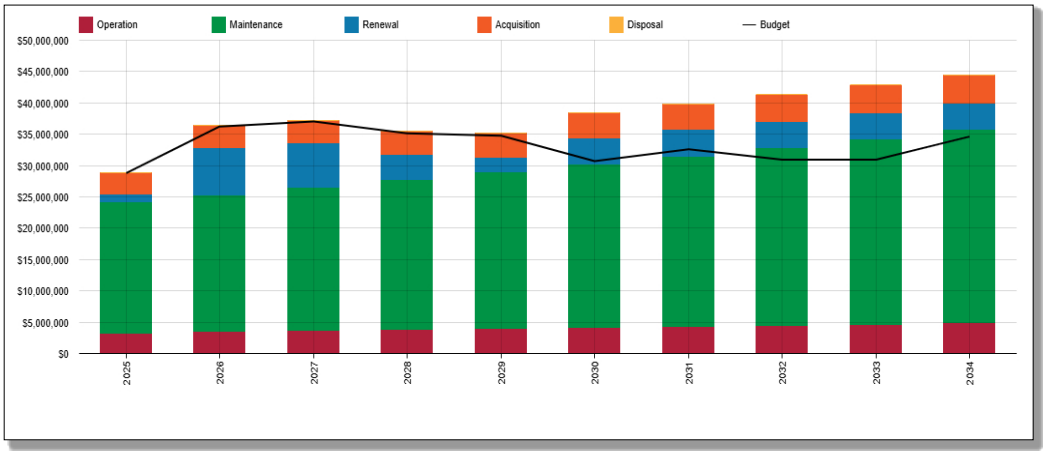
1.5.2 What we will do

The funding made available in the first 10-years' of the LTFP is $331,846,912 or $33,184,690 on average per year which is approximately 87.37% of the cost to undertake the lifecycle activities.

The reality is, only what is funded in the LTFP can be provided. Informed decision making depends on the AMP emphasising the consequences of planned budgets on the service levels provided and communicating the residual risks. It is important to ensure the organisation is delivering the services in a financially sustainable manner.

The 10-year LTFP results in an average annual shortfall funding of $-4,797,862 per year of the forecast lifecycle costs required to provide services. The City will need to prioritise asset renewals over new acquisitions and upgrades, and will also need to distribute renewal expenditure across the 10-year planning period, to align with available funding and budget constraints. This is shown in the figure 1.5.2 below.

Figure 1.5.2: Forecast Lifecycle Costs and Planned Budget



Amounts are shown in real values (i.e., current values, net of inflation).

We plan to provide parks and environment asset services for the following:

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- Operate and maintain existing parks and environment infrastructure assets to meet the service.
- Deliver a prioritised renewals program across key asset groups over the 10-year planning period.
- Completion of upgrades and new construction projects were funded to meet demand and maintain agreed level of service as outline in Capital Work Program within the 10 Year planning period.

1.5.3 What we cannot do

We currently do not allocate enough budget to sustain services at the proposed standard including below:

- Ensuring all parks and environment assets are in 'Condition 3' or better.
- Maintaining our parks and environment infrastructure assets at the lowest lifecycle cost within available funding levels.
- Complete all functionality and capacity upgrades that have been identified.

1.6 Risk Management

The current planned budget is sufficient to continue to manage risks in the short to medium term . However, in the long term (approximately from 2030 onwards) it is important to ensure that adequate budget is kept in reserve to achieve what is shown in the life cycle cost summary.

The main risk consequences are:

- Safety and liability risk increases as high-use assets deteriorate (e.g., playgrounds, playing fields, amenities, lighting), potentially leading to incidents and temporary closures or restricted access.
- Loss or reduce the level of service and amenity as maintenance and renewals are deferred, additional costs resulting in more frequent failures and delayed reactive maintenance.
- Community dissatisfaction may increase over the medium to long term if current funding levels are insufficient to maintain existing levels of service.

Strategies and actions to manage these risks are discussed in Section 6.0.

1.7 Financial Summary

Providing financially sustainable and affordable services from infrastructure requires the careful management of service levels, costs, and risks.

The 10-year LTFP is $33,184,690 on average per year giving a 10 year funding shortfall of $-4,797,862 per. This indicates that 87.37% of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the LTFP.

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

1.8 Assumption, Decision, and Improvement Program

Key assumptions made in this AMP are:

- Population and asset growth are assumed to increase proportionally. Accordingly, acquisition forecasts incorporate an annual growth rate of 3.1%.
- Accordingly, 3.1% acquisition growth per year, additional operation and maintenance forecasts calculated by NAMS+ system as a percentage, based on the planned operation and maintenance budgets divided by the total replacement cost of the assets.
- The NAMS+ calculated additional maintenance 17.31% which is the percentage for maintenance that determines how much maintenance each dollar of new assets requires. This is based on the planned maintenance budget divided by the total replacement cost.
- The NAMS+ calculated additional operation 2.75% which is the percentage for operation that determines how much additional operation, each dollar of new assets requires. This is based on the planned operation budget divided by the total replacement cost.
- If City has estimate of the forecast percentage for operation and maintenance, it can be changed in NAMS+.
- The average annual growth in total maintenance operating expenditure forecast is approximately 4.38%.
- Funding by the City will be prioritised for renewals over new acquisitions or upgrades.

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- projected renewals will be distributed over 10-year planning period to meet the budget constraints which makes City current funding level sufficient to maintain current level of service.
- The AMPS have been prepared using the Alternative Method.
- Useful Lives (UL) are an accurate representation of the behaviour of assets in the field and the City's practices in renewing/replacing assets at their end of useful life.
- Useful lives have been used to inform renewal projections across the 10-year planning period based on asset age.
- Condition data and age data are assumed to be accurate (noting that this AMP is based on a 'medium' level of confidence of relevant information).
- Apply 1 – 5 condition rating to determine Remaining Useful Lives (RUL).
- All Boardwalk, Decks and Foot Bridges now have been included in Bridge AMP regardless of the custodian.
- Lighting (Lumin and Pole) and sign assets with custodian parks and environment are included into this AMP whilst lighting and sign assets with custodian of roads have been included into road AMP.
- Fences that assigned in park and open space register (O-Spec) with custodian parks and environment are included into this AMP.
- Assets assigned with parks and open space (O-Spec) register with custodian of marina have been included into Marina AMP.
- Unit rates are representative of asset replacement costs.

The Alternate Method was used to forecast the renewal lifecycle costs for this AMP.

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

- Review asset registers to ensure data is up to date and relevant with New Capital Works asset creation and donations Investigate customer service expectations and expected levels of service.
- Improve the quality and accuracy of parks & environment asset condition survey by implementing inspection methodology based with new technology. (e.g. ArcGIS Field App to configure for data capturing requirements that able to manage asset data integrated with GIS and CiAnywhere more effectively for better reporting and forecasting).

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2.0 INTRODUCTION

2.1 Background

This AM Plan communicates the actions and necessary funds required to sustainably deliver services through the careful management of assets for the foreseeable future.

The AMP is to be read in conjunction with the City's Asset Management Policy along with following Asset Management Strategic documents:

- City of Cockburn Strategic Community Plan 2025 – 2035
- City of Cockburn Long Term Financial Plan 2024 -2034
- City of Cockburn Annual Report 2024 - 2025
- City of Cockburn Corporate Business Plan 2025/26 – 2028/29
- City of Cockburn Service Plans 2025 – 2026
- City of Cockburn Project Plans 2025 -2026

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

The infrastructure assets categories covered by this AMP include amenities, bins, bore meters, bore pumps, fence, gates, irrigation, lighting, playgrounds, playground equipment, sporting equipment, playing fields, signs, public art and minor structures.

For a detailed summary of the assets covered in this AMP refer to Table 5.1.1 in Section 5.

The infrastructure assets included in this plan have a total replacement value of $**120,828,226**.

2.2 Stakeholders

Key stakeholders engaged with during the preparation of this AMP are shown in Table 2.2

Table 2.2: Key Stakeholders in the AM Plan

Internal Stakeholders	Role in Asset Management Plan
Elective Council	• Represent needs of community. • Ensure service suitable.
Executive Leader Team (ELT)	• Community representation and provide strategic direction to the elected council through the setting of asset management policy. • Allocate resources to meet planning objectives in providing services while managing tasks. • Ensure service suitable.
Director Infrastructure and Group Manager Asset Services and Projects	• Overall responsibility for Infrastructure Department. • Manage organisation operational activities and future planning strategic direction.
Service Manager Infrastructure Assets	• Review the Asset Management Plan and future planning strategic direction. Capital works projects, reactive and planned maintenance schedule and deliver.
Technical Officer Asset Management	• Responsibility to ensure asset management tasks and improvement plan are undertaken in line with objectives within AMP. • Drafting of Asset Management Plans for approval.
External Stakeholders	Role in Asset Management Plan

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Community (Residents, Tourists & Business)	• Set the expectations for levels of service.
Federal and State Governments	• Liaise for Funding opportunities through various Government Agencies. • Reporting body for any issues or service deficiencies for DIT infrastructure.
Developers	• Work in conjunction with the City to ensure infrastructure meets required standards and service outcomes
Insurers	• Assist to manage financial risk of the City

2.3 Principles, Goals and Objectives of Asset Management

The principles of asset management as per the International Standards for asset management are:

- **Value**: asset management focuses on the value assets provide to the organization over time.
- **Alignment**: asset management aligns financial, technical, and operational decisions with the organizational objectives, promoting vertical and horizontal coordination.
- **Leadership**: leadership and sustained commitment at all levels are crucial for successful asset management.[1]

Our goal for managing infrastructure assets is to deliver the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers.

The key objectives of infrastructure asset management as defined by the International Infrastructure Management Manual are:

- Defining levels of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing, and appropriately controlling risks, and
- Linking to a Long-Term Financial Plan which accommodates the required expenditure and how it will be funded.[2]
- Managing risks associated with asset failures.
- Sustainable use if physical resources.
- Continuous improvement in asset management practices.

2.4 Plan Framework

The 2024-2028 Parks and Environment Asset Management Plan (AMP) has been developed in accordance with the International Infrastructure Management Manual (IIMM) and complies with Department of Local Government & Communities Asset Management Framework.

As part of the City's Strategic Asset Management Planning Framework (SAMPF), The Parks and Environment AMP will be reviewed every four years, with an interim desktop review undertaken every two years. The FAMP review will focus on core elements required by the LTFP, for example asset valuations, growth projections, financial analysis including operating, sustainability ratios and 10-year renewals. This will ensure that future revisions of the LTFP will be derived from a structured AMP development cycle which has received Executive and or Council approval, increasing confidence and integration of asset management data and methodologies into the City's long term financial planning and adopted service levels.

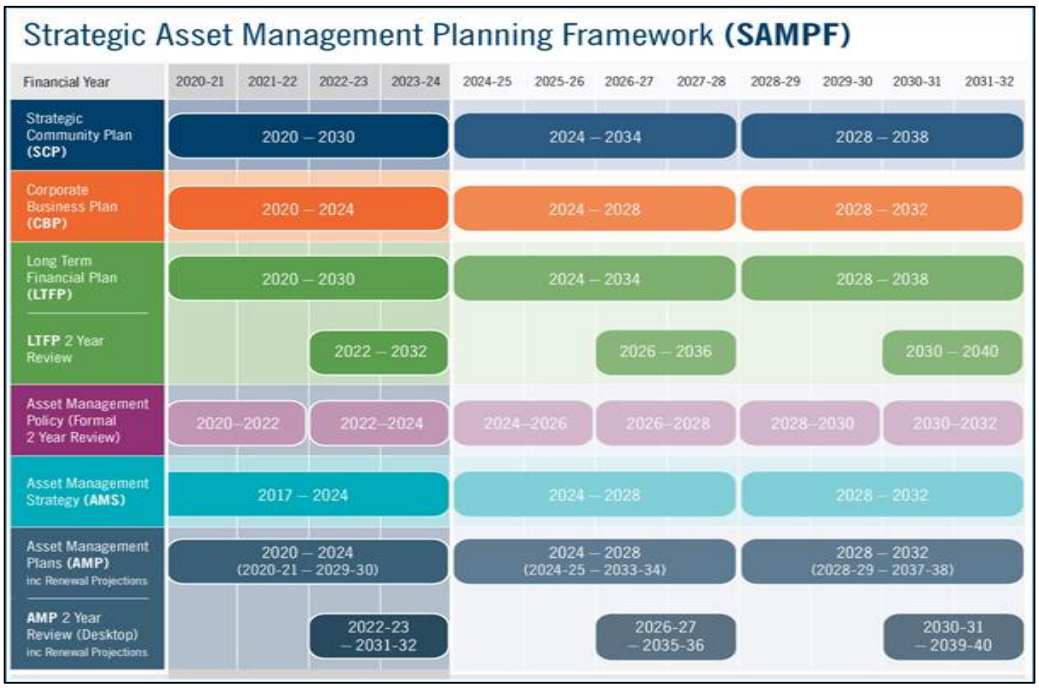
[1] ISO 55000:2024 Asset Management – Vocabulary, overview, and principles

[2] IPWEA International Infrastructure Management Manual (IIMM), Sec 1.2.1

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The Figure 2.4 below provides a visual representation and timelines of the Corporate Planning Frameworks Plans and Strategies.

Figure 5.4: Strategic Asset Management Planning Framework (SAMPF)



- Level of Service and Enterprise Risk Management – outlines the level of service provided by council and identifies risks to the City.
- Future Growth and Demand how this will impact on future service delivery and how this is to be met.
- Lifecycle Management – how the City will manage its existing and future assets to provide the required services.
- Financial Analysis – what funds are required to provide the required services.
- Asset management practices – current systems and practices in place
- Improvement and monitoring – how the plan will be monitored and improved to ensure it is meeting Council's objectives.

The formalisation and alignment of the City's SAMPF within the Corporate Planning Framework reflects the City's increasing maturity and recognises the importance of Asset Management in supporting the City in delivering long term financial sustainability of services and capital asset renewal.

2.4.1 Corporate Planning Framework

The formalisation and alignment of the City's SAMPF within the Corporate Planning Framework reflects the City's increasing maturity and recognises the importance of Asset Management in supporting the City in delivering long term financial sustainability of services and capital asset renewal.

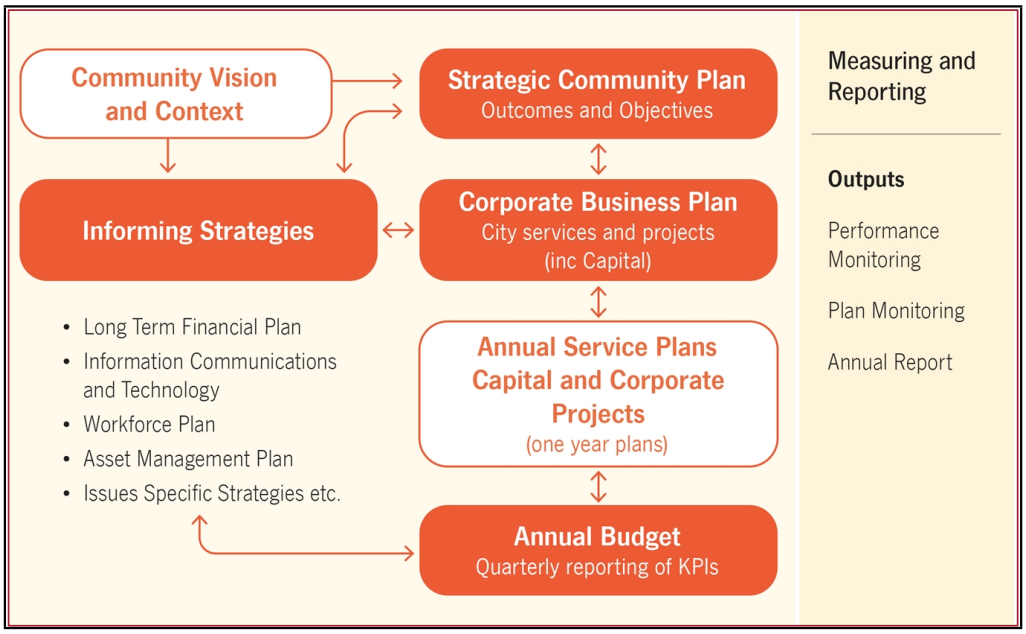
With the continued implementation of the Strategic Asset Management Planning Framework, the City will commence measuring service levels for planned and reactive maintenance to determine operational performance and asset utilisation.

The City strives to improve its strategic and operational asset management practices and to continue its journey towards advanced asset management. The Department of Local Government, Sport and Cultural Industries

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(DLGSC) has developed the Western Australia Local Government Integrated Planning and Reporting Framework. The future direction and need for advanced level practices are continually assessed in accordance.

Figure 2.4.1: City's Corporate Planning Framework



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3.0 LEVELS OF SERVICE

Levels of service define the standards and performance targets that infrastructure assets are expected to meet to ensure they provide reliable, safe, and efficient services to the community.

3.1 Customer Research and Expectations

The City carries out the Place Score Liveability Survey bi-annually to gather and evaluate customer feedback across a range of services that the City provides. This allowed the City to measure its performance against community expectations.

The first and most recent Place Score Liveability Survey was undertaken in September 2024. Over 1800 residents participated in the survey. The survey results align with the City's strategic outcomes and indicate the following:

- **Environment Overall Community** – Community Familiarity (CF) percentage for open space (parks) general condition is at 68% (CX7.1) and the community satisfaction percentage for quality of open space and landscaping is at 52%. (PX7.0)
- **Environment Overall Community** – Community Familiarity (CF) percentage for protection of natural environment is at 45% (PX 6.9)
- **Environment Overall Community** - Community Familiarity (CF) percentage for natural environment (natural features, views, vegetation, topography, water, wildlife etc.) is at 74% (PX7.3)
- **City Growth and Moving Around** - The Community Familiarity (CF) percentage for community amenity versus community growth is at 49%. (PX6.9) and 37% (PX7.7) score for the capacity of public spaces.
- **Community, Lifestyle, and Security -** The Community Familiarity (CF) percentage for space suitable for specific activities or special interest (exercise, BBQ, dog park, entertainment etc.) is at 45%. (PX6.9) and spaces suitable for play (from toddlers to teens) scores at 22%.

The key topics relating to this Strategic Outcome are:

- 49% of ideas related to natural environment, with a strong desire for increased tree canopy, parks, and improved landscaping.
- 28% of ideas related to amount and quality of public spaces, with the community wanting more trees and green spaces, in addition to upgrades to existing parks and open spaces.
- 16% of ideas related to maintenance of public open spaces, with the community highlighting the need for improved management and upkeep of street trees and verges, as well as protection of native flora and fauna.

Table 3.1: Customer Satisfaction Survey Levels

Performance Measure	Performance Score (PX)		
	Good PX ≥ 7	Average 6 ≤ PX < 7	Poor PX < 6
Quality of Public Space (verges, parks, footpaths, etc.)	7.2		
Amount of Public Space (parks, footpaths, verges, etc.)		6.5	
General Condition (parks, footpaths, street trees, etc.)	7.1		
Landscaping and natural elements (street trees, planting, water features etc.)	7.0		
Elements of natural environment (natural features, views, vegetation, topography, water, wildlife etc.)	7.3		

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Performance Measure	Performance Score (PX)		
	Good PX ≥ 7	Average 6 ≤ PX < 7	Poor PX < 6
Protection of Natural environment		6.9	
Spaces suitable for specific activities or special interests (entertainment, exercise, dog park, BBQs etc.)	7.4		

3.2 Strategic and Corporate Goals

This AMP is prepared under the direction of the City of Cockburn vision, mission, goals and objectives.

Our vision is:

Cockburn, the best place to be.

Our mission is:

Support our communities to thrive by providing inclusive and sustainable services which reflect their aspirations.

Strategic goals have been set out in the City of Cockburn Strategic Community Plan 2025 – 2035. The relevant goals and objectives and how these are addressed in this AMP are summarised in Table 3.2

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

Strategic Outcome	Strategic Objective	Deliverable	Measure
Community, Lifestyle and Security:	Accessible and inclusive community, recreation and cultural services and facilities that enrich our community. A vibrant, healthy, safe, inclusive and connected community.	Provision and maintenance of community centres, recreational facilities, public safety, parks, and inclusive amenities.	Customer survey results
Environment Responsibility:	A leader in environmental management that enhances and sustainably manages our local natural areas and resources.	Implementation of environmental management plans, protection of verges, and facilitate community to encourage use of Electric Vehicle (EV) (e.g. e bikes scooters)	Customer survey results
City Growth and Moving Around:	An attractive, socially connected and diverse built environment.	Development and renewal of urban open spaces, streetscapes.	Customer survey results

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Listening and Leading:	community focused, sustainable, accountable and progressive organisation.	Transparent decision-making, regular community engagement, performance reporting, and integration of community feedback into planning.	Customer survey results
Local Economy :	Empower and support local businesses (through quality open space).	Streamlined process for negotiating road levels of service vs cost with businesses.	Customer survey results

3.3 Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the parks and environment Infrastructure service are outlined in Appendix G.

3.4 Customer Values

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

Customer Values indicate in Table 3.4:

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

Table 3.4: Customer Values

Service Objective:			
Customer Values	**Customer Satisfaction Measure**	**Community Values (CF) Score**	**Expected Trend Based on Planned Budget**
Quality of Public Space (footpaths, verges, parks etc.)	Strategic Community Plan or customer requests	52%	Planning and funding for capital works requires attention.
Amount of Public Space (footpaths, verges, parks etc.)		37%	Planning and funding for new and upgrades capital works requires attention.
General Condition (open space parks etc.)		68%	Ensure open space park, maintenance budgets keep up with demand.
Landscaping and natural elements (street trees, planting, water features)		52%	Current funding is expected to maintain basic landscaping standards; however, enhancement and renewal activities may be limited over the medium to long term.
Elements of natural environment (natural features, views, vegetation, topography, water, wildlife etc.)		74%	Generally expected to remain stable in the short term, though increased usage and environmental pressures may impact long-term performance without targeted investment.

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Protection of Natural environment is		45%	Protection outcomes may decline over time unless additional funding is allocated for proactive environmental management and rehabilitation works.
Spaces suitable for specific activities or special interests (entertainment, exercise, dog park, BBQs etc.)		22%	Existing facilities are likely to experience increased pressure, with limited capacity for upgrades or expansion under current funding levels.
Locally Owned and Operated business.		44%	Local businesses may be adversely affected by poorly performing infrastructure, disadvantaging them.

3.5 Customer Levels of Service

The Customer Levels of Service are considered in terms of:

Condition How good is the service … what is the condition or quality of the service?

Function Is it suitable for its intended purpose …. Is it the right service?

Capacity/Use Is the service over or under used … do we need more or less of these assets?

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

The City of Cockburn has defined service levels in two terms:

- Community/customer Levels of Service, which relate to how the community receives the service in terms of safety, quality, quantity, reliability, responsiveness, cost efficiency and legislative compliance.
- Operational/technical Levels of Service, which are measures of performance developed to ensure that at least the minimum customer levels of service are met. Technical Levels of Service relate to how the City provides the service using technical terms.

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

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Table 3.5: Customer Levels of Service

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Condition	Parks and environment assets are maintained in a safe, clean, and visually acceptable condition.	Place Score survey – general condition scores. Frequency of condition assessments of parks and environment assets.	Play score survey indicates the PX Score of 7.1/10 and CF score: 68% for general condition of parks. Complete condition assessment of full parks infrastructure networks at least every five years (playground equipment is inspected annually) Percentage of parks infrastructure assets in condition 3 or better by replacement cost is 96.96%	Maintain > 7.0/10 PX score short to medium term, may be at risk longer term.
	Confidence levels		High	Medium
Function	Parks and environment assets are fit for purpose and support intended recreational, social, and environmental uses.	Place Score survey – suitability for activities. Customer complaints relating to functionality. Temporary closures or restricted use of assets.	Play score survey indicates spaces suitable for specific activities PX Score of CF score: 22% Ongoing use of facilities, with increasing pressure on playgrounds, amenities, and sporting assets.	Increasing requests for accessibility upgrades with aging population. Insufficient budget may delay upgrades in medium to long term. Insufficient budget may delay upgrades in medium to long term which may also reduce level of service.
	Confidence levels		High	Medium
Capacity	Sufficient quantity and capacity of parks and facilities to meet community demand.	Place Score survey – amount of public space. Community requests for upgraded facilities.	Amount of public space CF score: 37% high utilisation of existing assets, particularly in growth areas.	Depending on future growth trends, the community is expected to require additional open space and upgrades to existing parks and reserves Insufficient budget may delay upgrades in medium to long term that also reduce level of service.
	Confidence levels		High	Medium

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3.6 Technical Levels of Service

Technical Levels of Service – To deliver on the customer values, and impact they have on Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the lifecycle activities (see Section 5) and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

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

Table 3.6 shows the lifecycle activities related to the current 10 year planned budget, and the forecast costs recommended in this AM Plan.

Table 3.6: Technical Levels of Service

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
TECHNICAL LEVELS OF SERVICE				
Acquisition	Provide new and upgraded parks and environment assets to meet growth, service demand, safety, accessibility, and strategic objectives, while considering whole-of-life costs.	Identification of acquisition as in forward capital planning and deliver within approved budget.	Priority acquisitions and upgrades only can be delivered within the current planned budget, focusing on essential safety, compliance, and high-use and poor in condition assets.	The Acquisitions that we would like to do as per the Lifecycle Forecast that budget levels are sufficient in short to medium level. City required to minimise the level of service by limiting the Acquisition to match up with budget level or required to re assessed the planned budget to continue with the defined future Acquisition.
		Budget	$3,705,282	$3,910,594
Operations	Operate parks and environment assets to ensure they are safe, accessible, clean and functional for community use.	Frequency of condition inspections and servicing. Operation delays and issues.	Core operational activities are undertaken within current budget constraints. Service delivery is maintained but with limited flexibility to increase service frequency in high-use areas.	Increase operational activities in line with lifecycle forecast to support new and upgrades assets being acquired. Improved inspection quality and more consistent service delivery across the network.
		Budget	$3,318,558	$4,005,479
Maintenance	Maintain asset condition, manage defects, reduce safety risks and extend asset life through planned and reactive maintenance.	Percentage of assets in condition 3 or better Reactive vs planned maintenance ratio. Maintenance response times.	Maintenance activities focus on safety-critical and high-risk assets. Within the current budget level the planned maintenance would be constrained, leading to increased reactive maintenance.	Increase planned maintenance in line with lifecycle forecast to stabilise asset condition, reduce reactive maintenance, and minimise long-term lifecycle costs.
		Budget	$20,904,782	$25,230,454
Renewal	Renew or replace assets at the end of their useful life to	Asset renewals are projected based on recent	The Renewal activities that can be done within the	Deliver the full renewal program identified in the lifecycle forecast to

[3] IPWEA, 2015, IIMM, p 2|28.

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Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
	maintain service levels, manage risk and avoid escalating costs.	Parks and Environment Condition Assessment Survey.	current Planned Budget restraints as required. Renewal works are prioritised for critical and high-use assets and assets are in poor condition.	maintain asset condition, reduce renewal backlog, and sustain agreed levels of service.
		Budget	$5,256,069	$4,314,629
Disposal	There are currently no plans for the disposal of parks and environment assets.	Disposal planning	No disposal planned	N/A
		Budget	$0	$0

Note: * Current activities related to planned budget.

** Expected performance related to forecast lifecycle costs.

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

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4.0 FUTURE DEMAND

Future demand refers to the anticipated need for infrastructure services driven by factors such as population movement, economic development, technological advancements, and changing environmental or community expectations.

4.1 Demand Drivers

A demand driver refers to the factors or trends that influence the need for infrastructure services and capacity. The factors influencing future demand are associated with following drivers.

- Population growth
- Changing demographics
- Development Trends
- Impact of materials on climate change
- Urban Consolidation

Demand drivers help predict future infrastructure needs and guide planning and investment decisions.

4.2 Demand Forecasts

The current position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 4.3.

4.3 Impacts 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.

The impact on service delivery will be managed through a combination of managing and upgrading existing assets and the provision of new assets to meet demand. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

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

Table 4.3: Demand Management Plan

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Population	The City of Cockburn current population in 2025 is 133,869. (Source: Australian Bureau of Statistics, Region Population Growth. Compiled and presented by .id Home | City of Cockburn | Population forecast)	The City's population is expected to increase to 177,920 by 2046. (Source: Australian Bureau of Statistics, Region Population Growth. Compiled and presented by .id Home | City of Cockburn | Population forecast)	Community desire for more open spaces, newer and more frequent refurbishments. Increasing number of gifted assets via through development. larger maintenance and operating costs.	Lifecycle cost/benefit analysis on all acquisition proposals. Manage construction of donated parks and environment assets by developers as these will become City assets. Manage expectations prior to construction of new and upgraded assets.
Demographics	Aging Population	Between 2021 and 2031, the population age forecasts for City of Cockburn indicate a 20.9% increase in population under working age, a 51.5% increase in population of retirement age, and a 16.7% increase in	Expected increase in accessibility requirements (DDA compliance) resulting in more ramps and road crossing points. (e.g. wheelchair excess & pram ramps) This will present higher risk associated with trip	Monitor age profile projections and consider during both long term acquisition planning and future level of service planning. Lifecycle cost/benefit analysis on all acquisition proposals.

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		population of working age. Essentially, a large portion of the City population will be older in the future. (Source: Australian Bureau of Statistics, Region Population Growth. Compiled and presented by .id Home | City of Cockburn | Population forecast)	hazards. Inspection frequency may need to increase, and the time taken to resolve issues may need to decrease to mitigate such risk. This would be an increase in the current level of service, resulting in higher costs.	
Development Trends	Existing industrial areas are expanding and reaching full potential.	More Lifecycle cost is required to be undertaken.	Increased development activity (and higher utilisation of facilities) increases whole-of-life impacts, including: more O&M workload, higher renewal pressure, and greater expectations for amenity upgrades in high-use / growth areas.	Lifecycle cost/benefit analysis on all acquisition proposals.
Impact of materials on climate change.	Current materials specifications may need review to consider recycled / lower-carbon options.	Investigation outcomes may influence future specifications and cost profiles (capital and/or maintenance).	There may be cost implications depending on the outcome of investigation.	Investigation into recycled materials added to improvement plan.
Urban Consolidation	Continual development of Greenfield land	Greenfield land will continue to be developed (expected 2030) and higher density residential developments will take place around Cockburn Central.	Increased use of existing reserves and demand for upgrading of reserves to a higher standard.	Apply lifecycle cost analysis to upgrades and new assets and coordinate with planning to secure funds.

4.3.1 Demand Management Plan Summary

Table 4.3:1: Service Activity and Demand Management Plan Summary

Demand driver	Current position
Public Open Space Strategy	Strategic planning framework which outlines how the City's will manage public open space and recreational area and the associated assets for current and future community needs.
Natural Areas Management Strategy	Strategic planning framework which outlines how the City's will manage natural areas and the associated assets for the current and future community needs.
Public Open Space & Natural Areas Maintenance	Annual maintenance plans / programs identify and forecast all maintenance works required within parks and bushlands
Sustainability	Sustainability is a key strategic value for the City of Cockburn, embedded in the culture of our organisation. The 'integrated reporting framework' embeds sustainability into responsible decision making at all levels. The framework includes the City's Sustainability Policy, Sustainability Strategy, Action Plan and annual State of Sustainability Report

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Urban Forest	Strategic approach to improving the canopy cover throughout the City and set direction for the management of streetscapes and public open space to improve liveability and wellbeing.
Park Maintenance	Annual maintenance plans / programs identify and forecast all maintenance works required within parks.
BBQ's	Review existing framework and develop process for new BBQ's in existing and growth areas.
Shade Sails	Continue to implement Councils annual policy on shade sails over playgrounds to meet community expectations.
Irrigation	Audit of existing infrastructure and review current central control systems to improve licensed ground water management.
Water Resource Operating Strategy	Strategic framework to manage the abstraction of groundwater to ensure a sustainable resource and mitigate impacts the environment.
Infrastructure location, provision and function	'Outdoor spaces' is a key topic area of the Age-friendly Cities initiative, ensuring sufficient provision of infrastructure that's functional in design and located with consideration is key to ensuring City open spaces are inclusive. City of Cockburn Age Friendly Strategy 2016 - 202 Global Age Friendly Cities – World Health Organisation (WHO)
Street Tree Database	Input and extraction of data to the new street tree data base using GIS to manage trees within the streetscape environment.

4.4 Asset Programs to meet Demand.

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

Acquiring new assets will commit the City of Cockburn to ongoing operations, maintenance and renewal costs, and depreciation expenses for the period that the service provided from the assets is required. These future costs and expenses are identified and considered in developing the long-term financial plan.

4.5 Climate Change Adaptation

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

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

As a minimum we consider how to manage our existing assets given potential climate change impacts for our region. Risk and opportunities identified to date are shown in Table 4.5 (A)

Table 4.5 (A): Managing the Impact of Climate Change on Assets and Services

Climate change risk	Projection	Impact on services	Climate Change Management Plan

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

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Higher temperatures and UV levels.	Hotter days and more frequent heatwaves.	Faster asset wear, heat risk to users and staff, and stress on turf and open space assets.	Provide more shade, use UV-resistant materials, inspect exposed assets and follow heat procedures.
Lower rainfall and reduced groundwater.	Longer dry periods and tighter water limits.	Less reliable irrigation, declining turf and trees, and higher maintenance costs.	Fix leaks, improve watering controls, prioritise high-use areas and use drought-tolerant plants.
Severe storms, flooding and erosion.	More intense storms and heavy rainfall.	Damage to trees and park assets, erosion, out of service and more repairs.	Improve drainage and erosion controls, manage tree risks and inspect open space assets after storms.

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

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

Table 4.5 (B) summarises opportunities to build climate change resilience into new and existing assets.

Table 4.5 (B): Building Climate Change Resilience into New and Existing Assets

Asset Description	Climate change risk	Resilience Plan for New Assets	Resilience Plan for Existing Assets
Playgrounds, Playing Fields, Playground Equipment (exercise equipment) shade sails, park furniture and surfaces.	higher temperatures and UV levels.	Heat/UV-resistant materials; increase shade design for cooler surfaces.	Prioritise annual inspections and renewals of sun-exposed components; where needed (e.g.: Playground equipment inspection done annually)
Irrigation system (bore pumps & meters, irrigation lines & points) and surface areas.	Lower rainfall / water restrictions / groundwater limits.	Design for water efficiency (smart control, sensors, low-loss pipework); drought-tolerant turf/planting and reduced irrigated footprint where appropriate.	Conduct irrigation audits and leak fixes; optimise watering schedules/central control; prioritise irrigation to high-use/critical areas; transition planting to drought-tolerant species.
Natural areas, trees and reserve infrastructure (fences, & gates, lighting and minor structures)	Severe storms / intense rainfall / flooding & erosion.	Site and design assets for drainage/overland flow; use robust fixings and corrosion protection; allow access for maintenance after events.	Improve drainage and erosion controls at risky spots. Proactive tree risk management; post-storm inspections for high-use assets.

The impact of climate change on new and existing assets is evolving and new opportunities will be developed in future revisions of this AM Plan.

4.6 Change in Technology

Notable technology changes are forecast to influence the delivery of services covered by this plan. Even more significantly, changes in energy consumption, environmental impacts (i.e. weather patterns) and water abstraction which will continue to be monitored and addressed in future revisions of this plan. Technology will enhance the delivery of services through better ground water monitoring, application of wetting agent/fertiliser to efficiently use irrigation water.

Table 4.6: Technology changes influence the delivery of services

Demand driver	Current position

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Central Irrigation Control	Improve ground water budget recording and forecasting
Machinery and Equipment	Improved design with low emission or electrical alternative
Lighting –LED	Improve energy efficiency
Tree Canopy Mapping	Identify percentage of cover, areas to plant trees and trees health
Ground Water Management Software	Ensures water delivered to POS and Streetscapes is tailored to environmental conditions and GW allocations set by DWER. Enhances water budget forecasting and recording for annual reporting.
Using online reporting platforms to capture greenhouse gas emissions, energy and water consumption for council buildings, parks and reserves	Greater efficiencies in use and management of resources, improves ease of reporting and greater transparency
Using tablets to capture data and respond to customer requests	Increases ability to capture on ground changes and apply management responses-improvement in reserve condition
Increased use of use of solar powered lights for POS lighting in specific locations	Decrease in energy consumption
Steam trials as a method of weed control	Diversification of weed control approaches - improvement to POS amenity and reduced chemical usage

4.6.1 Alternate Water Supply System (AWSS) Groundwater Interception Device (GID)

Studies confirmed the need to reduce groundwater flow and associated inflow of nutrients to the proposed marina at Port Coogee. Groundwater flow and hydrodynamic modelling concluded that a 90% reduction in flow of groundwater / nutrients was required as excess nitrogen contributed to phytoplankton blooms. The solution was to install a sub-surface permeable cut-off drain to intercept the groundwater flowing into the marina.

The Port Coogee Alternate Water Supply System (AWSS) comprises of:

- Two interception pump stations each with two submersible pumps, these pumps service the irrigation and re-use network storage as well as the reinjection bore;
- Two distribution pump skids drawing water from the storage tank. These pump skids area each servicing separate water distribution schemes, one for the irrigation of public open space, the other for non-potable use by residents and miscellaneous construction purposes;
- The distribution network;
- The reinjection bore.

The AWSS has a separate maintenance plan managed by external Facilities Contractor Advisian which includes various monthly, bi-annual and annual readings including monthly irrigation system readings, annual end of year water readings and bi-annual inspections of water meters. For more information on the AWSS please see Port Coogee Alternative Water Supply Scheme – General Information document.

4.6.2 Fertigation

Installation of fertigation cabinets at active reserves, these work in conjunction with existing irrigation systems but inject fertilisers into the water whilst it is running.

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Liquid wetting agent is also used to lock in the fertiliser reducing wasteful pooling and runoff resulting in improved water retention, penetration and more efficient usage of ground water.

4.6.3 Soil Moisture Sensors

The City is trialling soil moisture sensors at Legacy Park with a secondary system planned for Atwell oval. These track soil moisture and movement throughout the soil profile.

Software data from the SMS will be fed into the irrigation system, following a rain event for example, the irrigation output will be reduced based on the stress point, full point and saturation point of the soil enabling more efficient practice.

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5.0 LIFECYCLE MANAGEMENT PLAN

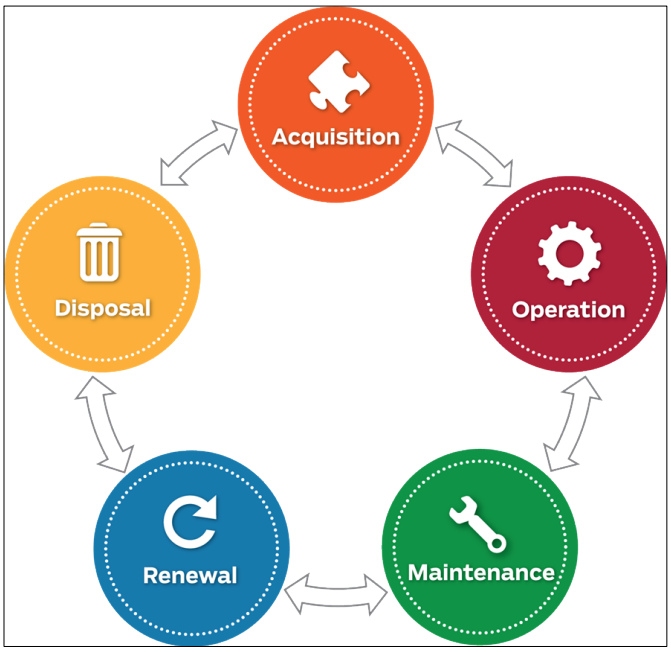
The lifecycle management plan details how the City of Cockburn plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) throughout their entire lifecycle, from acquisition or creation to disposal. The goal is to maximise the value of the assets while minimising costs and risks, ensuring they continue to meet performance requirements over time.

From a financial perspective, infrastructure activities tend to be classified as being either Operating or Capital. The lifecycle activities used in the asset management and financial planning and reporting process cover:

- **Capital**
  - **Acquisition** – the activities to provide a higher level of service (e.g. constructing a new park or playground, installing new park furniture, pathways, irrigation or lighting, expanding an existing playground.)
  - **Renewal** – the activities that replace or restore assets to the standard it had originally provided (e.g. replacing playground equipment, park furniture, shelters, pathways, irrigation systems, sports lighting or retaining walls at the end of their useful lives).
- **Operating**
  - **Operations** - the routine activities that keep services accessible and effective, balancing efficiency with user expectations (e.g. opening hours, cleansing, mowing grass, energy, inspections, etc.)
  - **Maintenance** – the preventative and corrective actions to sustain asset functionality and minimise unexpected failures. Maintenance activities enable an asset to provide service for its planned life (e.g. repairing playing fields, equipment, Park structure repairs, replacing damage park furniture and rectifying park lighting faults).
  - **Disposal** – the decommissioning, removing, or repurposing of assets that are no longer cost-effective, safe, or necessary (e.g. shutting down an old water treatment plant, demolishing unsafe buildings, dismantling old bridges, etc.).

A pictorial representation of the asset lifecycle activities is shown below in Figure 5.1

Figure 5.1: Asset Lifecycle Activities



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5.1 Background Data

5.1.1 Physical parameters

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

Table 5.1.1: Assets covered by this Plan

Asset Class	Asset Group	Asset type	Quantity	Replacement Value ($)
INFRASTRUCTURE	**Amenities**	BBQ Plates	116	**9,346,350**
		Bicycle racks	71	
		Drink Fountains	186	
		Dog Exercise Equipment	9	
		Bird Nest and Feed and Watering Station	7	
		Handrail	154	
		Park Seat	1,068	
		Picnic settings/shelters	365	
		Beach Showers	13	
		Table	8	
		Taps	9	
	Bins	Dog Pouch Stations	402	**1,495,807**
		Rubbish Bins	222	
	Fences	Animal Enclosure (m)	76.79	**26,116,871**
		Bollards	38,894	
		Baseball Fence / AFL (m)	264.20	
		Cricket Net (m)	635.88	
		Chicanes (no.)	32	
		Colourbond (m)	2,834.27	
		Chain wire / Wire (m)	46,094.63	
		Conservation (m)	5,926.15	
		Cyclone (m)	8,091.42	
		Edging (m)	13029.02	
		Feral Proof (m)	6919.29	
		Gabion (m)	311.12	
		Kopper (m)	1435.86	
		Pedestrian Hop over (m)	53.48	
		Pedestrian Trail (m)	765.27	
		Rabit Proof (m)	225.64	
		Railing (m)	13958.94	
		Ring lock (m)	19691.8	
		Rail (m)	765.26	
		Retaining walls (m)	41810.47	
		Tennis Nets (m)	24.47	

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Asset Class	Asset Group	Asset type	Quantity	Replacement Value ($)
INFRASTRUCTURE	**Gates**	Pedestrian	73	**613,046**
		Vehicle	357	
	Lighting Pole	Car Park	187	**3,475,504**
		CCTV	38	
		Directional	18	
		Feature	12	
		Floodlights	118	
		Midge Lights	6	
		Park	395	
		Solar	90	
	Lighting Luminaire	Car Park	140	**4,117,002**
		CCTV	6	
		Coogee Light	32	
		Directional	13	
		Feature	597	
		Floodlights	144	
		Midge Lights	6	
		Footpaths	87	
		Park	374	
		Solar	138	
	Minor Structure	Amphitheatre	2	**12,171,079**
		Decorative Structure	1	
		Driveway	16	
		Dug out	4	
		Gazebo	2	
		Lookout	5	
		Shelter	245	
		Shed	3	
		Stairs	10	
		Tree Protector	4	
		Undersurface	1007	
	Signs	Beach Hazards	28	**2,418,794**
		Entry / Locality Statements	32	
		CoSafe Security Sign	43	
		Dog related Sign	475	
		Activity not permitted	36	
		Health Warnings	104	
		Street Parking	43	
		Car Parking	37	

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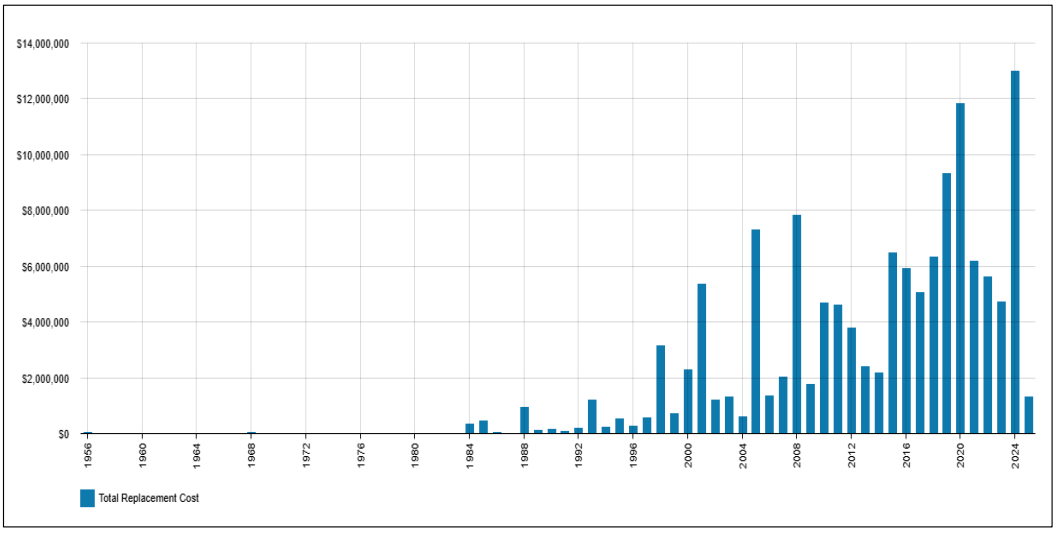
Asset Class	Asset Group	Asset type	Quantity	Replacement Value ($)
		Prohibitive Sign	24	
		Warning Icon	97	
		Warning Sign (Gate)	13	
		Directional Sign	6	
		Community Sign	4	
		Information Entry Sign	3	
		Wayfinding Sign	3	
		Water Parks	2	
		Facility Plaques	8	
		Park Sign	195	
		Interpretive Sign	167	
		Project Sign	23	
		Dual Use Path	3	
		GW Monitoring Well	1	
		Information Sign	4	
IRRIGATION	**Irrigation Point**	Aerators	11	**20,926,376**
		Electrical Cabinets	306	
		Headworks	244	
		Iron Filtration Unit	19	
		Valves	518	
		Sprinklers (gear drive)	205	
		Sprinklers (pop ups)	106	
		Isolation Valve	31	
		Water Controllers	140	
		Bore Meter (m)	6929	
		Bore Pump	273	
	Irrigation Lines	Infield Pipe (m)	4288.18	**2,546,794**
		Lake fill pipe (m)	1934.12	
		Mainline Pipe (m)	91754.48	
		Tank fill Pipe (m)	425.63	
		Reinject (m)	2598.79	
Playground and Playing Fields		Playground Surface	508	**9,742,235**
		Basketball Field	71	
		BMX Facility	10	
		Boucle court	2	
		Cricket Fields	37	
		Netball Fields	5	
		Skate Facility	5	
		Tennis Fields	5	

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Asset Class	Asset Group	Asset type	Quantity	Replacement Value ($)
		Tracks (Long jump sand pits, shotput & synthetic tack)	17	
Playground Equipment		Playground Equipment	529	**22, 284, 069**
		Shade Poles	165	
		Shade Sales	167	
		Water Play Equipment	3	
Sporting Equipment		Basketball / netball rings	93	**2,816,086**
		Cricket (practice nets)	15	
		Disc Golf holes	9	
		Exercise equipment	101	
		Goals	132	
Public Arts		Public Arts	122	**2,758,214**
TOTAL Replacement Cost				**120,828,226**

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

Figure 5.1.1: Asset Age Profile



Overall, this age profile shows most assets are still relatively new (fewer renewals needed in the short to medium term). It highlights that a large proportion of assets were constructed during previous upgrade programs and development phases. These assets will also mature and reach forecast replacement age around the same time, which may create a closer spike in renewal costs. For this reason, the age profile supports planning renewals earlier and spreading renewal works over a manageable period of time is necessary to manage budgets and keep services reliable.

5.1.2 Asset capacity and performance

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

Table 5.1.2: Known Service Performance Deficiencies

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Infrastructure	Service Deficiency
Irrigation	Irrigation infrastructure is ageing at various rates and have the potential to fail prior to expected end of useful like , impacting on delivery of service and reserve management. An increase in irrigation infrastructure through new subdivisions has led to a reduced maintenance service level. More recently the City has been performing reactive maintenance only with regards to asset replacement.
Groundwater Management	There has been and will continue to be an increase in the regulatory framework on the management of the abstracted groundwater which is impacting on the existing resources. New resources are required to meet the changes and ensure no breaches of the ground water license conditions. Working collaboratively with contracted company to assist with groundwater monitoring and reporting. Require integrated software in conjunction with central irrigation software to assist with process.
Sport Fields / Passive Reserves	Inconsistent turf quality across most reserves is due to inefficient irrigation systems, reduced water allocations, high usage on sporting ovals through an increase in sporting clubs and limited window to conduct turf renovation between summer and winter sports. Current service levels are inconsistent with budget and resource allocations. Poor quality turf is also due to poor soil health; provision may need to be made to improve the structure using compost. With compost added soils will hold water longer making more sustainable use of groundwater. Changed irrigation installation method which is now cheaper and more efficient to replace. Contracted out mowing of some premier sports fields to produce quality turf surface, there are still improvements to be made.
Playgrounds	The continued increase in playgrounds through new subdivisions and the increase in adventure / nature playgrounds further exacerbate the variance between levels of service and budget allocations.
Street Trees	Current service is based on reactive street tree pruning by request, development of a Tree management plan will outline resourcing and funding. Annual audit on specific trees within Parks and Street Tree Audit every 3 years until development of a Tree Management Plan.
Verge Maintenance	Current service is based on reactive mowing of verges by residential requests an increase service delivery will mitigate complaints and improve aesthetic appearance for the wider community.
Streetscapes	An increase in streetscapes via developer contributions are not identified accurately thereby reducing service level across all streetscapes. Landscaped streetscapes are increasing and are difficult for residents to maintain as they are disconnected by laneways and rear property access.
Natural Areas	Maintenance service levels based on current funding are inadequate to complete full range of work actions.
Lighting (Pole and Lumin)	There has been an increased demand to utilizing sporting reserve at night through higher participation rates at sporting clubs requiring an increase to service and maintain the luminaire lighting levels. Meeting this new demand requires additional funding and resources along with a plan to replace the existing lamps with LED.
Signage	Lack of appropriate and adequate signage prevents the delivery of valid information thereby reducing the experience for the community.
Verge/Crossover Compliance	There has been an increasing trend towards property owners installing non-compliant verges and crossovers which impacts the current resources within the business unit. Some are dangerous and risk must be considered; this continues to be a deficiency.

5.1.3 Asset condition

The Condition Assessment which rates condition for parks and environment assets are scheduled to be carried out once in every five years in accordance with the City's condition assessment schedule. City's Playground equipment including sporting equipment is done annually. The Condition Assessment of defects is based on relevant technical standards and guidelines. The most recent condition survey of parks and environment assets was completed in 2023/24.

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

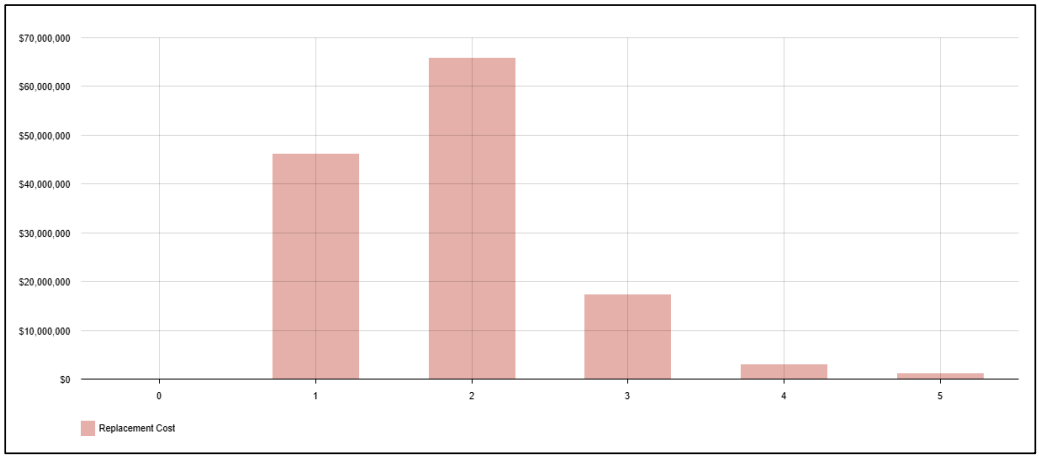
Table 5.1.3: Condition Grading System

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

The condition profile of our assets is shown in Figure 5.1.3

Figure 5.1.3: Asset Condition Profile



The condition profile indicates that most of the parks and environment assets are in good to very good condition. However, if inadequate renewal funding is allocated through the Long-Term Financial Plan for medium to long term, the average condition of parks and environments assets will worsen over time, as they reach the end of their useful life. The challenge will be to either ensure there is enough funding to maintain the current service levels or to adjust agreed levels of service.

5.2 Operations and Maintenance Plan

For the purpose of modelling within this AMP, the following definitions apply:

Reactive maintenance is unplanned maintenance work carried out in response to service requests and management/supervisory directions. Examples include ad-hoc faults (toilets blocked, leaks, broken and make safe the unsafe playground equipment, repair lighting outages, respond to storm damages fences and gates, signs and minor structures, irrigation failures like pipe burst and pump breakdowns etc.)

Planned maintenance is work that is identified and managed through a maintenance schedule. Examples include planned painting/coating for shelters, handrails to prevent corrosion, planned servicing bore pumping and calibration, resurfacing playing turfs and scheduled condition inspection etc.)

Operating expenditure is continuously required expenditure required to keep the asset functional. Examples include cleaning of amenities, bin collection, servicing dog waste, meter and lights energy and power running costs, staff, fleet, and plant running costs.

Table 5.2.1: Maintenance Budget Trends

Financial Year	Budget ($)	Total Maintenance Expenditure ($)		Total Operating Expenditure ($)
		Planned	Reactive	

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2017/18	16,251,829	11,787,866	2,311,279	1,707,613
2018/19	18,021,223	12,443,229	2,490,268	1,979,951
2019/20	19,050,364	13,744,796	3,134,644	1,830,742
2020/21	17,300,179	14,344,629	2,716,965	851,568
2021/22	17,539,924	14,319,289	2,140,362	809,749
2022/23	17,420,130	14,933,173	2,221,141	856,697
2023/24	19,316,653	15,373,921	1,162,200	2,780,026
2024/25	24,223,339	18,309,978	2,261,557	2,494,625

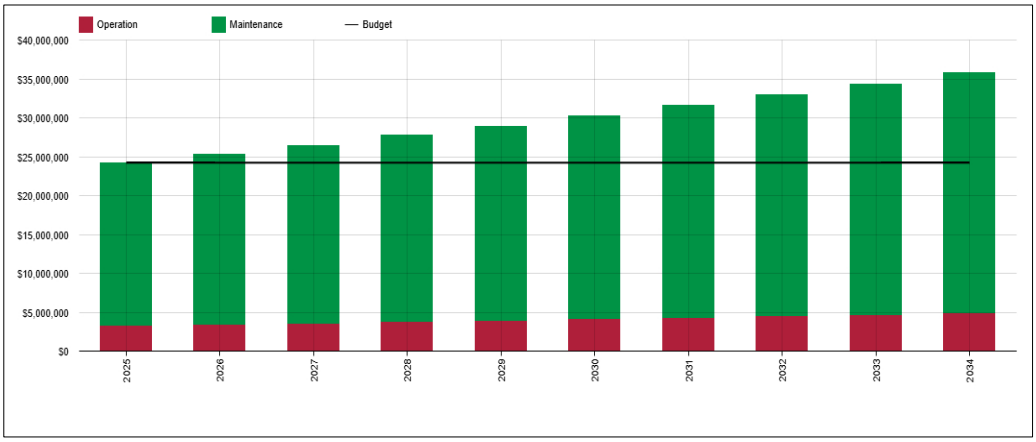
The trends in maintenance expenditure are shown in Table 5.2.1.

Operating and Maintenance budget levels are considered to have been adequate to meet previous service levels, which may be less than or equal to current service levels. However, this needs to be continuously monitored into the future, as a gap between the planned budgets and forecast expenditure will result in more community complaints and risks of injury. Assessment and priority of reactive maintenance is undertaken by relevant staff using experience and judgement in accordance with the levels of service detailed in Appendix C.

5.2.1 Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.2.1 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

Figure 5.2.1: Operations and Maintenance Summary



Overall, the budget allocations appear broadly aligned with forecast requirements in the short to medium term, indicating that service levels can be sustained without significant funding gaps. However, the trend suggests a gradual increase in forecast operational and maintenance expenditure as the network expands and assets age. This reflects the impact of population growth, higher usage, and the ongoing need for responsive and preventative maintenance.

5.3 Renewal Plan

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

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

- The first method uses Asset Register data to project the renewal costs (replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year)
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work.

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The typical useful lives of depreciable assets used to develop condition-based asset renewal forecasts are shown in Table 5.3. Asset useful lives were last reviewed on 2024-2025 when revaluation carried out. Based on the straight-line depreciation rate a useful life has been applied to each park and environment assets.

The modelling in this AMP considers Useful Life as shown in Table 5.3.

Table 5.3: Useful Lives of Assets

Asset Group	Asset Classification	Asset Type	Useful Life (years)
INFRASTRUCTURE	Amenities	BBQ – 1 & 2 Plate Bicycle Rack Drink Fountain Flag Pole Picnic Setting Picnic Shelter Seat Shower Tap	10 15 20 20 20 20 10 25 20
	Bins	Dog Poo Pouch Stations Rubbish Bins	10 &15 13 & 23
	Boardwalk	Timber Steel	30 20
	Bridges (Timber)	Footbridges Decking	30 30
	Fence	Baseball Fence Bollard Chain Wire Colourbond Conservation Edging Feral / Rabbit proof Gate Handrail / Railings Retaining Wall Wall	15 15 & 25 & 40 20 20 25 25 25 15 & 25 25 & 15 40 20 & 40 & 50
	Lighting	Luminaire Poles	15 25
	Minor structure	Amphitheatre BMX Facility Courts – Asphalt Courts – Concrete Cricket – Concrete base Discus / shot put throwing circle Gazebo Jetties Lookout Shelter Synthetic surface (bowls, cricket) Skate Facility Tree Protector Under-surface – Asphalt Under-surface – Concrete	50 15 20 50 50 50 25 25 25 35 40 20 50 20 20 50
	Sporting equipment	Basketball / Netball rings Cricket – Poles Cricket – Rubber backing Goals	10 40 10 15

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	Public Art	Public Art Material: Aluminium Bronze Canvas Ceramic Concrete Copper Glass Paint Steel Stone Timber	 40 50 10 40 50 50 40 10 50 50 25
	Signs	All signs	15
IRRIGATION	Irrigation	Aerators Bores Cabinet/Electrics/Controller Discharge Assembly Infield Pipes Iron Filtration Unit Pumps Sprinklers Valves	20 25 15 20 20 30 10 5 15
PLAYGROUNDS	Playgrounds	Exercise equipment Liberty Swing Play equipment Shade poles Shade fabric	15 15 15 15 5

The estimates for renewals in this AM Plan were based on the alternative method.

5.3.1 Renewal ranking criteria.

Asset renewal is typically undertaken to either:

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

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

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

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

Table 5.3.1: Renewal Priority Ranking Criteria

Criteria	Weighting
Condition	80%
High Usage	10%
Justification – Project Needs	10%

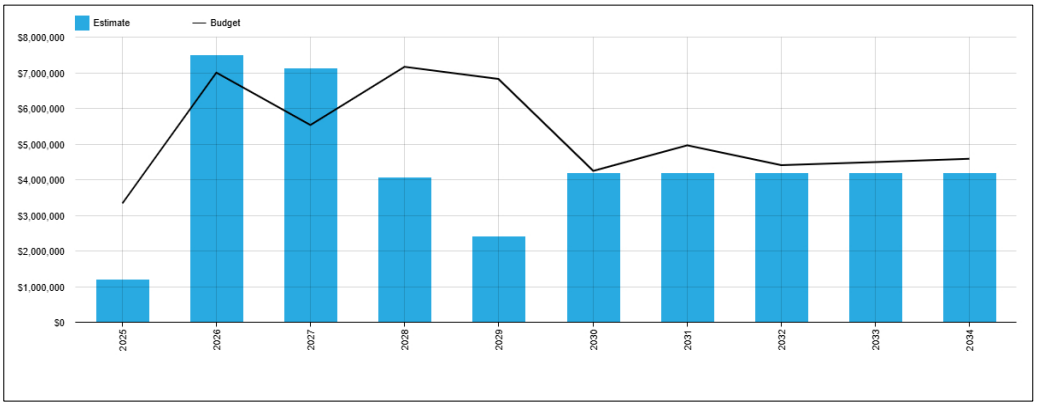
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Criteria	Weighting
Total	100%

5.3.2 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.3.2. A detailed summary of the forecast renewal costs is shown in Appendix D.

Figure 5.3.2: Forecast Renewal Costs



The graph above indicates that planned budget is not adequate over the next 10 years to meet the forecast renewal requirements.

5.4 Acquisition Plan

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

5.4.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to the Entities needs. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in Table 5.4.1.

Table 5.4.1: Acquired Assets Priority Ranking Criteria

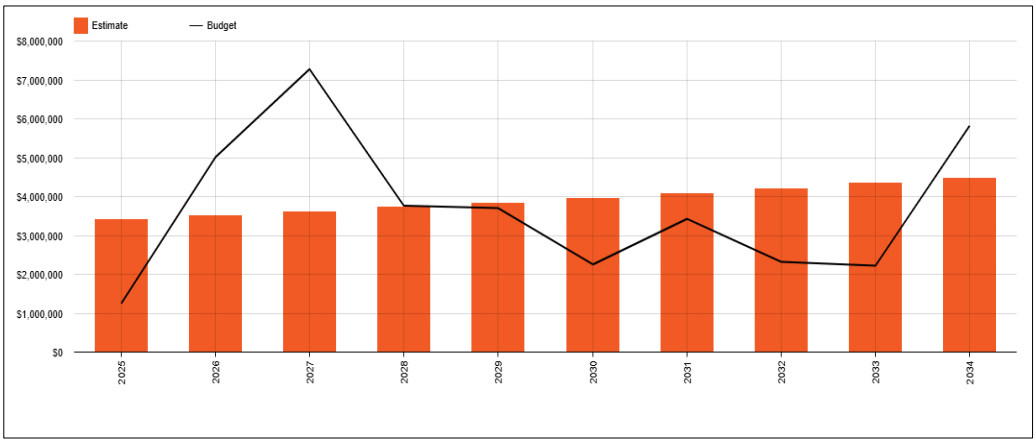
Criteria	Weighting
New/upgraded asset requirement identified in strategic documentation (e.g. Strategic Community Plan and Corporate Business Plan).	50%
Strong holistic community demand (e.g. community group, petition, etc).	25%
Supported by empirical data such as population growth data, approved developments, gap in agreed level of service, etc.	25%
Total	**100%**

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5.4.2 Summary of future asset acquisition costs

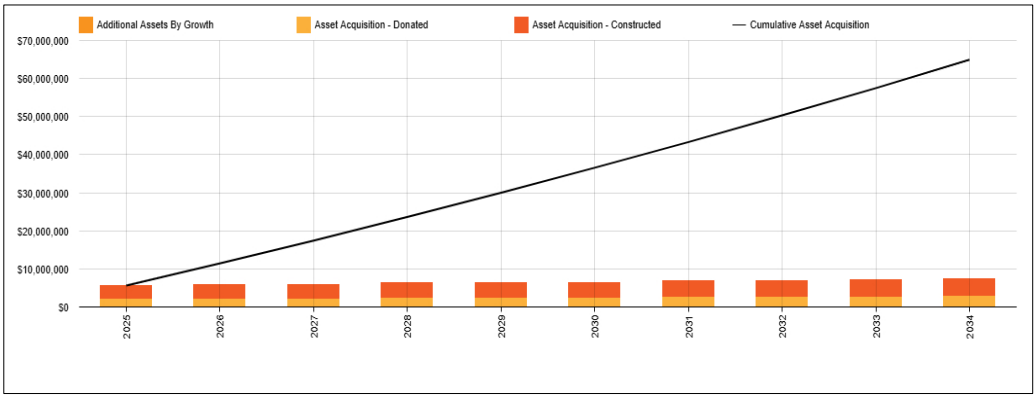
Forecast acquisition asset costs are summarised in Figure 5.4.2(A) and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix A.

Figure 5.4.2(A): Acquisition (Constructed) Summary



When an Entity commits to new assets, they must be prepared to fund future operations, maintenance, and renewal costs. They must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in Figure 5.4.2 (B)

Figure 5.4.2(B): Acquisition Summary



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

5.5 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. There are no disposals planned for any Parks and Environment Infrastructure assets at this time.

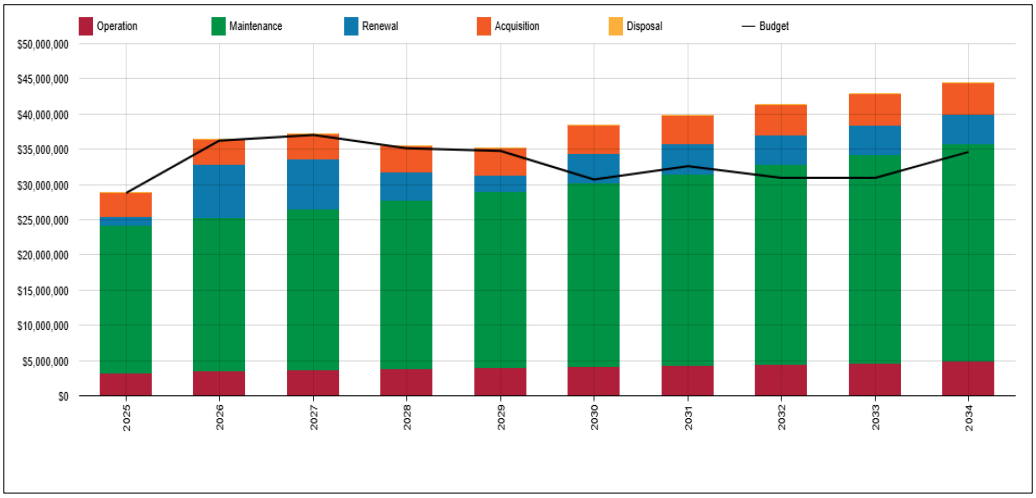
5.6 Summary of asset forecast costs.

The financial projections from this asset plan are shown in Figure 5.6. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

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

Figure 5.6: Lifecycle Summary



Overall, the planned budget (black line) appears to be sufficient to address the forecast expenditure (coloured bars) in the short-term to medium term. However, a funding gap can be seen forming in the long-term, which is of concern, as this will lead to level of service, reputational and financial risks for the City and its community if not addressed. A significant contributing factor to this gap is associated with acquisitions (i.e. construction of new assets and/or a portion of the upgrades for existing assets).

To address this gap, the City must consider either increasing the planned budget to match the forecast expenditure or reducing the level of service that is provided.

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6.0 RISK MANAGEMENT PLANNING

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

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'[5].

An assessment of risks[6] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical Assets

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

Table 6.1: Critical Assets

Critical Asset(s)	Failure Mode	Impact
Playing fields & playground equipment	Structural failure, loose fixings, damaged surfacing, and non-compliance with safety requirements.	Safety risk (injury) immediate make-safe works, temporary closure, reputation, and liability impacts.
Amenities (toilet blocks, shower, shelters, shade sails)	Plumbing/electrical failure, corrosion/structural defects, vandalism damage.	Hygiene issues, amenity service closures, increased complaints, reduced park usability.
Lighting (flood lights, active areas, carparks	Electrical outage, for luminaire failure and pole instability corrosion.	Unsafe night use that restricted access/closure, reduced sporting use, increased security risk.
Irrigation (bore pumps/meters, controllers/electrical cabinets, isolation valves and mainlines)	Bore Pump and meter breakdown, control failure, pipe burst and leaks.	higher reactive maintenance costs, potential groundwater compliance risk.
Fences and Gates (around playgrounds/ovals and active areas interfaces)	Fence breach, collapse, and gate lock failure	Uncontrolled access (dogs/vehicles) and safety incidents increase damages reduced service quality.
Overall parks and environment assets are in poor to very poor condition which are in rating 4 to 5.	Extensive and high severity defects.	Higher reactive maintenance costs and higher risk of unexpected failure.

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

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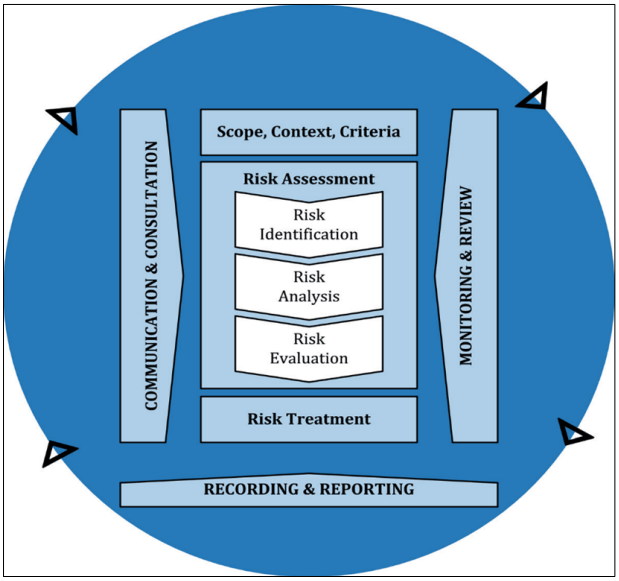
6.2 Risk Assessment

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.

Fig 6.2 Risk Management Process – Abridged



Source: ISO 31000:2018, Figure 1, p9

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks. An assessment of risks[7] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2 when failure to effectively plan for capital works projects align to current funding levels.

Table 6.2: Risks and Treatment Plans

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Service or Asset at Risk	What can Happen	Risk Rating (VH,H)	Risk Treatment Plan	Residual Risk *	Treatment Budget
Playing fields & playground equipment	Structural failure, loose fixings, damaged surfacing and non-compliance with safety requirements.	H- VH	Routine inspections, urgent make-safe repairs, renew non-compliant and aged asset. Renew and maintain prioritise high-use parks.	M	Moderate with planned & reactive maintenance budget and renewals budget allocation
Amenities (toilet blocks, shower, shelters, shade sails)	Plumbing/electrical failure, corrosion/structural defects, vandalism damage.	H	Preventive servicing, rapid response to faults, targeted renewals, improve vandal-resistant fixtures, CPTED lighting/visibility where needed.	M	Moderate with planned & reactive maintenance budget and renewals budget allocation
Lighting (flood lights, active areas, carparks	Electrical outage, for luminaire failure and pole instability corrosion.	H	On time condition inspections and luminaire replacements, prioritised renewal of corroded poles and emergency isolation make-safe.	M	Moderate with planned & reactive maintenance budget and renewals budget allocation.
Irrigation (bore pumps, meters, controllers, electrical cabinets, isolation valves and mainlines)	Bore Pump and meter breakdown, control failure, pipe burst and leaks.	H - VH	Preventive maintenance, leak detection, critical spares (pumps/controllers), renew failing mains/valves, optimise irrigation scheduling	M	Moderate with planned & reactive maintenance budget and renewals budget allocation
Fences and Gates (around playgrounds/ovals and active areas interfaces)	Fence breach, collapse and gate lock failure.	H	Scheduled Condition inspections, defect rectification, corrosion treatment, targeted renewals; temporary closure if unsafe.	M	Moderate with planned & reactive maintenance budget and renewals budget allocation
Minor Structure in active areas (shelters, sheds, stairs)	Structural deterioration failure and hazards leads to injury risk and closure of area.	H	Scheduled condition inspections, reactive repair/replace damaged the structure, corrosion treatment. Prioritised renewal for high-use sites.	L - M	Moderate with planned & reactive maintenance budget and renewals budget allocation

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

6.2.1 Infrastructure Resilience Approach

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

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

We do not currently measure our resilience in service delivery, though it is considered in the project scoping phase. This will be included in future iterations of the AMP.

6.2.2 What we cannot do

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

- Ensuring all parks and environment assets are in 'Condition 3' or better.
- Maintain parks and environment infrastructure at the lowest lifecycle cost within available funding levels.

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- Unable to complete all new and upgrades to expand asset capacity to increase the level of service according to community perceptions within medium to long term.

6.2.3 Service and Risk Trade – Offs

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

- Critical parks and environment assets are not adequately maintained, renewed, or upgraded to meet demand, resulting in a greater percentage of the assets being in poor condition (i.e. Condition 4 or 5).
- More reactive, less proactive maintenance reduce the functionality of parks assets (e.g., bins, fences, gates, minor structures) and longer response times for customer requests.
- Community satisfaction level reduces in the medium to long term as more visible defects amenity and increase complaints.

6.2.4 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Safety and liability risk increase as high use assets deteriorate (e.g.: playground equipment, playing fields, amenities and lightings).
- Service level reduction risk as maintenance and renewals are differed that leads delayed reactive maintenance during the medium to long term.

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

6.2.5 Enterprise Risk Management

In 2015 the City implemented a Risk Management & Safety System (RMSS) in which all operational and strategic risks are captured, rated and receive ongoing monitoring based on their level of risk.
Additionally, in 2017 the Risk Management Framework was adopted with the aim of supporting an integrated and effective organisational wide approach to risk management.

The implementation of the Framework will:

- Ensure a consistent approach to the risk management process across Council.
- Establish a structured process for undertaking the risk management process to identify, assess and control/treat risk.
- Encourage the integration of risk management into the strategic and operational process across all Business Units.

There are currently no Extreme or High Risks identified that are associated to 511 - Environment, Parks and Streetscapes.

Each of the risks are reviewed with current and proposed control measures being assessed yearly to ensure industry standards and potential advancements are considered and are incorporated as required.

The City uses a matrix based approach when addressing risk level, treatment and responsibility as detailed in Table 6.2.5

Table : 6.2.5 Risk Treatment Matrix

Risk Level	Code	Criteria	Treatment	Responsibility
LOW	L	Risk acceptable with adequate controls, managed by routine procedures. Subject to annual monitoring or continuous review throughout project lifecycle.	Management through routine operations/project, Risk Registers to be updated.	Service Unit Manager/Project Manager

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Risk Level	Code	Criteria	Treatment	Responsibility
MODERATE	M	Risk is acceptable with adequate controls, managed by specific procedures. Subject to semi-annual monitoring or continuous review throughout project lifecycle.	Communication and awareness of increasing risk provided to SM and Risk Registers to be updated.	Senior Manager/Project Manager
SUBSTANTIAL	S	Accepted with detailed review and assessment. Action Plan prepared and continuous review.	Assess impact of competing Service Unit/Business Unit Projects. Potential redirect of Service Unit/Business Unit resources. Risk registers to be updated.	Director/Steering Committee
HIGH	H	Risk is acceptable with effective controls, managed by senior management/executive. Subject to quarterly monitoring or continuous review throughout project lifecycle.	Escalate to CEO, report prepared for Audit & Strategic Finance Committee. Quarterly monitoring and review required. Risk Registers to be updated.	Executive/ Steering Committee/Project Sponsor
EXTREME	E	Risks are only acceptable with effective controls and all treatment plans to be explored and implemented where possible, managed by highest level of authority and subject to continuous monitoring.	Escalate to CEO, report prepared for Audit & Strategic Finance Committee. Monthly monitoring and review required. Risk Registers to be updated.	CEO/Council/Project Sponsor

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7.0 FINANCIAL SUMMARY

This section contains the financial and valuation forecasts resulting from the information presented in the previous sections of this plan. Forecasts will be improved as the discussion on sustainable levels of service, risk and cost matures in line with the financial strategy.

7.1 Financial Sustainability and Projections

7.1.1 Sustainability of service delivery

There are three key indicators of sustainable service delivery that are considered in the AMP for this service area. The three indicators are the:

- Asset Consumption Ratio (Fair Value / Current Replacement Cost).
- Asset Sustainability Ratio (planned renewal budget for the next year / annual depreciation expense).
- Asset Renewal Funding Ratio (planned renewal budget for the next 10 years / forecast renewal expenditure outlays for the next 10 years identified as warranted in the AMP).

The Department of Local Government, Sport, and Cultural Industries, through the IPRF, sets three key performance indicators that indicate the ongoing financial sustainability of assets. A summary is included in the table in the table 7.1.1 below.

Table :7.1.1 Asset Ratios

Asset class	Consumption ratio	Sustainability ratio	Renewal funding ratio
Description	How much has the City used of its assets?	Is the City replacing assets as they wear out?	Is the City setting aside sufficient future funding for asset renewals?
Calculation	Depreciated replacement cost / current replacement cost	Capital renewal (one year) / annual depreciation (one year)	Planned capital renewal (10 years) / required capital renewal (10 years)
Target	50-75% standard 60-75% ideal	90-110% standard	75-95% standard 95-105% ideal
What it means	Lower than standard = assets are deteriorated and will result in a poor level of service Higher than ideal = assets are being replaced too early resulting in poor value for money	Lower than standard = the City is under investing in asset renewal/replacement resulting in a poor level of service Higher than standard = the City is over investing in asset renewal/replacement resulting in poor value for money	Lower than standard = the City is allocating too little funding to long term asset renewal/replacement which will result in a lower level of service in future Higher than ideal = the City is allocating too much funding to long term asset renewal/replacement which will result in poor value for money in future

Consumption Ratio

Consumption Ration **75%**

Consumption Ratio	=	Depreciated Replacement Cost (Current Replacement Cost) / Replacement Cost	x 100
	=	$ 90,607,919 / $ 120,828,226	x 100
		75%	

This ratio shows the written down value of depreciable assets in relation to their 'as new' value in current prices. A ratio of less than 50% indicates a rapid deterioration of the asset base, whilst a ratio greater than 75% may indicate an over investment in the asset base.

- This ratio indicates that, on average, City assets retain approximately 75% of their service potential.

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Sustainability Ratio

Sustainability Ratio **17.15%**

Sustainability Ratio	=	Annual Renewal Expenditure / Annual Depreciation Expense	x 100
	=	$ 1,189,659 / $ 6,938,088	x 100
		17.15%	

The target ratio council expected to achieve is between 90% - 110%. The value of17.15% indicates that the City's planned renewal spend for parks and environment assets is low.

It is important to consider the positive effect of maintain adequate renewal budget in the medium to long-term to avoid future renewal works which the City cannot sustain. This value also indicates that current renewal expenditure is significantly below the rate at which assets are being consumed, indicating renewal shortfall and a risk of declining asset condition and service performance

However, with the Asset Renewal Funding Ratio[8] of 121.82% suggests that planned renewal funding for longer term is more than adequate. This may indicate a timing mismatch between annual renewal delivery and long term planned renewals needs.

Renewal Funding Ratio

10 year Renewal Funding Ratio[9] **121.82%**

10 year Renewal Funding Ratio	=	Planned Renewal Budget (10 years) / Forecast Renewal Costs (10 years)	x 100
	=	$ 52,560,687 / $ 43,146,284	x 100
		121.82%	

The target ratio council expected to achieve is between 90% - 110%. The Asset Renewal Funding Ratio illustrates that over the next 10 years we expect to have 121.82% of the funds required for the optimal renewal of assets. However, as outlined in Section 5.3.2, this does not account for the proportion of new/upgraded parks assets (shown in Figure 5.4.1) that are forecast to be constructed, which will then create the need for additional renewal expenditure in the long-term. It is essential that any proposed adjustment to the future budget allocation for parks and environment renewals is carefully considered along with the need to ensure there is adequate reserve funding set aside.

The forecast renewal works along with the planned renewal budget, and the cumulative shortfall, is illustrated in Appendix D.

[1] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

Lifecycle Funding Ratio – 10-year financial planning period

This AM Plan identifies the forecast operations, maintenance and renewal costs required to provide the levels of service to the community over a 10-year period. This provides input into 10-year long-term financial plan (LTFP) aimed at providing the required services in a sustainable manner.

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

The forecast operations, maintenance and renewal costs over the 10 year planning period is $31,963,280 average per year.

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

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The 10-year LTFP is $29,479,408 on average per year giving a 10 year funding shortfall of $-4,592,551 per year. This indicates that 86.52% of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget. Note, these calculations exclude depreciation and the acquisition of new and upgrade of existing assets.

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

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

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

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

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan and/or financial projections in the LTFP.

We will manage any 'gap' by communicating the service performance, cost, and risk implications in consultation with the community and key stakeholders.

Forecast costs are shown in according to the 2024-2025 financial year dollar values.

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

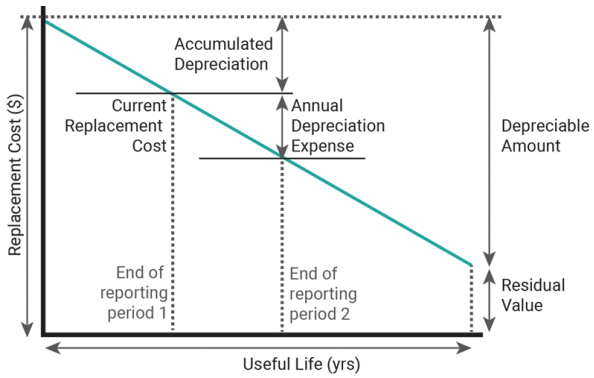
Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)
2025	3,395,551	3,318,558	2,090,4782	1,189,659	0
2026	3,500,813	3,473,607	21,880,746	7,492,187	0
2027	3,609,339	3,633,462	22,886,964	7,122,995	0
2028	3,721,228	3,798,274	23,924,376	4,039,365	0
2029	3,836,586	3,968,194	24,993,948	2,401,298	0
2030	3,955,520	4,143,382	26,096,676	4,180,156	0
2031	4,078,141	4,324,001	27,233,588	4,180,156	0
2032	4,204,564	4,510,218	28,405,744	4,180,156	0
2033	4,334,905	4,702,209	29,614,238	4,180,156	0
2034	4,469,287	4,900,151	30,860,196	4,180,156	0

7.2 Valuation Forecasts

The best available estimate of the value of assets included in this AMP are shown below in Figure 7.2.

Figure 7.2: Valuation Terminology

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Replacement Cost (Gross)	**$120,828,226**
Depreciable Amount	**$120,828,226**
Current Replacement Cost (Depreciated Replacement Cost)	**$90,607,919**
Annual Depreciation Expense	**$6,938,088**

Asset values are forecast to increase as additional assets are constructed. Acquiring new assets will add to existing operations, maintenance, future renewal, and depreciation expenses.

[1]Current Replacement also reported as Written Down Value, Carrying Amount or Net Book Value in some jurisdictions.

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8.0 ASSUMPTIONS AND IMPROVEMENT PLANNING

8.1 Data and Information Sources

8.1.1 Accounting and financial data sources

This AMP utilises accounting and financial data sourced from:

- City's Annual Management Budgets 2024 – 2025 and Expenditure Reports (Executive Management Report - EMR) available in Ci in CiAnywhere.
- 2024 – 2025 Sub Activity Breakdown Report for Maintenance and Operation breakdowns.
- City of Cockburn Forward 10-year Capital Works Plan 2026 – 2035.
- City of Cockburn Forward 10-year Capital Works Plan 2027 – 2036.

8.1.2 Asset management data sources

This AMP also utilises asset management data sourced from:

- City's GIS Registers, Strategic Asset Management (SAM) registers and other register data available with Ci in CiAnywhere and CiAnywhere.
- 2024 - 2025 Parks Revaluation Report, which includes the latest footpath valuations.
- Parks assets Condition surveys conducted by third-party contractors (TALLIS) every five years (latest undertaken in 2023/24).
- Strategic documents including the Strategic Community Plan 2020–2030, Corporate Business Plan, Project Plan 2024 - 2025, Service Plans 2024 - 2025, and Cycling and Walking Network Plan 2016 – 2021.
- Community Satisfaction Surveys (e.g., 2024 PLACESCORE liveability survey and CATALYSE Pty Ltd scorecard 2023).

8.2 Key Assumptions

In compiling this AMP, it was 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 forecasts.

Key assumptions made in this AMP are:

- Renewal forecasts have been made by professional judgement.
- Population and asset growth projections are assumed to be accurate with all projection figures include 3.1% growth increase per year forward.
- The data supplied was as accurate as possible at the time of compilation of this asset management plan.
- The breakdown of the actual reactive, planned, and operational expenditure is assumed to be accurate.

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

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

The Asset Register method was initially used to determine the forecast renewal expenditure required based on remaining useful life. The Alternate Method was then used to adjust the distribution of forecast expenditure to better align with available City resources.

8.3 Forecast Reliability and Confidence

The forecast demands, costs, planned budgets, and valuation projections in this AMP are based on the best available data. For effective asset management and financial planning and reporting, it is critical that the

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information is reliable and up to date. Data confidence is classified on an A to E level scale in accordance with the guidance provided in the International Infrastructure Management Manual as shown in Table 8.3(A).

Table 8.3(A): Data Confidence Grading System

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

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 8.3(B).

Table 8.3(B): Data Confidence Assessment for Data used in AM Plan

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Data	Confidence Assessment	Comment
Demand drivers	B	Based on population, demographics, and transport trends from external forecasts (e.g., WA Planning Commission, ABS). Reasonably reliable but dependent on external factors.
Growth projections	B	City of Cockburn - Population and household forecast, 2021 to 2046, National Forecasting Program, id (informed decisions) June 2025.)
Acquisition forecast	B	Based on the priorities within the City's Cycling and Walking Plan and the LTFP allocations. Reliable in short term, but medium-to-long-term forecasts depend on funding availability and external contributions.
Operation forecast	B	Costs based on historic budgets and expenditure data, adjusted for growth. Reliable with minor uncertainty due to inflation and network expansion.
Maintenance forecast	B	Supported by historical expenditure and defect records. Confidence limited by variability in reactive maintenance demand.
Renewal forecast	B	The Alternate Method (condition-based lifecycle modelling based with condition base renewal forecast) has been used to forecast renewal costs.
Asset useful lives	B	Based on engineering estimates, IPWEA guidelines, and recommended by third party condition surveyors (e.g. TALIIS consultant). Generally reliable but may vary depending on materials and environmental impacts.
Condition modelling	C	Updated from 2023/24 condition survey; forecasts use the "Alternate Method". Medium confidence due to reliance on periodic surveys (every 5 years) and extrapolation between surveys.

The estimated confidence level for and reliability of data used in this AMP is considered to be B - High Confidence Level.

8.4 Improvement Plan

It is important that we recognise gaps in the planning process that require improvement to ensure effective asset management and informed decision making. The improvement plan generated from this AM Plan is shown in Table 8.4.

Table 8.4: Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
1	Unit Rates Review	Assets, Infrastructure and Projects	IPWEA, WALGA, Talis, Play check Consultant and Rawlinson guidance or Responsible Team members of civil infrastructure and asset.	2025/26 revaluation.
2	Useful lives – review useful lives for components based on condition (expected vs actual)	Assets, Infrastructure and Projects	IPWEA, WALGA and Rawlinson guidance and responsible team members in civil infrastructure and asset services.	2025/26 revaluation.

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3	Review and update the Parks and Environment Asset Register/GIS data to ensure data is current and aligns with new and upgrade capital works.	GIS Team, Assets and Projects	GIS, Technical Officer Asset and Project manager.	On going annually
4	Improve the scheduled condition assessment program (whole park network once every 5 years and playground equipment annually).	Assets and Parks	Technical Officer Asset, Service Manager Infrastructure assets and Park.	On going
6	Improve the quality and accuracy of asset condition inspection survey by implementing new app for field data pick up. (e.g. ArcGIS Field App to configure for data capturing requirements that able to manage asset data integrated with GIS staging data and CiAnywhere more effectively for better reporting and forecasting).	GIS, Assets Projects	Technical Officer Asset, GIS and Contractors.	2028/29 Playground equipment (annually)
7	Strengthen risk-based renewals planning for high-use/high-risk assets (e.g., playing fields, playground equipment, public amenities, lighting) by linking condition-based renewal priority.	Assets, Infrastructure and Projects	Technical Officer Asset, Service Manager Infrastructure assets and Park.	Over 10-year planning period of 2024/25 – 2023/34
8	Review and revise the capital work program to prioritise City funding renewals appropriately against new/upgrade. The more municipal funding the City spends on new assets. • The less municipal funds are available to renew existing assets. • The more additional assets there are to maintain. Both above relate to the need to consider "Whole of Life Cost" when considering the construction of new assets.	Assets, Infrastructure and Projects	Technical Officer Asset, Service Manager Infrastructure assets and Park.	Over 10-year planning period of 2024/25 – 2023/34
10	Continue organisational education about the importance of asset management systems, asset management plans, and long-term financial plans. (e.g. XL One training, IPWEA training and NAMs+ modelling)	Assets and Projects and Learning and Development.	Service Manager Infrastructure, Learning and Development Team and Asset Services.	On going

8.5 Monitoring and Review Procedures

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

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

The AMP has a maximum life of 4 years and is due for complete revision in 2028.

8.6 Performance Measures

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

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan.
- The degree to which the 1 to 5-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan.
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans,
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90 – 110%).

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- The Asset Sustainability Ratio achieving the Organisational target (this target is often 90 – 110%).
- The Asset Consumption Ratio achieving the Organisational target (this target is often 50 – 75%)

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9.0 REFERENCES

- ISO, 2024, ISO 55000:2024 Asset Management – Vocabulary, overview, and principles
- ISO, 2018, ISO 31000:2018 Risk management – Guidelines
- City of Cockburn Strategic Community Plan 2025 – 2035
- City of Cockburn Annual Management Budget 2023/24 and 2024/25.
- City of Cockburn Annual Report 2024 – 2025.
- City of Cockburn forward 10-year Capital Works Plan 2026 – 2035.
- City of Cockburn forward 10-year Capital Works Plan 2027 – 2036.
- City of Cockburn 10-year Long-Term Financial Plan 2024/25 – 2033/34.
- 2023/24 Road Revaluation Report.
- Project Plan and Service Plans 2024 – 2025.
- IPWEA, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/bookshop/iimm
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10.0 APPENDICES

Appendix A Acquisition Forecast

A.1 – Acquisition Forecast Assumptions and Source

3.1% growth population growth and asset growth projections are assumed to be accurate and proportional for the forecast acquisition that includes 3.1% growth increase per year forward.

A.2 – Acquisition Forecast Summary

Table A2 - Acquisition Forecast Summary

Year	Constructed ($)	Donated ($)	Growth ($)
2025	3,395,551	2,242,599	0
2026	3,500,813	2,312,120	0
2027	3,609,339	2,383,796	0
2028	3,721,228	2,457,693	0
2029	3,836,586	2,533,882	0
2030	3,955,520	2,612,432	0
2031	4,078,141	2,693,418	0
2032	4,204,564	2,776,914	0
2033	4,334,905	2,862,998	0
2034	4,469,287	2,951,751	0

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Table A3 – Acquisition Project Summary - Forward Capital Works10 year Plan FY26 – 35 & Forward Capital Works10 year Plan FY27 – 36

	Estimated Budget Allocations ($)												
Project Name	New/Upgrade (%)	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
Sports Floodlight Upgrade Program	100%							1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Annual Construction of Shade Sails	100%	120,000		120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000
Parks & Environment New Initiatives	100%			1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Tramway Trail Stage 1 & 2	100%		59,000	400,000									
Aubin Grove Reserve Floodlight Improvements	80%		51,920	760,000									
Legacy Park Floodlighting	100%		41,300	550,000									
Beeliar Reserve Lighting and Cricket Nets	80%		14,632	809,600									
Treeby East Oval	100%		100,000	3,245,785									
Success Reserve Floodlighting Phase 2 - Playing field - Rugby	50%			25,000	350,000								
Success Reserve Parking	33%			16,500	231,000								
Atwell Reserve Floodlight Upgrade (East Oval only)	100%			50,000	550,000								
Davilak Reserve Redevelopment - Reserve works	40%			300,000	1,450,000	1,450,000							
Lucius Park Floodlights	50%				25,000	275,000							
Nicholson Reserve Floodlights	80%				40,000	760,000							
Edwardes & Watson Reserves Floodlights	100%					100,000	1,100,000						
Nicholson Reserve Open Space works	67%						33,500	1,306,500					
Success Regional Sports Reserve Courts and Parking (DFES Site)	100%		118,000						200,000	100,000	3,700,000		
Tempest Park Floodlighting	50%	300,000											
Success Regional Sports Reserve Netball Floodlight	90%	54,000	630,000										
Manning Park Playground	30%	18,000	582,000										
Parks Hard Infrastructure (Upgrades)	80%		901,446										

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Parks Soft Infrastructure	100%		2,514,640										
CY O'Connor Fringing Reef	100%	760,000											
Total		**$1,252,000**	**$5,012,938**	**$7,276,885**	**$3,766,000**	**$3,705,000**	**$2,253,500**	**$3,426,500**	**2,320,000**	**2,220,000**	**5,820,000**	**2,120,000**	**2,120,000**

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Appendix B Operation Forecast

B.1 – Operation Forecast Assumptions and Source

Operation costs include routine activities required to keep parks and environment assets safe, accessible, clean, and functional for community use. These costs include activities such as inspections, cleansing, utility costs, irrigation control and monitoring, servicing of park amenities and facilities, and administration associated with day-to-day operations.

Operation forecasts are primarily based population growth and expected expansion of the park and environmental network via acquisitions.

Operation forecasts assume current levels of service will be maintained and that any new donated/constructed assets will add proportionately to operational requirements.

B.2 – Operation Forecast Summary
Recommend using NAMS+ Outputs Summary for Operation

Table B2 - Operation Forecast Summary

Year	Operation Forecast ($)	Additional Operation Forecast for New Acquisitions ($)	Total Operation Forecast ($)
2025	3,318,558	155,049	3,318,558
2026	3,318,558	159,856	3,473,607
2027	3,318,558	164,811	3,633,462
2028	3,318,558	169,920	3,798,274
2029	3,318,558	175,188	3,968,194
2030	3,318,558	180,619	4,143,382
2031	3,318,558	186,218	4,324,001
2032	3,318,558	191,991	4,510,218
2033	3,318,558	197,942	4,702,209
2034	3,318,558	197,942	4,900,151

Appendix C Maintenance Forecast

C.1 – Maintenance Forecast Assumptions and Source

Maintenance activities include routine and reactive works such as repairs of pumps and valves, footpath and playground repairs, soft fall reinstatement and replenishment patching, shade sail repairs, and minor playground repairs to ensure assets remain safe and functional.

The 2023/24 Parks assets Condition Assessment Survey inform prioritisation of maintenance works for the park assets are in poor to very poor condition.

Assumes current service levels will continue, with maintenance budgets scaled proportionally as assets are added through new construction and donated infrastructure.

Maintenance forecasts assume current levels of service will be maintained and that any new donated/constructed assets will add proportionately to operational requirements.

C.2 – Maintenance Forecast Summary

Recommend using NAMS+ Outputs Summary for Maintenance.

Table C2 - Maintenance Forecast Summary

Year	Maintenance Forecast ($)	Additional Maintenance Forecast for New Acquisition ($)	Total Maintenance Forecast ($)
2025	20,904,782	975,964	20,904,782
2026	20,904,782	1,006,219	21,880,746
2027	20,904,782	1,037,412	22,886,964
2028	20,904,782	1,069,571	23,924,376
2029	20,904,782	1,102,728	24,993,948
2030	20,904,782	1,136,913	26,096,676
2031	20,904,782	1,172,157	27,233,588
2032	20,904,782	1,208,494	28,405,744
2033	20,904,782	1,245,957	29,614,238
2034	20,904,782	1245,957	30,860,196

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Appendix D Renewal Forecast Summary

D.1 – Renewal Forecast Assumptions and Source

Renewal forecasts expenditures are based on the 2023/24 parks assets condition assessment survey, the City's asset register, and the 2023/24 Road Revaluation Report.

3.1% growth population growth and asset growth projections are assumed to be accurate and proportional for the renewal forecast figures that includes 3.1% CPI increase per year forward.

The Alternate Method (condition modelling, staff judgement, and lifecycle analysis) was used rather than relying solely on the register method.

Renewal priorities are ranked using condition/risk criteria (high consequence of failure, usage levels, safety/accessibility, and maintenance cost trends).

Budgets in the Long-Term Financial Plan (LTFP) are generally above forecast renewal needs, giving an Asset 10-year Renewal Funding Ratio of **121.82%**

D.2 – Renewal Forecast Summary
Recommend using NAMS+ Outputs Summary for Renewal.

Table D2 - Renewal Forecast Summary

Year	Renewal Forecast ($)	Renewal Budget ($)
2025	1,189,659	3,333,210
2026	7,492,187	7,004,514
2027	7,122,995	5,536,110
2028	4,039,365	7,164,210
2029	2,401,298	6,825,210
2030	4,180,156	4,245,210
2031	4,180,156	4,964,590
2032	4,180,156	4,407,867
2033	4,180,156	4,495,564
2034	4,180,156	4,584,203

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Table D3 – Renewals Project Summary - Forward Capital Works10 year Plan FY26 – 35 & Forward Capital Works10 year Plan FY27 – 36

Project Name	New/Upgrade (%)	Estimated Budget Allocations ($)											
		FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
Open Space Asset Renewal	100%	1,550,000		1,650,000	1,700,000	1,750,000	1,800,000	1,850,000	1,900,000	1,950,000	2,000,000	2,050,000	2,050,000
Streetscape Upgrades	100%			1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Aubin Grove Reserve Floodlight Improvements	20%		12,980	190,000									
Anning Park Floodlighting	100%		41,300	550,000									
Beeliar Reserve Lighting and Cricket Nets	20%		36,580	202,400									
Success Reserve Floodlighting Phase 2 - Playing field - Rugby	50%			25,000	350,000								
Success Reserve Parking	67%			33,500	469,000								
Davilak Reserve Redevelopment - Reserve works.	60%			450,000	2,175,000	2,175,000							
Lucius Park Floodlights	50%				25,000	275,000							
Nicholson Reserve Floodlights	20%				10,000	190,000							
Nicholson Reserve Open Space works	33%						10,000	643,500					
Tempest Park Floodlighting	50%	300,000											
Success Regional Sports Reserve Netball Floodlight	10%	6,000	70,000										
Manning Park Playground	70%	42,000	1,358,000										
Parks Hard Infrastructure (Upgrades)	20%		225,361										
Parks Hard Infrastructure (Renewals)	100%		3,825,082										
Total		**$1,898,000**	**$5,569,303**	**$4,100,900**	**$5,729,000**	**$5,390,000**	**$2,810,000**	**$3,493,500**	**$2,900,000**	**$2,950,000**	**$3,000,000**	**$3,050,000**	**$3,050,000**

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Appendix E Disposal Summary

E.1 – Disposal Forecast Assumptions and Source
At this stage, there are no significant asset disposal plans in the City.

E.2 – Disposal Forecast Summary
Recommend using NAMS+ Outputs Summary for Disposal

Table E2 – Disposal Activity Summary

Year	Disposal Forecast ($)	Disposal Budget ($)
2025	0	0
2026	0	0
2027	0	0
2028	0	0
2029	0	0
2030	0	0
2031	0	0
2032	0	0
2033	0	0
2034	0	0

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Appendix F Budget Summary by Lifecycle Activity

Renewal Planned budgets are derived from the City's Long-Term Financial Plan (LTFP 2024/25 – 2033/34).

All costs are referring to Road Revaluation Report in 2024/25.

Budgets include acquisitions, operations, maintenance, and renewals. Disposal is set at $0 as there are no planned disposals.

With alternative method to Renewal allocations are set higher than forecast requirements, ensuring a strong 10-year Renewal Funding Ratio **121.82%**

Operations and maintenance are assumed to increase gradually to account for new assets and inflation.

Table F1 – Budget Summary by Lifecycle Activity

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)	Total ($)
2025	1,252,000	3,318,558	20,904,782	3,333,210	0	28,808,550
2026	5,012,938	3,318,558	20,904,782	7,004,514	0	36,240,792
2027	7,276,885	3,318,558	20,904,782	5,536,110	0	37,036,336
2028	3,766,000	3,318,558	20,904,782	7,164,210	0	35,153,548
2029	3,705,000	3,318,558	20,904,782	6,825,210	0	34,753,548
2030	2,253,500	3,318,558	20,904,782	4,245,210	0	30,722,050
2031	3,426,500	3,318,558	20,904,782	4,964,590	0	32,614,430
2032	2,320,000	3,318,558	20,904,782	4,407,867	0	30,951,206
2033	2,220,000	3,318,558	20,904,782	4,495,564	0	30,938,904
2034	5,820,000	3,318,558	20,904,782	4,584,203	0	34,627,544

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Appendix G Legislative Requirements

Table G1 – Legislative Requirements

Legislation	Requirement
Local Government Act 1995	Provides for a system of Local Government by describing the functions of and providing a framework for the administration and financial management of Local Governments.
Main Roads Act 1930	Consolidates and amends the law relating to and making provision for the construction, maintenance and supervision of highways, main and secondary roads, and other roads and the control of access to roads.
Main Roads WA – Code of Practice for traffic management for works on roads (April 2011)	To promote safe and consistent traffic management practice at work sites on roads in accordance with state legislation and national standards. Requires general compliance with the Australian Standard 1742.3-2009 and associated field guides, provides details of additional requirements necessary to meet WA requirements. Also outlines the competency requirements for personnel responsible for managing traffic on work sites.
Transport Co-ordination Act 1966	Provides for the co-ordination, planning and advancement of all forms of transport in WA, to provide for the review, control and licensing of transport services and for incidental and other purposes.
Planning and Development Act 2005	Provides for a system land use planning and development in the State and for related purposes.
Environmental Protection Act 1986	Provides for an Environmental Protection Authority, for the protection, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected to the foregoing.
Development Act 1993 Disability Discrimination Act 1993	Sets out parameters for Developments, including what developments required Development Approval (Planning Consent/Building Rules Consent) and the process required to obtain such consents. Set outs requirements for equality of access to services and facilities.
Contaminated Sites Act 2003	Provides for the identification, recording, management, and remediation of contaminated sites, to consequentially amend certain other Acts and for related purposes.
Conservation and Land Management Act 1984	Makes better provision for the use, protection and management of certain public lands and waters and the flora and fauna thereof, establishes authorities to be responsible therefore, and for incidental or connected purposes.

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Paper from responsible sources.

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City of Cockburn

Cockburn ARC Asset Management Plan 2024–2028



www.cockburn.wa.gov.au

Document Set ID: 12839670
Version: 4, Version Date: 10/09/2026

Cover image from Cockburn ARC, Cockburn Central

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Asset Management Plan				
Document ID: 13532030				
Date	**Revision Details**	**Author**	**Reviewed**	**Approved**
Sept 2021	Final Version 2020 - 2024	Property & Asset Services	Manager Engineering Services	Executive Committee / Council
Sept 2026	Final Version 2024 - 2028	Asset Services	Service Manager Infrastructure Assets	

Acknowledgement of country

The City of Cockburn acknowledges the Nyungar people of Beeliar Boodjar. Long ago, now and in the future they care for Country.

We acknowledge a continuing connection to Land, Waters and Culture and pay our respects to Elders, past and present.

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1 Executive summary

The City of Cockburn's community relies on a diverse portfolio of infrastructure assets, including roads, buildings, bridges, parks and footpaths. This Asset Management Plan has been developed for one of the City's premier facilities, the Cockburn Aquatic and Recreation Centre, known as Cockburn ARC, which is valued at approximately $115 million.

The Asset Management Plan (AMP) provides a strategic framework for managing the Cockburn ARC, ensuring the facility remains safe, reliable and capable of supporting aquatic, recreation, sporting, leisure and community services now and into the future.

1.1 Purpose of the plan

This AMP aims to:

- Provide a systematic approach to asset management
- Address critical risks associated with aging assets and components within the facility
- Forecast funding requirements
- Ensure the facility supports the community's social, economic, and environmental goals.

This AMP details information about the City's Aquatic and Recreation Centre (Cockburn ARC), as well as defining the Level of Service (LOS) and outlining the funding required to maintain this LOS over a 10 year planning period.

This highlights any funding gaps between the planned and forecast expenditure, which assists in optimising expenditure on managing assets through the Long-Term Financial Plan.

1.2 Asset description

The ARC is a single structure that includes:

- Stadium
- Pool Hall with 7 pools
- Outside pool
- Gymnasium and Program Rooms
- Slide tower and Water slides
- Tenanted spaces (Cafe, Allied Health)
- Leased Spaces (Fremantle Football Club)
- Changerooms and ablutions
- Administration areas
- Plant rooms (Mechanical, Aquatic and Electrical)
- Geothermal heating system
- Recreation Buildings - 1
- Component assets - 1579

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The ARC building has a total renewal value estimated at $114,620,000. The component assets have a total replacement cost of $61,831,873.

1.3 Levels of service

Levels of Services are typically split into 'Customer' and 'Technical' and each have their own metrics which the City is able to measure its performance against.

The City's LOS objective, specific to the Cockburn ARC, is to maintain a Net Promotor Score (NPS) above 40. Based on customer surveying, the Cockburn ARC achieved a NPS of 80 in May 2026 and an average of 46 for the 2025-2026 financial year. It should be noted that at times, it dropped below 40, believed to be due to disruptions from upgrade works.

Maintaining this level of service is expected to require significant ongoing renewal, maintenance and operational investment throughout the 10-year planning period, especially given the popularity and resulting high patronage of the facility and deterioration of some of the facilities components (due to the hostile air and aquatic environment).

The main service consequences of an insufficient planned budget are:

- Higher likelihood of unplanned pool closures due to failure of Aquatics assets
- Increased reactive maintenance issues and costs
- Greater risk of water treatment, sanitation and pool circulation failures
- A planned shutdown opportunity (2028) inadequately addressing major renewal and upgrade works efficiently
- More frequent partial facility closures or service disruptions
- Continued deterioration of corrosion-affected assets, including the slide tower, roof sheeting and pool-hall ceilings
- Delays to major renewals such as the site ductwork
- Increased future costs due to asset deterioration, escalation and emergency repairs
- Growth of the renewal backlog beyond the 2026-2035 planning period
- Reduced customer satisfaction due to unavailable pools, amenities or facility areas
- Works that are delayed cost more in subsequent years due to CPI and additional deterioration
- Safety issues for staff and customers.

1.4 Future demand

The main demands for new services are created by:

- Population growth
- Changing demographics
- Community demand for aquatic, recreation, sport and leisure services
- Climate change, energy efficiency and water management requirements

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- Reliability of Aquatics assets, pool plant, building services and specialist recreation assets.

These demands will be approached using a combination of managing existing assets, upgrading of 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.

Examples of non-asset based solutions to ensure the City's asset portfolio is sufficient to meet community need include:

- Manage existing assets through appropriately prioritised Capital Works, Renewal and Maintenance Programs
- Ensure decisions to upgrade existing assets and construct new assets are supported with appropriate modelling to understand the long-term impacts
- Continue to investigate alternative renewal treatments to lower lifecycle costs
- Considering energy and water efficiency in future projects, including considering the real costs of aspirational targets versus financial and asset sustainability implications
- Reviewing opportunities to upgrade or repurpose existing ARC assets before providing new assets
- Focusing on critical Aquatics assets, pool plant, building services and defect works.

1.5 Lifecycle management plan

How we plan to manage and operate the assets at the agreed levels of service throughout their lifecycle is contingent on 10-year Long-Term Financial Plan (LTFP).

It is important to be aware of the 'Whole of Life' lifecycle costs associated with assets (i.e. cost of construction, operation and maintenance costs, renewal and upgrade costs and disposal costs at end of life). For a facility of this size and significant replacement cost, it may also be worthwhile, in future iterations of this AMP, to forecast the site's lifecycle against its expected lifespan.

1.5.1 What does it cost?

The lifecycle costs necessary to provide the services covered by this AMP include operation, maintenance, renewal and upgrade costs of existing assets, as well as the acquisition or construction of new assets to meet demand. Disposal of assets is also considered when it is no longer cost effective to continue to maintain/operate an asset.

When lifecycle costs are prepared for a minimum 10-year planning period, they can be used to inform the 10-year LTFP. The first 10-year lifecycle forecast is estimated to cost $116,477,039 or $11,647,704 on average per year.

Depreciation is excluded from these cost estimates.

1.5.2 What we will do

The funding made available in the first 10-years' of the LTFP is $111,625,265 or $11,162,527 on average per year which is approximately 97 per cent of the cost to undertake the lifecycle activities.

The reality is, only what is funded in the LTFP can be provided. Informed decision making depends on the AMP emphasising the consequences of planned budgets on the LOS provided and communicating the residual risks to decision makers. It is important to ensure the organisation is delivering the services in a financially sustainable manner.

The current 10-year LTFP results in a shortfall of $485,177 on average per year of the forecast lifecycle costs required to provide services. This is shown in Figure 1.1 below.

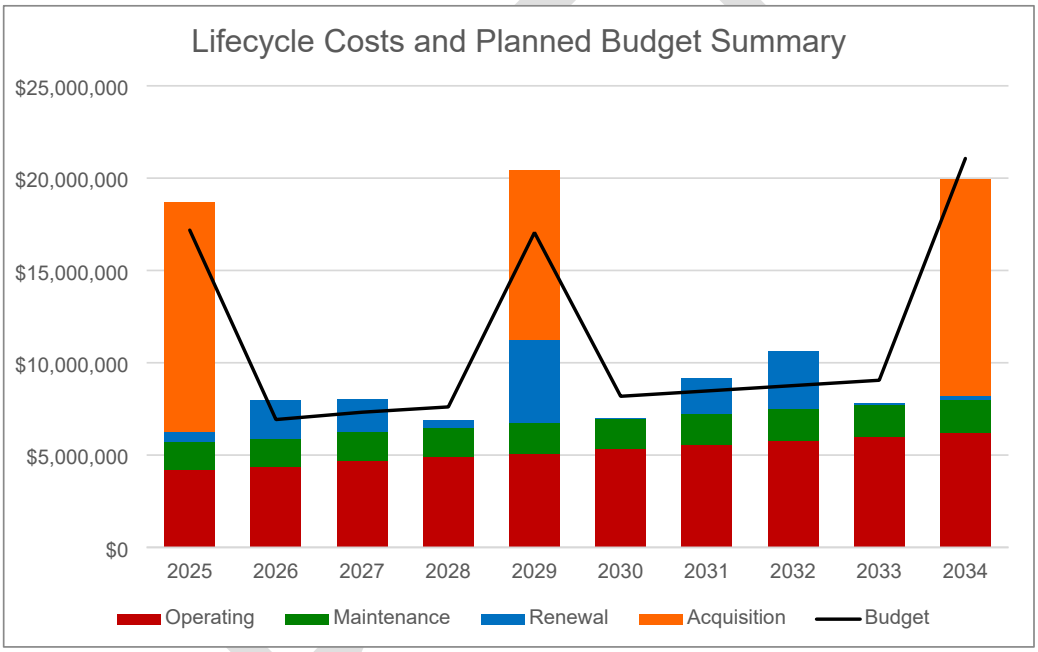


Figure 1.1: Lifecycle Costs and Planned Budget Summary

We plan to provide ARC services for the following:

- Operation, maintenance, renewal and upgrade of the ARC building and associated assets to meet service levels set in annual budgets
- Completion of key ARC renewals, upgrades and new construction projects within the 10-year planning period.

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1.5.3 What we cannot do

No specific works or services have been identified as unable to be provided under current planning assumptions. However, some lifecycle costs exceed the planned budget in selected years and will require ongoing review through the Capital Works Program and Long-Term Financial Plan.

Ongoing planning is required to manage renewal timing, defect works, future upgrades and potential service impacts during major works.

1.6 Risk management

The current planned budget is sufficient to continue to manage risks in the medium term, however in the longer term significant LOS impacts are expected. Ongoing review is required due to renewal, defect and operational risks associated with Cockburn ARC.

The main risk consequences are:

- Failure or reduced reliability of Aquatics assets, pool plant and building services
- Increased likelihood of pool closures or service disruption
- Safety, compliance or asset performance risks from corrosion, roof defects and unresolved waterslide precinct decisions
- Increased reactive maintenance and future renewal costs
- Reduced customer satisfaction if facility areas or services become unavailable.

Strategies and actions to manage these risks are discussed in Section 6.

1.7 Financial summary

Providing financially sustainable and affordable services from infrastructure requires the careful management of service levels, costs and risks.

The 10-year LTFP is $11,162,527 on average per year giving a 10 year funding shortfall of $485,177 per year. This indicates that approximately 3.2 per cent of the forecast costs needed to provide the services documented in this AMP are not accommodated in the LTFP.

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

1.8 Assumptions and improvement planning

Key assumptions made in this AMP are:

- Population and asset growth projections are assumed to be accurate

- Condition data and age data are assumed to be accurate (noting that this AMP is based on a 'Reliable' level of confidence information
- Unit rates are representative of asset replacement costs
- Useful lives are an accurate representation of the behaviour of assets in the field and the City's practices in renewing/replacing assets at their end of useful life
- Renewal forecasts are based on the ARC building register, Aquatics register, condition assessment and renewal modelling.

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

- Review and update the ARC and Aquatics asset registers annually
- Review Aquatics replacement costs and useful lives
- Reconcile the defect register with the renewal program to avoid double-counting and improve project planning
- Update condition data after major renewal, defect or shutdown works
- Review and update the Risk Register annually
- Confirm future acquisitions, upgrades and disposals once scope, timing and funding are approved.

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2 Introduction

2.1 Background

This AMP communicates the actions and necessary funds required to sustainably deliver 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.

The AMP is to be read in conjunction with the City's Asset Management Policy and Asset Management Strategy, along with the following strategic documents:

- City of Cockburn Strategic Community Plan 2025 – 2035
- City of Cockburn Corporate Business Plan 2024/25 – 2027/28
- City of Cockburn Annual Business Plan(s)
- City of Cockburn Long Term Financial Management Plan 2024/25 – 2033/34.

The infrastructure assets covered by this AMP include the Cockburn Aquatic Recreation Centre and all related building components. Please note the carpark is covered under the Roads AMP. For a detailed summary of the assets covered in this AMP refer to Table 5.1 in Section 5.

These assets are used to provide various services throughout the City of Cockburn and have a total replacement value of approximately $115 million.

2.2 Stakeholders

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

Key Stakeholder	Role in Asset Management Plan
The Elected Council	Represent needs of community/shareholders Allocate resources to meet planning objectives in providing services while managing risks Ensure service sustainable.
Chief Executive Officer (CEO)	Organisational direction and leadership
Executive Leadership Team (ELT)	Executive management endorsement, sign off and executive ownership
Group Manager Assets and Projects	Review and strategic management sign off
Service Manager Infrastructure Assets	Review and line management sign off

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Key Stakeholder	Role in Asset Management Plan
Infrastructure Asset Services	Asset Management Plan development, review, continuous improvement and implementation of the AMP maintenance actions.
Cockburn ARC Service Lead and Operations Team	Provide operational input on service demand, facility use, aquatic and recreation services, customer impacts, shutdown requirements and operational priorities. Identify asset issues affecting safety, accessibility and service delivery. Lead day-to-day maintenance, contractor management and HVAC, electrical and plumbing services. Participate in tender evaluations and manage contracts after award.
Facilities Team	Facilities Management (FM) owns all city-wide maintenance contracts and delivers compliance and continuous improvement, acting as the subject matter expert across the portfolio. FM provides expertise on hard asset renewals, such as major building infrastructure, with maintenance priorities guided by the Asset Management Plan (AMP) in collaboration with the Assets and ARC teams
Community, Residents, Tourists & Business	Provide feedback to the City and Councillors on how the City is going in maintaining the agreed levels of service.
Insurers	Assist to manage financial risk of the City
State Emergency Services	Attendance to call-outs and security
Leaseholders of Cockburn ARC	Provide input on leased areas, maintenance responsibilities, access needs and renewal impacts.
Cockburn ARC Customers	Providing information about the suitability of the site, from a customers' perspective via previous engagement i.e. NPS scores.

Table 2.1: Key Stakeholders in the AMP

2.3 Principles, goals and objectives of asset management

The principles of asset management as per the International Standards for asset management are:

- **Value**: asset management focuses on the value assets provide to the organisation over time
- **Alignment**: asset management aligns financial, technical and operational decisions with the organisational objectives, promoting vertical and horizontal coordination

- **Leadership**: leadership and sustained commitment at all levels are crucial for successful asset management.[1]

Our goal for managing infrastructure assets is to deliver the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers.

The key objectives of infrastructure asset management as defined by the International Infrastructure Management Manual are:

- Defining levels of service and monitoring performance
- Managing the impact of growth through demand management and infrastructure investment
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service
- Identifying, assessing and appropriately controlling risks
- Linking to a Long-Term Financial Plan which accommodates the required expenditure and how it will be funded.[2]

2.4 Plan framework

The 2024 - 2028 Cockburn ARC AMP has been developed in accordance with the International Infrastructure Management Manual (IIMM) and complies with Department of Local Government & Communities Asset Management Framework.

As part of the City's Strategic Asset Management Planning Framework (SAMPF), the Cockburn ARC AMP will be developed every 4 years and be subject to a 2-year desktop review. This AMP review will focus on core elements required by the LTFP, for example asset valuations, growth projections, financial analysis including operating, sustainability ratios and 10-year renewals. This will ensure that future revisions of the LTFP will be derived from a structured AMP development cycle that has received Executive and or Council approval, increasing confidence and integration of asset management data and methodologies into the City's long term financial planning and adopted service levels.

Figure 2.1 provides a visual representation and timeline of the SAMPF.

[1] ISO 55000:2024 Asset Management – Vocabulary, overview, and principles

[2] IPWEA International Infrastructure Management Manual (IIMM), Sec 1.2.1

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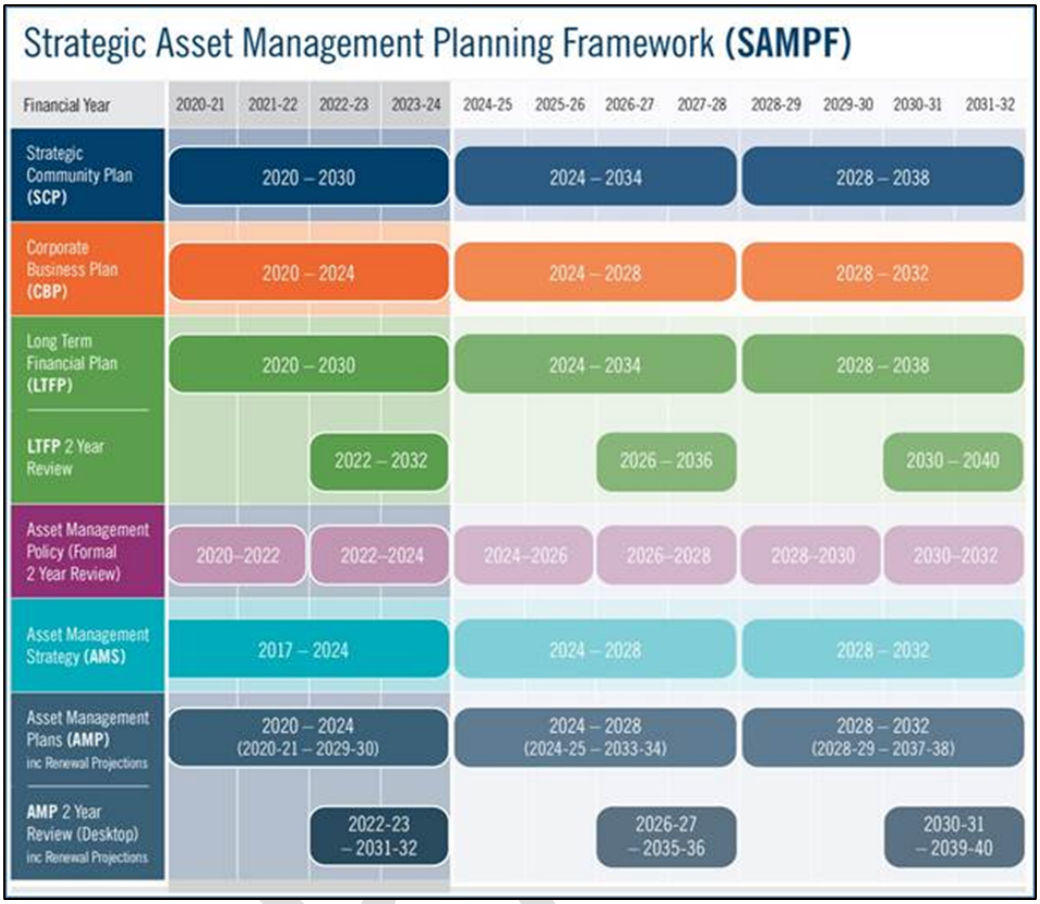


Figure 2.1: Strategic Asset Management Planning Framework (SAMPF)

- Level of Service and Enterprise Risk Management – outlines the level of service provided by council and identifies risks to the city
- Future Growth and Demand how this will impact on future service delivery and how this is to be met
- Lifecycle Management – how the city will manage its existing and future assets to provide the required services
- Financial Analysis – what funds are necessary to provide the required services
- Asset management practices – current systems and practices in place
- Improvement and monitoring – how the plan will be monitored and improved to ensure it is meeting Council's objectives.

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2.4.1 Corporate planning framework

The formalisation and alignment of the City's SAMPF within the Corporate Planning Framework reflects the City's increasing maturity and recognises the importance of Asset Management in supporting the City in delivering long term financial sustainability of services and capital asset renewal.

With the continued implementation of the SAMPF, the City will commence measuring service levels for planned and reactive maintenance to determine operational performance and asset utilisation.

The City strives to improve its strategic and operational asset management practices and to continue its journey towards advanced asset management. The Department of Local Government, Sport and Cultural Industries (DLGSC) has developed the Western Australia Local Government Integrated Planning and Reporting Framework. Accordingly, the future direction and need for advanced level practices are continually assessed.



Figure 2.2: City's Corporate Planning Framework

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3 Levels of service

Levels of service define the standards and performance targets that infrastructure assets are expected to meet to ensure they provide reliable, safe, and efficient services to the community.

3.1 Customer research and expectations

The City carries out customer research internally using the industry standard Net Promoter Score (NPS). In May 2026, the ARC achieved an NPS of 80 from 845 submissions. However, between September 2024 and May 2026, it dropped below the target of 40 at times.

Detailed feedback was also given, summarised in Section 3.4.

3.2 Strategic and corporate goals

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

Our vision is:

Cockburn, the best place to be.

Our mission is:

Support our communities to thrive by providing inclusive and sustainable services which reflect their aspirations.

Strategic goals have been set by the City and are found in the City's Strategic Community Plan. The relevant goals and objectives and how these are addressed in this AMP are summarised in Table 3.1.

Strategic Outcome	Strategic Objective	Deliverable	Measure
Our Economy Our City attracts investment supporting commercial and business growth.	1D. Facilitate vibrant, connected commercial hubs and visitor experiences.	Buildings that meet the needs of the community and are close to or within commercial centres	Customer survey results
Our Environment	2C. Enhance climate resilience and champion	Ensure buildings are resilient to climate change	Structural assessments

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Strategic Outcome	Strategic Objective	Deliverable	Measure
We use our resources with a focus on conservation and mitigate the impacts of climate change.	environmental initiatives to mitigate impacts.	Ensure buildings minimise greenhouse gas generation	Electricity use from the grid Use of generators powered by fossil fuels
Our Community Our community feels safe, secure and connected and is active and healthy.	3B. Promote and support active, healthy lifestyles through recreation and wellness.	Buildings that provide health, recreation and wellness services	Customer survey results
	3C. Celebrate and recognise Aboriginal and Torres Strait Islander and diverse cultures.	Buildings that are sensitive to Aboriginal and Torres Strait Islander culture and diverse cultures.	Customer survey results Consultation with relevant groups
	3D. Foster connected, accessible communities and services.	Buildings that support social interaction, are universally accessible and provide community services.	Customer survey results Compliance with Disability Access and Inclusion Plan (DAIP)
Our Places	4A. Plan for growth and sustainable development.	Buildings that keep up with demand	Customer survey results Capacity assessments
Our Governance Our City is governed through transparent and accountable leadership with a focus on open communication, listening and engaging with our community, with an eye on the future.	5D. Strive for financial sustainability and operational excellence.	Ensure alignment between agreed levels of service and funding, optimise lifecycle cost	Ratio of funding to projected cost of agreed levels of service
	5B. Strengthen engagement and communication and enhance customer experience.	Negotiate levels of service vs cost with the community and businesses	Customer survey results and feedback Business surveys

Table 3.1: Goals and how these are addressed in this Plan

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3.3 Legislative requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the road service are outlined in Appendix G.

While no longer a legislative requirement, the Asset Management Ratios are reasonable performance indicators of the ongoing financial sustainability of assets. The targets for these ratios are set by the Department of Local Government, Sport and Cultural Industries (DLGSCI) through the Integrated Planning and Reporting Framework (IPRF). The calculation methodology and targets for these ratios are outlined in Table 3.2.

Asset class	Consumption ratio	Sustainability ratio	Renewal funding ratio
Description	How much has the City used of its assets?	Is the City replacing assets as they wear out?	Is the City setting aside sufficient future funding for asset renewals?
Calculation	Depreciated replacement cost / current replacement cost	Capital renewal (one year) / annual depreciation (one year)	Planned capital renewal (10 years) / required capital renewal (10 years)
Target	50-75% standard 60-75% ideal	90-110% standard	75-95% standard 95-105% ideal
What it means	Lower than standard = assets are deteriorated and will result in a poor level of service Higher than ideal = assets are being replaced too early resulting in poor value for money*	Lower than standard = the City is under investing in asset renewal/replacement resulting in a poor level of service Higher than standard = the City is over investing in asset renewal/replacement resulting in poor value for money	Lower than standard = the City is allocating too little funding to long term asset renewal/replacement which will result in a lower level of service in future Higher than ideal = the City is allocating too much funding to long term asset renewal/replacement which will result in poor value for money in future

Table 3.2: Asset Ratios

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3.4 Customer values

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

Customer Values indicate:

- What aspects of the service are important to the customer
- Whether they see value in what is currently provided
- The likely trend over time based on the current budget provision.

Customer Values	Customer Satisfaction Measure	Performance	Expected Trend Based on Planned Budget
Range of equipment available	NPS survey free text section	Top 4 of ratings	Maintain
Friendly, welcoming environment		Highly rated	Maintain
Gym space and equipment		Most requested for improvement	Maintain
Locker reliability		Most requested for improvement	Improve
Pool lane availability		Most requested for improvement	Maintain
Group fitness / Mind and Body space		Most requested for improvement	Maintain
Cleaning		In both Top 4 and most requested for improvement (investigate)	Maintain

Table 3.3: Customer Values

3.5 Customer levels of service

The Customer Levels of Service are considered in terms of:

Condition How good is the service … what is the condition or quality of the service?

Function Is it suitable for its intended purpose …. Is it the right service?

Capacity/Use Is the service over or under used … do we need more or less of these assets?

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In Table 3.4 under each of the service measures types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

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

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Overall	Our facilities are of such a standard that customers recommend it	NPS of 40+	NPS of 46 on average but at times dropped below 40	Maintain
Condition	Complete condition assessment of all buildings at least every five (5) years	Dates between condition assessments of buildings	Condition inspections for all buildings every five (5) years.	Maintain
	Maintain at least 80% of the City's ARC assets in Condition 3 or better.	Condition assessment scores	Percentage of ARC assets in condition 3 or better by replacement cost is 92%	Maintain
	Confidence levels		High (Professional Judgement supported by extensive data)	High (Professional Judgement supported by extensive data)
Function	Assets are fit for purpose	Percentage of asset components by CRC that are deemed unsafe	The water slide is deemed unsafe - approx. 3% of total CRC	Maintain

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Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
		Percentage of asset components by CRC that are not performing their required function	Less than 5% of asset components by CRC are not fulfilling their expected function	Maintain
	Confidence levels		Medium (Professional judgement supported by data sampling)	Low (Professional Judgement with no data evidence)
Capacity	Assets have adequate capacity to serve customer demand	Percentage that demand exceeds capacity	Estimated 5% over capacity A review by Oceanis International in 2024 identified the pools were at capacity and about to be exceeded	Maintain
	Confidence levels		High (Professional Judgement supported by extensive data)	High (Professional Judgement supported by extensive data)

Table 3.4: Customer Level of Service Measures

3.6 Technical levels of service

Technical Levels of Service – To deliver on the customer values, and impact they have on Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the lifecycle activities (see Section **Error! Reference source not found.**) and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

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

Table 3.5 shows the lifecycle activities related to the current 10 year planned budget, and the forecast costs recommended in this AMP.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Acquisition	Provide additional facilities as required	Number and type of additional facilities acquired in the 10 year period	Generally following recommendations of Market Analysis by Oceanis	Continue following market analysis report recommendations in relation to new facilities (e.g. additional pools)
	Upgrade existing facilities as required	Number and type of building upgrades, nature of upgrade, in 10 year period	There is a desire to re-commission the water slides, against market analysis report recommendation	Investigate full implications of repairing and making safe the slides
		Budget	$3,176,798 average per annum	$3,332,108 average per annum
Operations	Keep ARC clean	Frequency of cleaning	Daily cleaning; detailed schedule	Cleaning sufficient
	Maintain up to date ARC condition data	Frequency of condition inspections	Complete condition assessment every 5 years	Current inspection frequency is sufficient
		Budget	$5,204,679 average per annum	No issues identified with budget

[3] IPWEA, 2015, IIMM, p 2|28.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Maintenance	Minor defects rectified on a priority basis to keep ARC safe for use	Localised maintenance issues identified by customers and staff actioned within 15 working days	Current maintenance budget and resourcing is sufficient to enable action on localised defects within 15 business days	Review Maintenance Management System, taking into account recent report from condition audit by RealBuilt
		Budget	$1,648,045 average per annum	No issues identified with budget
Renewal	Keep ARC in satisfactory and safe condition	Proportion of ARC assets in “poor” or “very poor” condition	8% in 2026	Adopt RealBuilt recommendations
	Allocate sufficient medium and long term renewal funding	Asset renewal funding ratio	68%	100%
		Budget	$999,345 average per annum	$1,462,871 average per annum
Disposal	Dispose of ARC assets that are no longer required	Facilities disposed of when opportunities identified	Water slide disposal still being discussed	Either: 1. Follow external advice and dispose; or 2. Investigate full implications of restoring and retaining
		Budget	$0 per year	$0 per year

Table 3.5: Technical Levels of Service

Note: * Current activities related to planned budget.

** Expected performance related to forecast lifecycle costs.

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

4 Future demand

Future demand refers to the effects on infrastructure assets services driven by factors such as population movement, economic development, technological advancements and changing environmental or community expectations.

4.1 Demand drivers

A demand driver refers to the factors or trends that influence the need for infrastructure services and capacity. Some examples of factors influencing future demand include (but are not limited to):

- Population growth
- Changing demographics
- Industry development/changes in technology
- Legislation changes.

Demand drivers help predict future infrastructure needs and guide planning and investment decisions.

4.2 Demand forecasts

The current position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 4.1.

4.3 Impacts and demand management plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.1.

The impact on service delivery will be managed through a combination of managing and upgrading existing assets and the provision of new assets to meet demand. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to manage demand are shown in Table 4.1. Further opportunities will be developed in future revisions of this AMP.

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Demand Driver	Current Position	Projection	Impact on Services	Demand Management Plan
Population	City population is 139,499 as at 2025.	Forecast to grow to 183,659 by 2046.	Increased use of ARC pools, courts, programs and amenities.	Monitor usage and plan renewals or upgrades as needed.
Demographics and Accessibility	ARC is used by a broad range of community members.	Continued demand for inclusive and accessible services.	Increased use of accessible pools, amenities and program spaces.	Review accessibility needs and renew assets when due.
Aquatic and Recreation Demand	ARC provides aquatic, sport, fitness and recreation services.	Ongoing demand for pools, courts and programs.	Higher use of pool plant, sports equipment and building services.	Align renewals with service demand.
Asset Reliability	Aquatics, plant and some services have renewal and defect needs.	Reliability risks may increase if works are delayed.	Possible service disruption, pool closures or reactive maintenance.	Prioritise Aquatics, critical renewals and defect works.
Climate Change and Energy	ARC uses pool plant, HVAC and solar PV assets.	Greater focus on efficiency and renewable energy.	Need for efficient plant, water and energy systems.	Consider energy and water efficiency in upgrades.

Table 4.1: Demand Management Plan

4.4 Asset programs to meet demand

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

Acquiring new assets will commit the City to ongoing operations, maintenance and renewal costs, and depreciation expenses for the period that the service provided from the assets is required. These future costs and expenses are identified and considered in developing the long-term financial plan.

4.5 Climate change adaptation

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

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

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

Risk and opportunities identified to date are shown in Table 4.2.

Climate change risk	Projection	Impact on services	Climate Change Management Plan
More extreme flooding/storm events during winter months	Increase in the frequency and severity of flooding and storm events	Increased wind loading Increased gutter and downpipe flows	Review capacity of existing Council buildings to withstand more severe weather events in line with latest National Construction Code
More extreme bushfires	Increase in the frequency and severity of bushfires	Evacuation Property damage	Ensure all City owned buildings (within Bushfire Prone Areas) have Bushfire Risk Assessments completed Consistent with Planning Policy provisions continue to ensure: • All proposed Structure Plans are accompanied and informed by a Bushfire Management Plan • New ARC assets design approval process (within Bushfire Prone Areas) incorporate bush fire management; Review, update and implement the Bushfire Risk Management Plan and Local Emergency Risk Management Plan.
Hotter temperatures during summer months	More frequent and longer heatwaves	Impact on air conditioning Increased complaints Increased heat stroke risk where no air conditioning	Review thermal insulation Review HVAC suitability Improved energy management

Table 4.2: Managing the Impact of Climate Change on Assets and Services

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

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

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

Table 4.3 summarises opportunities to build climate change resilience into new and existing assets.

Asset Description	Climate Change Impacts	Resilience Plan for New Assets	Resilience Plan for Existing Assets
Building Services	Increased cooling and ventilation demand.	Design HVAC and building services to current standards and future demand.	Maintain and renew HVAC systems and improve insulation where practical.
Aquatics and Pool Plant	Increased pressure on pool plant, water treatment and pumps.	Select efficient pumps, filtration and water treatment systems.	Prioritise critical pool plant renewals and monitor high-risk Aquatics assets.
Roof and Building Fabric	Increased heat, rain, corrosion and water ingress risk.	Use durable materials, coatings and waterproofing systems.	Address roof, waterproofing, cladding and corrosion defects through planned works.
Energy Systems	Increased energy demand and emissions reduction expectations.	Include energy-efficient plant and renewable energy options in upgrades.	Maintain solar PV, inverters and energy-related assets when required.

Table 4.3: ARC Climate Change Resilience Plan

The impact of climate change on new and existing assets is evolving and new opportunities will be developed in future revisions of this AMP.

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5 Lifecycle management plan

The lifecycle management plan details how the City plans to manage and operate the assets at the agreed levels of service (Refer to Section **Error! Reference source not found.**) throughout their entire lifecycle, from acquisition or creation to disposal. The goal is to maximise the value of the assets while minimising costs and risks, ensuring they continue to meet performance requirements over time.

From a financial perspective, infrastructure activities tend to be classified as being either Operating or Capital. The lifecycle activities used in the asset management and financial planning and reporting process cover:

Capital Expenditure:

- **Acquisition** – the activities to provide a higher level of service (e.g., new pool equipment, sports equipment or upgraded facility systems)
- **Renewal** – the activities that replace or restore assets to the standard it had originally provided (e.g., replacement of HVAC units, pool pumps, floor finishes, fire services or building components)
- **Disposal** – the decommissioning, removing, or repurposing of assets that are no longer cost-effective, safe, or necessary (e.g., obsolete plant, redundant pool equipment or damaged sports equipment).

Operating Expenditure:

- **Operations** - the routine activities that keep services accessible and effective, balancing efficiency with user expectations (e.g. utilities, cleaning, inspections, pool operations and daily facility operations etc.)
- **Maintenance** – the preventative and corrective actions to sustain asset functionality and minimise unexpected failures. Maintenance activities enable an asset to continue providing service for its useful life (e.g., HVAC servicing, fire system testing, pool plant servicing and minor building repairs).

A pictorial representation of the asset lifecycle activities is shown below in Figure 5.1.

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Figure 5.1: Asset Lifecycle Activities

5.1 Background data

5.1.1 Physical parameters

The assets covered by this AMP are shown in Table 5.1.

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Component Group	Asset Group	Count	Total CRC ($)
	Roof	12	3,317,080
	Fitouts and Fittings	206	4,147,600
	Finishes	202	8,962,537
	Disability Access	18	169,000
	Electrical Services	158	4,434,260
	Lifts	4	800,000
	Fire Services	73	809,310
	HVAC Services	218	5,325,910
	Hydraulic Services	11	451,000
	Security Services	22	554,500
	Arc Assets	655	32,860,676
	Total	1579	61,831,873
ARC Building Total			114,620,000

Table 5.1: Physical Parameters

As at the valuation completed July 2026, the City is responsible for maintaining one Recreation Building under this Asset Management Plan, being the Cockburn Aquatic and Recreation Centre (ARC). The ARC includes the building, services, plant, aquatic assets and recreation-specific components required to support aquatic, sporting, leisure and community recreation services.

Cockburn ARC is covered by this AMP as a standalone major Recreation Building due to the scale and complexity of the facility. The facility contains a range of building, plant, aquatic and recreation assets that require coordinated operation, maintenance, renewal and compliance planning.

An important distinction in the management of assets is the difference between ‘Design Life’ and ‘Useful Life’. Design Life refers to the length of time that an asset is designed to last, based on engineering standards, analysis, testing and reporting. Useful Life is simply the length of time that an asset is used. For example, ARC components such as HVAC units, pool plant, floor finishes and building services may be used for longer than their design life through ongoing maintenance and servicing. The modelling in this AMP considered Useful Life.

The age profile of the assets included in this AMP is shown in Figure 5.2.

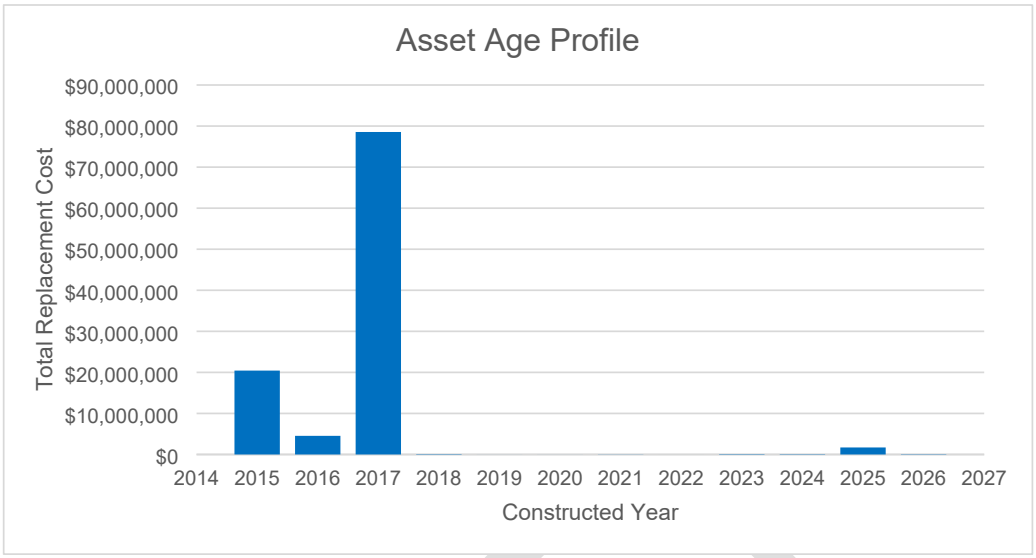


Figure 5.2: Asset Age Profile

The asset age profile is heavily weighted to 2017, reflecting the original construction of Cockburn ARC. This indicates that the majority of the asset value relates to the original facility construction, with smaller values in later years associated with subsequent additions, renewals or upgrades.

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 5.2.

Location	Service Deficiency
Aquatics and Pool Plant	Failed pool assets may cause service disruption or pool closures.
HVAC and Plant Room	Poor-condition ductwork may affect ventilation and facility operation.
Waterslide Precinct	Slide tower corrosion and waterslide status require a retain / refurbish / remove decision.
Roof and Building Fabric	Corrosion, roof deterioration and waterproofing issues may affect building performance.
Electrical and HV Services	Critical electrical infrastructure requires ongoing maintenance planning.
Fitout and Access Assets	Doors, lockers and fittings require maintenance to support access and amenity.

Location	Service Deficiency
Fire and Life Safety	Fire and emergency systems require testing, maintenance and renewal.

Table 5.2: Known Service Performance Deficiencies

The above service deficiencies were identified through asset condition data, inspection findings, maintenance information and operational input from Cockburn ARC.

5.1.3 Asset condition

Condition ratings for the City's buildings are currently monitored every five years. The most recent valuation of the City's buildings was completed by JLL in June 2026 and included a high level condition assessment. RealBuilt Partners has completed the most recent condition assessment in August 2026 – this was an assessment at the detailed component level.

Condition is measured using a 1 – 5 grading system[5] as detailed in Table 5.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AM plan results are translated to a 1 – 5 grading scale for ease of communication.

Condition Grading	Description of Condition
1	Very Good: free of defects, only planned and/or routine maintenance required
2	Good: minor maintenance required plus planned maintenance
3	Fair: defects requiring regular and/or significant maintenance to reinstate service
4	Poor: significant defects, renewal/rehabilitation required
5	Very Poor: physically unsound and/or beyond rehabilitation, immediate action required. Asset is at end of useful life.

Table 5.3: Condition Grading System

[5] IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

The condition profile of the ARC is shown in Figure 5.3.

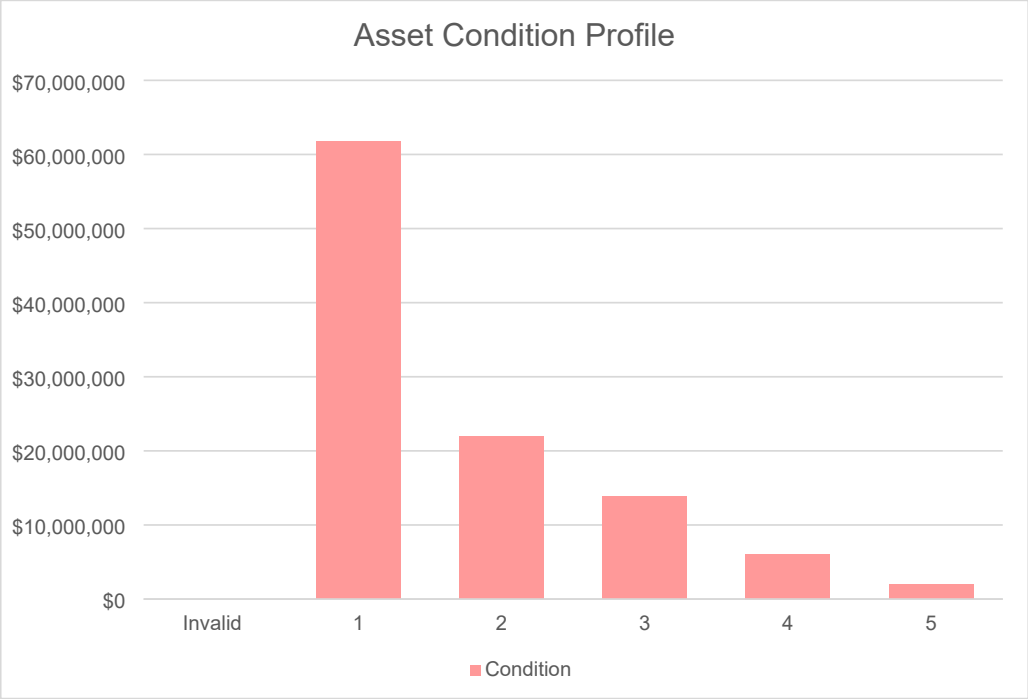


Figure 5.3: Asset Condition Profile

The structure was rated as being in condition 1 by JLL, with the remainder of varying condition. If inadequate renewal funding is allocated through the Long-Term Financial Plan, the average condition of the ARC will worsen over time. Of concern is the $6,080,855 of assets in Condition 4. The challenge will be to either ensure there is enough funding to maintain the current service levels or to adjust agreed levels of service.

5.2 Operations and maintenance plan

For the purpose of modelling within this ARC AMP, the following definitions apply:

Reactive maintenance is unplanned maintenance work carried out in response to service requests and management/supervisory directions. Examples include urgent repairs to pool plant, HVAC faults, leaking pipework, faulty doors, electrical issues, plumbing repairs and minor building defects.

Planned maintenance is work that is identified and managed through a maintenance schedule. This includes prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance. Examples include scheduled servicing of HVAC systems, fire systems testing, lift servicing, pool plant servicing, roof inspections, electrical testing and routine building services maintenance.

Operating expenditure is continuously required expenditure required to keep the asset functional. Examples include inspection, costs of power, fuel, staff, security patrols, plant equipment, on-costs and overheads. Examples include utilities, cleaning, security, pool operations, water treatment, inspections, compliance activities, contractor support, staffing-related operating costs and general facility overheads.

The trend in maintenance budgets is shown in Table 5.4.

Financial Year	Total Maintenance Expenditure ($)	Total Operating Expenditure ($)
2020/21	0	0
2021/22	0	0
2022/23	0	3,755,202
2023/24	0	4,099,579
2024/25	1,532,406	4,192,737

Table 5.4: Maintenance and Operating Budget Trends

These previous Operating and Maintenance budget levels are considered to have been adequate to meet service levels. Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement.

5.2.1 Asset hierarchy

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

The service hierarchy is shown in Table 5.5.

Service Hierarchy	Service Level Objective
Structure	Provide structural support for the safe operation of the facility.
Pools	Primary purpose of the facility.
Sports Assets	Basketball stadium, gym etc.
Electrical Services	Provide power, lighting, emergency lighting and electrical distribution.
HVAC Services	Provide heating, ventilation and air-conditioning for the facility.

Service Hierarchy	Service Level Objective
Fire Services	Provide fire detection, warning and protection systems.
Hydraulic Services	Provide water and hydraulic services for facility operation.
Lifts	Provide vertical access within the facility.
Fitout	Provide internal and external fittings required for building use.
Security Services	Provide security, access control and monitoring systems.
Finishes	Floor, wall, ceiling and paint finishes.

Table 5.5: Asset Service Hierarchy

5.2.2 Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.4 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance planned budget.

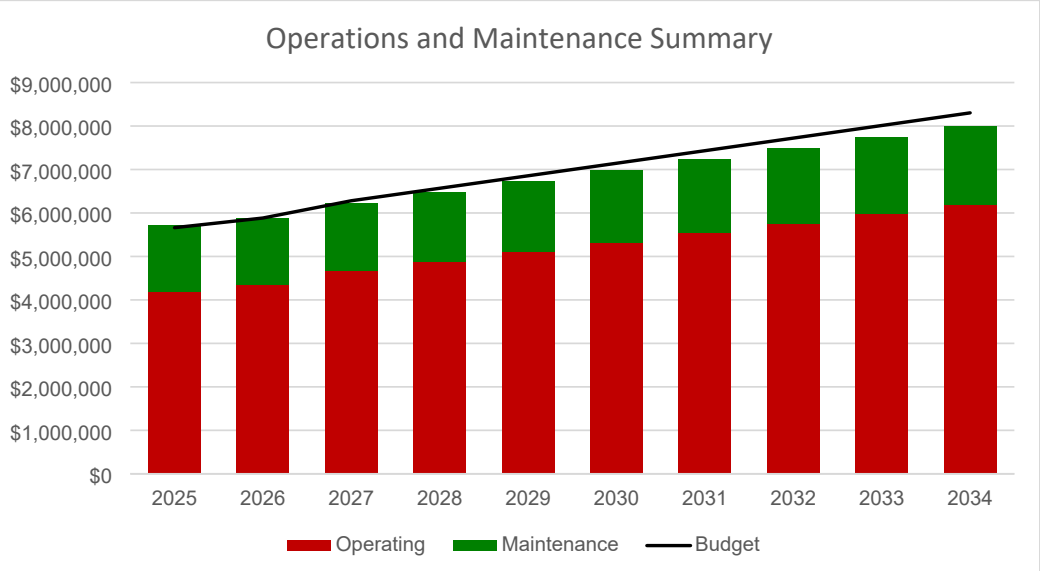


Figure 5.4: Operations and Maintenance Summary

All figure values are shown in current day dollars.

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5.3 Renewal plan

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

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

- The first method uses Asset Register data to project the renewal costs (replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year), or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 5.6.

Asset Classification	Useful Life
Building Structure	80 years
Roof	40 years
Building Services	25 years
Fitout	20 years
Floor, Wall and Ceiling Finishes	10 to 40 years
Electrical Services	10 to 40 years
Fire Services	10 to 20 years
HVAC Services	10 to 25 years
Hydraulic Services	10 to 30 years
Lifts	20 years
Security Services	10 years
Disability Access Assets	10 to 15 years
Pool Plant and Aquatics Assets	5 to 30 years
ARC-Specific Pool and Sports Equipment	5 to 20 years

Table 5.6: Useful Lives of Assets

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The estimates for renewals in this AMP were based on the asset register method.

The Useful Lives used for this plan have been verified with and sourced from RealBuilt.

Due to the complexity of the ARC components and their useful lives varying from 1 to 50 years, they are provided in Appendix H. Asset useful lives were last reviewed by RealBuilt in 2026.

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing pool plant, HVAC ductwork or electrical assets that are in poor condition and affecting service reliability), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of Aquatics assets, building services, roof, fitout or specialist recreation equipment).[6]

Renewals are prioritised by identifying assets or asset groups that:

- Have a high consequence of failure
- Have high use and subsequent impact on users would be significant
- Have higher than expected operational or maintenance costs
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.[7]

The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 5.7.

Criteria	Weighting (%)
Condition	70
High usage	25
Necessary to improve safety/efficiency/expenditure	5
Total	100

Table 5.7: Renewal Priority Ranking Criteria

[6] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

[7] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

5.3.2 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.5. A detailed summary of the forecast renewal costs is shown in Appendix D.

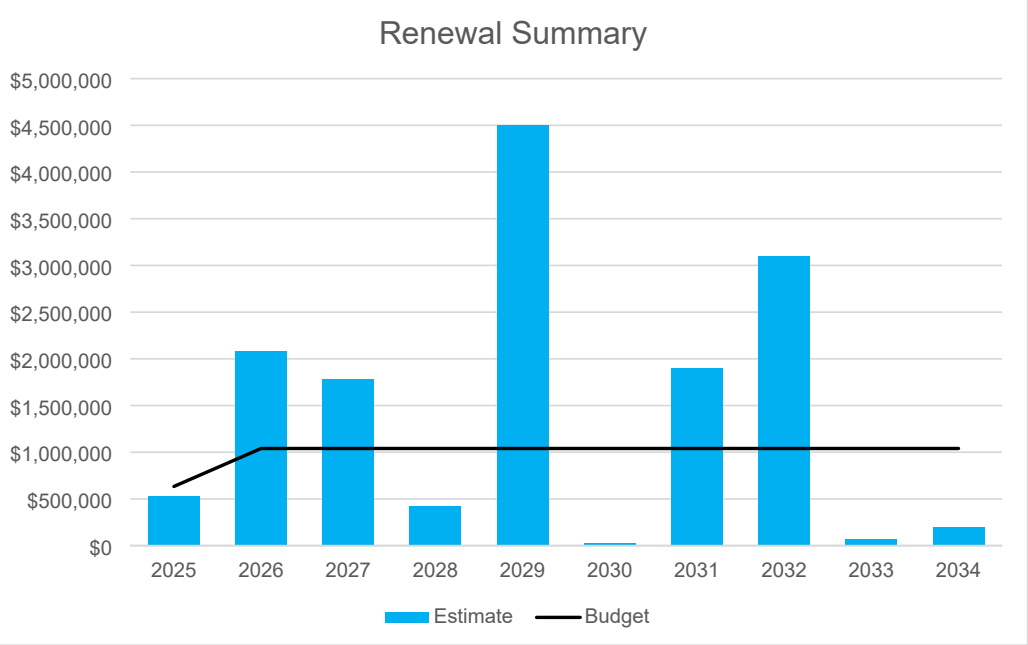


Figure 5.5: Forecast Renewal Costs

While the renewal programme appears manageable over the 10-year planning period, the timing and delivery of key renewal works requires attention. Renewal demand is concentrated around major ARC assets, including HVAC ductwork, Aquatics assets, building services, corrosion-related defects and works planned to commence in the 2028/2029 financial year.

Deferred renewal, including failed-but-operating Aquatics assets and high-consequence building services, should be included in the risk analysis process and considered in future capital works planning.

5.4 Acquisition plan

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its original service level. They may result from growth, demand, social or environmental needs. Assets may also be donated to the City by developers or third parties.

5.4.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to meet strategic needs of the community. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programs. The priority ranking criteria are detailed in Table 5.8.

Criteria	Weighting (%)
New asset requirement identified in strategic documentation (e.g. Strategic Community Plan, Corporate Business Plan or Infrastructure Plan)	50
Strong community demand (e.g. community group, petition, etc.)	25
Supported by empirical data such as population growth data, gap in agreed level of service, etc.	25
Total	100

Table 5.8: Acquired Assets Priority Ranking Criteria

5.4.2 Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised in Figure 5.6 and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix A.

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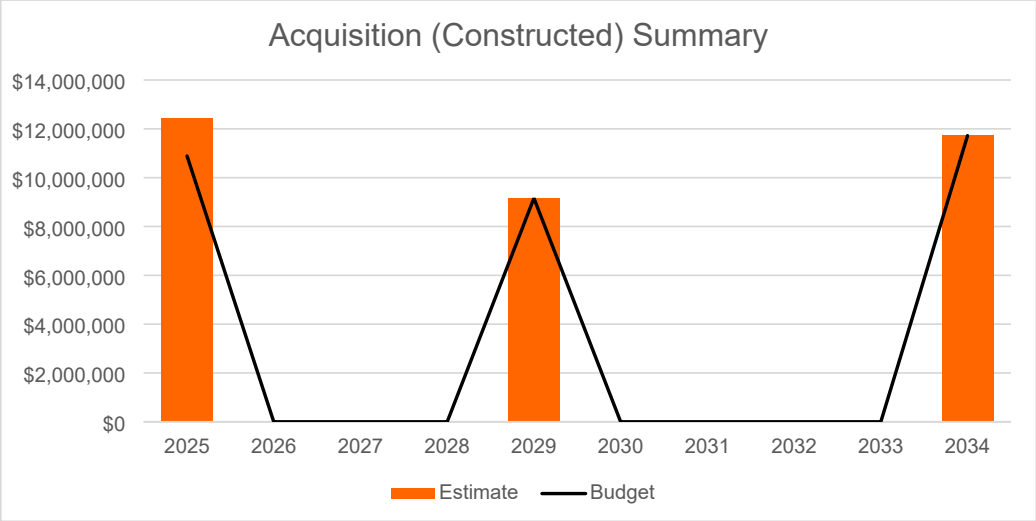


Figure 5.6: Acquisition (Constructed) Summary

Amounts are shown in real values (i.e., current values, net of inflation).

When the City of Cockburn commits to new assets, we must be prepared to fund future operations, maintenance and renewal costs. We must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity. The cumulative value of all acquisition work, including assets that are constructed and contributed are shown in Figure 5.7.

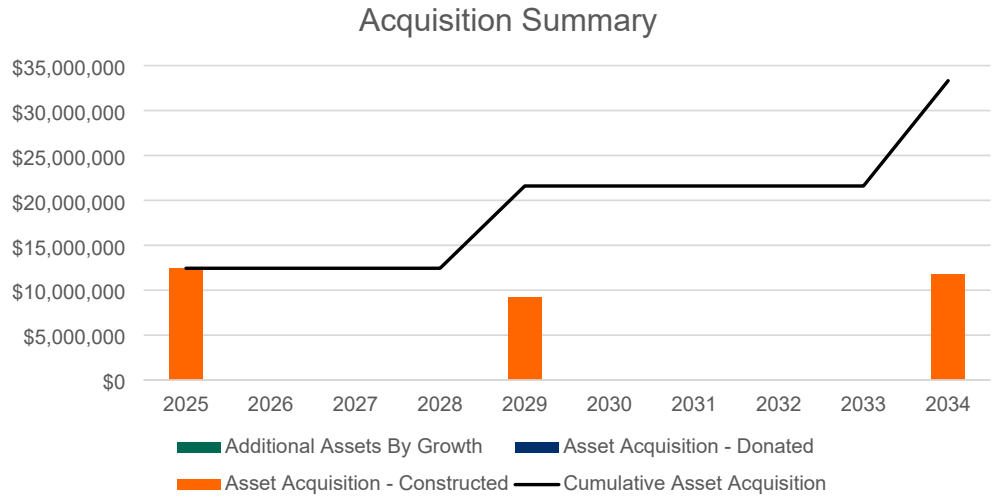


Figure 5.7: Acquisition Summary

Amounts are shown in real values (i.e., current values, net of inflation).

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

Future acquisitions or upgrades at Cockburn ARC are expected to relate to facility assets rather than new buildings. These may include aquatic plant, building services, accessibility assets, fitout items and specialist recreation equipment. Any new or upgraded assets may result in additional operations, maintenance and renewal requirements.

5.5 Disposal plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.9. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined in Table 5.9. Any costs or revenue gained from asset disposals is included in the long-term financial plan.

Asset	Reason for Disposal	Timing	Disposal Costs	Operations & Maintenance Annual Savings
No Cockburn ARC assets scheduled	N/A	N/A	N/A	N/A

Table 5.9: Assets Identified for Disposal

5.6 Summary of Lifecycle Costs and Planned Budget

The financial projections from this asset plan are shown in Figure 5.8. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

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

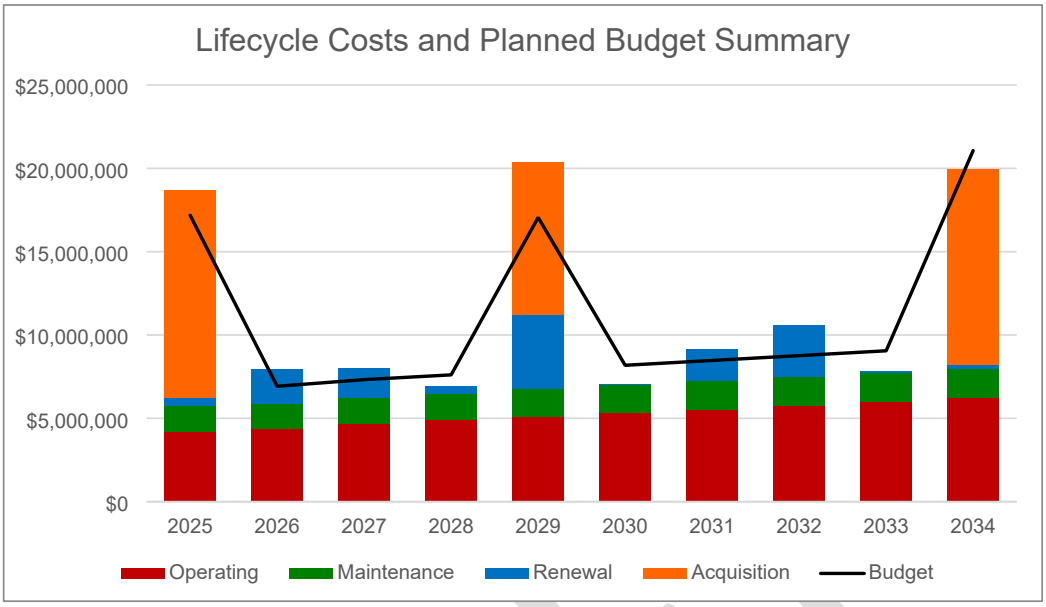


Figure 5.8: Lifecycle Costs and Planned Budget Summary

Overall, the lifecycle forecast shows that total expenditure exceeds the proposed budget in some years. This is driven by the combined impact of operational, maintenance, renewal and acquisition costs, rather than renewal expenditure alone. Future budgets should continue to be reviewed through capital works and long-term financial planning to balance available funding, service levels and asset risk.

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6 Risk management planning

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

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'[8].

An assessment of risks[9] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical assets

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

Critical Asset(s)	Failure Mode	Impact
Site ductwork	Poor condition / deterioration requiring major renewal.	Major ARC building services disruption. Renewal linked to planned 2028 shutdown.
Waterslide stair tower / slide tower structure	Corrosion and structural deterioration.	Continued waterslide precinct closure / restricted use; requires owner decision to retain, refurbish, remove or convert.

[8] ISO 31000:2009, p 2

[9] Risk Management & Safety System (RMSS)

Critical Asset(s)	Failure Mode	Impact
Aquatics failed assets	Failed-but-operating pool hydraulic, sanitation, water treatment and electrical assets.	Risk of unplanned pool closures and service interruptions.

Table 6.1: Critical Assets

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

6.2 Risk assessment

The risk management process used is shown in Figure 6.1 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.

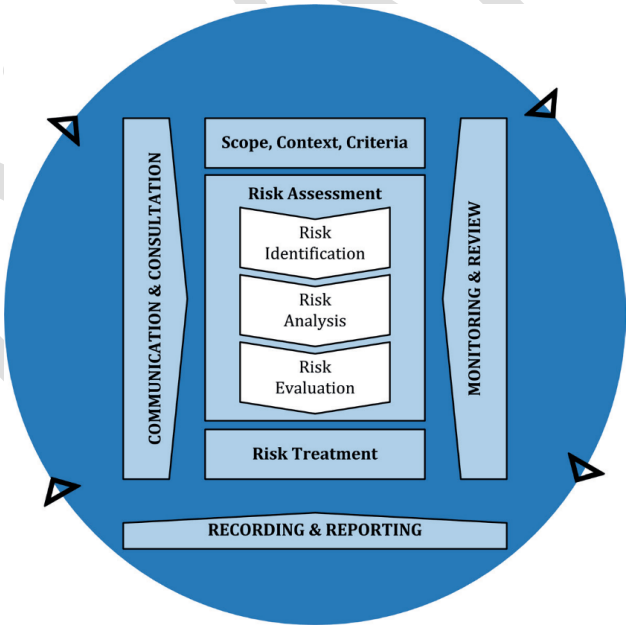


Figure 6.1: Risk Management Process – Abridged

Source: ISO 31000:2018, Figure 1, p9

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

An assessment of risks[10] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

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

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Aquatics and Pool Plant	Failed pool hydraulics, sanitation, pumps, filters or electrical assets may cause pool closures or service disruption.	VH	Prioritise failed and extreme-risk Aquatics assets and deliver renewals as bundled trade packages.	H	$3.78m to $5.23m Aquatics 10-year renewal program
HVAC / Plant Room Ductwork	Poor-condition ductwork or plant failure may affect ventilation, comfort and facility operation.	VH	Deliver ductwork renewal through the planned renewal program and align works with the 2028 shutdown.	M	$3.0m ductwork renewal

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Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Waterslide Precinct / Slide Tower	Corrosion or unresolved waterslide strategy may create safety, compliance and planning risks.	H	Confirm retain, refurbish or remove decision and align treatment with shutdown and capital planning.	M	$1.0m stair tower allowance. $750,000 removal or pool redesign allowance if removal proceeds
Building Fabric / Corrosion Defects	Corrosion, cracking, sealant failure or water damage may reduce asset condition and increase safety or renewal risk.	H	Implement corrosion management and package defect works with planned renewals where practical.	M	$2.66m defect program, including $1.14m corrosion-related works
Roof / Building Envelope	Defective roof or envelope can cause leaks during rain events	H	Complete roof and envelope defect works and coordinate with access, safety and shutdown planning.	M	$339,000 roof-related defect works
Electrical / HV Services	Safety considerations Widespread disruptions depending on nature of electrical fault	H	Progress HV maintenance planning and include critical electrical works in capital planning.	M	$110,000 HV switchgear replacement allowance
Fire and Life Safety Systems	Failure of fire detection, emergency lighting or fire services may affect compliance and user safety.	H	Continue statutory testing, planned servicing and scheduled renewal of fire and life safety assets.	M	$122,000 fire services renewal need

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Accessibility Assets	Failure of pool hoists or accessible assets may affect inclusive access and program delivery.	H	Maintain servicing and renew pool hoists when due.	M	$90,000 pool hoist renewal allowance

Table 6.2: Risks and Treatment Plans

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

6.3 Infrastructure resilience approach

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

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

We do not currently measure our resilience in service delivery. This will be included in future iterations of the AM Plan.

6.4 Service and risk trade-offs

The decisions made to adopt this AMP are based on the objective of achieving the optimum benefits from the available resources.

6.4.1 What we cannot do

There are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years. These include:

- Completing all Cockburn ARC renewal, defect and upgrade works within the 10-year planning period without staging or planned shutdown impacts.

6.4.2 Service trade-off

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

- Critical ARC assets may not be renewed, maintained or upgraded at the optimal time, increasing the risk of asset deterioration, higher reactive maintenance and reduced service reliability
- Aquatics, pool plant, HVAC, electrical or building services assets may become less reliable, leading to reduced service availability, temporary pool closures or disruption to facility operations
- Major renewal and defect works may need to be staged or delivered during planned shutdowns, temporarily affecting access to parts of the facility
- Reduced user comfort, amenity or satisfaction if facility condition, access or service availability declines.

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Increased risk of pool closures or service disruption from failed or unreliable Aquatics assets
- Increased risk of disruption to facility operations if critical plant, HVAC ductwork or electrical/HV assets are deferred
- Increased safety, compliance and asset performance risk from corrosion, roof defects, waterproofing issues or unresolved waterslide precinct decisions
- Increased reactive maintenance costs if planned renewals and defect works are delayed
- Increased community complaints or reduced user satisfaction if facility condition, comfort, access or service availability declines
- Loss of reputation and reduced revenue from reduced usage.

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

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7 Financial summary

This section contains the financial and valuation forecasts resulting from the information presented in the previous sections of this plan. Forecasts will be improved as the discussion on sustainable levels of service, risk and cost matures in line with the financial strategy.

7.1 Financial statements and projections

7.1.1 Asset valuations

The City's Cockburn ARC was last valued in June 2026 by JLL. Assets were valued at 'greenfield replacement cost', based on a 'cost to construct' approach. This type of valuation considered inputs such as:

- Components
- Unit rates
- Condition data
- Residual value (after depreciation was considered).

7.1.2 Sustainability of service delivery

There are three key indicators of sustainable service delivery that are considered in the AMP for this service area. The three indicators are the:

- Asset Consumption Ratio (Fair Value/Current Replacement Cost)
- Asset Sustainability Ratio (planned renewal budget for next year / annual depreciation expense)
- Asset Renewal Funding Ratio (planned renewal budget for the next 10 years / forecast renewal outlays for the next 10 years).

Asset Consumption Ratio

Asset Consumption Ratio 87 per cent

This ratio shows the written down value of depreciable assets in relation to their 'as new' value in current prices. A ratio of less than 50 per cent indicates a rapid deterioration of the asset base, whilst a ratio greater than 75 per cent may indicate an over investment in the asset base or a relatively young asset base.

Asset Sustainability Ratio

Asset Sustainability Ratio 52 per cent

The target ratio should be between 90-110 per cent. A lower value indicates that at some time in the future, more renewal funding will be required. A higher value may

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indicate 'above average' renewal spending over the lifecycle of the asset base, which may simply correspond with peaks in new assets being added, depending on the useful lives of the assets.

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio[11] 68 per cent

The Asset Renewal Funding Ratio illustrates that over the next 10 years we expect to have 68 per cent of the funds required for the optimal renewal of buildings assets.

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

7.1.3 Forecast costs (outlays) for the long-term financial plan

Table 7.1 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan.

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

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AMP and/or financial projections in the LTFP.

We will manage any 'gap' by communicating the service performance, cost, and risk implications in consultation with the community and key stakeholders.

Forecast costs exclude inflation.

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[11] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)
2025	12,441,679	4,192,737	1,532,406	535,038	0
2026	0	4,351,446	1,532,406	2,084,880	0
2027	0	4,672,141	1,563,054	1,786,341	0
2028	0	4,890,908	1,594,315	421,290	0
2029	9,157,414	5,109,675	1,626,201	4,499,750	0
2030	0	5,328,443	1,658,725	29,710	0
2031	0	5,547,210	1,691,900	1,903,010	0
2032	0	5,765,977	1,725,738	3,095,795	0
2033	0	5,984,744	1,760,252	71,600	0
2034	11,721,987	6,203,511	1,795,457	201,300	0

Table 7.1: Forecast Costs (Outlays) for the Long-Term Financial Plan

7.2 Valuation forecasts

The best available estimate of the value of assets included in this AMP are shown below.

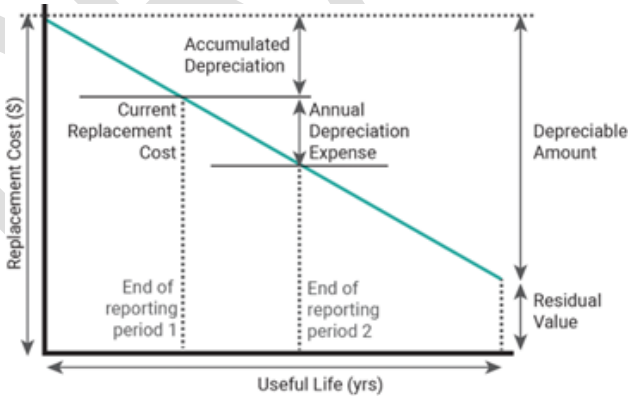


Figure 7.1: Valuation Terminology

These costs are shown in 2026 dollar values:

- Replacement Cost (Gross) $114,620,000
- Depreciable Amount $114,620,000
- Current Replacement Cost[12] $99,178,130
- Annual Depreciation Expense $1,989,329

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

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

8 Assumptions and improvement planning

8.1 Data and information sources

8.1.1 Accounting and financial data sources

This AMP utilises accounting and financial data sourced from Technology One CiAnywhere 2024A Release (775), as well as the valuation by JLL in 2026.

8.1.2 Asset management data sources

This AMP also utilises asset management data sourced from Technology One CiAnywhere 2024A Release (775), as well as information from the detailed audit by RealBuilt in 2026.

8.2 Key assumptions

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

Key assumptions made in this AMP are:

- Population and asset growth projections are assumed to be accurate
- The data supplied was as accurate as possible at the time of compilation of this asset management plan
- The breakdown of the actual reactive, planned and operational expenditure is assumed to be accurate
- Assets requiring renewal are identified from either the asset register or an alternative method
- The timing of capital renewals based on the asset register is applied by adding the useful life to the year of acquisition or year of last renewal
- Alternatively, an estimate of renewal lifecycle costs is projected from external condition modelling systems and may be supplemented with, or based on, expert knowledge. When doing so, the forecast remaining useful life in the asset register should be adjusted where necessary
- The asset register method was used to forecast renewals.

8.3 Forecast reliability and confidence

The forecast demands, costs, planned budgets, and valuation projections in this AMP are based on the best available data. For effective asset management and financial planning and reporting, it is critical that the information is reliable and up to date.

Data confidence is classified on an A to E level scale in accordance with the guidance provided in the International Infrastructure Management Manual. [13]

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

Table 8.1: Data Confidence Grading System

The estimated confidence level for and reliability of data used in this AMP is shown in Table 8.2.

[13] IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

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Data	Confidence Assessment	Comment
Demand drivers	B	Professional judgement, corporate knowledge and id projections.
Growth projections	B	id projections.
Acquisition forecast	B	Professional judgement by Asset Services.
Operation forecast	B	City records of past expenditure and professional judgement
Maintenance forecast	B	City records of past expenditure and professional judgement
Renewal forecast - Asset values	B	Latest asset valuation data. Unit rates are appropriate for high level budgeting but not project planning.
- Asset useful lives	B	Useful lives are based on industry practice and condition ratings.
- Condition modelling	A	Completed in August 2026 by RealBuilt.
Disposal forecast	B	No planned ARC disposals (other than water slides) at this moment in time, although this may change within the planning period and, if so, must be reflected in the AMP. Water slide disposal still being discussed

Table 8.2: Data Confidence Assessment for Data used in AMP

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

8.4 Improvement plan

It is important that we recognise gaps in the planning process that require improvement to ensure effective asset management and informed decision making. The improvement plan generated from this AMP is shown in Table 8.3.

Section	Project	Responsibility	Task
3.4	More detailed analysis of customer feedback	Asset Services ARC Team	Investigate link between NPS and detailed customer feedback Explore implications for investment
5.4	Functionality and Capacity Assessments	Asset Services ARC Team	Perform functionality and capacity assessments for ALL assets, e.g. following IPWEA Practice Note 2: Buildings
5.1	Ensure consistent componentisation, review depreciation	Asset Services Finance	Ensure consistent replacement costs between valuation data and the detailed componentisation, ensure depreciation reflects wide range of useful lives of components
5.2	Operations and maintenance planning	Asset Services Facilities/ARC Team	Maintenance Management System – review, accommodate recommendations in RealBuilt detailed report Maintenance cost planning Link maintenance costs to individual assets

Table 8.3: Improvement Plan

8.5 Monitoring and review procedures

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

This AMP will be reviewed and updated to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

The AMP has a maximum life of 4 years and is next due for complete revision in 2028.

8.6 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 long-term financial plan

- The degree to which the 1 to 5-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AMP
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90-110 per cent).

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9 References

- City of Cockburn – Asset Management Strategy 2017 – 2024
- City of Cockburn – Strategic Community Plan 2025 – 2035
- City of Cockburn – Long Term Financial Plan 2024-2025 to 2033-2034
- City of Cockburn – Management Budget 2024 - 2025
- City of Cockburn – Enterprise Risk Management
- City of Cockburn - Population forecast - https://forecast.id.com.au/cockburn/
- Government of Western Australia, Department of The Premier and Cabinet - Western Australian Legislation - Acts in force
- IPWEA, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/bookshop/iimm
- IPWEA, 'NAMS+ - A Toolkit for Asset Management Planning', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/namsplus
- IPWEA, 2024 'International Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/bookshop/iifmm
- IPWEA, 2018, Practice Note 12.1, 'Climate Change Impacts on the Useful Life of Assets', Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/resourcesnew/bookshop/pn12-1
- IPWEA, 2012, Practice Note 6 Long-Term Financial Planning, Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn6
- IPWEA, 2014, Practice Note 8 – Levels of Service & Community Engagement, Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn8
- ISO, 2024, ISO 55000:2024 Asset Management – Vocabulary, overview, and principles
- ISO, 2018, ISO 31000:2018 Risk management – Guidelines
- The Local Government and Municipal Knowledge Base - LGAM Knowledge Base
- DVC, 2006, 'Asset Investment Guidelines', 'Glossary', Department for Victorian Communities, Local Government Victoria, Melbourne, http://www.dvc.vic.gov.au/web20/dvclgv.nsf/allDocs/RWP1C79EC4A7225CD2FCA257170003259F6?OpenDocument
- Local Government of Western Australia – Asset Management Framework and Guidelines
- Oceanis International 2024, 'Cockburn ARC Leisure Infrastructure Revitalisation Phase 2' ARC Coordinators - #2414 Cockburn ARC Phase 2 - Market Analysis Report (1).pdf - All Documents

10 Appendices

10.1 Appendix A Acquisition forecast

The new assets required to meet growth will be funded through a combination of municipal funding, grant funding and user fees.

10.1.1 Acquisition forecast assumptions and source

The acquisition forecast is based on a staged upgrade approach to accommodate increasing demand over the planning period.

No donated assets are anticipated to be received at this stage.

10.1.2 Acquisition project summary

The acquisition forecast includes constructed asset expenditure identified in the 10-year Capital Works Program. Projects should be appropriately scoped and confirmed with the relevant service and asset custodians, with whole-of-life costs considered before approval. Acquisitions should also be clearly separated from renewals and defect works.

10.1.3 Acquisition forecast summary

Year	Constructed ($)	Donated ($)	Growth ($)
24/25	12,441,679	0	0
25/26	0	0	0
26/27	0	0	0
27/28	0	0	0
28/29	9,157,414	0	0
29/30	0	0	0
30/31	0	0	0
31/32	0	0	0
32/33	0	0	0
33/34	11,721,987	0	0

Table 10.1: Acquisition Forecast Summary

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10.2 Appendix B Operation forecast

10.2.1 Operation forecast assumptions and source

Operations include the activities listed in Section 5.2.

Both the forecast and the budget are linearly extrapolated from previous budgets. It is in the Improvement Plan to review this approach.

10.2.2 Operation forecast summary

Table 10.2 provides a summary of Forecast Operations expenditure over the planning period.

Year	Operation Forecast ($)	Additional Operation Forecast ($)	Total Operation Forecast ($)
24/25	4,192,737	0	4,192,737
25/26	4,351,446	0	4,351,446
26/27	4,672,141	0	4,672,141
27/28	4,890,908	0	4,890,908
28/29	5,109,675	0	5,109,675
29/30	5,328,443	0	5,328,443
30/31	5,547,210	0	5,547,210
31/32	5,765,977	0	5,765,977
32/33	5,984,744	0	5,984,744
33/34	6,203,511	0	6,203,511

Table 10.2: Operation Forecast Summary

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10.3 Appendix C Maintenance forecast

10.3.1 Maintenance forecast assumptions and source

Maintenance includes the activities listed in Section 5.2.

Both the forecast and the budget are linearly extrapolated from previous budgets. It is in the Improvement Plan to review this approach.

10.3.2 Maintenance forecast summary

Table 10.3 provides a summary of Forecast Maintenance expenditure over the planning period.

Year	Maintenance Forecast ($)	Additional Maintenance Forecast ($)	Total Maintenance Forecast ($)
24/25	1,532,406	0	1,532,406
25/26	1,532,406	0	1,532,406
26/27	1,563,054	0	1,563,054
27/28	1,594,315	0	1,594,315
28/29	1,626,201	0	1,626,201
29/30	1,658,725	0	1,658,725
30/31	1,691,900	0	1,691,900
31/32	1,725,738	0	1,725,738
32/33	1,760,252	0	1,760,252
33/34	1,795,457	0	1,795,457

Table 10.3: Maintenance Forecast Summary

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10.4 Appendix D Renewal forecast summary

10.4.1 Renewal forecast assumptions and source

The renewal forecast was developed by RealBuilt and makes use of their condition assessment data, current replacement costs and renewal modelling for the 2026 to 2035 planning period.

Renewal timing has been condition-adjusted, with failed and poor-condition assets prioritised where required. ARC assets are costed using single current replacement cost values, while Aquatics assets are presented using low and high replacement cost ranges. The high range costs were adopted for the purpose of this AMP and will be refined as the projects receive more detailed costings.

Data sources include the ARC and Aquatics asset registers, RealBuilt Partners' May to June 2026 visual condition assessment, defect register, maintenance budgets, FY25/26 contract spend records, engineering assessments and technical reviews.

10.4.2 Renewal project summary

Renewal Program	Financial Year	Estimated Renewal Cost ($m)
ARC Building Renewal Program	25/26	0.44
	26/27	1.10
	27/28	3.00
	28/29	1.00
	29/30	0.22
	30/31	0.02
	31/32	2.37
	32/33	0.73
	33/34	0.01
	34/35	0.10
Aquatics Renewal Program	25/26 to 34/35	3.78 to 5.23

Table 10.4: Renewal Project Summary

10.4.3 Renewal forecast summary

Table 10.5 provides a summary of Forecast Renewal expenditure over the planning period.

Year	Renewal Forecast ($)	Renewal Budget ($)
24/25	535,038	633,450
25/26	2,084,880	1,040,000
26/27	1,786,341	1,040,000
27/28	421,290	1,040,000
28/29	4,499,750	1,040,000
29/30	29,710	1,040,000
30/31	1,903,010	1,040,000
31/32	3,095,795	1,040,000
32/33	71,600	1,040,000
33/34	201,300	1,040,000

Table 10.5: Renewal Forecast Summary

10.5 Appendix E Disposal summary

10.5.1 Disposal forecast assumptions and source

As of August 2026, it is assumed there are no ARC asset disposal projects required over the planning period. However, this AMP should be updated with any disposal projects identified during the planning period, as well as the life cycle cost summary.

10.5.2 Disposal project summary

Any disposal projects identified during the planning period should be listed here in future AMP updates.

10.5.3 Disposal forecast summary

No disposals have been identified.

10.6 Appendix F Budget summary by lifecycle activity

The budget summary shown in Table 10.6 is based on the renewal budget from the LTFP and the projected O&M budget, as discussed in Appendix B and C.

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)	Total ($)
24/25	10,888,584	4,129,526	1,532,406	633,450	0	17,183,965
25/26	0	4,351,446	1,532,406	1,040,000	0	6,923,852
26/27	0	4,718,132	1,563,054	1,040,000	0	7,321,186
27/28	0	4,973,752	1,594,315	1,040,000	0	7,608,067
28/29	9,157,414	5,229,371	1,626,201	1,040,000	0	17,052,986
29/30	0	5,484,991	1,658,725	1,040,000	0	8,183,716
30/31	0	5,740,610	1,691,900	1,040,000	0	8,472,510
31/32	0	5,996,230	1,725,738	1,040,000	0	8,761,968
32/33	0	6,251,850	1,760,252	1,040,000	0	9,052,102
33/34	11,721,987	6,507,469	1,795,457	1,040,000	0	21,064,914

Table 10.6: Budget Summary by Lifecycle Activity

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10.7 Appendix G Legislative requirements

Legislation	Requirement
Local Government Act 1995 LG (Miscellaneous Provisions) Act 1960 & LG (Building Surveyors) Regulations 2008	Provides for a system of Local Government by describing the functions of and providing a framework for the administration and financial management of Local Governments.
Heritage of Western Australia Act 1990	Provides for and encourages the conservation of places which have significance to the cultural heritage of the state.
Disability Services Act 1993 (WA)	Is to ensure that services are provided and funded in conformity with the Act
Occupational Safety and Health Act 1984 (WA). OSH Regulations 1996	Provides for the promotion, coordination, administration and enforcement of Safety and Health in WA. Places emphasis on the prevention of accidents and injury.
Building Code of Australia 2010	Provides a set of minimum technical provisions for the design and construction of buildings and other structures throughout Australia. The provisions are performance based and cover issues such as health, safety, amenity and sustainability.
Building Regulations 1989	The regulations apply in each local government district in the area specified for that district.
Building Services (complaint resolution and administration) Act 2011	Provides a system for dealing with complaints about building services, home building work contract and disciplinary matters; provides a public officer with functions relating to building services and complaints; a levy in relation to certain authorisations for building services and a system for ensuring compliance with laws about building services.
Building Services Levy Act 2011	Imposes a levy in relation to certain authorisations for building services.
The Building Services (Registration) Act 2011	Provides for the following — • the registration of certain building service providers; • the approval of owner-builders; • the repeal of the Builders' Registration Act 1939, the Painters' Registration Act 1961 and various regulations;
Building Fire and Safety Regulation 1991	Sets out the regulations for fire safety such as means of escape, limitation of people in buildings, fire and evacuation plans and testing of special fire services and installations

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Legislation	Requirement
Australian Standards	Standards are published documents setting out specifications and procedures designed to ensure products, services and systems are safe, reliable and consistently perform the way they were intended to. They establish a common language which defines quality and safety criteria.
Environment Protection Act, 1993 (WA)	Regulations regarding noise, sustainability, land fill stormwater and groundwater resources.
Emergency Management Act, 2005 (WA)	Requires lifeline utilities to function at the fullest possible extent during and after an emergency and to have plans for such functioning (business continuity plans)
Crown Lands Act, 1929 (WA)	Sets out requirements for work and leases on Crown Land.
Code for the Management and Control Asbestos in the Workplace	Regulation 5.43 of the Occupational Safety and Health Regulations 1996 requires the identification assessment and control of risks from hazards in relation to asbestos in accordance with the Code of Practice for the Management and Control of Asbestos in Workplaces.
Liquor Control Act 1988	To regulate the sale, supply and consumption of liquor, the use of premises on which liquor is sold, and the services and facilities provided in conjunction with or ancillary to the sale of liquor, to minimise harm or ill health caused to people, or any group of people due to the use of liquor, to provide for orders that may prohibit persons from being employed at, or from entering, licensed premises, to repeal the Liquor Act 1970, and for related matters.
Food Act 2008	The objects of this Act include the following — (a) to ensure food for sale is both safe and suitable for human consumption; (b) to prevent misleading conduct in connection with the sale of food; (c) to provide for the application in this State of the Food Standards Code.
Health Act 1911	An Act to consolidate and amend the law relating to public health

Table 10.7: Legislative Requirements

10.8 Appendix H Useful life component classification breakdown

Component Description	Asset Group	Asset Type	Useful Life (years)
ARC Specific Assets	Mechanical	Air Compressor	5
		Chlorine Tank Extraction Fan	3
	Pool Electrical	Balance Tank Level Sensor	20
		Flow Meter	15
		Flow Switch Paddle Type	10
		Pool Control BMS	15
		Pool Switch Board	40
		UV Chamber	20
		UV Control System Ballast	20
		UV Quartz Sleeve and Automatic Wiper	10
		UV Sensor	10
		UV Service Kit 2kw	1
		UV Service Kit 3kw	1
		UV Service Kit 6kw	1
		Variable Speed Drive	15
		Flow Meter	15
		UV Chamber	20
		UV Control System Ballast	20
		UV Quartz Sleeve and Automatic Wiper	10
		UV Sensor	10
		UV Service Kit 6kw	1
		Flow Switch Paddle Type	10
	Pool Filters	Backwash Filter	30

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Component Description	Asset Group	Asset Type	Useful Life (years)
		UFF Filter Bump Mechanism Bushing & Seals	5
		UFF Filter Controller & Display Screen	8
		UFF Filter Vessel	25
		UFF Flex Tube Filter Elements	5
		UFF Filter Vessel	25
		UFF Filter Controller & Display Screen	8
		UFF Filter Bump Mechanism Bushing & Seals	5
		UFF Flex Tube Filter Elements	5
	Pool Finishes	Pool Grout	7
		Pool Tiles	40
		Structural Expansion Joint Mastic Sealant	7
		Tile Growth Expansion Joint Mastic Sealant	7
	Pool Fixtures and Fittings	Blanket Roller	20
		Handrails (removeable)	30
		Pool Blankets	10
		Pool Dive Block	20
		Pool Floor Drain (1200x300mm)	20
		Pool Floor Drain (300x300mm)	10-20
		Pool Floor Outlet	20
		Pool Handrails	30
		Pool Lane Rope Anchor	20
		Pool Wall Outlet	20
		Pool Wall Outlet (push in)	10
		Pool Wet Deck Grating	20

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Component Description	Asset Group	Asset Type	Useful Life (years)
		Ramp Handrails	30
		Spa Air Outlet (push in)	10
		Swim Wall	20
		Wall Return Screens	20
		Pool Floor Drain (300x300mm)	20
	Pool Heaters	Heat Exchanger	20
		Pool Chiller	15
		Heat Exchanger	20
	Pool Hydraulics	100mm Butterfly Valve Ductile Iron	10
		100mm Butterfly Valve PVC	10-20
		100mm Check Valve Plastic	20
		100mm Rubber Isolation Bellow	10
		125mm Rubber Isolation Bellow	10
		150mm Butterfly Valve Ductile Iron	10
		150mm Butterfly Valve PVC	20
		150mm Butterfly Valve PVC	20
		150mm Check Valve Ductile Iron	10
		150mm Check Valve Plastic	20
		150mm Rubber Isolation Bellow	10
		200mm Butterfly Valve Ductile Iron	10
		200mm Butterfly Valve PVC Gearbox	20
		200mm Check Valve Ductile Iron	10
		200mm Check Valve Plastic	20
		225mm Butterfly Valve PVC Gearbox	20
		250mm Butterfly Valve Ductile Iron	10
		250mm Butterfly Valve PVC Gearbox	10-20

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Component Description	Asset Group	Asset Type	Useful Life (years)
		250mm Check Valve Ductile Iron	10
		250mm Check Valve Plastic	20
		25mm Ball Valve PVC Double Union	20
		300mm Butterfly Valve Ductile Iron	10
		300mm Check Valve Ductile Iron	10
		315mm Butterfly Valve PVC Gearbox	20
		32mm Ball Valve PVC Double Union	20
		32mm ball valve with electronic actuator	15
		400mm Butterly Valve Ductile Iron Gearbox	10
		400mm Check Valve Ductile Iron	10
		40mm Ball Valve PVC Double Union	20
		50mm Ball Valve PVC Double Union	20
		50mm Rubber Isolation Bellow	10
		65mm Rubber Isolation Bellow	10
		80mm Butterfly Valve Ductile Iron	10
		80mm Butterfly Valve PVC	20
		80mm Rubber Isolation Bellow	10
		Backwash Solids Tank	30
		Backwash System Pipework	40
		Backwash Water Tank	30
		Chemical Injection Manifold Pipework	10
		Hair and Lint Strainer	20
		Pressure Gauges	10
		Temperature Gauge	10
		Valve Actuator	15-20

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Component Description	Asset Group	Asset Type	Useful Life (years)
		150mm Butterfly Valve Ductile Iron	10
		315mm Butterfly Valve PVC Gearbox	20
		300mm Check Valve Ductile Iron	10
		Hair and Lint Strainer	20
		32mm Ball Valve PVC Double Union	20
		Chemical Injection Manifold Pipework	10
		50mm Ball Valve PVC Double Union	20
		100mm Butterfly Valve Ductile Iron	10
		Valve Actuator	15-20
		150mm Rubber Isolation Bellow	10
		40mm Ball Valve PVC Double Union	20
		25mm Ball Valve PVC Double Union	20
		300mm Butterfly Valve Ductile Iron	10
		250mm Check Valve Plastic	20
		250mm Butterfly Valve PVC Gearbox	20
		80mm Butterfly Valve PVC	20
		100mm Butterfly Valve PVC	20
		Pressure Gauges	10
		Temperature Gauge	10
		200mm Butterfly Valve PVC Gearbox	20
		280mm Butterfly Valve PVC Gearbox	20
		250mm Check Valve Ductile Iron	10
	Pool Pumps	Backwash Solids Pump	10
		Chiller Loop Circulation Pump	10
		Feature Pump (Aquaplay)	10
		Feature Pump (Leisure Pool)	10

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Component Description	Asset Group	Asset Type	Useful Life (years)
		Feature Pump (Spa Jet Pump 1)	10
		Feature Pump (Spa Jet Pump 2)	10
		Heat Loop Circulation Pump	10
		Jet Pump	10
		Pool Circulation Pump	10
		Pool Circulation Pump (25m)	10
		Pool Circulation Pump (50m Pump 1)	10
		Pool Circulation Pump (50m Pump 2)	10
		Pool Circulation Pump (CRP)	10
		Pool Circulation Pump (HRP)	10
		Pool Circulation Pump (LP)	10
		Pool Circulation Pump (LTS)	10
		Spa Circulation Pump	10
		Submersible Pump	10
		Pool Circulation Pump (Slides)	10
		Heat Loop Circulation Pump	10
	Pool Sanitation	Acid Back Pressure Valve	10
		Acid Dosing Pipework	10
		Acid Dosing Pump	8
		Acid Injection Port	10
		Acid Storage Tank	10
		Acid Tank Bunding	10
		C02 Controller	10
		C02 Dosing Lines	15
		C02 Gas Detection System	10
		C02 Injector	10

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Component Description	Asset Group	Asset Type	Useful Life (years)
		C02 Tank	10
		Chemical Controller	10
		Chemical Controller Display Unit	10
		Chemical In-Line Probe Housing / Flow Switch Assembly	15
		Chlorine Back Pressure Valve	10
		Chlorine Dosing Pipework	10
		Chlorine Dosing Pump	8
		Chlorine Injector	10
		Chlorine Pump Bunding	10
		Chlorine Storage Tank 1	10
		Chlorine Storage Tank 2	10
		Chlorine Tank Bunding	10
		Dosing Water Tank	20
		Free Chlorine Sensor (CGE-2-CAN-10ppm)	5
		Free Chlorine Sensor (CLE-3-CAN-10ppm)	5
		pH Sensor	5
		Submersible Pump	10
		Total Chlorine Sensor (CTE-1-CAN-10ppm)	5
		Chlorine Injector	10
		Acid Injection Port	10
		C02 Injector	10
	Superstructure	Balance Tank	50
		Pool Structure	50
	Waterproofing	Balance Tank & Gutter Coating	20

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Component Description	Asset Group	Asset Type	Useful Life (years)
	Pool Deck	Grated Wetdeck	20
	Pool Equipment	Arc Inflatables	7
		Diving Block	15
		Slide Tower Stair Structure	20
		Water Play Equipment	15
		Water Slide	20
	Plantroom Equipment	Geothermal System	15
		Pool Pumps	8
	Signs	External	15
		Internal	20
	Play Equipment	Play Equipment	20
	Arc Equipment	Basketball Backboard	15
		Dividing Nets	20
		Fixed Equipment Winches	15
		Mobile Competition Equipment	10
		Scoreboards	10
Disability Assistance	Toilet Facility	Ceramic	20
	Disability Assistance	Not Applicable	15
Electrical Services	Internal Electrical	Control Panel	20
		Digital Screens	10
		Digital Sign	10
		Distribution Board Local	20-30
		Distribution Board Main	30
		Down Lighting	15
		Downlights	20

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Component Description	Asset Group	Asset Type	Useful Life (years)
		Duress Alarm	15-20
		Large format Television	15
		Lighting	20
		Lighting Sensors	20
		Mechanical Services Switchboard	20
		Motorised blinds	15
		Multimedia conferencing system	15
		Oscillating Fan	10
		Switchboard	20
		Tannoy system	20
		Television	10-20
		Track Lighting	20
	Exit Sign (illuminated)	Not Applicable	10-12.5
	Emergency Lighting	Not Applicable	10
	External Electrical	Car Park Lighting	20
		Distribution Board Main	30
		Irrigation Board	30
		Lighting	20
		Park Lighting	20
		Site Main	30
		Transformer	40
	Exit Luminaire	Not Applicable	10
	PV System	Inverter switchboard	30
		Inverters	15
		PV System	20

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Component Description	Asset Group	Asset Type	Useful Life (years)
	HV Switchgear	Ring Main Unit	40
External Site	Wall Finish - External	Aluminium	30
		Colorbond	30
		Glass Block	30
		Lining - Other	20
		Tile	30
		Timber Weatherboard	30
		Zincalume	30
	Floor Finish	TGSI Indicators	30
		Tile	30
	Ceiling Finish	Lining - Other	30
	External Electrical	Lighting	15
	Paving	Concrete	30
	Paint - External	Not Applicable	15
	Hydraulic Services Assets	Bore aquifer rejection system	25
Fire Services	Fire - Portable	Extinguisher	10
		Fire Blanket	10
	Fire Services Assets	Fire Door	20
		Jockey / Jacking Pump	20
		Pump	20
		Pump Control	30
		Water Tank	40
	Fire - Fixed	Detectors	10
		Sprinkler System	30

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Component Description	Asset Group	Asset Type	Useful Life (years)
	Fire - Hydrant	Hydrant	30
		Sprinkler / Hydrant stop valves	30
	Doors - Internal	Fire Doorset - Double	20
	Panel	Not Applicable	20
	Doors - External	External	30
	Fire Hydrant Booster / Hard suction connection	Fire Hydrant Booster	30
	Fire - Backflow Preventer	Backflow Preventer	30
Fitouts and Fittings	Balustrade	Not Applicable	20
	Floor Finish	Windows - Internal	30
	Kitchen Facility	Fittings and Fixtures	40
		Fridge	10
		Ice Machine	12
		Not Applicable	10-20
		Oven	15
	Doors - Roller	Auto Roller	20
		Roller Shutter	20
	General Fittings	Defibrillator	20
		Drinking water fountain	20
		Fittings and Fixtures	15
		Glass balustrade and gate	25
		Hand Dryers	15
		Lockers	15-20
		Not Applicable	10-20

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Component Description	Asset Group	Asset Type	Useful Life (years)
	Doors - Auto	Auto Door	25
		Internal	20-25
	Doors - Internal	Cubicle doors	30
		Fire Door	50
		Internal	30-50
		Internal Cubicle Doors	30-50
		Powder Coated Glazed	30
		Sliding	30
	Toilet Facility	Ceramic	20
		Sink and Tapware	20
		Steel cleaners sink	30
	Doors - External	External	30
	Sink	Ceramic	20
	Sink and sensor tapware	Ceramic	20
	Boom Gate	Not Applicable	15
	Windows - External	Not Applicable	30
	Windows - Internal	Not Applicable	50
	Boiling/Cold water unit	Not Applicable	12
	Safety anchors	Man safe clip on style to the stadium	15
	Urinals	Urinals	20
	Shower Facility	Shower Assembly	20
	Drinking water fountain assembly	Not Applicable	12

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Component Description	Asset Group	Asset Type	Useful Life (years)
	Universal Access Toilet Facility	Universal Access Toilet Facility	20
	Sinks and Tapware	Ceramic	30
	Sink	Ceramic	20
	Gate	Not Applicable	20
HVAC Services	Ductwork	Not Applicable	30
	Supply/return air fan	Not Applicable	15
	Condensing Unit (AC Condenser)	Split condenser	15
	Supply Air Fan	Not Applicable	15
		Supply Air Fan	15
	Cool Room Condenser	Cool Room Condenser	15
	Condensing Unit (VRF)	VRF	15
	Split System	Cassette	15
		Not Applicable	15
		Wall Split	15
	Run Around Coil	Not Applicable	15
	Evaporative Cooler	Evaporative Cooler (Kitchen Make-up Air)	10
		Not Applicable	10
	Variable Speed Drive	Variable Speed Drive	15
	Thermostat	Thermostat	15
	Skylight compressor	Not Applicable	15

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Component Description	Asset Group	Asset Type	Useful Life (years)
	Exhaust Fan	Exhaust Fan	15
		Not Applicable	15
	Packaged Condensing Unit	Packaged AC / Make-up Air Unit	20
		Packaged unit	20
	Fan	HVLS Fan	20
	Kitchen Exhaust Fan	Kitchen Exhaust Fan	15
		Not Applicable	15
	Air Handling Unit	Not Applicable	20
	Return Air Fan	Not Applicable	15
	Fan Coil Unit	VRV Indoor Fan Coil Unit	15
Hydraulics Services	Hot Water Pump	Pump	10-15
	Water Storage Cylinder	Expansion Tank	20
		Storage cylinder	15
	Pumps	Pump Controller	15
	Water Heater	Gas Boilers	15
		Gas Storage Heater	15
	Hydraulic Services Assets	Pipework	30
		Potable Water Tank	20
		Potable Water Tank Pumps	15
Internal Site	Wall Finish - External	Cladding	30
	Floor Finish	Carpet	15
		Epoxy / Grit	15
		Rubber	15-20
		Softfall	15

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Component Description	Asset Group	Asset Type	Useful Life (years)
		TGSI Indicators	25-30
		Tile	40
		Timber	20
		Vinyl	15
	Paint - Internal	Paint	10-20
	Wall Finish - Internal	Folding Partition	20
		Lining - Acoustic	30
		Lining - Gyprock	20
		Lining - Other	20
		Lining - Vinyl	15
		Paint	10
		Plaster	20
		Plywood	20
		Steel Splashback	30
		Textile	30
		Tile	30
		Timber	30
		Wallpaper	15-20
	Ceiling Finish	Acoustic	20
		Lining - Acoustic	30
		Lining - Gyprock	20
		Lining - Other	20
		Lining - Prefinished metal	50
		Paint	10
		Painted CFC	20
		Suspended	20

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Component Description	Asset Group	Asset Type	Useful Life (years)
		Timber	20
	Windows - Internal	Windows - Internal	20
	Wall Finish	Lining - Gyprock	20
Lifts	Lift	Passenger Lift	25
		Wheelchair Lift	25
Roof	Wall fittings	Louvres	20
	Height Safety System	Not Applicable	20
	General Fittings	Skylights	30
	Roof Surface	Colorbond	20-50
	Roof	Mechanical Board	20
	Roof Fittings	Louvres	20
		Skylight	20
		Soffit	20
		Timber Soffit	20
		Walkway	50
Security Services	Security and Communication	CCTV Camera	10
	Access control	Access Control Auto Gate	20
		Access Control Challenger Panel	15
		Access Control Keypad	10
		Access Control Swipe	10

Table 10.8: Useful Life Component Classification Breakdown

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This information is available in alternative formats upon request.
Paper from responsible sources.

Document Set ID: 12839670
Version: 4, Version Date: 10/09/2026

City of Cockburn

Marina Asset Management Plan

2024–2028



www.cockburn.wa.gov.au

Document Set ID: 12674057
Version: 11, Version Date: 08/09/2026

Front cover page photo is taken at the Marina at North Coogee

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Asset Management Plan				
Document ID: 12674057				
Date	**Revision Details**	**Author**	**Reviewed**	**Approved**
Sept 2026	Final Version 2024 - 2028	Asset Services	Service Manager Infrastructure Assets	

Acknowledgement of country

The City of Cockburn acknowledges the Nyungar people of Beeliar Boodjar. Long ago, now and in the future they care for Country.

We acknowledge a continuing connection to Land, Waters and Culture and pay our respects to Elders, past and present.

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1 Executive summary

The City of Cockburn's community relies on a diverse portfolio of infrastructure assets, including roads, recreational facilities, buildings, parks, waste recovery, marina and beaches. The marina assets covered by this Asset Management Plan are valued at approximately $17 million.

The Asset Management Plan (AMP) provides a strategic framework for managing our community's infrastructure assets, ensuring they remain safe, reliable, and capable of meeting current and future demands. This AMP will help Council make informed decisions and provide stakeholders with guidance on the timing and cost of renewals.

1.1 Purpose of the plan

This AMP aims to:

- Provide a systematic approach to asset management
- Address critical risks associated with aging infrastructure and available funding
- Ensure infrastructure supports the community's social, economic, and environmental goals.

This AMP details information about the City's marina assets, as well as defining the Level of Service (LOS) and outlines the funding required to maintain this LOS over a 10-year planning period.

Funding gaps are highlighted between the planned and forecast expenditure, which assists in optimising expenditure on managing assets through the Long-Term Financial Plan (LTFP).

1.2 Asset description

The marina assets are:

- Boardwalks 297m
- Gangways and jetties 2,825m
- Piles 203
- Fuel pontoons 4
- Service lines 4,467m
- Service points 211
- Amenities, lighting, signage, bins, gates etc. 107
- Fences, railing and retaining walls 476m

The above infrastructure assets have a total renewal value estimated at $17,095,351. Refer to Section 5.1 for a detailed summary including replacement cost breakdown.

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1.3 Levels of service

Levels of Services are typically split into Customer and Technical and each have their own metrics which the City can measure its performance against.

The City's overall customer LOS objective is to maintain 70 per cent community satisfaction with marina assets, which is sustainable for the foreseeable future. However, risks and treatment costs should continue to be actively monitored due to the risk consequences involved.

The main service consequences of an insufficient planned budget are:

- Assets are not adequately maintained, renewed or upgraded to meet demand, resulting in a greater proportion of marina assets being in poor condition (i.e. Condition 4 or 5)
- An increasing number of assets become unfit for purpose, leading to a risk to the general public, reduction in usage and reduced revenue
- Marina capital projects cannot occur to meet service levels.

1.4 Future demand

The main demands for new services are created by:

- Population growth
- Customer interest and preferences.

These demands will be approached using a combination of managing existing assets, upgrading of 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. Examples of solutions to ensure the City's asset portfolio is sufficient to meet community need include:

- Manage existing assets through an appropriately prioritised Capital Works Program
- Ensure decisions to upgrade existing assets and construct new assets are supported with appropriate modelling to understand the long-term impacts
- Continue to monitor customer interest and preferences, making adjustments to suit demand e.g. larger pen sizes or catamaran pens
- Producing and regularly reviewing a 15 year strategic plan for the marina business.

1.5 Lifecycle management plan

How we plan to manage and operate the assets at the agreed LOS throughout their lifecycle is contingent on the 10 year LTFP. It is important to be aware of the Whole of Life (lifecycle) costs associated with assets, such as cost of construction, operation and maintenance costs, renewal and upgrade costs and disposal costs at end of life.

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1.5.1 What does it cost?

The lifecycle costs necessary to provide the services covered by this AMP include operation, maintenance, renewal and upgrade costs of existing assets, as well as the acquisition or construction of new assets to meet demand. Disposal of assets is also considered when it is no longer cost effective to continue to maintain an asset.

When lifecycle costs are prepared for a minimum 10 year planning period, they can be used to inform the 10 year LTFP. The first 10 year lifecycle forecast is estimated to cost $15,809,843 or $1,580,984 on average per year.

Depreciation is excluded from these cost estimates.

1.5.2 What we will do

The funding made available in the first 10 years' of the LTFP is $15,809,843 or $1,580,984 on average per year which is 100 per cent of the cost to undertake the lifecycle activities.

The reality is, only what is included in the LTFP can be funded. Informed decision making depends on the AMP emphasising the consequences of planned budgets on the LOS provided and communicating the residual risks to decision makers. It is important to ensure the organisation is delivering the services in a financially sustainable manner.

The current 10 year LTFP will not result in any identified shortfall. This is shown in Figure 1.1 – note the spike in 2028 is due to stage 4 marina expansion construction.

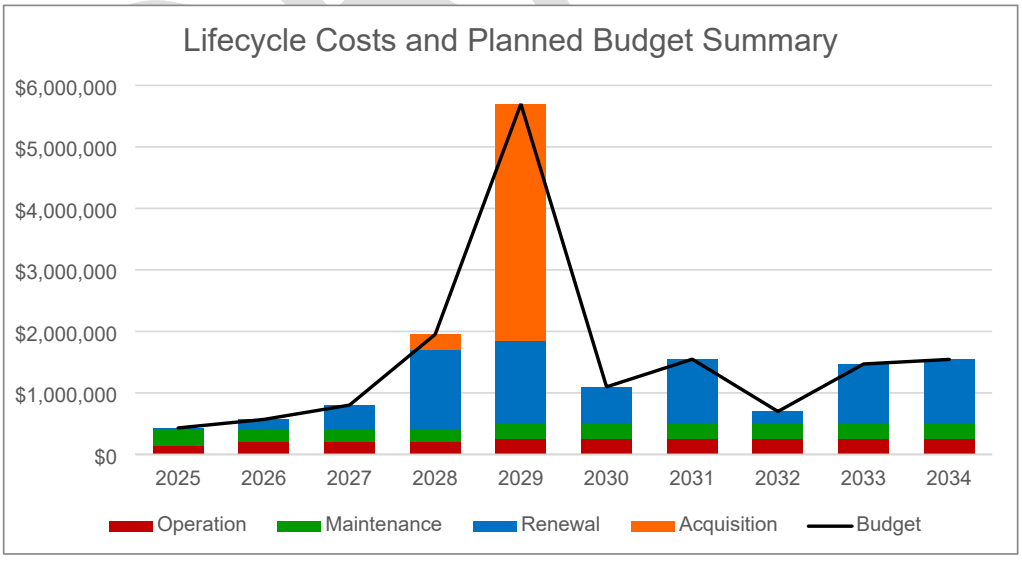


Figure 1.1: Forecast Lifecycle Costs and Planned Budgets

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We plan to provide marina asset services for the following:

- Operation, maintenance, renewal and upgrade of boardwalks, gangways, jetties and related assets to meet service levels set in annual budgets
- Completion of key marina renewals, upgrades and new construction projects within the 10-year planning period.

1.5.3 What we cannot do

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

- Providing adequate long term secure parking for the marina customers by acquiring assets.

1.6 Risk management

The current planned budget is sufficient to continue to manage risks for the foreseeable future, however continued monitoring is essential.

The main consequences if risks aren't adequately managed are:

- Reduction in vessel occupancy and revenue
- Injuries and vessel collision from structural failure
- Electrical shock / electrocution from unintentional mains contact with seawater
- Damage from a fuel fire
- Environmental harm from fuel spill
- Insurance claims, injuries, death
- Impact (reduction) in expected Levels of Service due to foreseeable adjacent impacts not being met (i.e. increased parking demand, insufficient facilities for guests and customers)
- Reputational damage.

Strategies and actions to manage these risks are discussed in Section 6.

1.7 Financial summary

Providing financially sustainable and affordable services from infrastructure requires the careful management of service levels, costs and risks.

The 10 year LTFP is $1,580,984 on average per year; the budget is sustainable for the foreseeable future.

Total asset values are forecast to increase as additional assets are added.

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1.8 Assumptions and improvement planning

Key assumptions made in this AMP are:

- Population and asset growth projections are accurate
- Condition data and age data are accurate
- AMP is based on 'Medium' level of confidence information
- Unit rates are representative of asset replacement costs
- Useful lives are an accurate representation of the behaviour of assets in the field and the City's practices in renewing/replacing assets at their end of useful life.

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

- Refine 10-year marina capital works program based on expert knowledge and the 10-year LTFP
- Ensure condition inspections collected on a regular cycle and suitably detailed to inform capital works and risk management in a manner acceptable to the City and its customers
- Review asset registers annually and as new assets are acquired, liaise with the City's Asset Management team, to ensure data is up to date and relevant.

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2 Introduction

2.1 Background

This AMP communicates the actions and necessary funds required to sustainably deliver services through the management of assets, compliance with regulatory requirements, and required funding to provide the appropriate LOS over the long-term planning period.

The AMP is to be read in conjunction with the City's Asset Management Policy and Asset Management Strategy, and the following strategic documents:

- City of Cockburn Strategic Community Plan 2025 – 2035
- City of Cockburn Corporate Business Plan 2024/25 – 2027/28
- City of Cockburn Annual Business Plan(s)
- City of Cockburn Long Term Financial Management Plan 2024/25 – 2033/34.

The infrastructure assets covered by this AMP include floating jetties, gangways, piles, boardwalks, services and other types. For a detailed summary of the assets covered in this AMP refer to Table 5.1 in Section 5. The jetty layout is indicated in Figure 2.1.

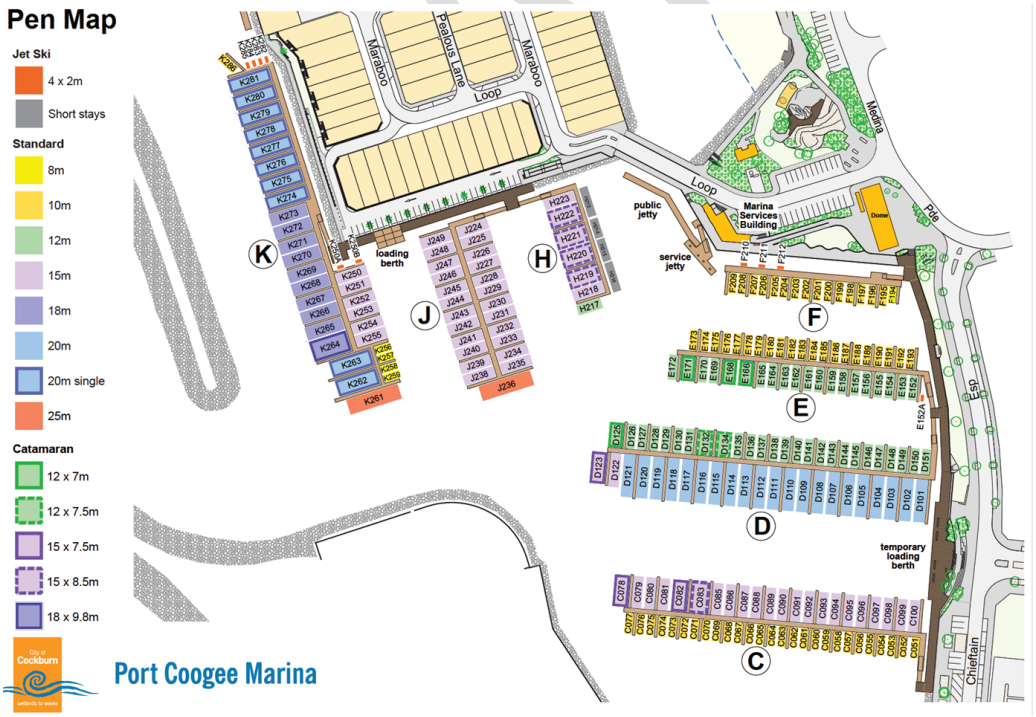


Figure 2.1: Jetty Layout

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These assets are used to provide access and connectivity for recreational boat users and have a total replacement value of approximately $17 million from the City's 2026 valuation.

2.2 Stakeholders

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

Key Stakeholder	Role in Asset Management Plan
The Elected Council	Represent needs of community/shareholders Allocate resources to meet planning objectives in providing services while managing risks Ensure service sustainable.
Chief Executive Officer (CEO)	Organisational direction and leadership
Executive Leadership Team (ELT)	Executive management endorsement, sign off and executive ownership
Group Manager Assets and Projects	Review and strategic management sign off
Group Manager Recreation and Place	Review and strategic management sign off
Service Manager Infrastructure Assets	Review and line management sign off
Service Manager Recreation Services	Input to, and delivery of, AMP
Port Coogee Marina	Input to, and delivery of, AMP
Infrastructure Asset Services	Asset Management Plan development, review, continuous improvement and implementation of the AMP maintenance actions
Insurers	Assist to manage financial risk of the City
City of Cockburn Community Port Coogee Community Association	Service and facility users
Marina Pen Holders	Service and facility users
City of Cockburn Businesses	Service and facility users

Key Stakeholder	Role in Asset Management Plan
CoSafe Rangers Emergency Services Water Police Marine Rescue Cockburn Department of Fire and Emergency Services (DFES) Maritime Environmental Emergency Response (MEER)	Attendance to call-outs and security
Government Agencies Department of Transport Department of Lands	Attend emergencies, provide assistance and security

Table 2.1: Key Stakeholders in the AMP

2.3 Principles, goals and objectives of asset management

The principles of asset management as per the International Standards for asset management are:

- **Value**: asset management focuses on the value assets provide to the organisation over time
- **Alignment**: asset management aligns financial, technical and operational decisions with the organisational objectives, promoting vertical and horizontal coordination
- **Leadership**: leadership and sustained commitment at all levels are crucial for successful asset management
- **Assurance**: Having confidence that the assets will consistently deliver their intended purpose and meet organisational objectives. It includes managing risks and ensuring that the assets are reliable and will perform as expected.[1]

Our goal for managing infrastructure assets is to deliver the defined LOS (as amended from time to time) in the most cost-effective manner for present and future consumers.

[1] ISO 55000:2024 Asset Management – Vocabulary, overview, and principles

The key objectives of infrastructure asset management as defined by the International Infrastructure Management Manual are:

- Defining levels of service and monitoring performance
- Managing the impact of growth through demand management and infrastructure investment
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service
- Identifying, assessing and appropriately controlling risks
- Linking to a LTFP which accommodates the required expenditure and how it will be funded.[2]

2.4 Plan framework

The 2024 - 2028 Marina AMP has been developed in accordance with the International Infrastructure Management Manual (IIMM) and complies with Department of Local Government & Communities Asset Management Framework.

As part of the City's Strategic Asset Management Planning Framework (SAMPF), the Marina AMP will be developed every 4 years and be subject to a 2-year desktop review. This AMP review will focus on core elements required by the LTFP, which are derived by the Department of Creative Industries, Tourism and Sport (CITS) through the Integrated Planning and Reporting Framework (IPRF) – see Table 3.3. These include asset valuations, growth projections, financial analysis including operating, sustainability ratios and 10-year renewals. This will ensure that future revisions of the LTFP will be derived from a structured AMP development cycle that has received Executive and or Council approval, increasing confidence and integration of asset management data and methodologies into the City's long term financial planning and adopted service levels.

Figure 2.2 provides a visual representation and timeline of the SAMPF.

[2] IPWEA International Infrastructure Management Manual (IIMM), Sec 1.2.1

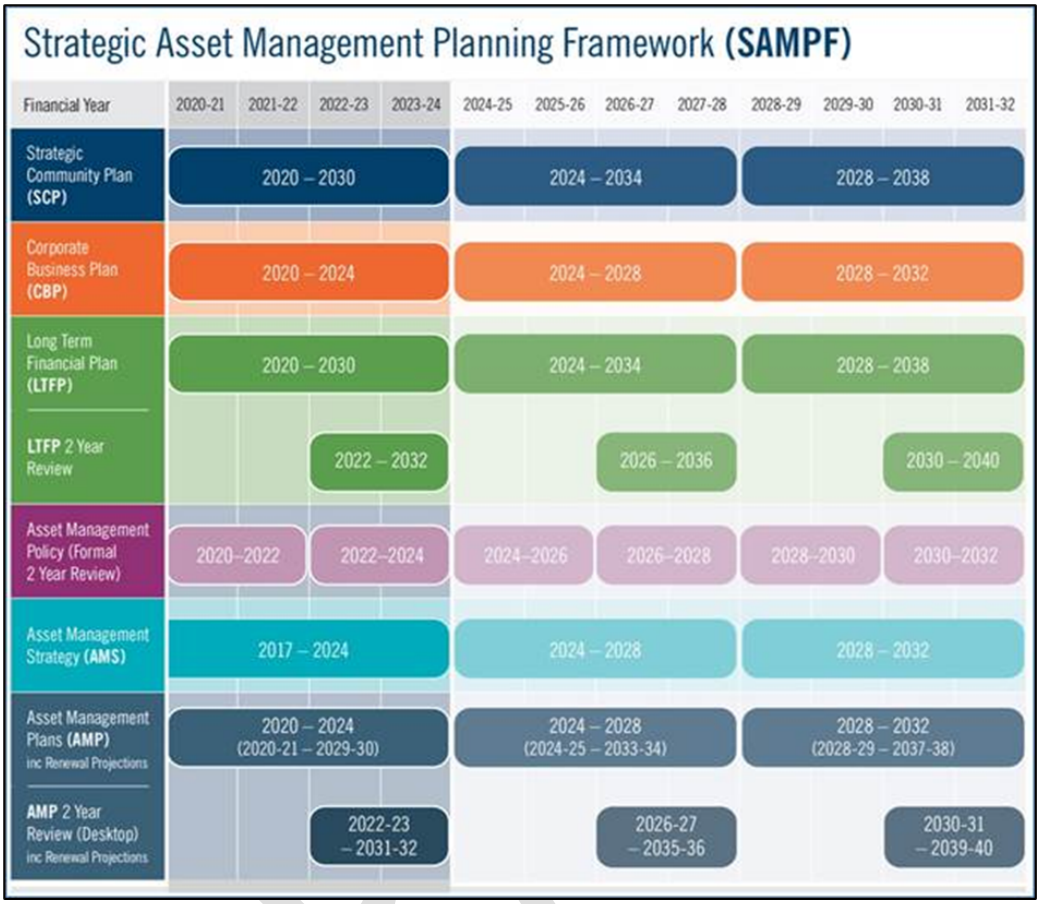


Figure 2.2: Strategic Asset Management Planning Framework (SAMPF)

- Level of Service – outlines the level of service provided by council
- Enterprise Risk Management – identifies risks to the city
- Future Growth and Demand how this will impact on future service delivery and how this is to be met
- Lifecycle Management – how the city will manage its existing and future assets to provide the required services
- Financial Analysis – what funds are required to provide the required services
- Asset management practices – current systems and practices in place
- Improvement and monitoring – how the plan will be monitored and improved to ensure it is meeting Council's objectives.

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2.4.1 Corporate planning framework

The formalisation and alignment of the City's SAMPF within the Corporate Planning Framework reflects the City's increasing maturity and recognises the importance of Asset Management in supporting the City in delivering long term financial sustainability of services and capital asset renewal.

With the continued implementation of the SAMPF, the City will commence measuring service levels for planned and reactive maintenance to determine operational performance and asset utilisation.

The City strives to improve its strategic and operational asset management practices and to continue its journey towards advanced asset management. The Department of Local Government, Sport and Cultural Industries (DLGSC) has developed the Western Australia Local Government Integrated Planning and Reporting Framework. Accordingly, the future direction and need for advanced level practices are continually assessed.



Figure 2.3: City's Corporate Planning Framework

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3 Levels of service

Levels of service define the standards and performance targets that infrastructure assets are expected to meet to ensure they provide reliable, safe, and efficient services to the community.

3.1 Customer research and expectations

The City carries out the Customer Satisfaction Survey for the Port Coogee Marina on an annual basis. This allows the City to measure its performance against customer expectations.

The most recent Customer Satisfaction Survey was undertaken in September 2025 by an external provider. Surveys were sent out to current and previous pen holders. There were 49 respondents.

Overall satisfaction with the marina was 79.1 per cent. Table 3.1 summarises the results from our Customer Satisfaction Survey.

Performance Measure	Satisfaction (%)
Politeness and courtesy of staff	91.5
Cleanliness of jetty areas	87.5
Ease of navigation within the marina	87.8
Long-term/overnight parking	43.8
Security of boats and equipment	65.1

Table 3.1: Customer Satisfaction Survey Levels

3.2 Strategic and corporate goals

This AMP is prepared to align with the City's vision, mission, goals and objectives.

Our vision is:

Cockburn, the best place to be.

Our mission is:

Support our communities to thrive by providing inclusive and sustainable services which reflect their aspirations.

Strategic goals have been set by the City and are found in the City's Strategic Community Plan. The relevant goals and objectives and how these are addressed in this AMP are summarised in Table 3.2.

Strategic Outcome	Strategic Objective	Deliverable	Measure
Our Economy Attracting investment, supporting business and visitor growth and boosting local jobs through vibrant hubs.	1B. Empower and support local businesses	Ensure marina meets the needs of local businesses operating services from it	Customer survey results
Our Environment Valuing natural assets, building climate resilience and using resources sustainably.	2A. Protect and enhance our natural areas and streetscapes.	Protect marina from pollution	Customer survey results Compliance with Department of Environmental Regulation
	2C. Enhance climate resilience and champion environmental initiatives to mitigate impacts.	Protect marina from rising sea levels and stronger storm surge and storm events	Customer survey results
Our Community Our community feels safe, secure and connected and is active and healthy.	3A. Strengthen and facilitate a safe and secure Cockburn.	Ensure marina assets do not pose a hazard	Customer survey results
		Manage theft and vandalism with CCTV	Customer survey results
Our Places Enhancing distinctive, liveable areas with well-connected, safe transport options.	4A. Plan for growth and sustainable development.	Ensure pen availability meets demand	Customer survey results
	4B. Strengthen unique, liveable and adaptive spaces.	High quality, attractive marina design assets with 'wow factor'	

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Strategic Outcome	Strategic Objective	Deliverable	Measure
	4C. Enhance connectivity and mobility through integrated transport networks.	Ensure marina provides adequate access and connectivity from road/path to ocean	
Our Governance Transparent leadership that listens, communicates openly and plans for a sustainable future.	5D. Strive for financial sustainability and operational excellence.	Ensure adequate funding to meet agreed service levels, optimise lifecycle cost	Asset Renewal Funding Ratio
	5B. Strengthen engagement and communication and enhance customer experience.	Negotiate marina levels of service vs cost with the community and businesses	Customer survey results and feedback Business surveys

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

3.3 Legislative requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the marina service are outlined in Appendix G.

While no longer a legislative requirement, the Asset Management Ratios are reasonable performance indicators of the ongoing financial sustainability of assets. The targets for these ratios are set by the Department of Creative Industries, Tourism and Sport (CITS) through the Integrated Planning and Reporting Framework (IPRF). The calculation methodology and targets for these ratios are outlined in Table 3.3.

Asset class	Consumption ratio	Sustainability ratio	Renewal funding ratio
Description	How much has the City used of its assets?	Is the City replacing assets as they wear out?	Is the City setting aside sufficient future funding for asset renewals?
Calculation	Depreciated replacement cost / current replacement cost	Capital renewal (one year) / annual depreciation (one year)	Planned capital renewal (10 years) / required capital renewal (10 years)

Asset class	Consumption ratio	Sustainability ratio	Renewal funding ratio
Target	50-75% standard 60-75% ideal	90-110% standard	75-95% standard 95-105% ideal
What it means	Lower than standard = assets are deteriorated and will result in a poor level of service Higher than ideal = assets are being replaced too early resulting in poor value for money*	Lower than standard = the City is under investing in asset renewal/replacement resulting in a poor level of service Higher than standard = the City is over investing in asset renewal/replacement resulting in poor value for money*	Lower than standard = the City is allocating too little funding to long term asset renewal/replacement which will result in a lower level of service in future Higher than ideal = the City is allocating too much funding to long term asset renewal/replacement which will result in poor value for money in future

Table 3.3: Asset Ratios

3.4 Customer values

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

Customer Values indicate:

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

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Customer Values	Customer Satisfaction Measure	Customer Feedback	Expected Trend Based on Planned Budget
Facilities	Annual customer satisfaction survey Complaints	Recurring themes for improved parking Concerns about security and unauthorised access (e.g. kids fishing inside gated area) Frustration with dust and particles from nearby construction	Recurring themes
Customer Service		Improve communication Improved personality and responsiveness	Maintain – ensure adequate resourcing maintained
Healthy waterways		Rubbish and algal blooms mentioned as issues in 2024 survey	Waterway health becoming a more significant issue

Table 3.4: Customer Values

From 2021 to 2024 the Customer Satisfaction Survey was completed by Research Solutions and was more detailed.

3.5 Customer levels of service

The Customer Levels of Service are considered in terms of:

Condition How good is the service … what is the condition or quality of the service?

Function Is it suitable for its intended purpose …. Is it the right service?

Capacity/Use Is the service over or under used … do we need more or less of these assets?

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

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

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Overall	Community satisfaction of 70% or greater with the City's marina assets.	Annual customer satisfaction survey - Marina	Overall satisfaction of 79.1%	Maintain
Condition	Complete condition assessment of all marina assets at least every five (5) years	Dates between condition assessments of marina	Condition inspections for all marina assets every five (5) years via a rolling annual program	Maintain
	Maintain at least 80% of the City's marina assets in Condition 3 or better.	Condition assessment scores	Percentage of marina assets in condition 3 or better by replacement cost is 98%	Maintain >80%
	Confidence levels		Medium (Professional judgement supported by data sampling)	Low (Professional Judgement with no data evidence)
Function	Suitability of marina assets (i.e. are the City's marina assets 'fit for purpose'?)	Suitability of pen sizes for demand	Pen sizes are being matched according to customer demand (refer Stage 4 Marina Expansion Business Case)	Maintain
	Confidence levels		High (Professional Judgement supported by extensive data)	High (Professional Judgement supported by extensive data)

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Capacity	Availability of marina pens	Pen capacity vs occupancy	The marina had a waitlist of approximately 235 pens in 2025, when the Stage 4 Expansion Business Case was developed. The expansion will allow for 154 total pens.	Maintain
	Parking	Number of parking places vs usage AS 3962 Marina Design 0.25 car bays per marina pen	Marina business case strongly emphasises parking – 75 bays was suggested. Constructing parking bays close to the marina pens an ongoing planning issue.	Maintain
	Confidence levels		High (Professional Judgement supported by extensive data)	Low (Professional Judgement with no data evidence)

Table 3.5: Customer Level of Service Measures

3.6 Technical levels of service

Technical Levels of Service – To deliver on the customer values, and impact they have on Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the lifecycle activities (see Section 5) and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

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

Table 3.6 shows the lifecycle activities related to the current 10 year planned budget, and the forecast costs recommended in this AMP.

[3] IPWEA, 2015, IIMM, p 2|28.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Acquisition	Provide new marina infrastructure as required	Ability to support future demand and vessel sizes via business planning for marina expansion and 15 year strategic plan. Build marina pens to keep up with demand	Demand exceeds supply of marina pens (refer Business Case)	Stage 4 expansion FY28
		Budget	$410,000 average per annum	$410,000 average per annum
Operations	Keep marina office open	Opening hours	Office hours are M-F 8:30am-4:30pm	Open the marina on weekends to support peak boating use and create presence to deter fishers and unauthorised activities.
	Maintain up to date condition data	Frequency of condition inspections	Complete condition assessment every 5 years for each asset	Current inspection frequency is sufficient
	Regular maintenance inspections	Frequency of maintenance inspections	Annually	Current inspection frequency is sufficient
		Budget	$232,296 average per annum	No issues identified

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Maintenance	Keep marina assets safe, usable and attractive	Frequency of specialist maintenance	Annual maintenance by contractor as per contract scope of works	Review and ensure all significant risks are captured and managed in a manner acceptable to customers and the City Review and streamline processes for improved efficiency and transparency
		Budget	$227,099 average per annum	No issues identified
Renewal	Keep assets in satisfactory and safe condition	Proportion of marina assets in “poor” or “very poor” condition	2%	Manage risk as per Section 6
	Allocate sufficient medium and long term renewal funding	Asset renewal funding ratio	100	100%
		Budget	$711,589 average p/a	$711,589 average per annum
Disposal	Dispose of assets that are no longer required	Assets disposed of when opportunities identified	Nil allocated due to nil disposal opportunities identified	Continue reviewing opportunities to dispose of assets
		Budget	$0 per year	$0 per year

Table 3.6: Technical Levels of Service

Note: * Current activities related to planned budget.
** Expected performance related to forecast lifecycle costs.

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

4 Future demand

Future demand refers to the effects on infrastructure assets services driven by factors such as population movement, economic development, technological advancements, and changing environmental or community expectations.

4.1 Demand drivers

A demand driver refers to the factors or trends that influence the need for infrastructure services and capacity. Some examples of factors influencing future demand include (but are not limited to):

- Population growth
- Changing demographics
- Industry development/changes in technology
- Legislation changes.

Demand drivers help predict future infrastructure needs and guide planning and investment decisions.

4.2 Demand forecasts

The current position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 4.1.

4.3 Impacts and demand management plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.1.

The impact on service delivery will be managed through a combination of managing and upgrading existing assets and the provision of new assets to meet demand. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to manage demand are shown in Table 4.1. Further opportunities will be developed in future revisions of this AMP.

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Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Population	133,869 as at 2025 (id 2025)	177,920 by 2046	Increased demand for provision of new mooring facility assets, marina parking and traffic requirements	Acquisition of assets as required Ensure operations, maintenance and renewal budgets keep up with an expanding asset base
Customer preference	Mostly 12m pens	Expected popular demand for 15m + pens, as well as catamaran pens.	Requirements to accommodate certain pen sizes as a part of future pen layout plan	Construct pen sizes as per Business Case
Customer interest	Waiting lists for pens	Consideration for 32 additional pens, then at capacity	Additional demand for pens	Acquisition of assets as required Ensure operations, maintenance and renewal budgets keep up with an expanding asset base
Neighbouring commercial businesses	Construction zones	Continued development	Increased demand on marina infrastructure through increasing visitor numbers	Acquisition of assets as required Ensure operations, maintenance and renewal budgets keep up with an expanding asset base

Table 4.1: Demand Management Plan

4.4 Asset programs to meet demand

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

Acquiring new assets will commit the City to ongoing operations, maintenance and renewal costs, and depreciation expenses for the period that the service provided from the assets is required. These future costs and expenses are identified and considered in developing the long-term financial plan.

4.5 Climate change adaptation

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

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

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

Risk and opportunities identified to date are shown in Table 4.2.

Climate change risk	Projection	Impact on services	Climate Change Management Plan
Raised seawater levels and stronger storm surge	Varies but 1m after a century plausible	Access may be severely affected, increased corrosion risk for coastal assets	Plan and budget for permanent raising, floating platforms etc
Hotter temperatures during summer months	Average 3 degrees predicted but more extreme variation	Reduced fuel quality, especially on hot days, when demand is highest	Protection of fuel from excessive heat through asset upgrades if required

Table 4.2: Managing the Impact of Climate Change on Assets and Services

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

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

Table 4.3 summarises opportunities to build climate change resilience into new and existing assets.

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

Asset Description	Climate Change Impacts to Marina Assets	Resilience Plan for New Assets	Resilience Plan for Existing Assets
Marina	Sea level rise and storm surge	Design for appropriate storm surge height	Ensure adequate corrosion protection, considering higher sea level especially during storm surges. Review pile heights and services installation levels.

Table 4.3: Building Climate Change Resilience into New Assets

The impact of climate change on new and existing assets is evolving and new opportunities will be developed in future revisions of this AMP.

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5 Lifecycle management plan

The lifecycle management plan details how the City plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) throughout their entire lifecycle, from acquisition or creation to disposal. The goal is to maximise the value of the assets while minimising costs and risks, ensuring they continue to meet performance requirements over time.

From a financial perspective, infrastructure activities tend to be classified as being either Operating or Capital. The lifecycle activities used in the asset management and financial planning and reporting process cover:

Capital Expenditure:

- **Acquisition** – the activities to provide a higher level of service (e.g., widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library)
- **Renewal** – the activities that replace or restore assets to the standard it had originally provided (e.g., road resurfacing and pavement reconstruction, pipeline replacement and building component replacement)
- **Disposal** – the decommissioning, removing, or repurposing of assets that are no longer cost-effective, safe, or necessary (e.g. shutting down an old water treatment plant, demolishing unsafe buildings, dismantling old bridges, etc.).

Operating Expenditure:

- **Operations** - the routine activities that keep services accessible and effective, balancing efficiency with user expectations (e.g. road sweeping, mowing grass, energy, inspections, etc.)
- **Maintenance** – the preventative and corrective actions to sustain asset functionality and minimise unexpected failures. Maintenance activities enable an asset to continue providing service for its useful life (e.g., road patching, pothole repairs, unsealed road grading, crack sealing).

A pictorial representation of the asset lifecycle activities is shown below in Figure 5.1.

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Figure 5.1: Asset Lifecycle Activities

5.1 Background data

5.1.1 Physical parameters

The assets covered by this AMP are shown in Table 5.1.

Asset Category	Asset Group	Asset Type	Qty (No.)	CRC ($)
Transport	Light Lumin	Feature Shelter	4	1,400
		Feature Wall	28	12,700
		Floodlight	3	9,000
		Sensor Light	12	6,000
	Light Pole	Pole Floodlight	3	37,260
	Signs	CoSafe Security	1	223
		Information	3	668
		Project	2	3,932
		Warning	2	446

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Asset Category	Asset Group	Asset Type	Qty (No.)	CRC ($)
Open Space	Amenities	Bicycle Rack	2	6,371
		Drink Fountain and Dog Bowl	1	5,433
		Park Seat	14	13,838
	Bins	Plastic	5	560
		Plastic with Steel Casing	2	16,800
		Sea Bin	1	5,500
		Steel and Aluminium Double	2	10,000
		Timber	1	4,400
		Timber and Steel Double	1	5,000
		Timber and Steel Single	4	10,000
	Boardwalk	Timber	2	5,287,679
	Fence	Wire and Balustrade	3	37,455
		Steel Railing	3	44,600
		Retaining Wall	1	13,500
	Gates	Security	5	301,749
	Minor Structure	Light Frame	11	21,890
Marina Specific	Gangways and Floating Jetties	Access Gangway	10	371,364
		Central Jetty	75	3,147,773
		Finger Jetty - 7.5m	26	429,000
		Finger Jetty - 10m	81	1,643,695
		Finger Jetty - 12m	34	851,520
		Finger Jetty - 15m	20	519,000
		Fuel Pontoon	4	343,724
		Public Jetty	1	95,520
	Piles	Boardwalk Piles	80	1,040,000

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Version: 11, Version Date: 08/09/2026

Asset Category	Asset Group	Asset Type	Qty (No.)	CRC ($)
		Jetty Piles	123	1,761,562
	Service Lines	Electrical Cables	16	83,818
		Fire Service	5	25,148
		Fuel Line	2	30,000
		Water Service	28	364,590
	Service Points	Emergency Cabinet	6	1,953
		Fire Hose	39	23,194
		Fire Hydrant	25	50,200
		Fuel Pumps	4	44,700
		Pay Station	1	1,000
		Portable Loo Empty	1	32,250
		Service Bollard	129	375,157
		Spill Kit	6	3,780
Total			832	17,095,351

Table 5.1: Assets covered by this Plan

As at August 2025, the City was responsible for maintaining approximately 832 marina assets.

An important distinction in the management of assets is the difference between ‘Design Life’ and ‘Useful Life’.

Design Life refers to the length of time an asset is design to last, based on engineering standards, analysis, testing and reporting.

Useful life is the length of time an asset is used. For example, the typical design life for a floating jetty is around 25 years, however, the timeframe it is actually occupied may be much longer than this due to applying ongoing maintenance to get more life out of the floating jetty than it was initially designed for. The modelling in this AMP considered Useful Life.

The age profile of the assets included in this AMP are shown in Figure 5.2.

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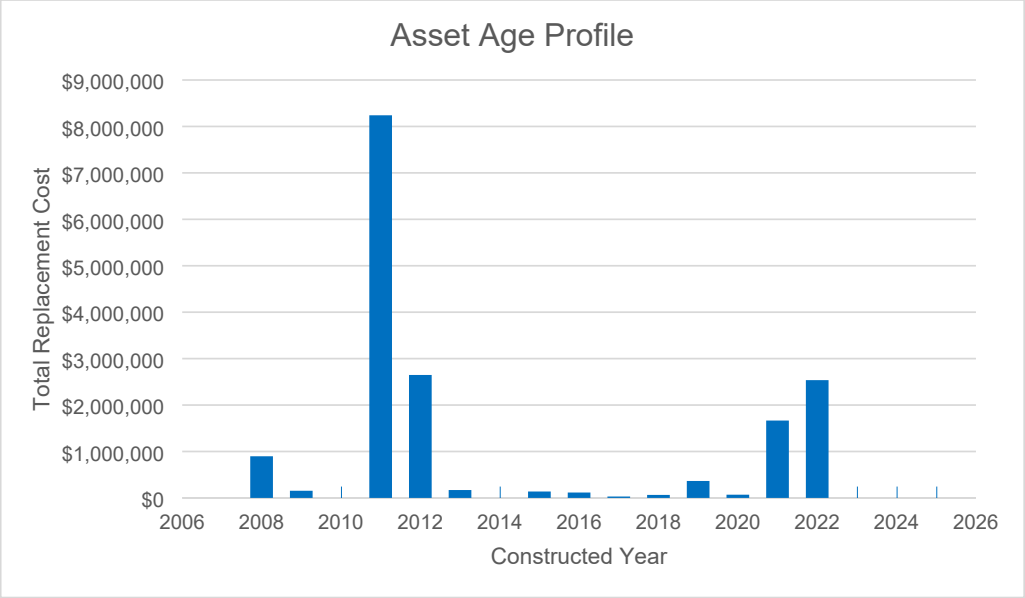


Figure 5.2: Asset Age Profile

The marina was initially constructed in about 2005 and has been expanded upon since.

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 5.2.

Location	Service Deficiency
Marina	Not enough pens to accommodate demand. Prospective customers will need to find an alternative even when marina expanded to full capacity.
Marina	Insufficient parking. If approx. 75 parking bays cannot be constructed by the City, will need to identify private leasing opportunities.

Table 5.2: Known Service Performance Deficiencies

The above service deficiencies were identified from operations staff and waiting lists.

5.1.3 Asset condition

A contract is in place for rolling annual inspection, maintenance and condition inspections of marine assets owned by the City. A scope of works clearly defines

which assets to inspect, in consultation with the contractor. The last inspection was completed in 2025. It is recommended to review the inspection regime; refer to the Improvement Plan. In particular, many assets built prior to 2021 do not appear to have been inspected since 2021 or have any record of inspection – the total replacement value of such assets is about $2.2 million.

Condition is measured using a 1 – 5 grading system[5] as detailed in Table 5.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AM plan results are translated to a 1 – 5 grading scale for ease of communication.

Condition Grading	Description of Condition
1	Very Good: free of defects, only planned and/or routine maintenance required
2	Good: minor maintenance required plus planned maintenance
3	Fair: defects requiring regular and/or significant maintenance to reinstate service
4	Poor: significant defects, renewal/rehabilitation required
5	Very Poor: physically unsound and/or beyond rehabilitation, immediate action required. Asset is at end of useful life.

Table 5.3: Condition Grading System

The condition profile of our marina assets is shown in Figure 5.3.

[5] IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

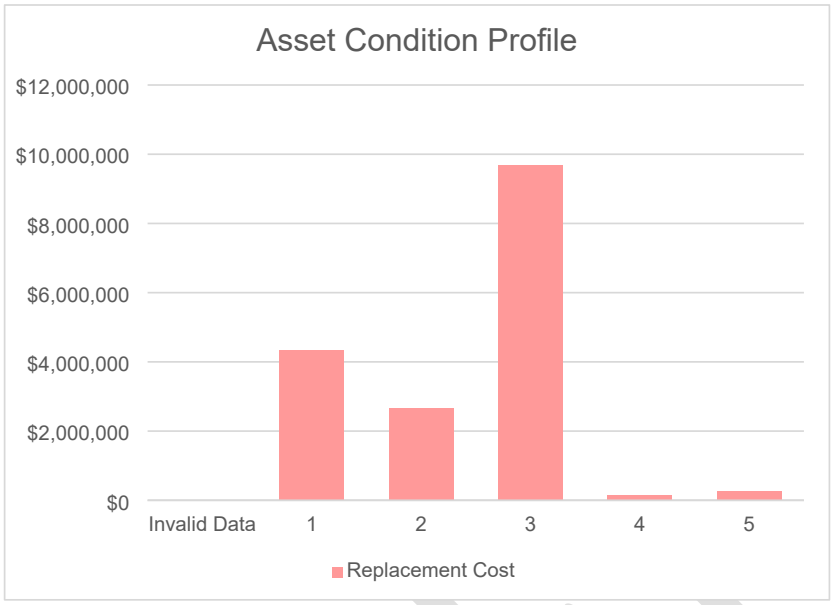


Figure 5.3: Asset Condition Profile

The City's marina assets are generally in Average condition, with 57 per cent of the assets rated as such. The challenge will be to either ensure there is enough funding to maintain the current service levels or to adjust agreed levels of service. Annual monitoring is being carried out and will continue to be essential. Useful lives should be reviewed regularly, in lieu of accurate recording of construction and renewal dates as well as condition.

5.2 Operations and maintenance plan

For the purpose of modelling within this AMP, the following definitions apply:

Reactive maintenance is unplanned maintenance work carried out in response to service requests and management/supervisory directions. Examples include electrical repairs, plumbing repairs, security system repairs and sign replacement.

Planned maintenance is work that is identified and managed through a maintenance schedule. Examples include planned electrical maintenance, plumbing, security system maintenance, fire protection system maintenance etc.

Operating expenditure is continuously required expenditure required to keep the asset functional. Examples include electricity, water supply, rubbish collection, pest control, cleaning, security system running costs, graffiti removal etc.

The trend in maintenance budgets are shown in Table 5.4.

Financial Year	Total Maintenance Expenditure ($)	Total Operating Expenditure ($)
2018/19	246,340	236,671
2019/20	149,448	260,988
2020/21	141,402	239,467
2021/22	133,514	246,451
2022/23	149,372	172,241
2023/24	260,849	175,224
2024/25	264,533	135,671

Table 5.4: Maintenance and Operating Budget Trends

These previous Operating and Maintenance budget levels are considered to have been adequate to meet service levels. Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement.

5.2.1 Asset hierarchy

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

The service hierarchy is shown is Table 5.5.

Service Hierarchy	Service Level Objective
Boardwalks	Access to the marina, connectivity with road reserve and parking
Gangways and Central Jetties, Supporting Piles	Connectivity with finger jetties
Finger Jetties	Provide access to pen holders boats – direct primary service access point
Amenities, lighting, signage, bins, fencing, gates, service lines, service points	Supporting services, safety and security

Table 5.5: Asset Service Hierarchy

5.2.2 Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.4 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance planned budget.

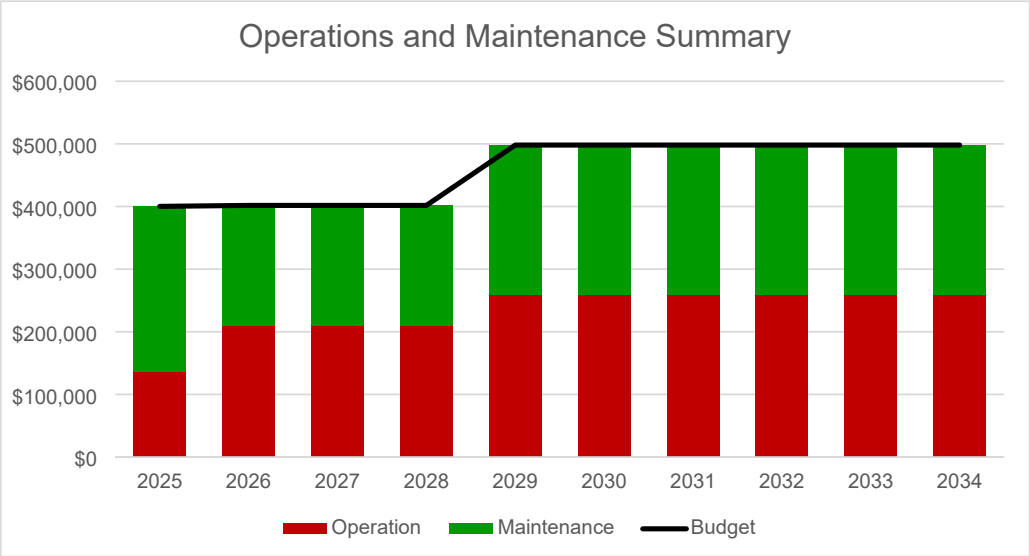


Figure 5.4: Operations and Maintenance Summary

All figure values are shown in current day dollars.

5.3 Renewal plan

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

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

- The first method uses Asset Register data to project the renewal costs (replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year), or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 5.6. Asset useful lives were last reviewed in 2020.

Asset Group	Asset Classification	Useful Life (years)
Marina Specific	Fire hoses, fire hydrants	10
	Fuel payment terminal	15
	Sullage facility, spill kits, light frames	20
	Access gangways, jetties, emergency cabinets	25
	Fuel lines	30
	Fuel dispensers	35
	Fuel tanks, electrical, fire service lines, fuel and water services and service pillars	40
	Boardwalk and jetty piles	50
Open Space	Seats	10
	Rubbish bins	13
	Rail fences, security gates, bicycle racks	15
	Sea bin and steel frames	20
	Chain wire fences	25
	Boardwalk	30
	Gatehouses	40
Signs and Lighting	Signs and light lumens	15
	Light poles	25

Table 5.6: Useful Lives of Assets

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a boardwalk or jetty that has a load limit), or

- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a light lumen).[6]

Renewals are prioritised by identifying assets or asset groups that:

- Have a high consequence of failure
- Have high use and subsequent impact on users would be significant
- Have higher than expected operational or maintenance costs
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.[7]

The ranking criteria used to determine priority of identified renewal proposals are detailed in Table 5.7.

Criteria	Weighting (%)
Condition	70
Criticality, i.e. consequence of failure	25
Necessary to improve efficiency/expenditure	5
Total	100

Table 5.7: Renewal Priority Ranking Criteria

5.3.2 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.5. A detailed summary of the forecast renewal costs is shown in Appendix D.

[6] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

[7] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

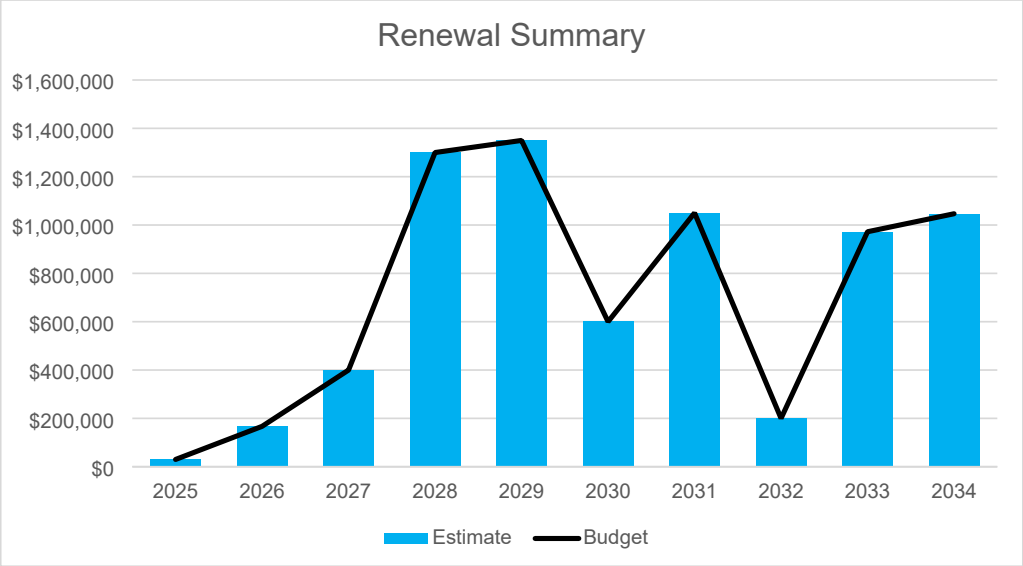


Figure 5.5: Forecast Renewal Costs

Deferred renewal (assets requiring renewal and not scheduled in capital works programs) should be included in the risk analysis process in the risk management plan.

5.4 Acquisition plan

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its original service level. They may result from growth, demand, social or environmental needs. Assets may also be donated to the City by developers or third parties.

5.4.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to meet strategic needs of the community. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in Table 5.8.

Criteria	Weighting (%)
New asset requirement identified in strategic documentation (e.g. Strategic Community Plan, Corporate Business Plan, Marina Expansion Business Case)	50
Strong community demand (e.g. community group, petition, etc.).	25
Supported by empirical data such as population growth data, approved developments, gap in agreed level of service, etc.	25
Total	100

Table 5.8: Acquired Assets Priority Ranking Criteria

5.4.2 Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised in Figure 5.6 and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix A. Presently, the only acquisition planned is the final marina expansion in 2029.

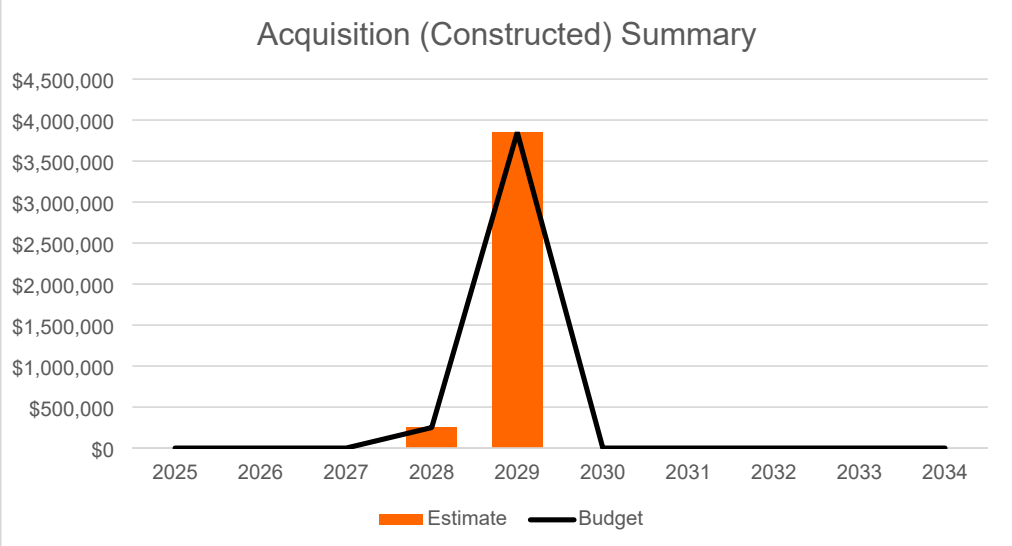


Figure 5.6: Acquisition (Constructed) Summary

Amounts are shown in real values (i.e., current values, net of inflation).

When the City of Cockburn commits to new assets, we must be prepared to fund future operations, maintenance and renewal costs. We must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity. The cumulative value of all acquisition work, including assets that are constructed and contributed, is shown in Figure 5.7.

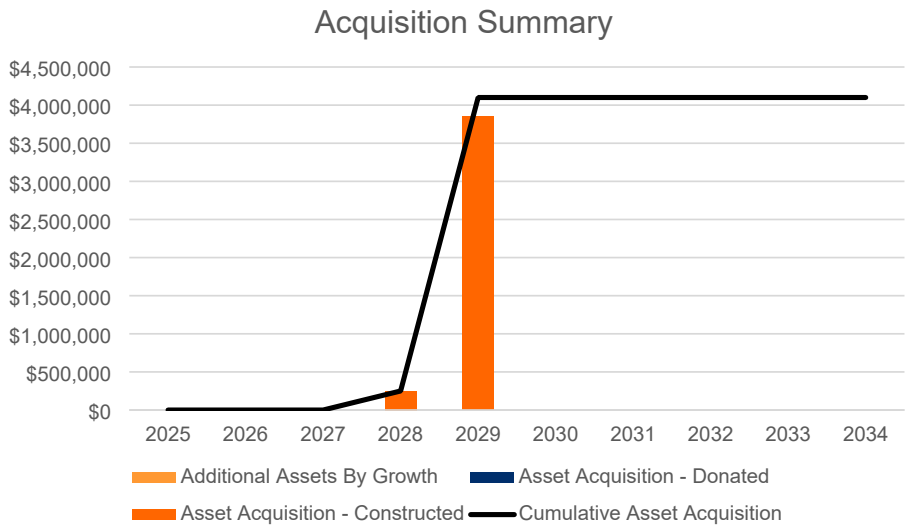


Figure 5.7: Acquisition Summary

Amounts are shown in real values (i.e., current values, net of inflation).

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

Marina expansion is anticipated to happen in 2029. This will commit the City to ongoing operations, maintenance and renewal. This will be covered by pen fees.

5.5 Disposal plan

No assets have been identified for disposal.

5.6 Summary of lifecycle costs and planned budget

The financial projections from this asset plan are shown in Figure 5.8. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

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

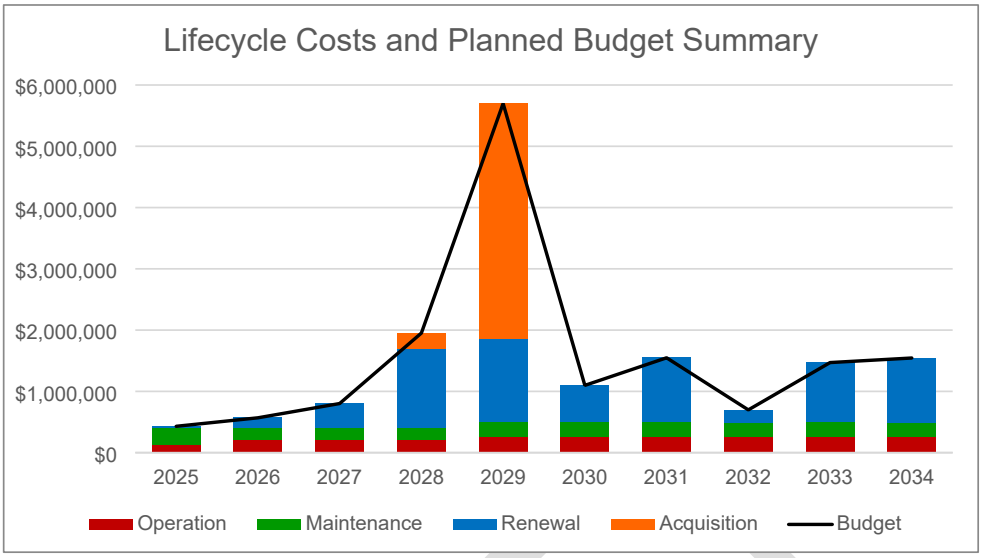


Figure 5.8: Lifecycle Costs and Planned Budget Summary

Overall, the proposed levels of service are affordable. However, as discussed previously, accurate expenditure planning will assist with the LTFP.

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6 Risk management planning

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

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'[8].

An assessment of risks[9] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical assets

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

Critical Asset(s)	Failure Mode	Impact
Boardwalks and Central Jetties	Damage from weather, corrosion	Loss of access to connected finger jetties
Marina electrical services	Deterioration in harsh marine environment leading to damage and safety risks	Loss of services, electrical hazard
Marina water supply	Deterioration in harsh marine environment leading to damage	Disruption to ability to respond to emergencies, e.g. vessel fire

[8] ISO 31000:2009, p 2

[9] Enterprise Risk Management

Critical Asset(s)	Failure Mode	Impact
Marina Building	Deterioration in harsh marine environment leading to damage and safety risks	Unable to administer marina business

Table 6.1: Critical Assets

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

6.2 Risk assessment

The risk management process used is shown in Figure 6.1 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.

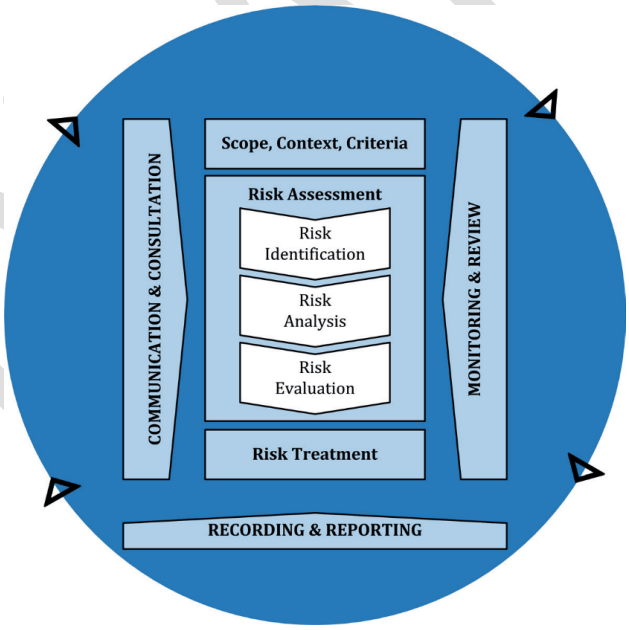


Figure 6.1: Risk Management Process – Abridged

Source: ISO 31000:2018, Figure 1, p9

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

An assessment of risks[10] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

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

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Marina jetty infrastructure (floating pontoons, piles, services)	Damage due to weather events, lack of maintenance and routine safety checks	H	Sufficient funding strategies as a part of LTFP Implement a documented inspection / preventative maintenance program	M	$60,000/year for jetty inspection program + extra for rectification costs
All	Damage due to extreme weather events	H	Proactive monitoring of weather systems Preventative maintenance	M	$20,000/year approx.
Car park Capacity	Decline of customer satisfaction	VH	Acquire land or designated area for marina car parking needs	M	$100,000 per annum for leased carparks

Table 6.2: Risks and Treatment Plans

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

[10] Risk Management & Safety System (RMSS)

6.3 Infrastructure resilience approach

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

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

We do not currently measure our resilience in service delivery. This will be included in future iterations of the AM Plan.

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 we cannot do

There are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years. These include:

- Providing adequate parking for the marina by acquiring assets.

6.4.2 Service trade-off

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

- Critical assets are not adequately maintained, renewed or upgraded to meet demand, resulting in a greater proportion of marina assets being in poor condition (i.e. Condition 4 or 5)
- An increasing number of assets become unfit for purpose, leading to a reduction in usage
- Critical marina construction projects cannot occur to meet demand.

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Injuries resulting from hidden sharp edges
- Injuries from structural failure

- Electrical shock / electrocution from unintentional mains contact with seawater
- Property damage from an unmitigated fuel fire
- Environmental harm from fuel spill
- Insurance claims, injuries, death.

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

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7 Financial summary

This section contains the financial and valuation forecasts resulting from the information presented in the previous sections of this plan. Forecasts will be improved as the discussion on sustainable levels of service, risk and cost matures in line with the financial strategy.

7.1 Financial statements and projections

7.1.1 Asset valuations

The marina assets are currently valued ‘at cost’, with a formal valuation process pending.

7.1.2 Sustainability of service delivery

There are three key indicators of sustainable service delivery that are considered in the AMP for this service area. The three indicators are the:

- Asset Consumption Ratio (Fair Value/Current Replacement Cost)
- Asset Sustainability Ratio (planned renewal budget for next year / annual depreciation expense)
- Asset Renewal Funding Ratio (planned renewal budget for the next 10 years / forecast renewal outlays for the next 10 years).

Asset Consumption Ratio

Asset Consumption Ratio 61 per cent

This ratio shows the written down value of depreciable assets in relation to their ‘as new’ value in current prices. A ratio of less than 50 per cent indicates a rapid deterioration of the asset base, whilst a ratio greater than 75 per cent may indicate an over investment in the asset base.

Asset Sustainability Ratio

Asset Sustainability Ratio 28 per cent

The target ratio should be between 90-110 per cent. A lower value indicates that at some time in the future, more renewal funding will be required, which is the case here; the asset stock is relatively new. A higher value may indicate ‘above average’ renewal spending over the lifecycle of the asset base, which may simply correspond with peaks in new assets being added, depending on the useful lives of the assets.

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Asset Renewal Funding Ratio

Asset Renewal Funding Ratio[11] 100 per cent

The Asset Renewal Funding Ratio illustrates that over the next 10 years we expect to have 100 per cent of the funds required for the optimal renewal of marina assets.

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

7.1.3 Forecast costs (outlays) for the long-term financial plan

Table 7.1 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan.

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

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AMP and/or financial projections in the LTFP.

We will manage any ‘gap’ by communicating the service performance, cost, and risk implications in consultation with the community and key stakeholders.

Forecast costs are shown in 2025 dollar values.

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[11] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

Year	Forecast Acquisition ($)	Forecast Operation ($)	Forecast Maintenance ($)	Forecast Renewal ($)	Forecast Disposal ($)
2025	0	135,671	264,533	30,000	0
2026	0	209,530	192,208	167,000	0
2027	0	209,530	192,208	400,000	0
2028	250,000	209,530	192,208	1,300,000	0
2029	3,850,000	259,782	238,306	1,350,000	0
2030	0	259,782	238,306	600,000	0
2031	0	259,782	238,306	1,050,000	0
2032	0	259,782	238,306	200,000	0
2033	0	259,782	238,306	972,214	0
2034	0	259,782	238,306	1,046,679	0

Table 7.1: Forecast Costs (Outlays) for the Long-Term Financial Plan

7.2 Valuation forecasts

The best available estimate of the value of assets included in this AMP are shown below.

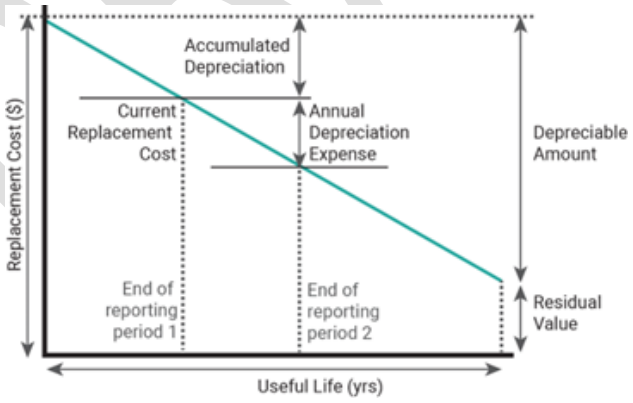


Figure 7.1: Valuation Terminology

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These costs are shown in 2025 dollar values:

- Replacement Cost (Gross) $17,095,351
- Depreciable Amount $17,095,351
- Current Replacement Cost[12] $10,396,354
- Annual Depreciation Expense $590,884

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

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

8 Assumptions and improvement planning

8.1 Data and information sources

8.1.1 Accounting and financial data sources

This AMP utilises accounting and financial data sourced from Technology One CiAnywhere 2024A Release (775).

8.1.2 Asset management data sources

This AMP also utilises asset management data sourced from Technology One CiAnywhere 2024A Release (775).

8.2 Key assumptions

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

Key assumptions made in this AMP are:

- Population and asset growth projections are assumed to be accurate
- The data supplied was as accurate as possible at the time of compilation of this asset management plan
- The breakdown of the actual reactive, planned and operational expenditure is assumed to be accurate.

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

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

The Asset Register method was used to forecast renewals.

8.3 Forecast reliability and confidence

The forecast demands, costs, planned budgets, and valuation projections in this AMP are based on the best available data. For effective asset management and financial planning and reporting, it is critical that the information is reliable and up to date.

Data confidence is classified on an A to E level scale in accordance with the guidance provided in the International Infrastructure Management Manual. [13]

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

Table 8.1: Data Confidence Grading System

The estimated confidence level for and reliability of data used in this AMP is shown in Table 8.2.

[13] IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

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Data	Confidence Assessment	Comment
Demand drivers	B	Professional judgement, corporate knowledge and id projections.
Growth projections	B	Id projections
Acquisition forecast	C	Professional judgement, corporate knowledge and Local Government projections.
Operation forecast	B	City records of past expenditure and professional judgement
Maintenance forecast	B	City records of past expenditure and professional judgement
Renewal forecast - Asset values	C	Historical construction cost. Formal valuation pending
- Asset useful lives	C	Useful lives are based on industry practice and condition ratings.
- Condition modelling	B	There are $2.2m worth of assets 5+ years old not condition rated since 2021, according to asset register
Disposal forecast	B	No planned disposals at this moment in time, although this may change within the planning period and, if so, must be reflected in the AMP.

Table 8.2: Data Confidence Assessment for Data used in AMP

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

8.4 Improvement plan

It is important that we recognise gaps in the planning process that require improvement to ensure effective asset management and informed decision making. The improvement plan generated from this AMP is shown in Table 8.3.

Section	Project	Responsibility	Task
5.3	Renewal Plan	Asset Services Marina	Confirm approach and refine 10 year capital renewal plan Consider requesting help from contractor to develop renewal forecast/plan
5.2	Condition Assessment	Asset Services	Asset Services to assist the Marina team with selecting assets for inspection, via implementation of a dashboard or some other agreed approach
5.1	Revaluation	Asset Services	Full revaluation of marina assets
5.2	Clarification of responsibilities for maintenance	Marina	Clarify who inspects/maintains which assets and when (there are low financial value, moderate consequence of failure assets not covered by the Inspection and Maintenance contract, e.g. electrical service points) Consider help from contractor to review, revise and document maintenance plan
5.2	Maintenance Management System	Marina Asset Services	Review maintenance system, identify any shortcomings and stage improvements Investigate CiA maintenance management features (e.g. work orders linked to assets) to improve efficiency and minimise human error
5.3	Review useful lives	Asset Services	In lieu of renewal intervention criteria / accepted levels of service, review useful lives by referring to assets budgeted for renewal Consider using statistics to calculate Contractor may assist
5.2	Review inclusion of marina building	Asset Services	In lieu of update of Buildings AMP, clarify which AMP the marina building belongs to and apply consistency throughout
5.1	Review public art etc custodians	Asset Services	Ensure consistency between this AMP and Parks and Environment AMP with included assets

Table 8.3: Improvement Plan

8.5 Monitoring and review procedures

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

This AMP will be reviewed and updated to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

The AMP has a maximum life of 4 years and is next due for complete revision in 2028.

8.6 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 long-term financial plan
- The degree to which the 1 to 5-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AMP
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90-110 per cent).

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9 References

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10 Appendices

10.1 Appendix A Acquisition forecast

The new assets required to meet growth will be funded through a combination of municipal funding, grant funding and Developer Contribution Plans.

10.1.1 Acquisition forecast assumptions and source

Acquisition will be via City construction projects. There are no further donated marina assets anticipated to be handed to the City.

10.1.2 Acquisition project summary

Marina expansion stage 4 is expected to take place in 2029 at a cost of about $4.1 million.

Other projects are pending further investigation.

10.1.3 Acquisition forecast summary

Year	Constructed ($)	Donated ($)	Growth ($)
24/25	0	0	0
25/26	0	0	0
26/27	0	0	0
27/28	250,000	0	0
28/29	3,850,000	0	0
29/30	0	0	0
30/31	0	0	0
31/32	0	0	0
32/33	0	0	0
33/34	0	0	0

Table 10.1: Acquisition Forecast Summary

10.2 Appendix B Operation forecast

10.2.1 Operation forecast assumptions and source

Operations includes the activities listed in Section 5.2. It currently includes operation of the marina building; whether this should be included in the Buildings AMP instead should be reviewed.

Both the forecast and the budget are linearly extrapolated from previous budgets. It is in the Improvement Plan to review this approach.

10.2.2 Operation forecast summary

Table 10.2 provides a summary of Forecast Operations expenditure over the planning period for the marina infrastructure.

Year	Operation Forecast ($)	Additional Operation Forecast ($)	Total Operation Forecast ($)
24/25	135,671	0	135,671
25/26	209,530	0	209,530
26/27	209,530	0	209,530
27/28	209,530	0	209,530
28/29	209,530	50,252	259,782
29/30	209,530	50,252	259,782
30/31	209,530	50,252	259,782
31/32	209,530	50,252	259,782
32/33	209,530	50,252	259,782
33/34	209,530	50,252	259,782

Table 10.2: Operation Forecast Summary

10.3 Appendix C Maintenance forecast

10.3.1 Maintenance forecast assumptions and source

Maintenance includes the activities listed in Section 5.2. It currently includes maintenance of the marina building; whether this should be included in the Buildings AMP instead should be reviewed.

Both the forecast and the budget are linearly extrapolated from previous operational budgets. It is in the Improvement Plan to review this approach.

10.3.2 Maintenance forecast summary

Table 10.3 provides a summary of Forecast Maintenance expenditure over the planning period for the marina infrastructure.

Year	Maintenance Forecast ($)	Additional Maintenance Forecast ($)	Total Maintenance Forecast ($)
24/25	264,533	0	264,533
25/26	192,208	0	192,208
26/27	192,208	0	192,208
27/28	192,208	0	192,208
28/29	192,208	46,098	238,306
29/30	192,208	46,098	238,306
30/31	192,208	46,098	238,306
31/32	192,208	46,098	238,306
32/33	192,208	46,098	238,306
33/34	192,208	46,098	238,306

Table 10.3: Maintenance Forecast Summary

10.4 Appendix D Renewal forecast summary

10.4.1 Renewal forecast assumptions and source

Renewal projects have been sourced from the Marina Services team and reflect asset degradation in a marine environment.

10.4.2 Renewal project summary

Project	Expenditure for Financial Year Ending ($m)							
	25	26	27	28	29	30	31	32
4x Jet ski docks	0.03							
3 x Walcon pontoon refurbishment		0.17						
Chieftain boardwalk paint			0.10					
Walcon decking replacement			0.30					
Chieftain boardwalk timbers				0.05				
Anode treatment Chieftain boardwalk				0.30				
Services enclosures Chieftain				0.50				
Tender package - public jetty, fuel jetty				0.35				
Maraboo parking gate				0.10				
Harbour anode replacement					0.20			
Public jetty, fuel jetty construction					1.15			
Chieftain gangways bearing/hinge replacement						0.20		
Maraboo storage area						0.40		
All boardwalks paint							0.30	
Chieftain gatehouses x 3							0.75	
All boardwalk timbers								0.20

Table 10.4: Renewal Projection Summary

10.4.3 Renewal forecast summary

Table 10.5 provides a summary of Forecast Renewal expenditure over the planning period.

Year	Renewal Forecast ($)	Renewal Budget ($)
24/25	30,000	30,000
25/26	167,000	167,000
26/27	400,000	400,000
27/28	1,300,000	1,300,000
28/29	1,350,000	1,350,000
29/30	600,000	600,000
30/31	1,050,000	1,050,000
31/32	200,000	200,000
32/33	972,214	972,214
33/34	1,046,679	1,046,679

Table 10.5: Renewal Forecast Summary

10.4.4 Renewal plan

See Section 10.4.2.

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10.5 Appendix E Disposal summary

10.5.1 Disposal forecast assumptions and source

As of June 2025, it is assumed there are no marina asset disposal projects required over the planning period. However, this AMP should be updated with any disposal projects identified during the planning period, as well as the life cycle cost summary.

10.5.2 Disposal project summary

Any disposal projects identified during the planning period should be listed here in future AMP updates.

10.5.3 Disposal forecast summary

No disposals have been identified.

10.6 Appendix F Budget summary by lifecycle activity

The budget summary shown in Table 10.6 is based on the renewal budget from the LTFP and the projected O&M budget, as discussed in Appendix B and C.

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)	Total ($)
2025	0	135,671	264,533	30,000	0	430,205
2026	0	209,530	192,208	167,000	0	568,739
2027	0	209,530	192,208	400,000	0	801,739
2028	250,000	209,530	192,208	1,300,000	0	1,951,739
2029	3,850,000	259,782	238,306	1,350,000	0	5,698,088
2030	0	259,782	238,306	600,000	0	1,098,088
2031	0	259,782	238,306	1,050,000	0	1,548,088
2032	0	259,782	238,306	200,000	0	698,088
2033	0	259,782	238,306	972,214	0	1,470,303
2034	0	259,782	238,306	1,046,679	0	1,544,767

Table 10.6: Budget Summary by Lifecycle Activity

10.7 Appendix G Legislative requirements

Legislation	Requirement
Local Government Act 1996 LG (Miscellaneous Provisions) Act 1960 (WA) LG Regulations 2008	Sets out role, purpose, responsibilities and powers of Local Governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Occupational Safety and Health Act 1984 (WA) OSH Regulations 1996	Provides for the promotion, coordination, administration and enforcement of Safety and Health in WA. Places emphasis on the prevention of accidents and injury.
Disability Discriminations Act 1992	Sets out requirements to eliminate as far as possible discrimination against persons on the grounds of disability in the areas of work, accommodation, clubs and sport and in the provision of facilities, services and land.
Disability Services Act 1993	An Act for the establishment of the Disability Services commission and the Ministerial Advisory Council on Disability, for the furtherance of principles applicable to people with disabilities, for the funding and provision of services to such people that meet certain objectives and for the resolution of complaints by such people.
Western Australian Marine Act 1982	Sets out rules and regulations in relation to marine and vessel operations; such areas like mooring licence, inspections and maintenance.
Australian Accounting Standards	Sets out the financial reporting standards for the revaluation and depreciation of assets.
Emergency Management Act, 2005 (WA)	Requires lifeline utilities to function at the fullest possible extent during and after an emergency and to have plans for such functioning (business continuity plans)
Australian Standards	Standards are published documents setting out specifications and procedures designed to ensure products, services and systems are safe, reliable and consistently perform the way they were intended to. They establish a common language which defines quality and safety criteria.
Environmental Protection Act 1993	An act to provide for the protection of the environment, to establish the Environmental Protection Authority and define its functions, powers and other purposes.

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Paper from responsible sources.

Document Set ID: 12674057
Version: 11, Version Date: 08/09/2026

City of Cockburn

Fleet & Plant Asset Management Plan 2024–2028



www.cockburn.wa.gov.au

Document Set ID: 12480565
Version: 10, Version Date: 11/09/2026

Cover page photo of City fleet at the Administration Centre, Spearwood.

Asset Management Plan				
Document ID: 12480565				
Date	**Revision Details**	**Author**	**Reviewed**	**Approved**
Sept 2021	Final Version 2020 - 2024	Property & Asset Services	Manager Engineering Services	Executive Committee / Council
April 2026	Final Version 2024 - 2028	Asset Services	Service Manager Infrastructure Assets	

Acknowledgement of country

The City of Cockburn acknowledges the Nyungar people of Beeliar Boodjar. Long ago, now and in the future they care for Country.

We acknowledge a continuing connection to Land, Waters and Culture and pay our respects to Elders, past and present.

Document Set ID: 12480565
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1 Executive summary

The City of Cockburn's community relies on a diverse portfolio of infrastructure assets, including roads, buildings, bridges, parks and footpaths. The fleet and plant assets covered by this Asset Management Plan are valued at approximately $39 million.

The Asset Management Plan (AMP) provides a strategic framework for managing our community's infrastructure assets, ensuring they remain safe, reliable, and capable of meeting current and future demands.

1.1 Purpose of the plan

This AMP aims to:

- Provide a systematic approach to asset management
- Address critical risks associated with aging infrastructure and limited funding
- Ensure infrastructure supports the community's social, economic, and environmental goals.

This AMP details information about the City's fleet and plant, as well as defining the Level of Service (LOS) and outlining the funding required to maintain this LOS over a 10 year planning period.

This highlights any funding gaps between the planned and forecast expenditure, which assists in optimising expenditure on managing assets through the Long-Term Financial Plan.

1.2 Asset description

As at the valuation completed August 2026, the fleet and plant network comprises:

- Boats 1
- Buses 8
- Cages 10
- Capsules 13
- Fire trucks 6
- Heavy fleet 92
- Light fleet 109
- Trailers 52.

The above infrastructure assets have a total replacement value estimated at $39,358,000.

1.3 Levels of service

Levels of Services are typically split into 'Customer' and 'Technical' and each have their own metrics which the City is able to measure its performance against.

The City's overall customer LOS objective is to maintain 70 per cent satisfaction with fleet and plant assets, which is sustainable over the short and medium term. However, this comes under significant risk towards the end of the 10 year planning period under current funding arrangements. This is because the current planned budget allocation is insufficient to maintain providing these services at current levels for the planning period.

The main service consequences of an insufficient planned budget are:

- More frequent vehicle breakdowns resulting in service disruption and hazards
- Increased costs due to extra repairs, maintenance and servicing
- Legacy, outdated safety features failing to mitigate accidents
- Higher demand on individual fleet and plant assets, resulting in lower availability with service impacts, as well as higher maintenance costs.

1.4 Future demand

The main demands for new services are created by:

- Population growth
- Changes in technology and legislation.

These demands will be approached using a combination of managing existing assets, upgrading of 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. Examples of solutions to ensure the City's asset portfolio is sufficient to meet community need include:

- Manage existing assets through an appropriately prioritised Replacement Program
- Ensure decisions to upgrade existing assets and acquire additional assets are supported with appropriate modelling to understand the long term impacts
- Continue to investigate alternative assets to lower lifecycle costs (e.g. electric vehicles, driverless or driver assisted technology)
- Booking and other work planning systems to manage demand.

1.5 Lifecycle management plan

How we plan to manage and operate the assets at the agreed levels of service throughout their lifecycle is contingent on 10-year Long-Term Financial Plan (LTFP). It is important to be aware of the 'Whole of Life' lifecycle costs associated with assets

(i.e. cost of construction, operation and maintenance costs, renewal and upgrade costs and disposal costs at end of life).

1.5.1 What does it cost?

The lifecycle costs necessary to provide the services covered by this AMP include operation, maintenance, renewal and upgrade costs of existing assets, as well as the acquisition or construction of new assets to meet demand. Disposal of assets is also considered when it is no longer cost effective to continue to maintain/operate an asset.

When lifecycle costs are prepared for a minimum 10-year planning period, they can be used to inform the 10-year LTFP. The first 10-year lifecycle forecast is estimated to cost $156,863,418 or $15,686,342 on average per year.

Depreciation and inflation are excluded from these cost estimates.

1.5.2 What we will do

The funding made available in the first 10-years' of the LTFP is $156,863,418 or $15,686,342 on average per year which is approximately 100 per cent of the cost to undertake the lifecycle activities.

The reality is, only what is funded in the LTFP can be provided. Informed decision making depends on the AMP emphasising the consequences of planned budgets on the LOS provided and communicating the residual risks to decision makers. It is important to ensure the organisation is delivering the services in a financially sustainable manner.

The current 10-year LTFP does not result in a known shortfall, with the caveat that the demand for additional fleet and plant needs to be investigated. The current financial modelling is shown in Figure 1.1.

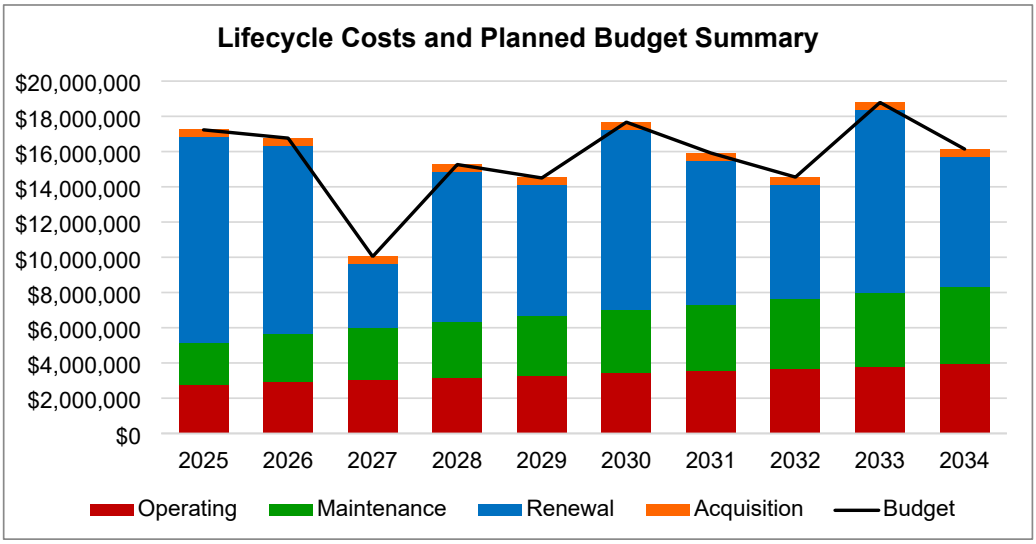


Figure 1.1: Forecast Lifecycle Costs and Planned Budgets

We plan to provide fleet and plant asset services for the following:

- Operation, maintenance, renewal and upgrade of fleet and plant to meet service levels set in annual budgets
- Completion of key fleet and plant replacements, upgrades and acquisitions within the 10 year planning period.

1.5.3 What we cannot do

We currently do not allocate enough budget to sustain services at the proposed standard including the provision of new assets. Fleet and plant that cannot be provided under present funding levels are:

- Provide additional fleet and plant to meet all the expectations of internal staff.

1.6 Risk management

The current planned budget is sufficient to continue to manage risks in the short term, however in the medium and longer term significant level of service impacts are expected. It is important to ensure that adequate budget is kept in reserve to achieve what is shown in the life cycle cost summary.

The main risk consequences are:

- More frequent vehicle breakdowns resulting in service disruption and hazards
- Legacy, outdated safety features exacerbating accidents

- Higher demand on individual fleet and plant assets, resulting in lower availability with service impacts, as well as higher maintenance costs.

Strategies and actions to manage these risks are discussed in Section 6.

1.7 Financial summary

Providing financially sustainable and affordable services from infrastructure requires the careful management of service levels, costs and risks.

The 10-year LTFP is $15,686,342 on average per year, which is sufficient for operations, maintenance and renewals. However, demand for acquisitions requires investigation.

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

1.8 Assumptions and improvement planning

Key assumptions made in this AMP are:

- Population and asset growth projections are assumed to be accurate
- Condition data and age data are assumed to be accurate (noting that this AMP is based on a 'Medium' level of confidence information)
- Unit rates are representative of asset replacement costs
- Useful lives are an accurate representation of the behaviour of assets in the field and the City's practices in renewing/replacing assets at their end of useful life.

The City procured an internal review of fleet management in June 2025, with a number of recommendations. The next steps resulting from this AMP to improve asset management practices are:

- A fleet risk register will be developed in conjunction with this AMP
- Review fleet policies to incorporate alignment, safety, cost, sustainability, and data use
- Implement a fleet management system with full lifecycle capability, including disposal tracking and asset justification workflows, using a combination of spreadsheets, Technology One and other digital platforms
- Investigate incorporating electric vehicles into the fleet replacement strategy, prioritising sustainability and cost-efficiency
    - Investigate the Australian Federal Government's Community Energy Upgrades Fund

2 Introduction

2.1 Background

This AMP communicates the actions and necessary funds required to sustainably deliver 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.

The AMP is to be read in conjunction with the City's Asset Management Policy and Asset Management Strategy, along with the following strategic documents:

- City of Cockburn Strategic Community Plan 2025 – 2035
- City of Cockburn Corporate Business Plan 2024/25 – 2027/28
- City of Cockburn Annual Business Plan(s)
- City of Cockburn Long Term Financial Management Plan 2024/25 – 2033/34.

The fleet and plant assets covered by this AMP include light fleet, major plant and minor plant. For a detailed summary of the assets covered in this AMP refer to Table 5.1 in Section 5.

These assets are used to provide access and connectivity throughout the City of Cockburn and have a total replacement value of approximately $27 million.

2.2 Stakeholders

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

Key Stakeholder	Role in Asset Management Plan
The Elected Council	Represent needs of community/shareholders Allocate resources to meet planning objectives in providing services while managing risks Ensure service is sustainable
Chief Executive Officer (CEO)	Organisational direction and leadership
Executive Leadership Team (ELT)	Executive management endorsement, sign off and executive ownership
Group Manager Assets and Projects	Review and strategic management sign off
Service Manager Infrastructure Assets	Review and line management sign off

Key Stakeholder	Role in Asset Management Plan
Infrastructure Asset Services	Asset Management Plan development, review, continuous improvement and implementation of the AMP maintenance actions
Community, Residents, Tourists & Business	Provide feedback to the City and Councillors on how the City is going in maintaining the agreed levels of service
Insurers	Assist to manage financial risk of the City
State Emergency Services	Attendance to call-outs and security

Table 2.1: Key Stakeholders in the AMP

2.3 Principles, goals and objectives of asset management

The principles of asset management as per the International Standards for asset management are:

- **Value**: asset management focuses on the value assets provide to the organisation over time
- **Alignment**: asset management aligns financial, technical and operational decisions with the organisational objectives, promoting vertical and horizontal coordination
- **Leadership**: leadership and sustained commitment at all levels are crucial for successful asset management.[1]

Our goal for managing infrastructure assets is to deliver the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers.

The key objectives of infrastructure asset management as defined by the International Infrastructure Management Manual are:

- Defining levels of service and monitoring performance
- Managing the impact of growth through demand management and infrastructure investment
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service
- Identifying, assessing and appropriately controlling risks

[1] ISO 55000:2024 Asset Management – Vocabulary, overview, and principles

- Linking to a Long-Term Financial Plan which accommodates the required expenditure and how it will be funded.[2]

2.4 Plan framework

The 2024 - 2028 Fleet and Plant AMP has been developed in accordance with the International Infrastructure Management Manual (IIMM) and complies with Department of Local Government & Communities Asset Management Framework.

As part of the City's Strategic Asset Management Planning Framework (SAMPF), the Fleet and Plant AMP will be developed every 4 years and be subject to a 2-year desktop review. This AMP review will focus on core elements required by the LTFP, for example asset valuations, growth projections, financial analysis including operating, sustainability ratios and 10-year renewals. This will ensure that future revisions of the LTFP will be derived from a structured AMP development cycle that has received Executive and or Council approval, increasing confidence and integration of asset management data and methodologies into the City's long term financial planning and adopted service levels.

Figure 2.1 provides a visual representation and timeline of the SAMPF.

[2] IPWEA International Infrastructure Management Manual (IIMM), Sec 1.2.1

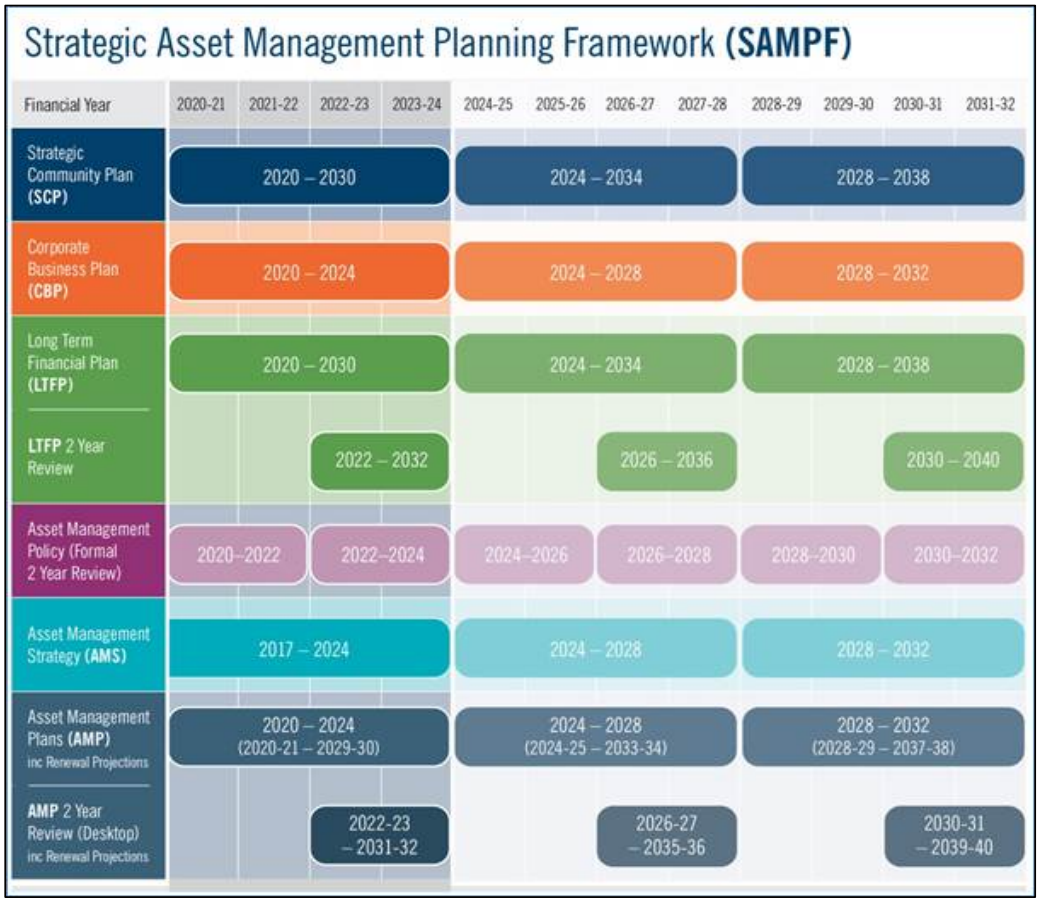


Figure 2.1: Strategic Asset Management Planning Framework (SAMPF)

- Level of Service and Enterprise Risk Management – outlines the level of service provided by council and identifies risks to the city
- Future Growth and Demand how this will impact on future service delivery and how this is to be met
- Lifecycle Management – how the city will manage its existing and future assets to provide the required services
- Financial Analysis – what funds are required to provide the required services
- Asset management practices – current systems and practices in place
- Improvement and monitoring – how the plan will be monitored and improved to ensure it is meeting Council's objectives.

2.4.1 Corporate planning framework

The formalisation and alignment of the City's SAMPF within the Corporate Planning Framework reflects the City's increasing maturity and recognises the importance of Asset Management in supporting the City in delivering long term financial sustainability of services and capital asset renewal.

With the continued implementation of the SAMPF, the City will commence measuring service levels for planned and reactive maintenance to determine operational performance and asset utilisation.

The City strives to improve its strategic and operational asset management practices and to continue its journey towards advanced asset management. The Department of Local Government, Sport and Cultural Industries (DLGSC) has developed the Western Australia Local Government Integrated Planning and Reporting Framework. Accordingly, the future direction and need for advanced level practices are continually assessed.



Figure 2.2: City's Corporate Planning Framework

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3 Levels of service

Levels of service define the standards and performance targets that infrastructure assets are expected to meet to ensure they provide reliable, safe, and efficient services to the community.

3.1 Customer research and expectations

The City carried out a regular internal customer survey, organised by Research Solutions, until 2023.

In the report it mentions 337 employees completed the survey, a 31.8 per cent response rate out of 1082 (casuals included), with over 960 comments and 510 suggestions provided.

Table 3.1 summarises the results from our Customer Satisfaction Survey.

Performance Measure	Proportion of Responses (%)		
	Easy/well 7+/10	Average 4 – 6/10	Difficult/not well >4/10
How easy was it to deal with Fleet Services?	81.9	9.1	9.0
How did the service provided by Fleet Services support you to deliver what you needed?	76.4	14.5	9.1

Table 3.1: Customer Satisfaction Survey Levels

3.2 Strategic and corporate goals

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

Our vision is:

Cockburn, the best place to be.

Our mission is:

Support our communities to thrive by providing inclusive and sustainable services which reflect their aspirations.

Strategic goals have been set by the City and are found in the City's Strategic Community Plan. The relevant goals and objectives and how these are addressed in this AMP are summarised in Table 3.2.

Strategic Outcome	Strategic Objective	Deliverable	Measure
Our Environment Valuing natural assets, building climate resilience and using resources sustainably.	2A. Facilitate sustainable waste management and resource conservation.	Provide fleet and plant appropriate for transporting and handling both recyclable and landfill waste	Capability of fleet and plant to meet waste collection, transport and disposal requirements
	2C. Enhance climate resilience and champion environmental initiatives to mitigate impacts.	Low or zero carbon emissions vehicles	Petrol and diesel usage per kilometre or hour of use
Our Places Enhancing distinctive, liveable areas with well-connected, safe transport options.	4A. Plan for growth and sustainable development.	Purchase of additional fleet and plant to meet service demand	Ability of fleet and plant to meet service demand
Our Governance Transparent leadership that listens, communicates openly and plans for a sustainable future.	5D. Strive for financial sustainability and operational excellence.	Ensure adequate funding to meet agreed service levels, optimise lifecycle cost	Asset Renewal Funding Ratio
	5B. Strengthen engagement and communication and enhance customer experience.	Negotiate fleet and plant levels of service vs cost with internal City service providers	Ability of fleet and plant to meet service demand affordably

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

3.3 Legislative requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of fleet and plant services are outlined in Appendix G.

While no longer a legislative requirement, the Asset Management Ratios are reasonable performance indicators of the ongoing financial sustainability of assets. The targets for these ratios are set by the Department of Local Government, Sport and Cultural Industries (DLGSCI) through the Integrated Planning and Reporting Framework (IPRF). The calculation methodology and targets for these ratios are outlined in Table 3.3.

Asset class	Consumption ratio	Sustainability ratio	Renewal funding ratio
Description	How much has the City used of its assets?	Is the City replacing assets as they wear out?	Is the City setting aside sufficient future funding for asset renewals?
Calculation	Depreciated replacement cost / current replacement cost	Capital renewal (one year) / annual depreciation (one year)	Planned capital renewal (10 years) / required capital renewal (10 years)
Target	50-75% standard 60-75% ideal	90-110% standard	75-95% standard 95-105% ideal
What it means	Lower than standard = assets are deteriorated and will result in a poor level of service Higher than ideal = assets are being replaced too early resulting in poor value for money*	Lower than standard = the City is under investing in asset renewal/replacement resulting in a poor level of service Higher than standard = the City is over investing in asset renewal/replacement resulting in poor value for money	Lower than standard = the City is allocating too little funding to long term asset renewal/replacement which will result in a lower level of service in future Higher than ideal = the City is allocating too much funding to long term asset renewal/replacement which will result in poor value for money in future

Table 3.3: Asset Ratios

3.4 Customer values

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

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Customer Values indicate:

- What aspects of the service are important to the customer
- Whether they see value in what is currently provided
- The likely trend over time based on the current budget provision.

Customer Values	Customer Satisfaction Measure	Customer Feedback	Expected Trend Based on Planned Budget
Reliability of fleet and plant	Internal Staff Feedback	Workshop resourcing impacting service delivery	Maintain
Availability of fleet and plant		Need more cars, hard to borrow one	Decrease

Table 3.4: Customer Values

3.5 Customer levels of service

The Customer Levels of Service are considered in terms of:

Condition How good is the service … what is the condition or quality of the service?

Function Is it suitable for its intended purpose …. Is it the right service?

Capacity/Use Is the service over or under used … do we need more or less of these assets?

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

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

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Overall	Customer satisfaction of 70% or greater with the City's fleet and plant network.	Internal Customer Satisfaction Survey 2023	76.4% of respondents gave a score of 7+/10 for "How did the service provided by Fleet Management support you to deliver what you needed?"	Slightly decrease over time
Condition	Fleet and plant serviced at required intervals	Dates between services vs required interval	About 3% more services than prescribed due to alignment of related services for cost effectiveness, minor services	Maintain
	Maintain at least 80% uptime on average.	Vehicle uptime percentage	Average uptime of 70%	Maintain
	Confidence levels		Low	Low
Function	Safety of vehicles	Severity of accidents	0 Killed or Serious Injury (KSI) crashes	Maintain
		Number of accidents	159 incidents and 42 insurance claims for 2024/2025 financial year	Increase
	Confidence levels		High	Medium
Capacity	People transport needs	Percentage of missed or delayed transport of individuals due to inadequate fleet	5% of trips missed or delayed	Increase

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
	Products, goods and waste transport needs	Percentage of missed or delayed transport of products, goods or waste due to inadequate fleet and plant	5% lost economic benefit	Maintain
	Park maintenance needs	Percentage of parks and gardens not maintained per maintenance run due to inadequate plant	5% of parks and gardens by area	Increase
	Confidence levels		Low	Low

Table 3.5: Customer Level of Service Measures

Please note the Capacity performance measures are currently based on anecdotal evidence from the Fleet Services team and require further investigation.

3.6 Technical levels of service

Technical Levels of Service – To deliver on the customer values, and impact they have on Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the lifecycle activities (see Section 5) and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

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

[3] IPWEA, 2015, IIMM, p 2|28.

Table 3.6 shows the lifecycle activities related to the current 10 year planned budget, and the forecast costs recommended in this AMP.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Acquisition	Provide new fleet and plant as required	Number and type of additional fleet procured	Average 2 additional fleet/plant per year depending on type	Requires further investigation
		Budget	$400,000 per year average	Requires further investigation
Operations	Keep fleet and plant refuelled	Percentage downtime due to running out of fuel or electricity	1% of downtime	Maintain
		Budget	$3,355,785 per annum average	$3,355,785 average
Maintenance	Keep fleet and plant maintained at recommended intervals	Dates between services vs required interval	Approx. 3% more services than prescribed due to alignment of related services for cost effectiveness, minor services	Move to servicing based on kilometres / engine hours As a short term measure, ensure adequate budget for reactive maintenance
		Budget	$3,460,657 per annum average	$3,460,657 per annum average
Renewal	Keep fleet and plant in satisfactory and safe condition	Proportion of assets in 'very poor' condition	11% of fleet and plant in 'very poor' condition (determined based on age)	0% - intervention should occur before an asset reaches very poor condition
	Allocate sufficient medium and long term renewal funding	Asset renewal funding ratio	100%	100%
		Budget	$8,469,900 per year average	$8,469,900 per year average

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Disposal	Dispose of fleet and plant assets that are no longer required	Fleet and plant disposed of when opportunities identified	Nil allocated due to nil disposal opportunities identified	Continue reviewing opportunities to dispose of assets
		Budget	$0 per year	$0 per year

Table 3.6: Technical Levels of Service

Note: * Current activities related to planned budget.

** Expected performance related to forecast lifecycle costs.

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

4 Future demand

Future demand refers to the effects on infrastructure assets services driven by factors such as population movement, economic development, technological advancements, and changing environmental or community expectations.

4.1 Demand drivers

A demand driver refers to the factors or trends that influence the need for infrastructure services and capacity. Some examples of factors influencing future demand include (but are not limited to):

- Population growth
- Changing demographics
- Industry development/changes in technology
- Legislation changes.

Demand drivers help predict future infrastructure needs and guide planning and investment decisions.

4.2 Demand forecasts

The current position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented in Table 4.1.

4.3 Impacts and demand management plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.1.

The impact on service delivery will be managed through a combination of managing and upgrading existing assets and the provision of new assets to meet demand. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to manage demand are shown in Table 4.1. Further opportunities will be developed in future revisions of this AMP.

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Population	133,869 as at 2025	177,920 by 2046	Greater demand for services, in turn leading to greater demand for fleet and plant	Plan work to maximise utilisation and minimise 'peaks' in demand on fleet and plant Procure additional fleet, ensuring operation, maintenance and renewal budgets keep up
Technology Change	Increasing use of smart technology, experimental driverless technology, reducing fuel use etc	Replacement of fleet and plant with modern equivalents taking advantage of new features to improve productivity Driverless technology becoming more mature	Older fleet and plant used less, as less useful, more cumbersome to use or use more resources	Review fleet replacement criteria (i.e. useful lives) in line with changing technology Increase proportion of electric vehicles as replacements are due
Change in Legislation	Strong focus on safety, recently re-established emissions standards	Increasingly stringent safety and emissions requirements	Increasing non-compliance of fleet and plant with relevant legislation Higher demand for electric charging points (refer Roads Asset Management Plan 2024-2028 for Demand Management Plan on this item)	Review fleet replacement criteria (i.e. useful lives) in line with changing legislation Increase proportion of electric vehicles Investigate Federal Government grants for electric vehicles
Waste to Energy Plant (W2E)	Municipal solid waste (MSW) currently sent to landfill in Kwinana	W2E plant built to receive MSW	Further distance to drive to W2E plant	Adjust operating and maintenance budgets to suit longer waste transport distance

Table 4.1: Demand Management Plan

4.4 Asset programs to meet demand

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

Acquiring new assets will commit the City to ongoing operations, maintenance and renewal costs, and depreciation expenses for the period that the service provided from the assets is required. These future costs and expenses are identified and considered in developing the long-term financial plan.

4.5 Climate change adaptation

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

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

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

Risk and opportunities identified to date are shown in Table 4.2.

Climate change risk	Projection	Impact on services	Climate Change Management Plan
More extreme storm events	Increase in the frequency and severity of storm events	Damage to fleet and plant from hail, indirect damage from road network	Plan for major storm events, particularly for new or vulnerable assets – e.g. store undercover, limit use

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

Climate change risk	Projection	Impact on services	Climate Change Management Plan
Hotter temperatures during summer months	Average global temperature increase of 3 degrees predicted but location and time based variability is difficult to predict	High temperatures can reduce vehicle performance, stress components and impact the quality of fuels	Consider increased frequency of servicing depending on temperature Monitor fuel quality Move to alternative fuels (also a mitigation response)

Table 4.2: Managing the Impact of Climate Change on Assets and Services

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

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

Table 4.3 summarises opportunities to build climate change resilience into new and existing assets.

Asset Description	Climate change Impacts to Assets	Resilience Plan for New Assets	Resilience Plan for Existing Assets
Fleet and plant	Hotter temperatures impact mechanical performance	Consider thermal resilience in purchasing decisions	Upgrade components for greater thermal resilience

Table 4.3: Building Climate Change Resilience into New Assets

The impact of climate change on new and existing assets is evolving and new opportunities will be developed in future revisions of this AMP.

5 Lifecycle management plan

The lifecycle management plan details how the City plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) throughout their entire lifecycle, from acquisition or creation to disposal. The goal is to maximise the value of the assets while minimising costs and risks, ensuring they continue to meet performance requirements over time.

From a financial perspective, infrastructure activities tend to be classified as being either Operating or Capital. The lifecycle activities used in the asset management and financial planning and reporting process cover:

Capital Expenditure:

- **Acquisition** – the activities to provide a higher level of service (e.g., widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library).
- **Renewal** – the activities that replace or restore assets to the standard it had originally provided (e.g., road resurfacing and pavement reconstruction, pipeline replacement and building component replacement).
- **Disposal** – the decommissioning, removing, or repurposing of assets that are no longer cost-effective, safe, or necessary (e.g. shutting down an old water treatment plant, demolishing unsafe buildings, dismantling old bridges, etc.).

Operating Expenditure:

- **Operations** - the routine activities that keep services accessible and effective, balancing efficiency with user expectations (e.g. road sweeping, mowing grass, energy, inspections, etc.)
- **Maintenance** – the preventative and corrective actions to sustain asset functionality and minimise unexpected failures. Maintenance activities enable an asset to continue providing service for its useful life (e.g., road patching, pothole repairs, unsealed road grading, crack sealing).

A pictorial representation of the asset lifecycle activities is shown below in Figure 5.1.



Figure 5.1: Asset Lifecycle Activities

5.1 Background data

5.1.1 Physical parameters

The assets covered by this AMP are shown in Table 5.1.

Asset Type	Quantity	Replacement Value ($)
Boat	1	50,000
Bus	8	1,125,000
Cage	10	300,000
Capsule	13	325,000
Fire Truck	6	1,140,000
Heavy Fleet	92	29,315,000
Light Fleet	109	5,868,000
Trailer	52	1,235,000
Total	291	39,358,000

Table 5.1: Assets covered by this Plan

As at the valuation completed August 2026, the City is responsible for maintaining approximately 291 assets.

An important distinction in the management of assets is the difference between 'Design Life' and 'Useful Life'. Design Life refers to the length of time that an asset is design to last, based on engineering standards, analysis, testing and reporting. Useful life is simply the length of time that an asset is used. For example, the typical design life for an asphalt road surface is around 20 years, however, the timeframe it is actually used may be much longer than this due to applying ongoing maintenance to get more life out of the surface than it was initially designed for. The modelling in this AMP considered Useful Life.

The age profile of the assets included in this AMP are shown in Figure 5.2.

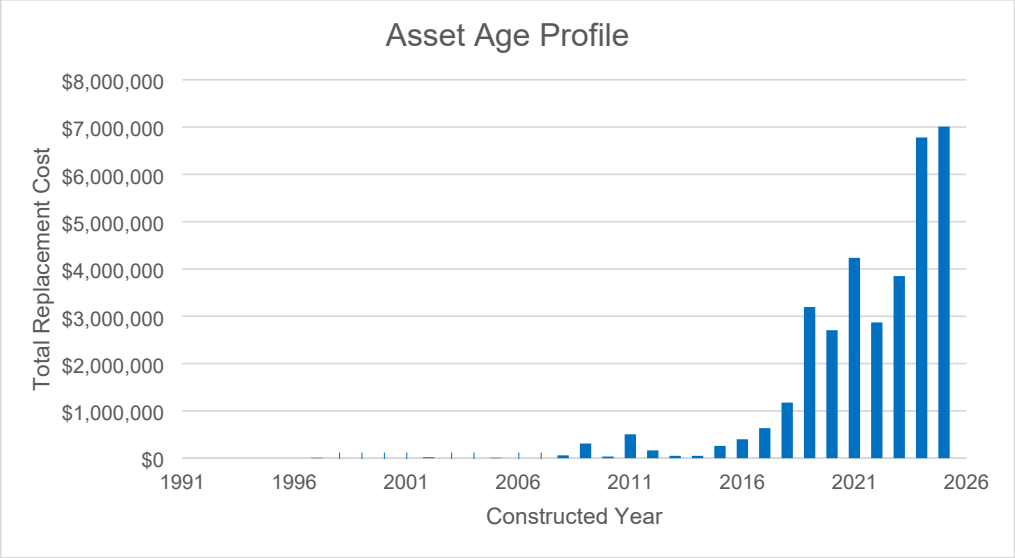


Figure 5.2: Asset Age Profile

The majority of the assets were purchased after 2015, reflecting the short useful life.

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 5.2.

Location	Service Deficiency
All	Vehicle and plant downtime due to maintenance is impacting availability, maintenance delays
Administration Centre	Shortage of available staff vehicles reported

Table 5.2: Known Service Performance Deficiencies

The above service deficiencies were identified from internal customers in the last survey in 2023.

5.1.3 Asset condition

Condition ratings are based on age relative to useful life.

Condition is measured using a 1 – 5 grading system[5] as detailed in Table 5.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AM plan results are translated to a 1 – 5 grading scale for ease of communication.

Condition Grading	Description of Condition
1	Very Good: free of defects, only planned and/or routine maintenance required
2	Good: minor maintenance required plus planned maintenance
3	Fair: defects requiring regular and/or significant maintenance to reinstate service
4	Poor: significant defects, renewal/rehabilitation required
5	Very Poor: physically unsound and/or beyond rehabilitation, immediate action required. Asset is at end of useful life.

Table 5.3: Condition Grading System

The condition profile of our fleet and plant assets is shown in Figure 5.3.

[5] IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

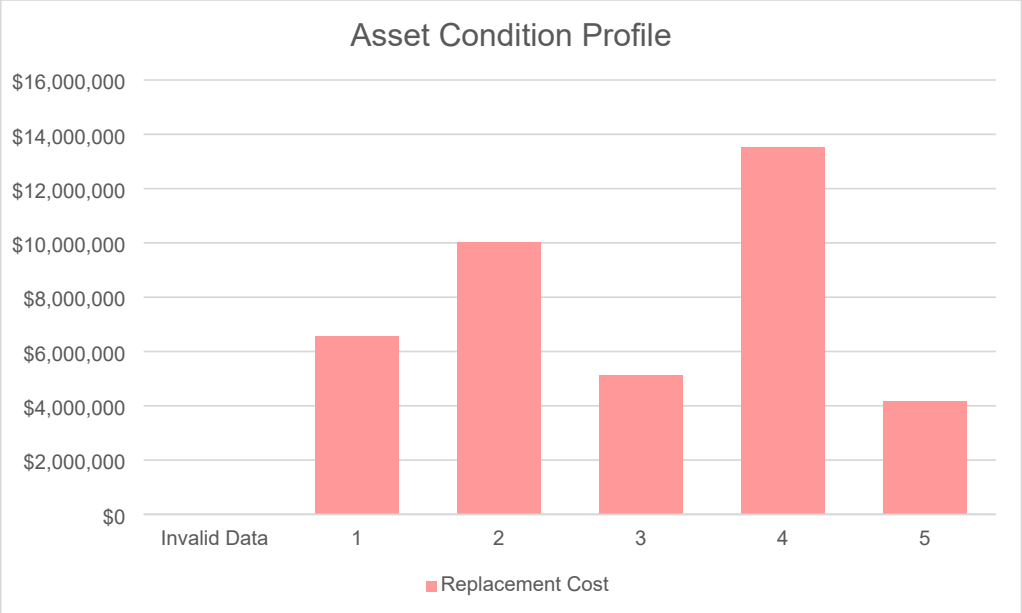


Figure 5.3: Asset Condition Profile for Road Surface by Road Hierarchy

According to the current methodology of condition rating based on age and odometer reading, $4 million of assets are in Very Poor condition. This needs to be reviewed in the context of a risk assessment process.

5.2 Operations and maintenance plan

For the purpose of modelling within this AMP, the following definitions apply:

Reactive maintenance is unplanned maintenance work carried out in response to service requests and management/supervisory directions. Examples include breakdowns and other unanticipated failures relating to condition, leading to unexpected costs.

Planned maintenance is work that is identified and managed through a maintenance schedule. This is predominantly components requiring replacement as identified from a log book service or other planned service, for example spark plugs, windscreen wipers, tyres, radiator and other parts.

Operating expenditure is continuously required expenditure required to keep the asset functional. Examples include costs of power, fuel, fleet staff, oil changes, on-costs and overheads.

The trend in maintenance budgets are shown in Table 5.4.

Financial Year	Total Maintenance Expenditure ($)	Total Operating Expenditure ($)
2018/19	1,392,257	2,177,526
2019/20	1,655,334	2,220,023
2020/21	1,813,504	1,944,997
2021/22	1,618,340	2,261,992
2022/23	2,116,112	2,494,085
2023/24	2,752,181	2,893,539
2024/25	2,433,784	2,749,024

Table 5.4: Maintenance and Operating Budget Trends

These previous Operating and Maintenance budget levels are not considered to have been adequate to meet service levels. Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement.

5.2.1 Asset hierarchy

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

The service hierarchy is shown is Table 5.5.

Service Hierarchy	Service Level Objective
Waste Management	Provide waste management services – collection, transport and disposal
Bushfire Management	Assist with the control of bushfires
Operational Management	Parks, civil and facilities maintenance plant; dedicated staff cars for City use; buses etc

Table 5.5: Asset Service Hierarchy

5.2.2 Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.4

shows the forecast operations and maintenance costs relative to the proposed operations and maintenance planned budget.

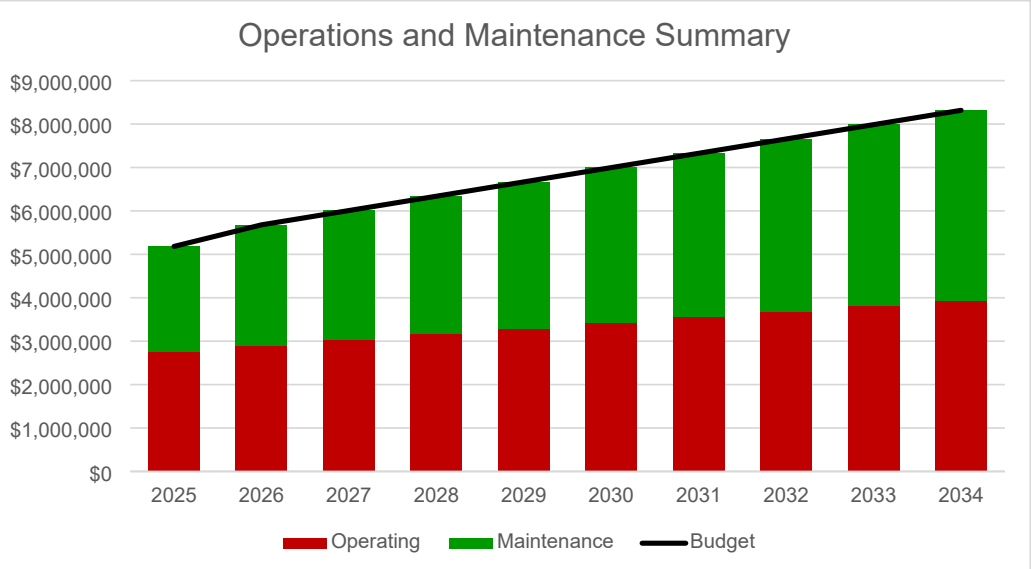


Figure 5.4: Operations and Maintenance Summary

Amounts are in today's dollars, i.e. excluding inflation.

5.3 Renewal plan

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

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

- The first method uses Asset Register data to project the renewal costs (replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year), or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work.

The typical useful lives of assets used to develop projected asset renewal forecasts range from 3-10 years and are shown in Appendix H. Asset useful lives were last updated in 2026 and are based on industry and technical knowledge.

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

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. vehicle uptime), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. productivity of landfill compaction equipment).[6]

Renewals are prioritised by identifying assets or asset groups that:

- Have a high consequence of failure
- Have high use and subsequent impact on users would be significant
- Have higher than expected operational or maintenance costs
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.[7]

The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 5.6:

Criteria	Weighting (%)
Kilometres/hours	80
Age	20
Total	100

Table 5.6: Renewal Priority Ranking Criteria

5.3.2 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.5. A detailed summary of the forecast renewal costs is shown in Appendix D.

[6] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

[7] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

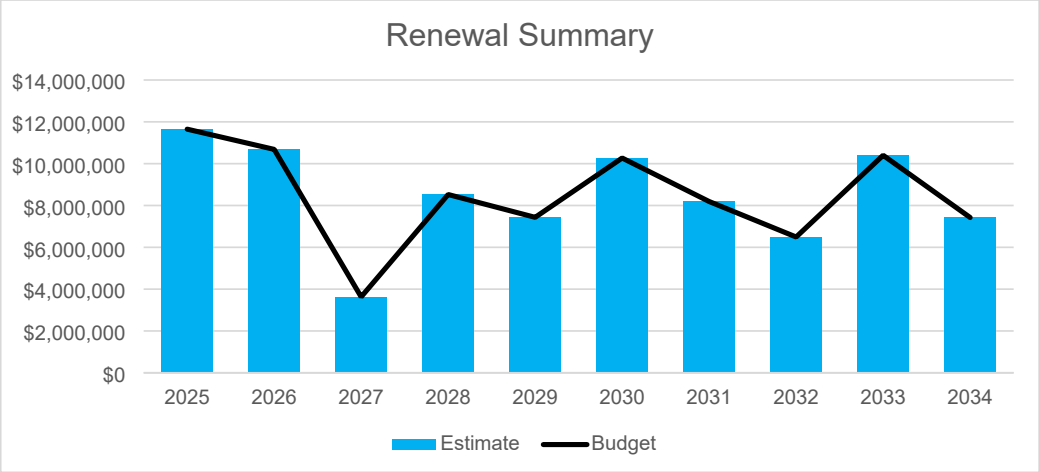


Figure 5.5: Forecast Renewal Costs

Deferred renewal (assets requiring renewal and not scheduled in capital works programs) should be included in the risk analysis process in the risk management plan.

5.4 Acquisition plan

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its original service level. They may result from growth, demand, social or environmental needs. Assets may also be donated to the City by developers or third parties.

5.4.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to meet strategic needs of the community. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in Table 5.7.

Criteria	Weighting (%)
New asset requirement identified in strategic documentation (Fleet Management Plan)	50
Strong demand (e.g. operational need)	25
Supported by empirical data such as population growth data, business case, gap in agreed level of service, etc.	25
Total	100

Table 5.7: Acquired Assets Priority Ranking Criteria

5.4.2 Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised in Figure 5.6 and shown relative to the proposed acquisition budget. The forecast acquisition program is shown in Appendix A.

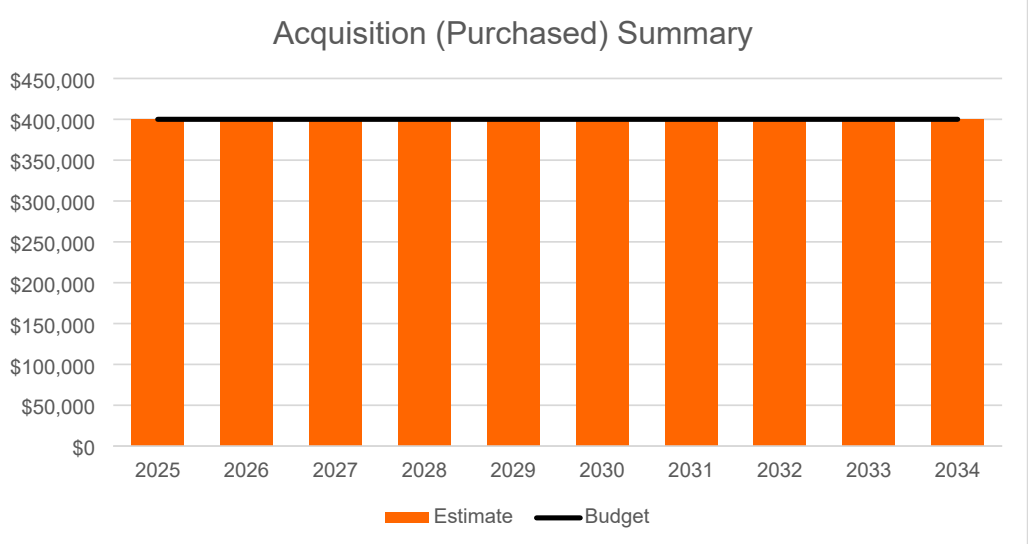


Figure 5.6: Acquisition (Purchased) Summary

Amounts are shown in real values (i.e., current values, net of inflation). The above figures are an estimate only; acquisition demand requires investigation.

When the City of Cockburn commits to new assets, we must be prepared to fund future operations, maintenance and renewal costs. We must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the

acquired assets being taken on by the Entity. The cumulative value of all acquisition work, including assets that are purchased and contributed are shown in Figure 5.7.

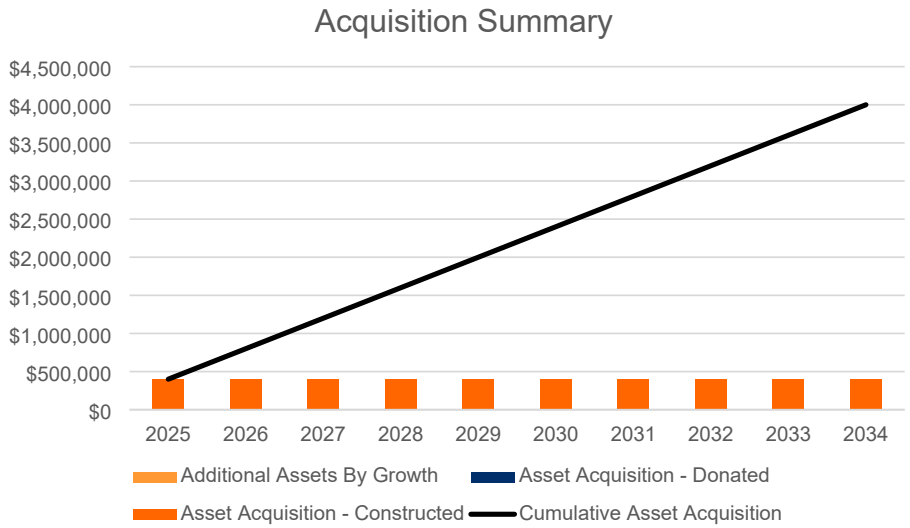


Figure 5.7: Acquisition Summary

Amounts are shown in real values (i.e., current values, net of inflation).

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

To keep up with service demand, especially for waste management, acquisitions will need to be adequately planned for and funded. This will commit the City to additional operations, maintenance and renewal costs.

5.5 Disposal plan

No asset disposals have been identified at this time.

5.6 Summary of lifecycle costs and planned budget

The financial projections from this asset plan are shown in Figure 5.8. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimise the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed

budget is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

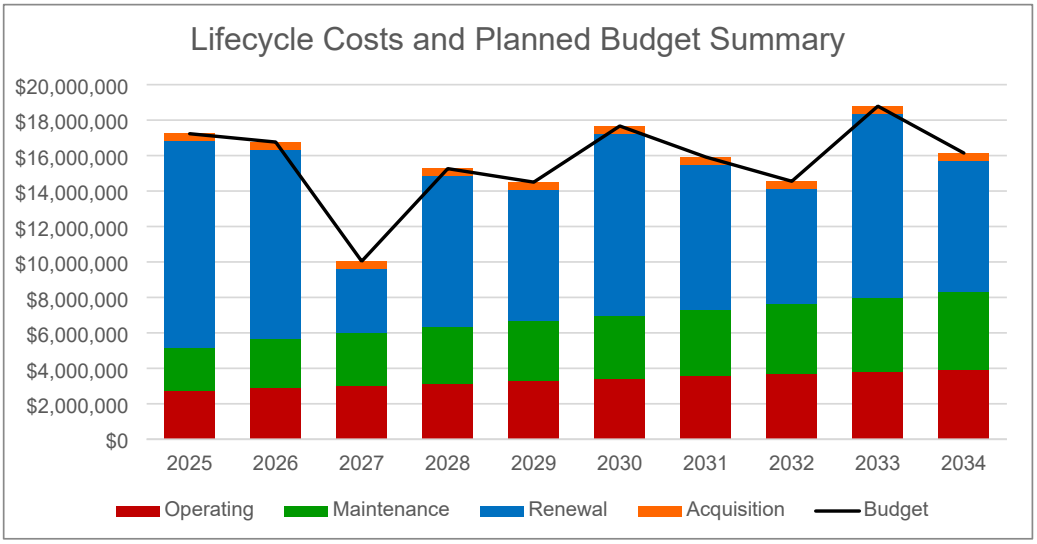


Figure 5.8: Lifecycle Costs and Planned Budget Summary

As discussed previously, the demand for acquisitions requires investigation.

6 Risk management planning

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

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'[8].

An assessment of risks[9] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical assets

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

Critical Asset(s)	Failure Mode	Impact
Henderson Waste Recovery Park Plant and Equipment	Mechanical breakdown	Disruption to service delivery i.e. earthworks, landfilling Landfill compactor has low hire availability Safety Public health
Waste Services Trucks	Mechanical breakdown	Disruption to service delivery e.g. waste collection Safety Public health

Table 6.1: Critical Assets

[8] ISO 31000:2009, p 2

[9] Enterprise Risk Management

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

6.2 Risk assessment

The risk management process used is shown in Figure 6.1 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.

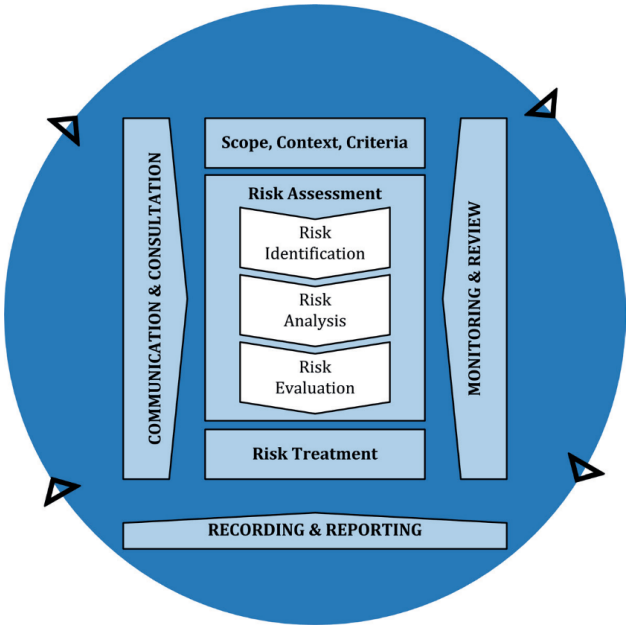


Figure 6.1: Risk Management Process – Abridged

Source: ISO 31000:2018, Figure 1, p9

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

An assessment of risks[10] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

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

These risks were sourced from a desktop exercise with the Fleet Services team and based on anecdotal evidence. It is in the Improvement Plan to implement a more robust risk management approach for fleet and plant.

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Resi-dual Risk *	Treatment Costs
Major Plant / Trucks	Mechanical failure	H	Dry hire	M	$360,000 per annum
All	Accidents resulting in property damage and/or injury	H	Investigate and establish appropriate safety measures e.g. warning sensors (Please note this AMP focuses on asset solutions and is not a substitute for other hazard management systems)	M	$150,000 approx. ~$10,000 per annum ongoing
All	Supply chain disruption, unexpected fleet and plant price rises	H	Renewal planning; acquisition planning	M	$300,000 per annum additional

Table 6.2: Risks and Treatment Plans

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

[10] Enterprise Risk Management

6.3 Infrastructure resilience approach

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

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

We do not currently measure our resilience in service delivery. 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 we cannot do

There are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years. These include:

- Resilience in the event of fleet and plant supply chain disruption
- Ensuring availability of light fleet for business requirements.

6.4.2 Service trade-off

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

- More frequent vehicle breakdowns resulting in service disruption
- Higher demand on individual fleet and plant assets, resulting in lower availability with service impacts, as well as higher maintenance costs.

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Inability to quickly process waste leads to health, safety and environmental risks, reputational damage
- Legacy, outdated safety features failing to mitigate accidents
- Increased staff and community complaints.

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

Document Set ID: 12480565
Version: 10, Version Date: 11/09/2026

7 Financial summary

This section contains the financial and valuation forecasts resulting from the information presented in the previous sections of this plan. Forecasts will be improved as the discussion on sustainable levels of service, risk and cost matures in line with the financial strategy.

7.1 Financial statements and projections

7.1.1 Asset valuations

The City's fleet and plant assets are valued at purchase cost. The valuation considered inputs such as:

- Purchase cost
- Age
- Sale value when disposing, i.e. residual value.

7.1.2 Sustainability of service delivery

There are three key indicators of sustainable service delivery that are considered in the AMP for this service area. The three indicators are the:

- Asset Consumption Ratio (Fair Value/Current Replacement Cost)
- Asset Sustainability Ratio (planned renewal budget for next year / annual depreciation expense)
- Asset Renewal Funding Ratio (planned renewal budget for the next 10 years / forecast renewal outlays for the next 10 years).

Asset Consumption Ratio

Asset Consumption Ratio 52 per cent

This ratio shows the written down value of depreciable assets in relation to their 'as new' value in current prices. A ratio of less than 50 per cent indicates a rapid deterioration of the asset base, whilst a ratio greater than 75 per cent may indicate an over investment in the asset base.

Asset Sustainability Ratio

Asset Sustainability Ratio 185 per cent

The target ratio should be 90-110 per cent. A lower value indicates that at some time in the future, more renewal funding will be required. A higher value may indicate 'above average' renewal spending over the lifecycle of the asset base, which may

simply correspond with peaks in new assets being added, depending on the useful lives of the assets.

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio[11] 100 per cent

The Asset Renewal Funding Ratio illustrates that over the next 10 years we expect to have 100 per cent of the funds required for the optimal renewal of fleet and plant.

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

7.1.3 Forecast costs (outlays) for the long-term financial plan

Table 7.1 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan.

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

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AMP and/or financial projections in the LTFP.

We will manage any ‘gap’ by communicating the service performance, cost, and risk implications in consultation with the community and key stakeholders.

Forecast costs are in today’s dollars, i.e. excluding CPI.

[11] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)
2025	400,000	2,749,024	2,433,784	11,650,000	0
2026	400,000	2,907,400	2,771,771	10,683,000	0
2027	400,000	3,036,351	2,972,517	3,630,000	0
2028	400,000	3,165,301	3,173,262	8,525,000	0
2029	400,000	3,294,252	3,374,008	7,433,000	0
2030	400,000	3,423,202	3,574,754	10,270,000	0
2031	400,000	3,552,153	3,775,500	8,190,000	0
2032	400,000	3,681,104	3,976,246	6,493,000	0
2033	400,000	3,810,054	4,176,992	10,400,000	0
2034	400,000	3,939,005	4,377,737	7,425,000	0

Table 7.1: Forecast Costs (Outlays) for the Long-Term Financial Plan

7.2 Valuation forecasts

The best available estimate of the value of assets included in this AMP is shown below.

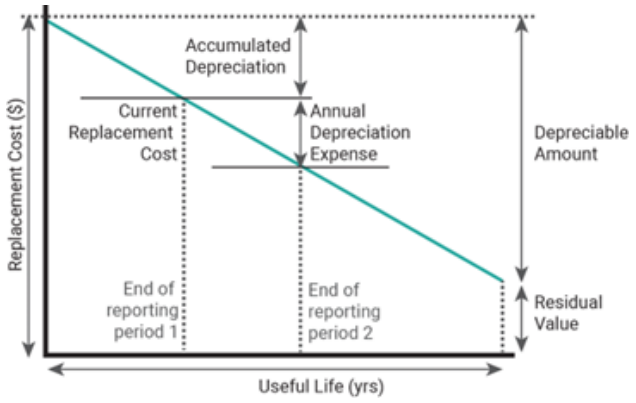


Figure 7.1: Valuation Terminology

These costs are shown in 2026 dollar values:

- Replacement Cost (Gross) $39,358,000
- Depreciable Amount $31,050,655
- Current Replacement Cost[12] $20,588,113
- Annual Depreciation Expense $5,763,635

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

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

8 Assumptions and improvement planning

8.1 Data and information sources

8.1.1 Accounting and financial data sources

This AMP utilises accounting and financial data sourced from Technology One CiAnywhere 2024A Release (775).

8.1.2 Asset management data sources

This AMP also utilises asset management data sourced from Technology One CiAnywhere 2024A Release (775).

8.2 Key assumptions

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

Key assumptions made in this AMP are:

- Population and asset growth projections are assumed to be accurate
- The data supplied was as accurate as possible at the time of compilation of this asset management plan
- The breakdown of the actual reactive, planned and operational expenditure is assumed to be accurate.

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

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

Renewals were estimated using the Asset Register Method.

8.3 Forecast reliability and confidence

The forecast demands, costs, planned budgets, and valuation projections in this AMP are based on the best available data. For effective asset management and financial planning and reporting, it is critical that the information is reliable and up to date.

Data confidence is classified on an A to E level scale in accordance with the guidance provided in the International Infrastructure Management Manual. [13]

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

Table 8.1: Data Confidence Grading System

The estimated confidence level for and reliability of data used in this AMP is shown in Table 8.2.

[13] IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

Data	Confidence Assessment	Comment
Demand drivers	B	Professional judgement, corporate knowledge and id projections.
Growth projections	B	Id projections
Acquisition forecast	D	Professional judgement of Asset Services and Fleet Services
Operation forecast	B	City records of past expenditure and professional judgement
Maintenance forecast	B	City records of past expenditure and professional judgement
Renewal forecast - Asset values	A	Latest asset valuation data.
- Asset useful lives	C	Useful lives are based on industry practice but additional data (e.g. risk assessments, downtime, well defined levels of service) are needed to improve accuracy.
- Condition modelling	D	Estimated based on age
Disposal forecast	D	Identified disposals (i.e. assets no longer required) do not have a structured process

Table 8.2: Data Confidence Assessment for Data used in AMP

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

8.4 Improvement plan

It is important that we recognise gaps in the planning process that require improvement to ensure effective asset management and informed decision making. The improvement plan generated from this AMP is shown in Table 8.3.

Task	Task	Responsibility	Resources Required
1	Develop fleet risk register as per Blue Zoo's recommendations	Fleet Services Asset Services	Staff time
2	Investigate requirement for additional fleet	Asset Services Fleet Services Vehicle Custodians	Staff time

Task	Task	Responsibility	Resources Required
3	Review fleet policies to incorporate alignment, safety, whole of life cost, sustainability, new technology and data use	Fleet Services People Experience	Staff time
4	Review procurement processes to ensure purchase lead times are planned for and accommodated	Fleet Services Finance	Staff time
5	Implement a fleet management system with full lifecycle capability, including disposal tracking and asset justification workflows, using a combination of spreadsheets, Technology One and other digital platforms	Asset Services Fleet Services	Staff time
6	Investigate the Australian Federal Government's Community Energy Upgrades Fund	Finance Fleet Services Asset Services Advocacy	Staff time
7	Maintenance Scheduling and Downtime Tracking – adopt telematics	Fleet Services	$150K approx.
8	Review and update KPI's	Fleet Services	Staff time
9	Operating Model – formal framework with periodic review	Fleet Services	Staff time
10	Monitor missed staff travel, goods and waste transport/processing and park maintenance missed as a result of lack of plant and equipment	Fleet Services Service unit / officer using asset	Staff time IT systems, inc. training
11	Clarify and streamline operations and maintenance budget and cost reporting	Asset Services Fleet Services Finance	Staff time
12	Update Fleet Management Plan Use for identifying additional fleet and plant to purchase	Fleet Services	Staff time
13	Ensure AMP's are completed prior to the beginning of the planning period for best accuracy and clarity	Asset Services	Staff time

Table 8.3: Improvement Plan

8.5 Monitoring and review procedures

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

This AMP will be reviewed and updated to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

The AMP has a maximum life of 4 years and is next due for complete revision in 2028.

8.6 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 long-term financial plan
- The degree to which the 1 to 5-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AMP
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90-110 per cent).

9 References

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- City of Cockburn – Long Term Financial Plan 2024-2025 to 2033-2034
- City of Cockburn – Management Budget 2024 - 2025
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- ISO, 2018, ISO 31000:2018 Risk management – Guidelines
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- DVC, 2006, 'Asset Investment Guidelines', 'Glossary', Department for Victorian Communities, Local Government Victoria, Melbourne, http://www.dvc.vic.gov.au/web20/dvclgv.nsf/allDocs/RWP1C79EC4A7225CD2FCA257170003259F6?OpenDocument
- Local Government of Western Australia – Asset Management Framework and Guidelines
- Research Solutions 2023, 'Internal Customer Satisfaction Survey 2023 Results: Fleet Management'

10 Appendices

10.1 Appendix A Acquisition forecast

The new assets required to meet growth will be funded through municipal funding.

10.1.1 Acquisition forecast assumptions and source

Although some fleet and plant are provided to the City for managing bushfires (for example), they are not owned by the City. As such there are no donated assets recorded.

Projected acquisition needs and budget are based on anecdotal evidence from Fleet Services staff. This is an identified area for improvement.

10.1.2 Acquisition project summary

Additional fleet and plant are identified on an as-needed basis currently. It is in the Improvement Plan to review this approach.

10.1.3 Acquisition forecast summary

Year	Constructed ($)	Donated ($)	Growth ($)
24/25	400,000	0	0
25/26	400,000	0	0
26/27	400,000	0	0
27/28	400,000	0	0
28/29	400,000	0	0
29/30	400,000	0	0
30/31	400,000	0	0
31/32	400,000	0	0
32/33	400,000	0	0
33/34	400,000	0	0

Table 10.1: Acquisition Forecast Summary

10.2 Appendix B Operation forecast

10.2.1 Operation forecast assumptions and source

Previous operation expenditure was extracted from the TechnologyOne finance system. Operation includes:

- Fuel
- Cleaning
- Grease
- Oil
- Regular insurance fees (i.e. excluding excess)
- Licensing.

Expenditure was linearly extrapolated and professional judgement used to verify. Some was apportioned to additional fleet, under the 'Additional Operation Forecast'.

10.2.2 Operation forecast summary

Table 10.2 provides a summary of Forecast Operations expenditure over the planning period.

Year	Operation Forecast ($)	Additional Operation Forecast ($)	Total Operation Forecast ($)
24/25	2,749,024	0	2,749,024
25/26	2,907,400	0	2,907,400
26/27	3,006,803	29,548	3,036,351
27/28	3,106,205	59,097	3,165,301
28/29	3,205,607	88,645	3,294,252
29/30	3,305,009	118,193	3,423,202
30/31	3,404,412	147,741	3,552,153
31/32	3,503,814	177,290	3,681,104
32/33	3,603,216	206,838	3,810,054
33/34	3,702,619	236,386	3,939,005

Table 10.2: Operation Forecast Summary

10.3 Appendix C Maintenance forecast

10.3.1 Maintenance forecast assumptions and source

Previous maintenance expenditure was extracted from the TechnologyOne finance system. Maintenance includes:

- Planned and reactive servicing
- Materials inc. vehicle components
- Labour
- Contract expenses
- Repairs
- Insurance excess.

10.3.2 Maintenance forecast summary

Table 10.3 provides a summary of Forecast Maintenance expenditure over the planning period.

Year	Maintenance Forecast ($)	Additional Maintenance Forecast ($)	Total Maintenance Forecast ($)
24/25	2,433,784	0	2,433,784
25/26	2,771,771	0	2,771,771
26/27	2,944,347	28,170	2,972,517
27/28	3,116,923	56,340	3,173,262
28/29	3,289,499	84,510	3,374,008
29/30	3,462,075	112,679	3,574,754
30/31	3,634,651	140,849	3,775,500
31/32	3,807,227	169,019	3,976,246
32/33	3,979,803	197,189	4,176,992
33/34	4,152,379	225,359	4,377,737

Table 10.3: Maintenance Forecast Summary

10.4 Appendix D Renewal forecast summary

10.4.1 Renewal forecast assumptions and source

Projected renewal needs and budget are from the Fleet Services 'Master Vehicle Program' spreadsheet, which was developed based on benchmark useful lives, usage and available financial reserves.

The Asset Register Method was used in lieu of professional judgement by the Fleet Services team.

10.4.2 Renewal project summary

As fleet and plant replacements are frequently changing, they are not included here.

10.4.3 Renewal forecast summary

Table 10.4 provides a summary of Forecast Renewal expenditure over the planning period.

Year	Renewal Forecast ($)	Renewal Budget ($)
24/25	11,650,000	11,650,000
25/26	10,683,000	10,683,000
26/27	3,630,000	3,630,000
27/28	8,525,000	8,525,000
28/29	7,433,000	7,433,000
29/30	10,270,000	10,270,000
30/31	8,190,000	8,190,000
31/32	6,493,000	6,493,000
32/33	10,400,000	10,400,000
33/34	7,425,000	7,425,000

Table 10.4: Renewal Forecast Summary

10.4.4 Renewal plan

Refer 10.4.2.

10.5 Appendix E Disposal summary

10.5.1 Disposal forecast assumptions and source

As of August 2026, it is assumed there are no fleet and plant asset disposals identified over the planning period. However, this AMP should be updated with any disposal projects identified during the planning period, as well as the life cycle cost summary.

A transparent approach to fleet disposals would ensure adequate communication regarding levels of service.

10.5.2 Disposal project summary

No fleet or plant disposals have been identified.

10.5.3 Disposal forecast summary

No fleet or plant disposals have been identified.

10.6 Appendix F Budget summary by lifecycle activity

The budget summary shown in Table 10.5 is based on the renewal budget from the LTFP and the projected O&M budget, as discussed in Appendix B and C.

Year	Acquisition ($)	Operation ($)	Maintenance ($)	Renewal ($)	Disposal ($)	Total ($)
2025	400,000	2,749,024	2,433,784	11,650,000	0	17,232,809
2026	400,000	2,907,400	2,771,771	10,683,000	0	16,762,171
2027	400,000	3,036,351	2,972,517	3,630,000	0	10,038,867
2028	400,000	3,165,301	3,173,262	8,525,000	0	15,263,564
2029	400,000	3,294,252	3,374,008	7,433,000	0	14,501,260
2030	400,000	3,423,202	3,574,754	10,270,000	0	17,667,957
2031	400,000	3,552,153	3,775,500	8,190,000	0	15,917,653
2032	400,000	3,681,104	3,976,246	6,493,000	0	14,550,349
2033	400,000	3,810,054	4,176,992	10,400,000	0	18,787,046
2034	400,000	3,939,005	4,377,737	7,425,000	0	16,141,742

Table 10.5: Budget Summary by Lifecycle Activity

10.7 Appendix G Legislative requirements

Legislation	Requirement
Local Government Act 1996 LG (Miscellaneous Provisions) Act 1960 (WA) LG Regulations 2008	Provides for a system of Local Government by describing the functions of and providing a framework for the administration and financial management of Local Governments.
Road Traffic Act 1974 Road Traffic (Vehicle Standards) Regulations 2002	All motor vehicles used on public roads must be licensed unless exempted by the Act.
Motor Vehicle Standards Act 1989	The objects of this Act include the following — (a) to achieve uniform vehicle standards to apply to new vehicles when they begin to be used in transport in Australia; and (b) to regulate the first supply to the market of used imported vehicles.
Disability Services Act 1993 (WA)	Is to ensure that services are provided and funded in conformity with the Act
Occupational Safety and Health Act 1984 (WA). OSH Regulations 1996	Provides for the promotion, coordination, administration and enforcement of Safety and Health in WA. Places emphasis on the prevention of accidents and injury.
Australian Standards	Standards are published documents setting out specifications and procedures designed to ensure products, services and systems are safe, reliable and consistently perform the way they were intended to. They establish a common language which defines quality and safety criteria.
Emergency Management Act 2005 (WA)	Requires lifeline utilities to function at the fullest possible extent during and after an emergency and to have plans for such functioning (business continuity plans)

10.8 Appendix H Asset useful lives

Category	Type	Useful Life (years)
Boat	4-6m Marina	10
Heavy Fleet	All Terrain Vehicle	3

Category	Type	Useful Life (years)
Heavy Fleet	Loader Small	3
Heavy Fleet	Quad	3
Heavy Fleet	Landfill Hooklift	4
Heavy Fleet	Landfill Traxcavator	4
Heavy Fleet	Mule	4
Heavy Fleet	Out Front Mower	4
Heavy Fleet	Truck Rubbish Rear Loader 29m3	4
Heavy Fleet	Truck Rubbish Waste 8m3	4
Heavy Fleet	Road Sweeper	4.5
Heavy Fleet	Truck Rubbish Recycle 29m3	4.5
Heavy Fleet	Truck Rubbish Waste 22m3	4.5
Heavy Fleet	High Speed Mower	5
Heavy Fleet	Landfill Compactor	5
Heavy Fleet	Mower 7 Gang	5
Heavy Fleet	Articulated Dump	6
Heavy Fleet	Bin Arm	6
Heavy Fleet	Deck Plate	6
Heavy Fleet	Excavator 4-5 Tonne	6
Heavy Fleet	Flocon	6
Heavy Fleet	Hooklift	6
Heavy Fleet	Landfill Loader	6
Heavy Fleet	Loader Backhoe	6
Heavy Fleet	Loader Heavy	6
Heavy fleet	Skid Steer	6
Heavy Fleet	Tip Truck	6
Heavy Fleet	Tractor	6

Category	Type	Useful Life (years)
Heavy Fleet	Truck + Crane	6
Heavy Fleet	Truck 5t	6
Heavy Fleet	Truck Light	6
Heavy Fleet	Truck Under 5t	6
Heavy Fleet	Water Truck	6
Heavy Fleet	Excavator 4-5 tonne Trailer	10
Heavy Fleet	Forklift	10
Light Fleet	Vehicle	3
Light Fleet	Cage	6
Light Fleet	Capsule	6
Other	Bus	6
Other	Complex Vehicle Extrication	6
Other	Ride On Sweeper	6
Trailers	All Terrain Vehicle Trailer	4
Trailers	Quad Trailer	4
Trailers	Elevated Work Platform Trailer	5
Trailers	AD Engineered	10
Trailers	Box Trailer	10
Trailers	Caravan	10
Trailers	Livestock Trailer	10
Trailers	Mower Trailer	10
Trailers	Roller Trailer	10
Trailers	Skid Trailer	10
Trailers	Tandem Trailer	10

Table 10.6: Useful Lives of Assets

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Document Set ID: 12480565
Version: 10, Version Date: 11/09/2026