Pathways Asset Management Plan 2025-2029

City of Kalamunda

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1.0	28/10/2024	The first version for adoption	SB, SS	SS	LH
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1. EXECUTIVE SUMMARY

1.1. The Purpose of the Plan

An Asset Management Plan is a strategic planning document designed to demonstrate the financial position of an asset portfolio based on current management practices. Infrastructure assets are a key service provided by Local Governments, and the cost to provide and upkeep the assets to an acceptable standard is significant. Asset Management Plans are therefore vital to understand and optimise the required investment into the portfolio now and into the future.

The plan considers:

- What assets we have (a summary of our existing portfolio);
- How we look after the portfolio, including level of service and risks;
- Future demand for the assets;
- The cost to manage the portfolio, over a 10-year period; and,
- Actions to improve.

1.2. Asset Description- What We Have

This Asset Management Plan covers the City's pathway infrastructure including;

- 432km of footpaths and cycle paths
- $58.7 million gross replacement value

- 41 pedestrian bridges
- $4.3 million gross replacement value

Footpaths, cycle paths, and pedestrian bridges comprise of approximately 6% of the City's overall portfolio by value.

1.3. Levels of Service

The City aims to provide services that meet community aspirations; however, financial capacity and technical requirements must be balanced. The resulting standard of provision is called a "level of service," and an Asset Management Plan uses this level of service as a benchmark for cost analysis.

The level of service for the pathway portfolio is:

Building New

Desired investment into new footpaths as per the New Footpaths Plan, Bike Plan, and Trails Plan.

Renewing Existing

Renewing existing pathways when in poor or very poor condition (known as intervention level 4).

Maintenance & Operation

Undertaking planned maintenance and operation programs.

1.4. Future Demand

The Asset Management Plan also considers future demand and its impact on service delivery. Factors influencing the plan include:

- Population growth
- Increasing community expectations
- Community demographics (increase in population of elderly and young children)
- Preferences towards walking, cycling, and use of public transport

The City's approach to service the future demand is outlined in the Plan.

1.5. Financial Summary

The City has undertaken financial modelling of the pathways portfolio to determine the funding required over a 10-year period to meet the level of service. This Asset Management Plan has found that the planned budget in the Long-Term Financial Plan is currently insufficient to meet the intended levels of service over a 10-year period.

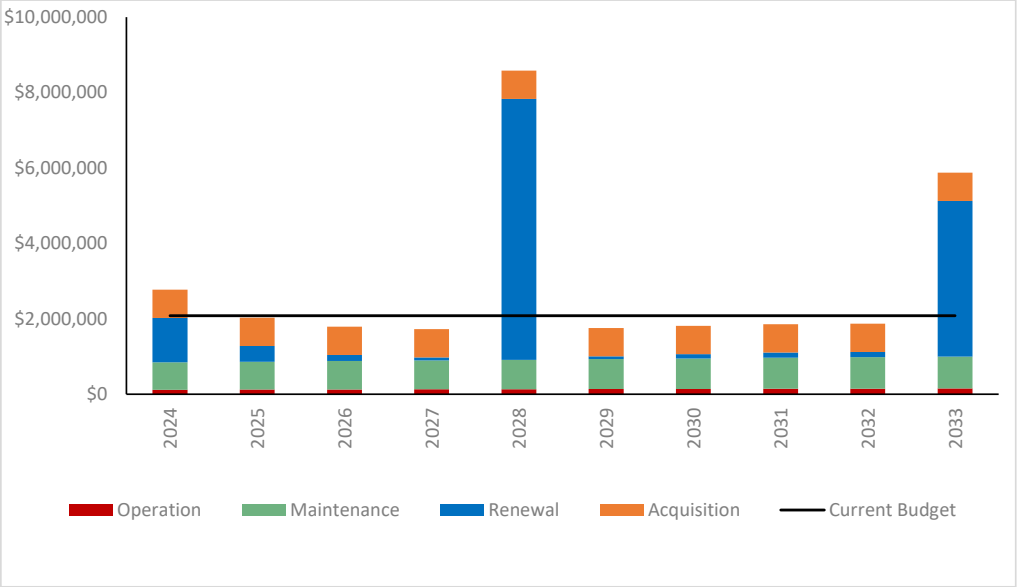
The modelling indicates:

The City needs to invest $3,007,773 per year into pathway assets to meet the level of service.

The current funding available in the Long-Term Financial Plan for pathways assets is $2,082,000.

The City is therefore underfunding the pathways portfolio by $925,773 per year.

The graph below demonstrates this funding gap.



In the event of such a funding gap, the City must either:

- Reduce its intended level of service, or
- Increase funding on the Long Term Financial plan for the acquisition, renewal, maintenance and operation of the pathway portfolio.

What We Cannot Do	What We Can Do
There are some service levels that cannot be reduced to save costs, due to the associated risks. We cannot: • Allow assets to deteriorate to a standard that is unsafe. • Reduce our standards when constructing new paths, as the City is obliged to meet Australian Standards. The risks to the City are outlined in the body of the Asset Management Plan.	To address the funding gap, the City can: • Prioritise renewal of existing assets over the construction of new assets, to ensure the existing portfolio remains at an acceptable standard. • Revise strategic direction for the provision of new infrastructure, to pursue only high priority network infrastructure which can attract grant funding.

1.6. Monitoring and Improvement Program

The Asset Management Plan also includes a review of the City's management processes to ensure continual improvement, which assists in optimising the cost of the portfolio. The City has identified the following actions to monitor and improve our processes, to be implemented over the life of the plan:

- Develop a Maintenance Management Plan.

- Implement an Enterprise Resource Planning (ERP) system with a Maintenance Management System including a mobile device for field data collection.
- Review Bike Plan and New Path Policy.
- Continue organisational education in asset management systems, asset management plans, and connection to the Long-Term Financial Plans.

2. INTRODUCTION

2.1. Background

An Asset Management Plan is a strategic planning document designed to demonstrate the financial position of an asset portfolio based on current management practices. Infrastructure assets are a key service provided by Local Governments, and the cost to provide and upkeep the assets to an acceptable standard is significant. Asset Management Plans are therefore vital to understand and optimise the required investment into the portfolio now and into the future.

The City is responsible for managing, operating, and maintaining major infrastructure asset classes such as roads, pathways, drainage, parks infrastructure, parks, reserves, car parks, and buildings.

Asset Management Plans are developed for each asset class for the following purposes:

- Implementing objectives in the City's Asset Management Policy and other strategic guiding documents
- Ensuring that the City's assets continue to provide an adequate level of service to the community
- Providing guidance on the long-term funding needs for the renewal of the City's assets
- Supporting external funding applications
- Documenting existing and planned works programs and practices

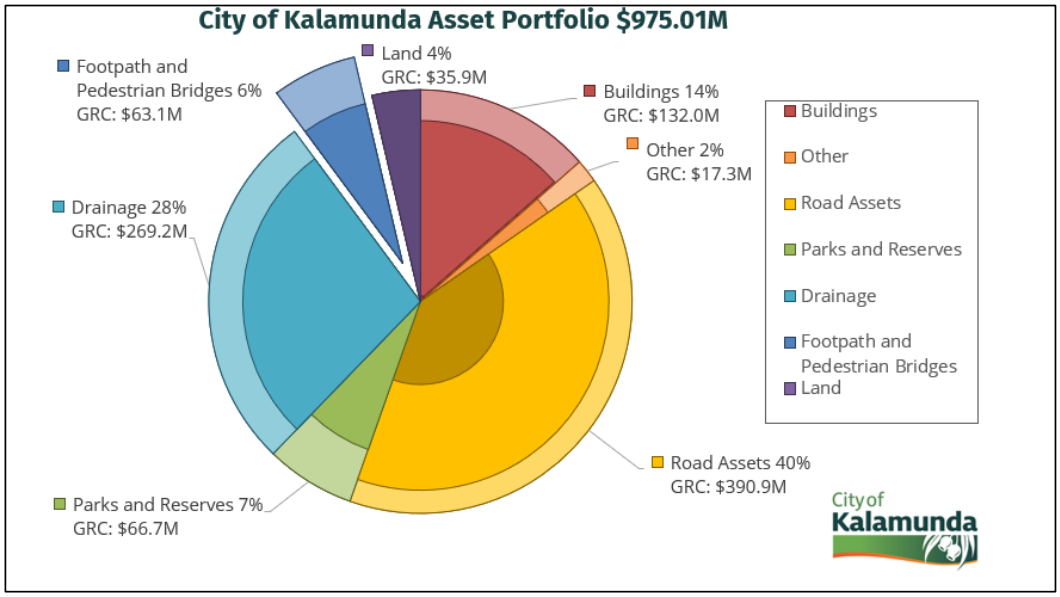
This Asset Management Plan covers the City's pathway infrastructure including;

- 432km of footpaths and cycle paths
- $58.7 million gross replacement value

- 41 pedestrian bridges
- $4.3 million gross replacement value

Footpaths, cycle paths, and pedestrian bridges comprise of approximately 6% of the City's overall portfolio by value (see Figure 2.1.1 below).

Figure 2.1.1. City of Kalamunda asset portfolio **(As of 30 June 2024)**



The aim of the City for the pathways and pedestrian bridge network is to achieve the following essential objectives:

- Safe,
- Accessible,
- Connected, and
- Affordable.

Strategic Context

The Asset Management Plan is to be read with the City of Kalamunda planning documents. This should include the Asset Management Policy and Asset Management Strategy, along with other key planning documents:

- Strategic Community Plan to 2031 – "Kalamunda Advancing"
- Long Term Financial Plan
- Corporate Business Plan to 2023 - "Kalamunda Achieving"
- Community Scorecard
- Disability Access and Inclusion Plan to 2022
- Bicycle Plan 2017
- New Path Policy 2018

Asset Management Practices are also aligned to the following standards:

- ISO 55000:2024 Asset Management – Vocabulary, overview, and principles
- International Infrastructure Management Manual[1]

[1] IPWEA International Infrastructure Management Manual (IIMM), Sec 2.1

Governance

Our organisational structure for service delivery for infrastructure assets is detailed below:

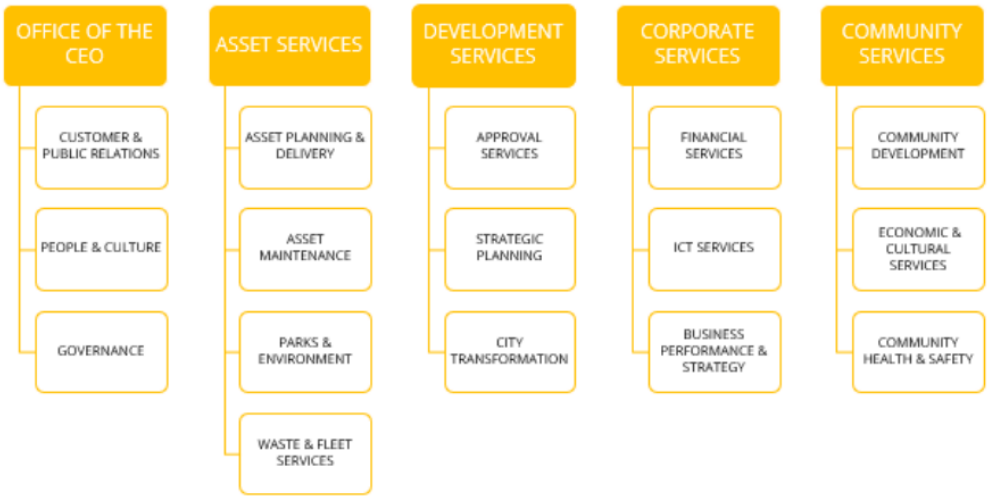


Figure 2.1.2. City of Kalamunda Organisational Structure

Stakeholders

Key stakeholders in the preparation and implementation of this plan are outlined in the table below.

Table 2.1: Key Stakeholders in the AM Plan

Key Stakeholder	Role in Asset Management Plan
Elected Board	▪ Stewards of the City of Kalamunda's assets to ensure sustainable infrastructure provision for current and future generations ▪ Set strategic direction for the portfolio ▪ Represent the needs of the community/shareholders ▪ Allocate resources to meet planning objectives in providing services while managing risks
City Administration/Officers	▪ Undertake asset management practices across the asset lifecycle including creation, renewal, maintenance, operation and disposal ▪ Set levels of services in accordance with the strategic direction and community feedback ▪ Make sure the quality of service offered satisfies both locals' and visitor's requirements

Key Stakeholder	Role in Asset Management Plan
Residents, Ratepayers, Businesses and Visitors	▪ End user of the assets ▪ Contribute to establishing levels of service of the assets through communicating needs and aspirations

2.2. Goals and Objectives of Asset Ownership

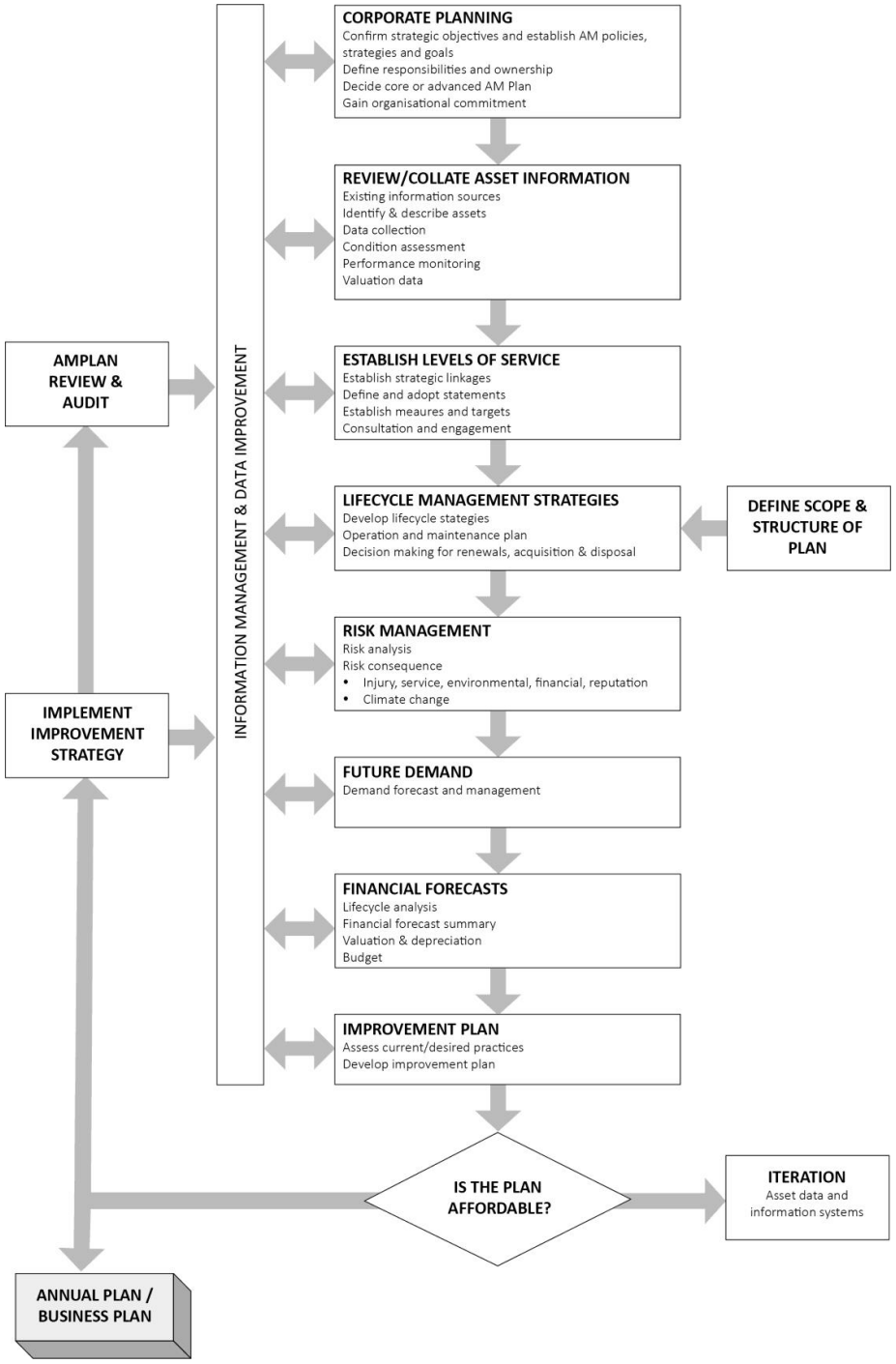
Our goal for managing infrastructure assets is to provide a level of service which aims towards community aspirations whilst considering financial sustainability for present and future consumers. We do this in an Asset Management Plan through:

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

The key elements of the planning framework are outlined in the road map as shown below.

Road Map for Preparing an Asset Management Plan

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



3. LEVELS OF SERVICE

The City aims to provide services that meet community aspirations; however, financial capacity and technical requirements must be balanced. The resulting standard of provision is called a "level of service," and an Asset Management Plan uses this level of service as a benchmark for cost analysis.

In setting levels of service, we consider:

- Customer values
- City values and relevant legislation
- Customer levels of service
- Technical levels of service

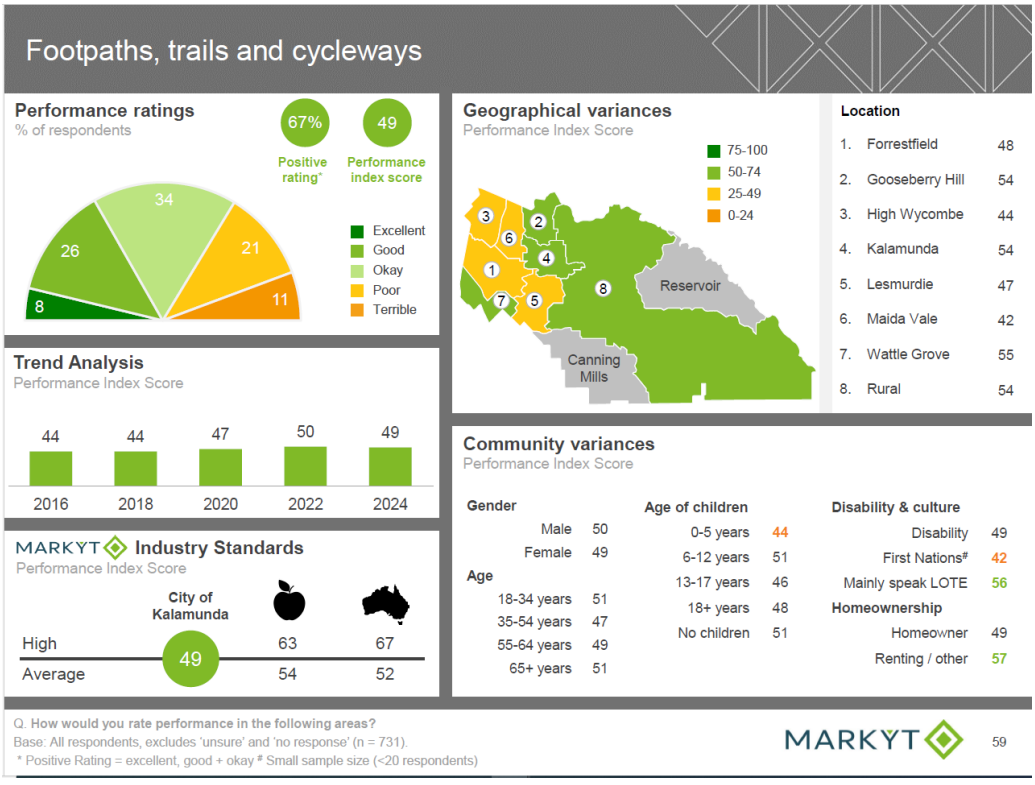
3.1. Customer Research and Expectations

The following data has been collected by the City and analysed to understand the community's expectations in relation to pathway assets:

Community Scorecard

The City commissioned Catalyse to conduct a community survey in 2024 to measure the City's performance against key indicators in the Strategic Community Plan. Satisfaction levels with footpaths, trails and cycleways was assessed in this survey, as outlined in the table below.

Table 3.1: Customer Satisfaction Survey Levels



The survey indicates that 67% of the respondents gave a positive performance rating (excellent, good, or okay) for the City's Footpath, Trails, and Cycle assets. The City's performance index score is below the average of other participating Local Government Authorities in WA. This indicates that the community has a greater expectation than what is currently being provided by the City of Kalamunda.

City staff have reviewed the commentary associated with the survey results. There were 66 total comments relating to pathways infrastructure.

31 respondents commented on cycling:

- 28 mentioned the lack of cycling infrastructure
- 4 mentioned safety
- 7 mentioned condition and maintenance of the existing network

43 respondents mentioned footpaths:

- 19 mentioned the lack of footpath infrastructure
- 12 mentioned maintenance
- 11 mentioned condition of the existing network
- 7 mentioned universal access
- 3 mentioned lack of lighting infrastructure

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- Kalamunda Central – 8 comments
- Zig zag – 3 comments
- Lesmurdie – 3 comments
- Hawtin Road, Maida Vale – 3 comments
- Hale Road, Forrestfield – 2 comments

The results indicate the following are high priority actions:

- A review of the Bike Plan and emphasis on cycling infrastructure should be the priority for acquisitions
- Funding renewals in accordance with the Asset Management Plan to address condition issues
- Site specific assessments

Community Services Requests

The number of requests received from the community relating to the services provided by the City is an indicator of the community's perception of the level of service.

Table 3.2: Description of Community Services Requests

Type of request	Details	Number of requests
Pathway Maintenance	Requests to rectify trip hazards, cracking, potholes, and sweeping	701
Pathway Renewal	Requests to renew an existing path due to its condition	92
Path Requests New	Requests to install a new path or upgrade existing	91

Figure 3.2: Customer Service Requests by Area

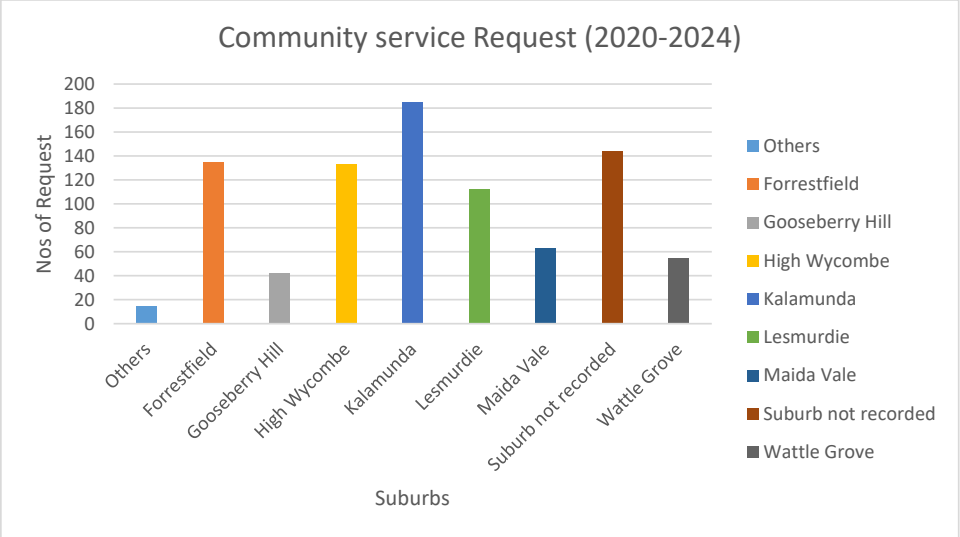
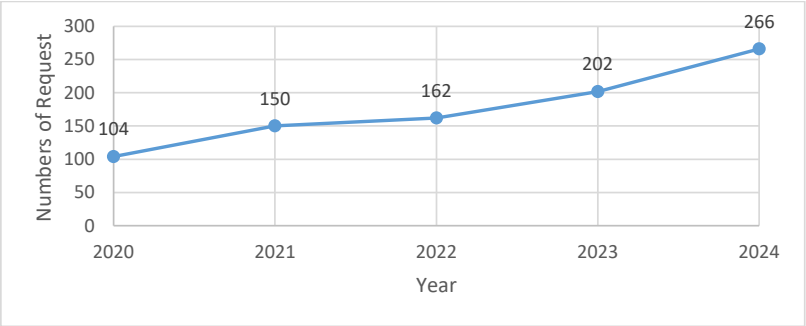


Figure 3.3: Customer Service Requests by Year



3.2. Strategic and Corporate Goals

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

Our vision is: *Connected Communities, Valuing Nature and Creating our Future Together*

Our Values are:

- Core Values
  - Service
  - Professionalism

- Quality
- Aspirational Values
  - Courage
  - Diversity
  - Innovation

This Plan has also been prepared to be aligned with the following objectives and strategies of the City's Strategic Community Plan 2031. The relevant goals and objectives and how these are addressed in this AM Plan are summarized in Table 3.3.

Table 3.3: Strategic Community Plan Goals and Objectives

Goal	Objective	Link to the Asset Management Plan
Connectivity	To connect the community to key centres of activity, employment, and quality amenities	This Plan describes how the City will operate, maintain, renew, and upgrade the assets to provide services and facilities to the community.
Improved Infrastructure	To develop and enhance the City's economy	This Plan sets a standard of infrastructure provision.
Safer Community	To provide safe and healthy environments for the community to enjoy	Maintenance, renewal, and upgrade of assets in a timely manner ensures community safety when using path assets.
Transparent Governance	To provide leadership through transparent governance	This Plan is a public document and provides transparency around management practices and financial capacity.
Benefit of community	To proactively engage and partner for the benefit of the community	The community is supported and served by infrastructure assets. Planning and long-term management of these assets is vital to the sustainability of these services.

3.3. Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the pathways and pedestrian bridge service are outlined in Table 3.4.

Table 3.4: Legislative Requirements

Legislation	*Requirement*
Local Government Act 1995 (WA)	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.
Australian Accounting Standards AASB 116 – Property, Plant and equipment AASB 136 - Impairment	Prescribes requirements for recognition, depreciation and fair value measurement of property (including infrastructure assets), plant and equipment assets.
Work Health and Safety 2020 (WA)	Safe work practices, Safety at worksites, Public Safety
Work Health and Safety (General) Regulations 2022	Safety regulations at worksites
Limitation Act 2005	Asset inspection and management requirements, Evidence-based maintenance system addressing risks appropriately

Land Administration Act 1997	Responsibility for land and improvements, Permitted uses on public land
Disability Discrimination Act 1992 (Commonwealth)	The responsibilities and power of the council to provide equitable access for a person with a disability.
State Records Act 2000 (WA)	Preservation of public records, Record keeping

3.4. Customer Values

Customer Values indicate:

- what aspects of the service are 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 3.5: Customer Values

Service Objective:

Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Well-maintained, pathways free of hazards	Customer services request Community Scorecard	Raised as areas of improvement in the Community Scorecard commentary Number of customer service requests have been gradually increased annually	Expected to increase at the current level of investment
Universal access			
Well-connected to major activity areas			
Pathways have appropriate lighting			

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?

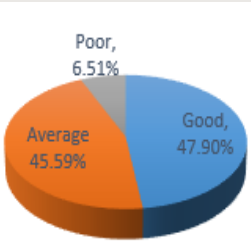
Function Is it suitable for its intended purpose …. Is it the right service?

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 %'s) to provide a balance in comparison to the customer perception that may be more subjective.

Table 3.6: Customer Level of Service Measures

Type of Measure	*Level of Service*	*Performance Measure*	*Current Performance*	*Expected Trend Based on Planned Budget*
Condition	Condition of the assets	Condition rating of the asset	Most assets are in average and good condition 	Asset renewals are currently not fully funded, and therefore asset conditions are likely to deteriorate. The portfolio has experienced overall deterioration from the last review in 2020 over which time renewals were not fully funded.
	Confidence levels		High (Professional judgement supported by extensive data sampling)	Medium (Professional judgement supported by data sampling)
Function	Assets are functional and able to provide services to the community	Customer Service Requests – when assets fail to function as required	Customer service requests gradually increase annually,	Expected to increase over the long term as several assets reach end of life, if funding is not sourced for asset replacement.
	Confidence levels		Medium (Professional judgment supported by data sampling)	Low (Professional judgement with no data evidence)
Capacity	Connectivity of the network	Community Scorecard	71% of respondents in the Community Scorecard commented that the cycleways and footpaths require investment due to lack of infrastructure.	Demand for shared paths will be addressed after a review of the existing bike plan and searching the possible grant funding for improvement.
	Confidence levels		Medium (Professional judgement supported by data sampling)	Medium (Professional judgement supported by data sampling)

3.6. Technical Levels of Service

To deliver the customer values, and impact the achieved Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance. Service and asset managers plan, implement, and control technical service levels to influence the service outcomes.[2]

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

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

Acquisition	Operation	Maintenance	Renewal
• 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)	• The regular activities to provide services (e.g. opening hours, cleansing, mowing grass, energy, inspections, etc	• The activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life (e.g. road patching, unsealed road grading, building and structure repairs)	• The activities that return the service capability of an asset up to that which it had originally provided (e.g. road resurfacing and pavement reconstruction, pipeline replacement, and building component replacement)

Table 3.7 shows the activities expected to be provided under the current 10-year Planned Budget allocation, and the Forecast activity requirements being recommended in this AM Plan.

Table 3.7: Technical Levels of Service

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
TECHNICAL LEVELS OF SERVICE				
Acquisition	New and upgraded Pathways to meet demand.	Identification of assets acquisition within forward capital planning, as per the Bike Plan, New Path Policy and customer requests.	Forward Capital Plan upgrade on an annual basis to incorporate future needs based on the grant and municipal funding available.	Additional acquisitions will be planned for missing pathways if additional grant and municipal funding are available.
		Budget	$750,000	$750,000
Operation	Routine cleaning of Pathways	Cleaning Frequency	Scheduled Street cleaning program.	Will increase as additional assets are constructed and require operation
		Budget	$121,000	$136,883
Maintenance	Ensure that the assets are well maintained and free of hazards for all asset users	Frequency	Hazards are reactively identified and prioritised for them repair within budget limitations.	Likely to increase due to additional assets being created
		Budget	$723,000	$785,569
Renewal	Renew existing assets that are in poor condition and reach the end of life.	Asset condition assessment	Assets in poor or very poor condition added to the capital works program.	The City has a substantial portfolio of assets that are reaching the end of life in the next decade. A higher renewal budget is required to maintain the portfolio at intervention level 4.
		Budget	$488,000	$1,335,320
Disposal	Disposal of assets no longer in use	Identification of assets disposal within forward capital planning	Forward Capital Plan upgrade on an annual basis to incorporate future needs	No additional disposal planned at this time

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
		Budget	*Nil in future years*	*Nil in future years*

Note: * Current activities related to Planned Budget.

** Expected performance related to forecast lifecycle costs.

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

4. FUTURE DEMAND

4.1. Demand Impact and Demand Management Plan

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

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

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets, and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures.

In the future, shared paths will be maintained using recycled materials, such as crumb rubber, in path resurfacing. This will continue to support the promotion of eco-friendly materials and the reduction of greenhouse gas emissions and waste in landfill sites.

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

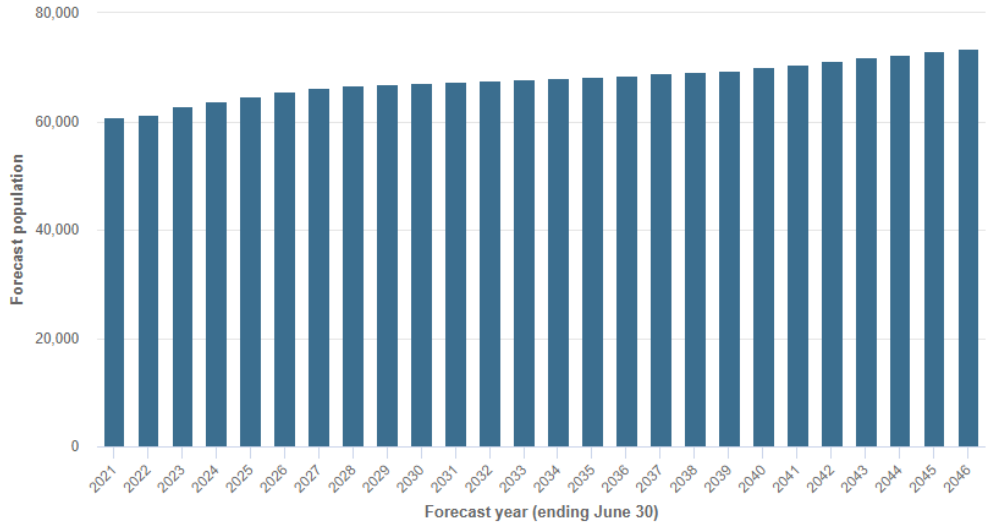
Table 4.3: Demand Management Plan

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Population Growth	58,762 (Census 2021)	Between 2021 and 2046, the population is forecast to increase by 20.71%, at an average annual change of 0.76% (Forecast.id.com.au)	Population growth will mean an increased use of assets	Demand for new assets and services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new and expanded assets to meet demand. As new developments are completed, gifted assets will help meet the demand created.
Community demographics (increase of population of elderly and young children)	The median age of people in Kalamunda is 47. Children aged 0 - 14 made up 15.7% of the population, and people aged 65 years and over made up 26.1%.	A significant increase in the number of people aged 65 years and over is expected over the next 10 years.	An ageing will have an impact on the functionality of the Pathways network. Pathways widths, gradients and cross-falls will need to be compliant for elderly Pathways users and the mobility-impaired	All new renewal programs will ensure that the City's pathway network is built to accessibility standards as per Australian standards.
Preferences towards walking, cycling, and use of public transport	Community becoming more aware of the health benefits of physical activity	Increased demand for shared paths. Increased walking and cycling activities on the Pathways network	Improvements to public transport and accessible shared path	Kalamunda Bike Plan review and implementation

Increasing Community Expectations	Community Scorecard results below industry average	Higher expectations and awareness	Increase in cost/resources to the City	Balancing the priorities with community needs

Between 2021 and 2046, the population is forecast to increase by 20.71%, at an average annual change of 0.76% (Figure 4.1)

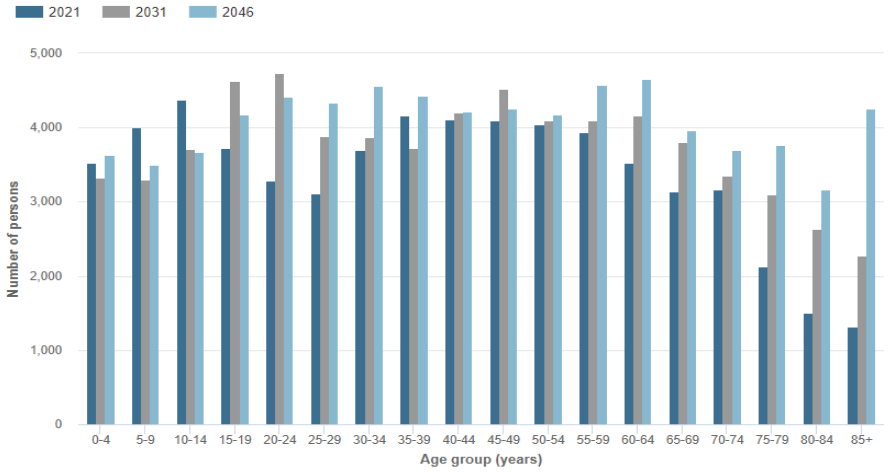
Figure 4.1: Population forecast (Forecast.id.com.au)



Source: Population and household forecasts, 2021 to 2046, prepared by .id (informed decisions), September 2024.

Between 2021 and 2031, the age structure forecasts for the City of Kalamunda indicate a 13.2% decrease in the population under working age, a 34.7% increase in the population of retirement age, and an 11.2% increase in the population of working age (Figure 4.2)

Figure 4.2: Forecast age structure (Forecast.id.com.au)

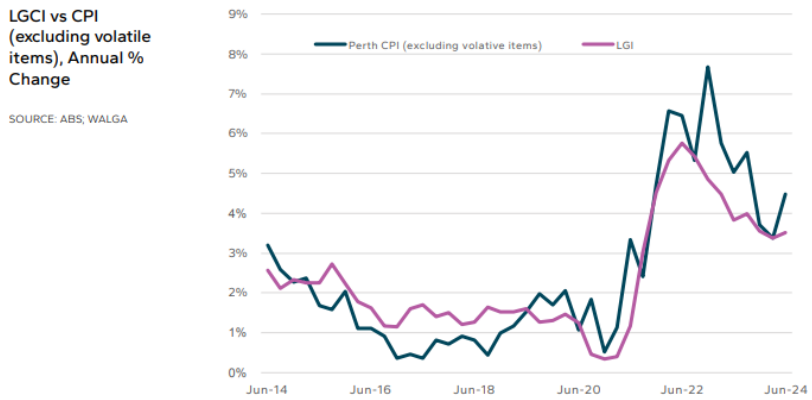


Source: Population and household forecasts, 2021 to 2046, prepared by .id (informed decisions), September 2024.

4.2. Industry Trends

The WALGA Economic Briefing for September 2024 shows the below graph showing the % Change in Perth CPI and the LGCI. The Local Government Cost Index (LGCI) increased by 0.8% in the June quarter, up slightly from 0.7% December quarter. In annual terms, the LGCI increased by 3.5%, up from 3.3% in the December quarter. Non-residential Building costs have seen the biggest jump, up 4.6% over the last 12 months as it competes with the residential sector for inputs. Non-road Infrastructure has increased by 3.2% and Road and Bridges costs have increased by 2.1% in the same timeframe. Through 2024-25 it is expected that construction costs will see modest growth of 2% to 3%.

Figure 4.3: Local Government Cost Index



4.3. Climate Change Adaptation

In the context of the Asset Management Planning process climate change can be considered as both a future demand and a risk. In relation to the pathways portfolio, there are limited risks relating to climate change.

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 while managing life cycle costs. The lifecycle of an asset includes; creation, operation, maintenance, renewal and disposal. A lifecycle approach is taken to ensure that the City understands all costs relating to meeting our service levels.

Figure 5.0.1: Asset Life cycle (IPWEA)

5.1. Background Data

5.1.1. Physical parameters

The City of Kalamunda is responsible for approximately 432km of pathways and 41 pedestrian bridges. The total area of the pathways network recorded within the asset register in the City's corporate asset management system is 711,150m².

For management purposes, the Pathways network is divided into 2,950 segments. Each of these segments is considered one asset and has a unique identification number (Asset ID) within Assetic myData.

The City's pathway networks serve as a vital connection to people and places, serve as a source of active and passive recreational activities, such as jogging, cycling, and walking, and they positively affect health and wellbeing.

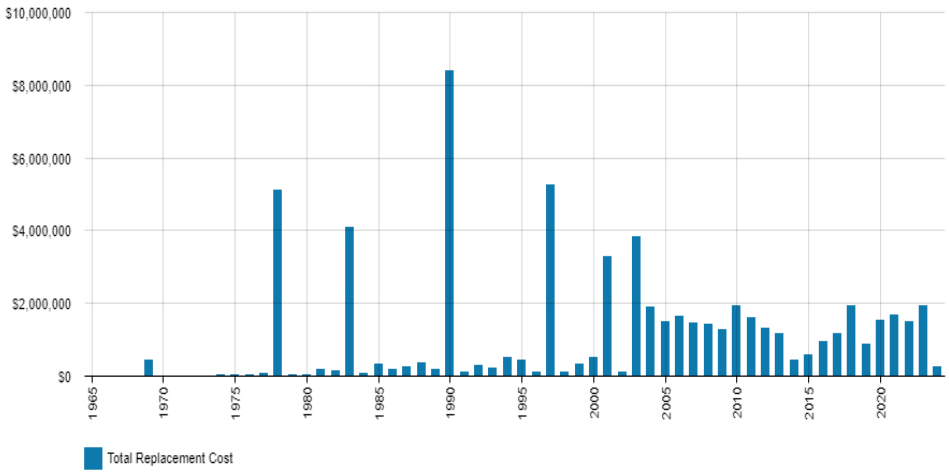
The assets covered by this AM Plan are shown in Table 5.1.1.

Table 5.1.1: Assets covered by this Plan

Asset Category	Material	Dimension (Sq M)	Replacement Value
Pathways	Asphalt	26,448	$1,689,294
	Brick Paving	6,436	$1,222,225
	Cement Concrete	619,196	$55,279,325
	Cement Slabs	335	$28,259
	Gravel	51,512	$473,561
	Special	7,224	$83,489
Pedestrian Bridge	Various	905	$4,287,670
TOTAL			**$63,063,825**

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

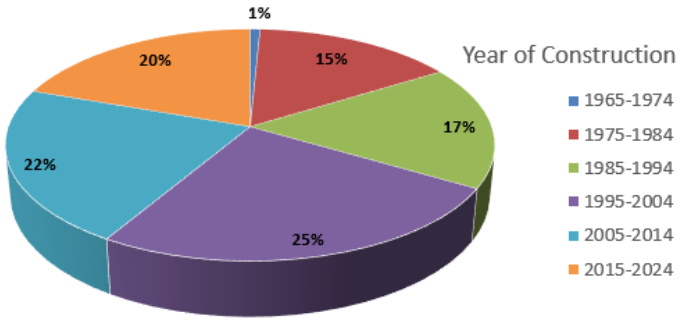
Figure 5.1.1: Asset Age Profile



All figure values are shown in current-day dollars.

It should be noted that in reviewing an asset age profile it is helpful to review past peaks of investment that may require peaks in renewals in the future.

Figure 5.1.2: Asset Age Profile(Grouped in 10 years period)



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

Location	Service Deficiency
Various	Some assets in master plan areas may deteriorate beyond the technical level of service due to the timing of implementation.

The above service deficiencies were identified from our various staff's expertise and knowledge.

5.1.3. Asset condition

Condition is currently monitored through ongoing asset inspections in accordance with the City's Asset Management Plan by our qualified asset inspectors every 5 years. Assessment of pathway defects is based on the Practice notes prepared by IPWEA.

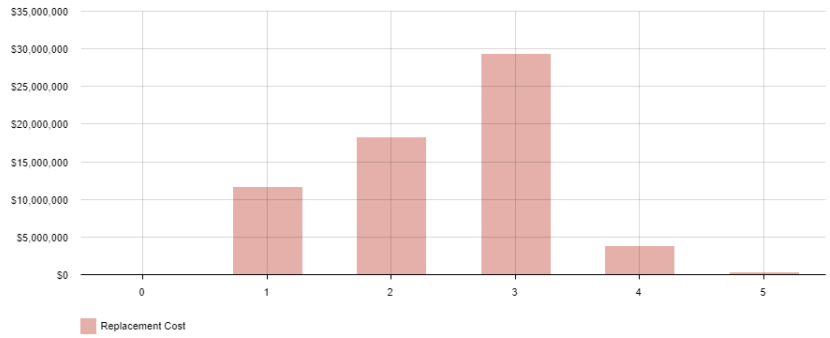
The condition profile for pathways and pedestrian bridges is based on condition rating surveys carried out by the City. Condition is measured using a 1 – 5 grading system[3] as detailed in Table 5.1.3. A consistent approach must be used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AM plan results are translated to a 1 – 5 grading scale for ease of communication.

Table 5.1.3: Condition Grading System

Condition Grading	Description of Condition
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. The majority of assets are in condition 3 or better.

Figure 5.1.3: Asset Condition Profile



All figure values are shown in current-day dollars.

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

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 is shown in Table 5.2.1.

Table 5.2.1: Maintenance Budget Trends

Year	Maintenance Budget $
Actual 2023	$ 625,394
Budgeted 2024	$ 723,000
Forecasted 2025	$ 736,849

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 are considered in the Infrastructure Risk Management Plan.

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

Asset hierarchy

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

The pathways hierarchy measures the importance of a given section of the pathways by estimating the amount of traffic (pedestrian, cycle, mobility device etc.) it receives. This is done by measuring the path's proximity to several locations which generate traffic by being key transport nodes (e.g. bus stops and car parks) or by being locations that have high levels of pathways traffic in and around the area (e.g. playgrounds, schools, shopping centres). These factors were split into four classes as follows:

- Points of Interest
  - Schools and other childcare facilities
  - Shopping centres and districts
  - Recreation facilities and sport centres
  - Hospitals and medical services
  - Other administrative buildings (Council office, post offices, police stations)
- Playgrounds
- Car parks
- High-use bus stops (more than 15 passengers per day)

If a path was within 100m, 300m, or 500m of one of these factors the path was given a score of 3, 2, and 1 respectively to represent the increasing foot traffic closer to each location. If a path contained two or more factors the value from each factor was added together, giving a score range of 0-12.

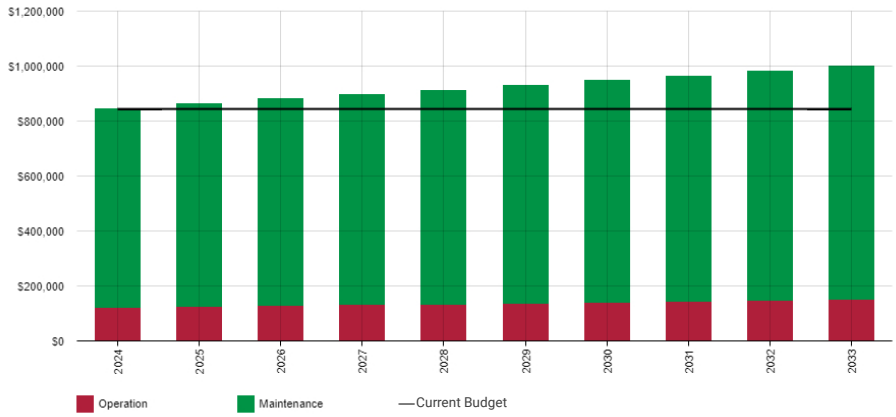
Once the scores were determined, the Pathways were split into a hierarchy of 1-5 based on the following scores:

- 1: >10 (High Priority)
- 2: >7 to 10
- 3: > 4 to 7
- 4: > 1-4
- 5: =<1 (Low Priority)

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, future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.2 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

Figure 5.2: Operations and Maintenance Summary



All figure values are shown in current day dollars.

The need to manage the newly developed assets and the increased demands resulting from the aging assets are the key drivers of the projected growth in operations and maintenance.

Operation and maintenance costs for this document are based on the most current estimate of needs, the 2023-24 budget.

- Operation budget for 2024-25 is $121,000.
- Maintenance budget for 2024-25 is $723,000.
- Combined total Operation and Maintenance budget for 2024-25 is $844,000.

5.3. Renewal Plan

Renewal is major capital work that 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 its original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Approaches in the Lifecycle Model

- Used NAMS Plus Modelling Tool for Life Cycle Cost Forecast.
- To forecast the Renewals, we used the Asset Register Data Method which projects the renewal costs (replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year),
- Choose to intervene before the end of useful life (e.g., replacing condition 4 assets) and the useful life was updated to reflect that choice based on the condition rating data.

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 5.3. Asset useful lives were last reviewed on 30 June 2023.[4]

Table 5.3: Useful Lives of Assets

Asset (Sub)Category	Useful life
Cement Concrete	50
Asphalt	25
Brick	50
Blockwork	50
Limestone	15
Timber	15
Metal dust	15
Gravel	15
Recycled Plastic	35

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 5T load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a playground).[5]

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

[4] JLL revaluation report 30 June 2023.

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

- Have a high consequence of failure,
- Have high use and the subsequent impact on users would be significant,
- Have higher than expected operational or maintenance costs, and
- Have the potential to reduce life cycle costs by replacing with a modern equivalent asset that would provide the equivalent service.[6]

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

Table 5.3.1: Renewal Priority Ranking Criteria

Criteria	Weighting
Condition/Risk	Extreme, High, Moderate, and Low
Justification- Project needs	High, Moderate, and low

Pathways assets have been renewed by the City, with an emphasis on those that are in poor condition and those that present the biggest risks to asset users. The City and the community can be at risk when pathways assets are in poor condition due to trip hazards.

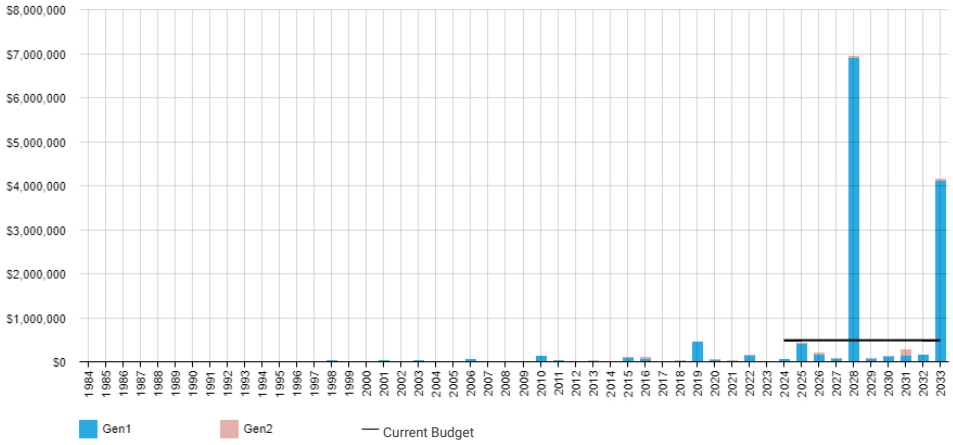
To prioritize assets with comparable risk factors and conditions, secondary criteria such as the pathways hierarchy, corporate/strategic objectives, and functionality have been employed.

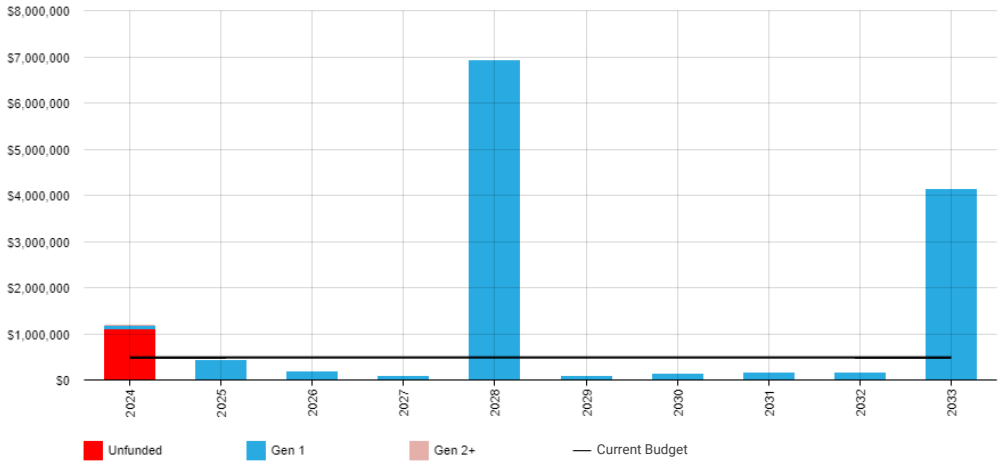
5.4. Summary of Future Renewal Costs

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

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

Figure 5.4.1: Forecast Renewal Costs





All figure values are shown in current-day dollars.

The renewal cost has been forecasted based on the end of the useful life of the asset. The red (unfunded) bar is the renewal activities that are overdue in accordance with our intervention levels and is shown in the first year of the planning period. If we have assets that are shorter than our planning period, they might appear as requiring renewal more than one time in the graph as generation two with different colours as in the first graph.

The two major reasons for the big spike in 2028/29 are:

- Many assets constructed in 1978 are anticipated to reach the end of useful life in 2028; and,
- A major replacement of a pedestrian bridge is required.

Given an anticipated bow wave of upcoming renewals, the City may need to consider early intervention to renew some assets before they deteriorate to condition 4 to avoid a funding peak around 2028. It is noted however that some assets may exceed their predicted useful life.

The difference between the amount of money currently available and what is needed to deliver the expected levels of service is the "funding gap". Due to the big spikes in years 2028 and 2033, the modelling indicates that the levels of funding allocated are insufficient. The renewal funding gap over the next 10 years is $847,320 per year (Table 5.4.1).

Table 5.4.1: Renewal recommended funding scenario

Asset Category	Selected Modelling Scenario	10 years predicted cost	Current Annual Renewal Allocation	Annual predicted funding gap
Pathways and Pedestrian Bridge	Renewal of the asset at the end of useful life	$13,353,201	$488,000	$847,320

5.5. Acquisition Plan

The acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, demand, and social or environmental needs. Assets may also be gifted to the City of Kalamunda.

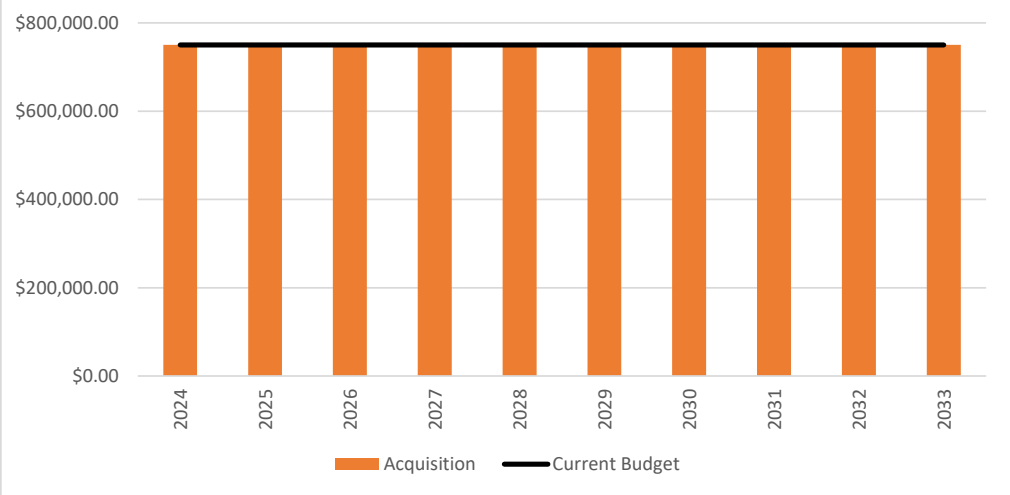
5.5.1. Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans, or partnerships with others. Potential upgrades and new works should be reviewed to verify that they are essential to the City's needs. The 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.

Summary of future asset acquisition costs

Forecast acquisition asset costs are summarized in Figure 5.5.1 and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix A.

Figure 5.5.1: Acquisition (Constructed) Summary



All figure values are shown in current-day dollars.

The City accepts the assets from the developers at no cost, and future maintenance, replacement, and ownership get transferred to the City. In some development areas, Developer's Contribution Plans (DCP) are necessary to facilitate the equitable provision for the construction of common infrastructure and open spaces. This infrastructure is categorised as gifted assets. The future expected developers and DCP handover scenarios are shown below in Table 5.5.2.

Table 5.5.2: Acquisition Lifecycle Activity

Asset Category	Budget estimated
Development contribution plan (DCP) estimated acquisition	$160,000
Subdivision contribution- Estimated	$90,000
Total	$250,000

These assets are estimated from data collected following asset handover from historical development. The DCP acquisition was estimated at a very high level from the information given by the Strategic Planning team.

The City is also planning to improve its path network in accordance with the Bike Plan 2018 and New Path Policy 2018. The Bike Plan is currently pending review, and key projects will be considered to apply for Western Australia Bicycle Network (WABN) funding. The New Path Policy provides criteria for assessment of customer requests for new paths, and high-priority requests are considered for funding. Path acquisitions are not funded in the current budget due to priority of large advocacy projects, but the Long-Term Financial Plan model includes future provision for new paths.

When an organisation commits to new assets, it 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 organisation.

The additional operational and maintenance cost resulting from the additional acquisition of the asset has been considered in the AMP.

5.6. Disposal Plan

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

Table 5.6: Assets Identified for Disposal

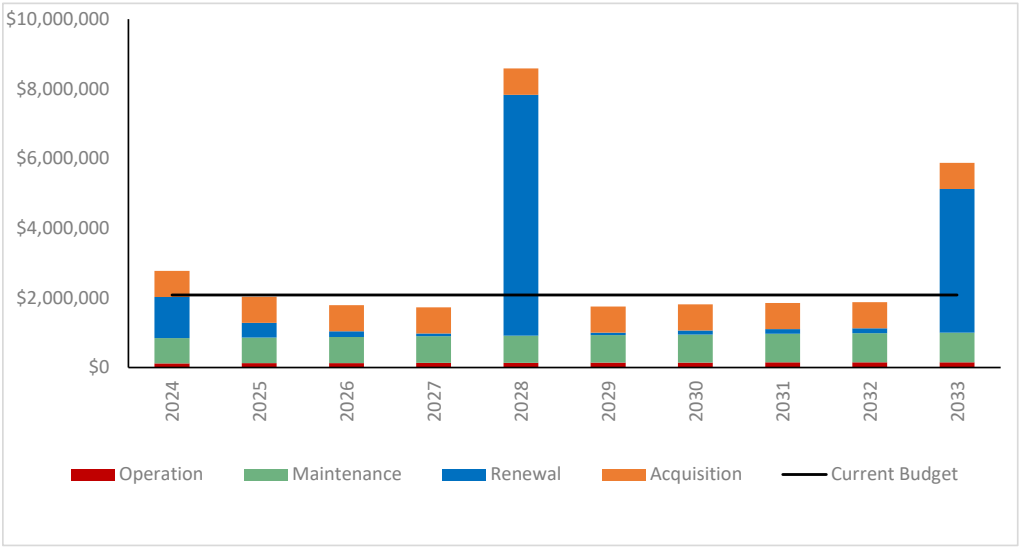
Asset	Reason for Disposal	Timing	Disposal Costs	Operations & Maintenance Annual Savings
No disposals identified in this plan				

5.7. Summary of asset forecast costs

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

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

Figure 5.7.1: Lifecycle Summary



All figure values are shown in current-day dollars.

The planned budget is not sufficient to meet the anticipated lifecycle cost related to this asset. Funding at current Long-Term Financial Plan levels will likely cause further deterioration in overall pathways network condition and increase the number of pathways with poor and very poor condition scores. This will reduce the level of service provided by the pathways and increase the risk exposure to the City.

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'[7].

An assessment of risks[8] 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
Pathways near key central activity areas like near schools, shopping centres, aged care, Hospital and other community facilities	Structure degradation or failure	Service and business disruption, accident, cost increase, reputation damage
Pedestrian bridges	Structure degradation or failure	Service and business disruption, accident, cost increase, reputation damage
Tactile ground Surface Indicators (TGSIs)	Damaged, vandalised, worn, displaced or non-compliant TGSIs can cause personal injury and Public Liability claims	Visually Impaired people will be seriously impacted.

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.

7 ISO 31000:2009, p 2

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

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.

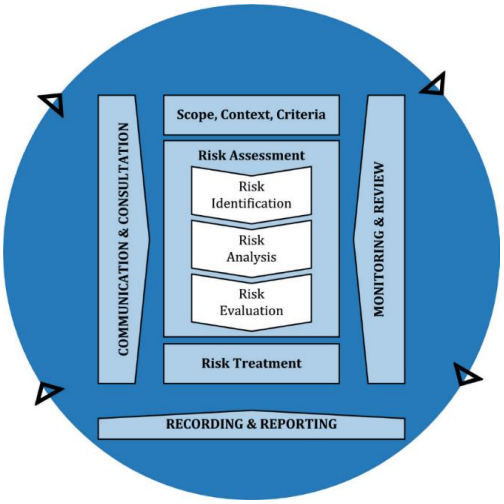


Fig 6.2 Risk Management Process – Abridged
Source: ISO 31000:2018, Figure 1, p9

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

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.

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 are shown in Table 6.2. These critical risks and costs must be reported to management and the City.

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

Table 6.2: Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Pathways	Injury to the public arising from asset defects due to pathways obstruction, settlement, breakage, etc	H	Proactive condition inspections, reactive inspections, and maintenance.	L	Included in maintenance budget
Pathways / Pedestrian Bridge	Deterioration in general pathways conditions (ageing)	H	Maintain adequate funding for maintenance and renewal work programs	L	Included in the maintenance and renewal budget
Pathways / Pedestrian Bridge	Lack of renewal funding	H	Continue to plan for and seek funding (possible grant application LRCI rural roads, WABN dual path)	M	Included in the renewal budget
Pathways / Pedestrian Bridge	Damage from third parties (Builders, utilities, etc.) resulting reduction in the lifespan and state of the pathways.	H	The Permit system and reinstatement requirements are implemented to guarantee that restoration works are carried out to a satisfactory level.	L	Included in maintenance budget
Pathways / Pedestrian Bridge	Road accidents due to walking on the road due to non-availability of pathways	H	Ensure the connectivity of the path network for missing pathways networks prioritising by safety.	L	Each year new path program in the budget process
Pathways / Pedestrian Bridge	Major natural events (e.g. bush fire, flood, earth slip, extreme weather) leading to severe damage or failure of the assets	H	Respond to major events as per the City's Emergency Management Plan. It covers the whole spectrum of emergency needs, including prevention, preparedness, response and recovery.	M	Develop a Maintenance Management Plan

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 Plan.

6.4. Service and Risk Trade-Offs

The decisions made in adopting this Plan 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:

- Proactive maintenance inspection of the assets
- Renew all assets in average to poor condition that fail to deliver service or the required level of service before they reach the end of their lives
- Upgrade assets to the level of service desired by the community

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:

- Reduction in pathways service levels due to shortfall of funding
- Likelihood of asset failure resulting in service disruptions
- Compromised in the safety of asset user
- Gaps in connectivity of the network

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:

- As the condition of assets deteriorates, they may become unsafe
- Failed assets can pose a danger to the community
- If assets are in dangerous condition, the City could be at risk of litigation should an incident occur
- With no new assets or asset improvements, to demonstrate prosperity, new residents may not be attracted to the area

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

7.1. Financial Sustainability and Projections

7.1.1. Sustainability of service delivery

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

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

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio[10] 36.55%

This ratio is a measure of the ability of a local government to fund its projected asset renewal/replacements in the future and can continue to provide existing levels of services in future. Standard is met if the ratio is between 0.75 and 0.95.

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years, we expect to have 36.55% of the funds required for the optimal renewal of assets.

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

Lifecycle Funding Ratio – 10-year financial planning period

This AM Plan identifies the forecast operations, maintenance and renewal costs required to provide an agreed, and affordable level of service to the community over a 10-year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

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

The forecast operations, maintenance and renewal costs over the 10 year planning period is $2,257,773 average per year.

The proposed (budget) operations, maintenance and renewal funding is $1,332,000 on average per year giving a 10 year funding shortfall of $925,772 per year. This indicates that 59.0% of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget. Note, these calculations exclude acquired assets.

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

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

7.1.2. Forecast Costs (outlays) for the Long-Term Financial Plan

Table 7.1.3 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 (Figure 7.1) 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 Long-Term Financial Plan.

The gap between the forecast work and the proposed budget is the basis of the discussion on balancing costs, level of service, and risk to achieve the best value outcome.

Forecast costs are shown in 2024/25 dollar values.

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

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2024	$750,000	$121,000	$723,000	$1,180,781	0
2025	$750,000	$124,516	$736,849	$419,113	0
2026	$750,000	$128,036	$750,719	$162,190	0
2027	$750,000	$131,562	$764,609	$79,796	0
2028	$750,000	$135,094	$778,520	$6,917,730	0
2029	$750,000	$138,630	$792,452	$71,349	0
2030	$750,000	$142,172	$806,404	$117,115	0
2031	$750,000	$145,719	$820,378	$139,651	0
2032	$750,000	$149,272	$834,373	$140,051	0
2033	$750,000	$152,830	$848,389	$4,125,425	0

Fig 7.1 Gap Analysis and Predicted Budget

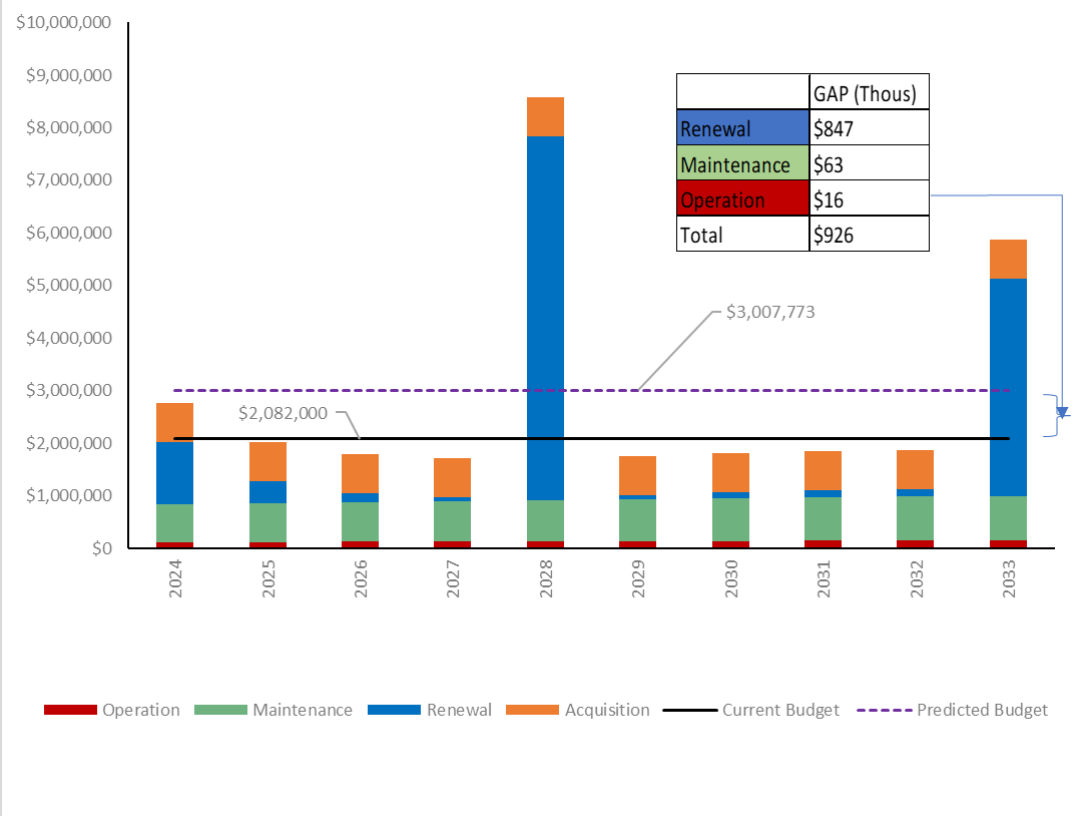


Table 7.1.3 The Predicted Budget (Each Year)

Life cycle	**$ (Each Year)**
Renewal	$1,335,320
Maintenance	$785,569
Operation	$136,883
Acquisition	$750,000
Total	$3,007,773

7.2. Funding Strategy

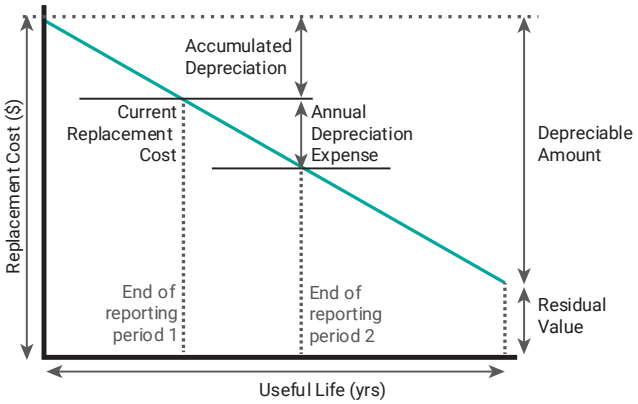
The proposed funding for assets is outlined in the City's budget and Long-Term Financial Plan.

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

7.3. Valuation Forecasts

7.3.1. Asset valuations

The best available estimate of the value of assets included in this AM Plan is shown below. The assets are valued at Fair Value for accounting compliance purposes on 30 June 2023.



Replacement Cost (Gross)	$63,064,016
Depreciable Amount	$63,064,016
Current Replacement Cost[11]	$32,270,742
Annual Depreciation Expense	$1,387,829

7.3.2. Valuation forecast

Asset values are forecast to Increase as additional assets are added from service.

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

[11] Also reported as Written Down Value, Carrying or Net Book Value.

7.4. Key Assumptions Made in Financial Forecasts

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

Key assumptions made in this Plan are:

- Asset age and remaining life were based on useful lives from the last revaluation of 2023 and asset conditions, which were determined based on visual inspection.
- Asset revaluation performed in 2023 provides an accurate estimation of the asset's value.
- The current operations and maintenance budgets have been used and only increased in the forecast relative to the acquisition of new assets.
- All financial forecasts and budgets are in current-day dollars.
- All assets will remain in the City's ownership throughout the planning period.

7.5. Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this Plan are based on the best available data. For effective asset and financial management, the information must be current and accurate. Data confidence is classified on a A - E level scale[12] in accordance with Table 7.5.1.

Table 7.5.1: Data Confidence Grading System

Confidence Grade	Description
A. Very High	Data based on sound records, procedures, investigations, and analysis, documented properly and agreed as the best method of assessment. Dataset is complete and estimated to be accurate ± 2%
B. High	Data based on sound records, procedures, investigations, and analysis, is 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. The dataset is complete and estimated to be accurate ± 10%
C. Medium	Data based on sound records, procedures, investigations, and analysis which is incomplete unsupported, or extrapolated from a limited sample for which grade A or B data are available. The 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. The 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 7.5.2.

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

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

Data	Confidence Assessment	Comment
Demand drivers	B	Professional Judgement and Forecast ID
Growth projections	B	Projected Population growth- ABS/Forecast id
Acquisition forecast	B	Information based on LTFP, different plans and policies.
Operation forecast	C	Based on the Previous year's trend
Maintenance forecast	C	Based on the Previous year's trend
Renewal forecast- Asset values	B	Asset Last Revaluation 2023
Asset useful lives	B	Asset Last Revaluation 2023
Condition modelling	B	Professional Judgement
Disposal forecast	N/A	No reliable data on proposed asset disposals.

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

8. PLAN IMPROVEMENT AND MONITORING

8.1. Data and Information Sources

8.1.1. Accounting and financial data sources

This AM Plan utilises accounting and financial data. The sources of the data are:

- Valuation report prepared for financial reporting purposes- City Of Kalamunda
- MyData Assetic
- Long Term Financial Plan
- Annual Budget

8.1.2. Asset management data sources

This AM Plan also utilises asset management data. The source of the data is Brightly MyData Assetic.

8.2. Improvement Plan

An entity must recognise areas of its AM Plan and planning process that require future improvements to ensure effective asset management and informed decision-making. The improvement plan generated from this AM Plan is shown in Table 8.2.

Table 8.2: Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
1	Review Pathways Asset Management Plan every 5 years	Asset Planning	Asset Team	5 years
2	Develop a Maintenance Management Plan.	Asset maintenance	Asset Team	3 years
3	Implement an Enterprise Resource Planning (ERP) system with a Maintenance Management System including a mobile device for field data collection.	Asset Planning	Asset Team	3 Years
4	Continue organisational education about the importance of asset management systems, asset management plans, and long-term financial plans.	Senior Management, Asset Planning	Asset Team	Ongoing
5	Ensure future needs are reflected in this asset Management Plan and considered in the development of the Long-Term Financial Plan	CEO and Senior Management	Asset and Finance Teams	2 Years
6	Review the projects identified in the Bike Plan and New Path Policy	Asset Planning	Asset Team	3 Years
7	Continue to monitor and improve the accuracy and validity of pathways asset data to improve confidence levels.	Asset Planning	Asset Team	Ongoing

8.3. Monitoring and Review Procedures

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

The AM Plan has a maximum life of 5 years.

8.4. Performance Measures

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

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the Long-Term Financial Plan,
- The degree to which the 1–5-year detailed works programs, budgets, business plans, and corporate structures consider the 'global' work 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 achieves the organisational target (this target is often 90 – 100%).

9. REFERENCES

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- ISO, 2018, ISO 31000:2018, Risk management – Guidelines
- Kalamunda Advancing 2031-Strategic Community Plan
- Annual Plan and Budget

10. APPENDICES

Appendix A Acquisition Forecast

A.1 – Acquisition Forecast Assumptions and Source

An asset may also be acquired at no upfront capital cost directly to the City from the major land developments, development contribution plan (DCP), and other stakeholder projects (Main Roads WA, Western Power, Public Transport Authority).

Major developments that are expected to generate higher demand for the City's Pathways Assets are:

- Forrestfield- Airport Link - High Wycombe Train Station – (High Wycombe)
- Lot 25 Gilba place, Maida vale-- (Maida Vale)
- The Hales Estate, Forrestfield — (Forrestfield)
- Lot 6 and 9006 Hale Road, Wattle Grove — (Wattle Grove)
- Adelaide Street, High Wycombe Train Station – (High Wycombe)
- Lot 9050 Arthur Road, Lot 9005 Gemina Avenue, and Lot 9006 Hale Road, Wattle Grove – (Wattle Grove)
- Lots 4 & 500 Hale Road, Wattle Grove – (Wattle Grove)
- 655 Welshpool Road East, Wattle Grove – (Wattle Grove)
- 980 Abernethy Road, High Wycombe (High Wycombe)
- 291 Berkshire Road, Forrestfield— (Forrestfield)
- Lot 45 Subdivision, Milner Road- (High Wycombe)

Likewise, the excepted **DCP-contributed path projects** are:

- Berkshire Road footpath upgrade
- Nardine Cul-de-sac and Emergency Accessway
- Milner Road (Berkshire Road- Sultana Road West)
- Sultana Road West Intersection Upgrade
- Milner Road (Sultana Road West- Stewart Road)
- Yule Brook Stage 1
- Yule Brook Stage 2
- Yule Brook Stage 3
- Willow Lake
- Woodlupine Undeveloped Reserve
- Raven Street Connector
- TOD Connector / Brae Road
- TOD Connector / Brae Road/ Raven Street

These developments will also result in a significant amount of gifted assets to the City requiring an increase in the operational and maintenance activities. It is also required to ensure that the revenue increase from these developments is sufficient for the long-term maintenance and renewal needs of these gifted assets.

Asset Category	Budget estimated
A development contribution plan (DCP) estimated acquisition	$160,000
Subdivision contribution- Estimated	$90,000
Total	$250,000

A.2 – Acquisition Forecast Summary

Table A2 - Acquisition Forecast Summary

Year	Constructed	Donated	Growth
2024	$250,000	$0	$315,320
2025	$250,000	$0	$316,897
2026	$250,000	$0	$318,481
2027	$250,000	$0	$320,074
2028	$250,000	$0	$321,674
2029	$250,000	$0	$323,282
2030	$250,000	$0	$324,899
2031	$250,000	$0	$326,523
2032	$250,000	$0	$328,156
2033	$250,000	$0	$329,797

Appendix B Operation Forecast

B.1 – Operation Forecast Assumptions and Source
Because labour and material costs are rising, it is projected that the operational forecast will increase annually. The increase in acquisition forecast is the reason for the additional increase in operation projection.

B.2 – Operation Forecast Summary

Table B2 - Operation Forecast Summary

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2024	$121,000	$3,516	$121,000
2025	$121,000	$3,521	$124,516
2026	$121,000	$3,526	$128,036
2027	$121,000	$3,531	$131,562
2028	$121,000	$3,537	$135,094
2029	$121,000	$3,542	$138,630
2030	$121,000	$3,547	$142,172
2031	$121,000	$3,553	$145,719
2032	$121,000	$3,558	$149,272
2033	$121,000	$3,558	$152,830

Appendix C Maintenance Forecast

C.1 – Maintenance Forecast Assumptions and Source
Because labour and material costs are rising, it is projected that the operational forecast will increase annually. The increase in acquisition forecast is the reason for the additional increase in operation projection.

C.2 – Maintenance Forecast Summary

Table C2 - Maintenance Forecast Summary

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2024	$723,000	$13,849	$723,000
2025	$723,000	$13,870	$736,849
2026	$723,000	$13,890	$750,719
2027	$723,000	$13,911	$764,609
2028	$723,000	$13,932	$778,520
2029	$723,000	$13,953	$792,452
2030	$723,000	$13,974	$806,404
2031	$723,000	$13,995	$820,378
2032	$723,000	$14,016	$834,373
2033	$723,000	$14,016	$848,389

Appendix D Renewal Forecast Summary

D.1 – Renewal Forecast Assumptions and Source
Renewal forecast is based on the asset register method. The acquisition date, condition and useful life of the assets are assessed correctly.

D.2 – Renewal Forecast Summary

Table D2 - Renewal Forecast Summary

Year	Renewal Forecast	Renewal Budget
2024	$1,180,781	$488,000
2025	$419,113	$488,000
2026	$162,190	$488,000
2027	$79,796	$488,000
2028	$6,917,730	$488,000
2029	$71,349	$488,000
2030	$117,115	$488,000
2031	$139,651	$488,000
2032	$140,051	$488,000
2033	$4,125,425	$488,000

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

Table E2 – Disposal Activity Summary

Year	Disposal Forecast	Disposal Budget
2024	0	0
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

Appendix F Budget Summary by Lifecycle Activity

The following budget summary is based on the city's Long Term Financial Plan.
It is shown in current dollars
This information is the basis of the planned budget used in the lifecycle model for this Asset Management Plan.

Table F1 – Budget Summary by Lifecycle Activity

Year	Acquisition	Operation	Maintenance	Renewal	Disposal	Total
2024	$0	$121,000	$723,000	$488,000	$0	$1,332,000
2025	$0	$121,000	$723,000	$488,000	$0	$1,332,000
2026	$0	$121,000	$723,000	$488,000	$0	$1,332,000
2027	$0	$121,000	$723,000	$488,000	$0	$1,332,000
2028	$0	$121,000	$723,000	$488,000	$0	$1,332,000
2029	$0	$121,000	$723,000	$488,000	$0	$1,332,000
2030	$0	$121,000	$723,000	$488,000	$0	$1,332,000
2031	$0	$121,000	$723,000	$488,000	$0	$1,332,000
2032	$0	$121,000	$723,000	$488,000	$0	$1,332,000
2033	$0	$121,000	$723,000	$488,000	$0	$1,332,000

Appendix G Condition Rating Matrix

The condition of the pathways has been rated as shown in G1 below. Example photos for each Condition Rating are also provided.

Table 1. Condition Rating Matrix

Condition Rating Score	Condition	Description
1	Very Good	The asset is in near perfect condition. Only routine maintenance is required.
		
2	Good	The asset has deteriorated slightly but only routine maintenance is required to maintain the rating.
		

Condition Rating Score	Condition	Description
3	Fair	The asset is in satisfactory condition but showing signs of wear and tear. Moderate levels of periodic maintenance are required to maintain the asset in this condition.
		
4	Poor	The asset is in below average condition with significant signs of wear and tear. High levels of periodic maintenance are required to maintain the rating of this asset. Regular safety inspections are required as part of a risk management strategy. Partial replacement (minor renewal) is required to improve the rating of this asset.
		

Condition Rating Score	Condition	Description
5	Very Poor	The asset is in very poor condition and needing full replacement (major renewal). Access restrictions and/or warning signs may be needed until replacement. Regular safety inspections are required as part of a risk management strategy.

Appendix H Glossary

All the definitions below apply in the context of Local Government Infrastructure Assets.

Asset Management	Applying management practices to Infrastructure Assets to provide the required Levels of Service in the most cost-effective manner.
Asset Management Plan	A documented plan for managing one or more classes of Infrastructure Assets over their Useful Lives to provide the required Levels of Service in the most cost-effective manner.
Condition	An assessment of the progress of an Infrastructure Asset from new to end of life. The Condition determines the Level of Service provided by the asset and the Maintenance actions required. The Condition also provides an estimate of the Remaining Useful Life.
Condition Rating	A number, typically from 1 (new) to 5 (end of Useful Life), as a measure of the assessed Condition.
Depreciable Amount	The proportion of an asset's Gross Replacement Cost which loses value over time due to Depreciation. The proportion which does not lose value is the Non-depreciating Value.
Depreciation	The loss of financial value of an Infrastructure Asset as it progresses from new to end of Useful Life. Accumulated Depreciation is the total depreciation of the asset to the date of assessment. Annual Depreciation is the loss of financial value in one financial year.
Fair Value	The best estimate of the financial value of Infrastructure Assets in their condition at a point in time. It includes loss of value due to depreciation, and depends on an appraisal of active markets, or in the absence of active markets, the cost of constructing the asset. See also Written Down Value, which is an alternative name for Fair Value.
Gross Replacement Cost	The cost of building a new Infrastructure Asset in the place of the current one, including the disposal cost of the current one.
Infrastructure Asset	A physically constructed asset with a life of longer than 12 months, which has a financial value, and which provides services to the community.
Level of Service	The quality of experience that the Infrastructure Asset provides to the community. Community Levels of Service describe the quality from the perspective of the users, in terms of subjective measures, such as of how safe, how clean, how new, etc. Technical Levels of Service describe the quality from the perspective of the providing organisation in terms of objective measures, such as how frequently, what metrics, what response time, etc. The organisation chooses the objective Technical Levels of Service to provide the users' required Community Levels of Service.

Maintenance	Corrective actions on the Infrastructure Asset which improve its Condition to allow it to achieve its intended Useful Life and to provide its required Level of Service. An example is repair of defects. See also Operations, which are necessary actions to provide the required Level of Service but do not affect the Condition.
New Works	The creation of an Infrastructure Asset which did not exist before. This increases the Gross Replacement Cost of the organisation's assets. See also Renewal, which replaces an existing asset and does not increase the Gross Replacement Cost of the organisation's assets.
Non-depreciating Value	The portion of the Gross Replacement Cost of an Infrastructure Asset which does not lose value over time. An example is land, which does not wear out over time and cannot be replaced.
Operations	Expense or actions on the Infrastructure Asset which are necessary to provide the required Level of Service, but which do not affect its Condition. An example is electricity supply to provide lighting. See also Maintenance, which covers actions necessary to provide the required Level of Service and that do affect Condition.
Renewal	The replacement of an existing Infrastructure Asset with an asset providing the same Level of Service or capacity. This does not increase the Gross Replacement Cost of the organisation's assets. See also New Works, which creates a new asset and does increase the Gross Replacement Cost of the organisation's assets.
Upgrade	Modifications or replacement of an existing Infrastructure Asset which increase the Level of Service or capacity. This increases the Gross Replacement Cost of the organisation's assets.
Useful Life	The total length of time during which an Infrastructure Asset is expected to be usable and to provide the required Level of Service. The Remaining Useful Life is the length of time until an Infrastructure Asset is expected to require Renewal.
Sustainability Ratios	Metrics required by the WA State Government to indicate whether a Local Governments Asset Management practices and budgeting are sustainable in the long term.
Valuation	The regular determination by qualified inspectors and assessors of the Gross Replacement Cost of a collection of Infrastructure Assets, as well as their Accumulated Depreciation, to report on their current Fair Value.
Written Down Value	An alternative name for Fair Value, which is Gross Replacement Cost less Accumulated Depreciation.