

ASSET MANAGEMENT PLAN - PATHS (2023 – 2027)

Shire of York – Asset Management System

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Acknowledgement of Country

The Shire of York acknowledge the Traditional Custodians of the land, the Ballardong people of the Noongar nation and pays respects to Elders past, present and emerging. We recognise the unique and valuable contribution the Ballardong Noongar people have made and continue to make to our culture and in our community. The land on which we live, meet and thrive as a community always was and always will be Noongar land.

Definitions	
Term	Description
Asset Register	Means a record of asset information considered worthy of separate identification including inventory, historical, condition, construction, technical, and financial
Acquisition	Means the creation of a new asset to meet additional service requirements
Capex	Means Capital Expenditure
Contractor	Means the person or persons, corporation, or corporations whose Response is accepted by the principal, and includes the executors or administrators, successors and assigns of such person or persons, corporation, or corporations
Council	Means the Council of the Shire of York
Grant	Means external funding/monies that are received by the Shire that contribute towards capital works and/or maintenance and operational activities.
Level of Service (LOS)	means meeting community expectations in relation to the quality and quantity of services delivered by Council required to meet the agreed or expected performance. In some contexts, it could be an adjusted performance expectations/standards of an asset in coordination with stakeholders due to limited financial resources.
Lifecycle	Means the cycle of activities that an asset goes through while it retains an identity as a particular asset
Lifecycle Cost	Means the total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, disposal and renewal costs
Local Government	Means the Shire of York
Maintenance	Means actions taken to preserve, repair or restore condition and functionality of assets. For ex: corrective repairs, inspection, repair of potholes and cracks on road etc. Maintenance can be reactively performed or proactively performed as part of a planned preventative program of works.
Municipal Funds	Means funds approved for expenditure as part of the annual budget adoption process through Council.
Operations	Means the regular activities to provide public health, safety, and amenity and to enable the assets to function e.g., road sweeping, grass mowing, cleaning, street lighting and graffiti removal and support services for the performance of maintenance and asset management services.
Opex	Means Operating Expenditure
Renewal	Means restores, rehabilitates, replaces existing asset to its original capacity. This may include the fitment of new components necessary to meet new legislative requirements in order that the asset may achieve compliance and remain in use
Risk	Means probability and consequence of an event that could impact on the Council's ability to meet its corporate objectives
Shire	Means the Shire of York
Transport Assets	Means to include roads, bridges, drainage and footpaths
Upgrade	Means enhances existing asset to provide a significantly higher level of service
Useful Life	Means the period over which a depreciable asset is expected to be used.
Principal	Shire of York
SoY	Shire of York

1 Executive Summary

1.1 The Purpose of the Plan

This document 'Asset Management Plan-Paths' (AM Plan) provides key information on paths infrastructure assets within the Shire of York (the Shire). This AM Plan has been developed for the management of paths assets. The AM Plan combines multi-disciplinary management techniques (technical and financial) for the performance of services across four (4) key phases of the lifecycle of the asset, this is known as the 'Asset Management Lifecycle'.

The four (4) key phases of the Asset Management Lifecycle and their associated services are summarised in **Table 1- Asset Management Lifecycle Phases**. This AM Plan establishes key parameters for the management of paths assets that include Levels of Service, Future Demand, Lifecycle Management Plans, Financial Projections alongside the implementation of Asset Management Practices including Performance Monitoring and Improvement. This AM Plan links with the Shire's Long-Term Financial Plan (LTFP) to ensure funding is aligned to meet infrastructure requirements over the same ten (10) year period and to ensure that path assets meet Council's priorities for service delivery.

Table 1- Asset Management Lifecycle Phases

Phases	1- Plan	2- Acquire	3- Operate & Maintain	4- Dispose
Services	Asset Management Planning	Investment of funds to acquire new asset or renew asset – Capital funds are typically allocated for these activities.	Allocation of funds to maintain and operate existing assets- Operational funds are typically allocated for these activities across the "useful life" of the asset*	Asset disposal-removal of the asset from service through unpredictable failure or planned decommissioning.
*Useful Life of the asset is the period over which a depreciable asset is expected to perform				

1.2 Asset Description

This document (AM Plan) is limited to discussing path assets that are owned or controlled by Council. **Table 2- Shire of York Paths Assets** below summarises the types of path, quantity, material construction and replacement value of Shire paths.

Table 2- Shire of York Path Assets

Class	Sub Class	Material	Quantity	Unit	Replacement Value
Path	shared path	Brick Paving	5617	Ln m	\$914,000
Path	shared path	Insitu Concrete	7381	Ln m	\$801,000
Path	shared path	Red Asphalt	5961	Ln m	\$324,000
Path	footpath	Insitu Concrete	3903	Ln m	\$424,000
Path	footpath	Red Asphalt	6110	Ln m	\$333,000
Path	Total	All types	15020	Ln m	\$2,796,000

The above infrastructure assets have replacement value estimated at **\$2.80 Million** as of **30 June 2022**.

1.3 Levels of Service

A ‘Level of service’ typically means the expectation of the quality and quantity of services required to be performed to realize an agreed condition and/or service provision. The types of services required to be performed vary depending on the phase of the Asset Management Lifecycle.

Key programs that assist with managing the Level of Service include:

- Asset Management Planning and Monitoring (Asset Performance)
- Asset Renewal or Acquisition (Construction)
- Operational and Maintenance Services (Service Standards)
- Asset Disposal (Asset Acquittal)

This AM plan assumes that the Shire holds the objective of maintaining existing Levels of Service across all path assets and that key programs are developed across the asset management lifecycle to reflect this objective.

Maintaining existing Levels of Service means the asset will maintain current load limits, widths, and trafficable surface conditions. The budget assumptions for maintaining service levels do not make provision for any future demand changes as outlined in section **1.4 Future Demand** in this document.

Table 3- Works Programs across the Asset Management lifecycle identifies the key works programs through the four (4) phases of the Asset Management Lifecycle.

Table 3-Works Programs Across the Asset Management Lifecycle

Phases	1-Plan	2-Acquire	3-Operate & Maintain	4-Dispose
Programs	Asset Management Planning	Lifecycle Renewal (partial asset replacement)	Operational Services ("soft" services)	Asset Disposal (removal of asset from service)
	Asset Monitoring (demand monitoring, condition monitoring)	Acquisition (Full asset replacement)	Maintenance Services (Planned/Preventative) ("hard services")	
			Maintenance Services (Reactive Maintenance Services) ("hard services")	

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

The main service consequences of the Planned Budget are:

- There is an existing backlog of 35.6% of paths not meeting service levels due to condition
- The proposed funding level would reduce this backlog over a 10-year period
- Affected paths are expected to remain functional, but with a lower standard of service and increased risk
- This will be addressed by proactive inspection and increased maintenance

1.4 Future Demand

Service levels across path assets may be influenced by future demand. Key factors that influence demand are summarised in **Table 6- Key Factors Influencing Demand**.

Table 6- Key Factors Influencing Demand

Item no.	Factor
1.	Population growth
2	Changing age demographic
3	Infill residential development
4	Precinct development
5	Changed Service use (i.e., changed transport routes or transport type)
6	Motorised scooters and similar
7	Economic constraints
8	Changing Environmental conditions

It is important that Asset Managers monitor factors that may change and impact demand in order that asset management programs can be adjusted to maintain agreed service levels.

Along with demand management (monitoring), asset managers may develop risk management strategies to deal with unpredictable changes in demand levels that may impact on service levels and/or impact on asset failure. **Table 7- Key Tasks to Manage Asset Failure Risk**, summarizes the types of strategies or tasks that asset managers may perform to manage demand and service levels.

Table 7- Key Tasks to Manage Asset Failure Risk

Item no.	Task
1.	Complete Regular Asset Valuations
2	Insure Assets
3	Develop Emergency Response Plans/Procedures
4	Assess Asset Criticality
5	Regular Demand Monitoring

Importantly the impact of the failure for some path assets may be higher than others as they form critical parts of the local or regional transport network. Demand monitoring helps to inform asset managers of the potential need for an increase in service level, the associate economic impact and timelines for asset renewal works. Demand monitoring allows the asset manager to be proactive and ensure that works schedules can be adjusted to changing demand conditions to ensure the asset does not fail or reduce the severity of unpredictable failure.

1.5 Lifecycle Management Plan

1.5.1 What does it Cost?

This AM Plan forecasts costs necessary to manage the delivery of works programs through each phase of the asset management lifecycle. Costs are assigned to each asset lifecycle phase, these phases include the operational and maintenance phase, lifecycle renewal or acquisition phase, and disposal phase.

The AM Plan may be adjusted for a range of time periods and to suit available budgets. The AM Plan typically helps to inform Long-Term Financial Planning periods of ten (10) years.

A summary output from the AM Plan is the forecast of 10-year total outlays, which for the Paths is estimated as \$1.61 Million or \$0.16 Million on average per year.

1.6 Financial Summary

1.6.1 What we will do

The Shire has identified in the LTFP funding of \$0.13 Million per annum for capital footpath works to the end of the current plan in 2026. This AMP assumes that funding will be continued for the full length of this AMP for a 10-year total of \$1.30M

The LTFP does not include an allocation for maintenance and operation of paths. The annual budget does not include an identifiable allocation for operation and maintenance. Historically path maintenance has been charged to the road maintenance account. It has been assumed that available portion of maintenance funding for paths is \$0.05 Million per annum.

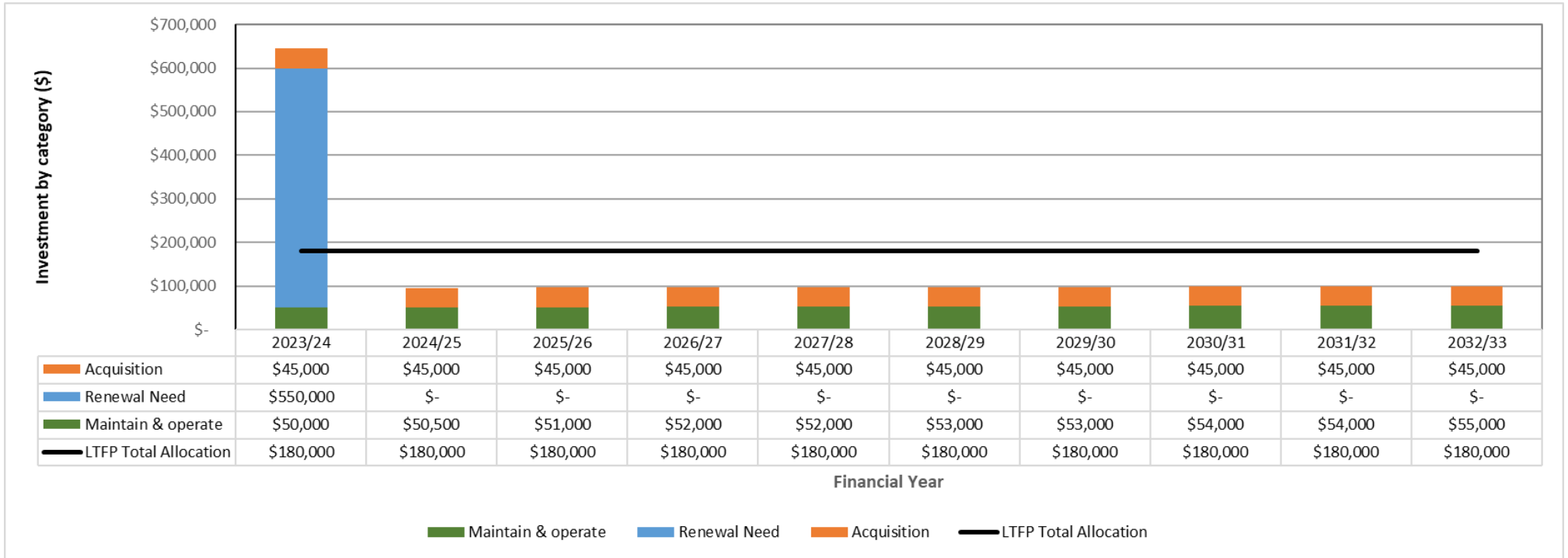
Net, the available capital, and operational funding is therefore \$1.8 Million over the 10-year period. The cost of proposed works identified in this plan including operation, maintenance, renewal and

acquisition (new paths) is \$1.5 Million over the 10-year period leaving a surplus of \$0.3 Million over 10 years (20%). This surplus might be redistributed to other needs, used to expedite path renewal works or to expand the acquisition of new path.

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

This is shown in the figure below. There are options to reallocate surplus, expedite renewal works or increase the acquisition plan.

Fig 1: Forecast Life Cycle Costs and Planned Budgets



Values are current as at May 2023

Note the renewal need identified includes \$550,000 value of assets that are past optimum renewal intervention time and are therefore shown as due in 2023. (Referred to as “Backlog” works). There are no additional identified emerging path renewal needs in the 10-year period. The average annual expense over the 10 years to address the backlog and emerging need is \$55,000 per annum

We plan to provide path services for the following:

- Operation, maintenance of paths to meet services levels set by the Shire.
- Renewal of assets to clear existing backlog of required renewals over the 10-year plan period.
- Proposed acquisition of approximately 200 metres of new path each year

There is no inclusion in this program for identified urgent compliance and maintenance needs to fix safety defects with existing paths. This has been identified in the improvement plan as potential extra work subject to funding. (Estimate cost around \$0.050 Million)

1.6.2 What we cannot do

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

- Clear the entire backlog of required renewals immediately
- Fix the urgent defects and missing tactile markers (unfunded maintenance need listed in the improvement plan)

1.6.3 Managing the Risks

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

The main risk consequences are:

- Aged and deteriorated paths contribute to an accident
- Paths not designed or built-in accordance with standards contribute to an accident
- An unexpected consequence (e.g., asset failure) of not being aware of the condition of the paths,
- demand for paths changing
- Public dissatisfaction with the function, condition, amenity, value for money or other concern

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

- Regular inspections and maintenance
- Prioritising renewal of worst paths, paths servicing vulnerable users and high traffic paths
- Apply standards to acquisition and renewal projects

1.7 Asset Management Planning Practices

Key assumptions made in this AM Plan are:

- The asset register, condition data and other source information is a true reflection of the real world (see confidence statement)
- The current level of capital investments in paths (\$0.13 Million per annum) will be renewed the new LTFP
- The assets are of sufficiently uniform design, construction, quality, and usage that reliable statistical forecasts can be made.
- The assets are being (and have been) maintained and operated appropriately, such that useful lives will be achieved.
- No data was available to estimate a maintenance budget. Historically path maintenance has been combined with road maintenance expense. The path maintenance was estimated to be 5% of the total historical spend on road maintenance.
- Costs of assets are estimated on average project costs, without project plans or site inspection. On the average these are statistically reliable, but in the individual case variation can be expected

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

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

The asset registers and condition data were used to forecast the renewal lifecycle costs for this AM Plan.

This AM Plan is based on a reliable level of confidence information.

1.8 Monitoring and Improvement Program

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

Item	Description	Responsibility	Resources required	Priority	Timeline
1	Urgently undertake maintenance works to install tactile markers and other universal access provisions, fix existing defects and kerb ramps on all paths	EMIDS	Estimate \$20,000 In house capability	Very high	Immediate
2	Establish a firm annual commitment to footpath renewal funding in the LTFP, with a focus on improving older and degraded sections of path.	Council	TBA	Very high	June 2023
3	Identify and pursue grant funding opportunities for path works.	EMIDS	TBA	High	June 2024
4	Prepare a simple map showing the existing path network, identified extensions and	EMIDS	TBA	High	June 2024

	proposed improvement priorities. (a.k.a. Master Plan referred to in DAIP) Circulate for comment and adopt by Council to provide guidance on priority investment needs for path acquisition and funding consideration				
5	Implement the service levels on a trial basis	EMIDS	TBA	Medium	June 2026
6	Hold a community and Council workshop on path service levels	EMDIS	TBA	High	June 2023
7	Establish separate cost centres for the reporting of footpath maintenance and capital works, with consideration to defining activity and asset identification of works	Finance	TBA	Medium	June 2024
8	Undertake Internal reviews of performance and issues- June 2023,2024,2025.	EMIDS	TBA	Medium	June 2023, 2024, 2025
9	Undertake external AMS audit June 2026.	EMIDS	TBA	Medium	June 2026
10	Adopt a data management plan including scheduled updates of footpath data.	EMIDS	TBA	Low	June 2025
11	Review service levels.	EMIDS	TBA	Very Low	June 2027
12	Develop and document processes for key functions such as valuation, acceptance of new assets, inspection, forward works planning and similar.	EMIDS	TBA	Very Low	Future

2 Introduction

2.1 Background

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

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

- Operational Policy – Asset Management
- Shire of York – Strategic Community plan 2020-2030
- Shire of York – Long Term Financial Plan 2016-2026
- Shire of York – Annual Budget 2022-23
- Shire of York Corporate Business Plan 2020-2024

The Shire is currently undergoing a comprehensive review and update of all its asset management planning documentation. The main objective being to implement a suite of transparent and workable documents that will assist Council and Executive Management with effective and purposeful decision making.

The infrastructure assets covered by this AM Plan includes paths. For a detailed summary of the assets covered in this AM Plan refer to Table in Section 5.

These assets are used to provide pedestrian, bicycle and e-rideables access services.

The infrastructure assets included in this plan have a total replacement value of \$2.796 Million.

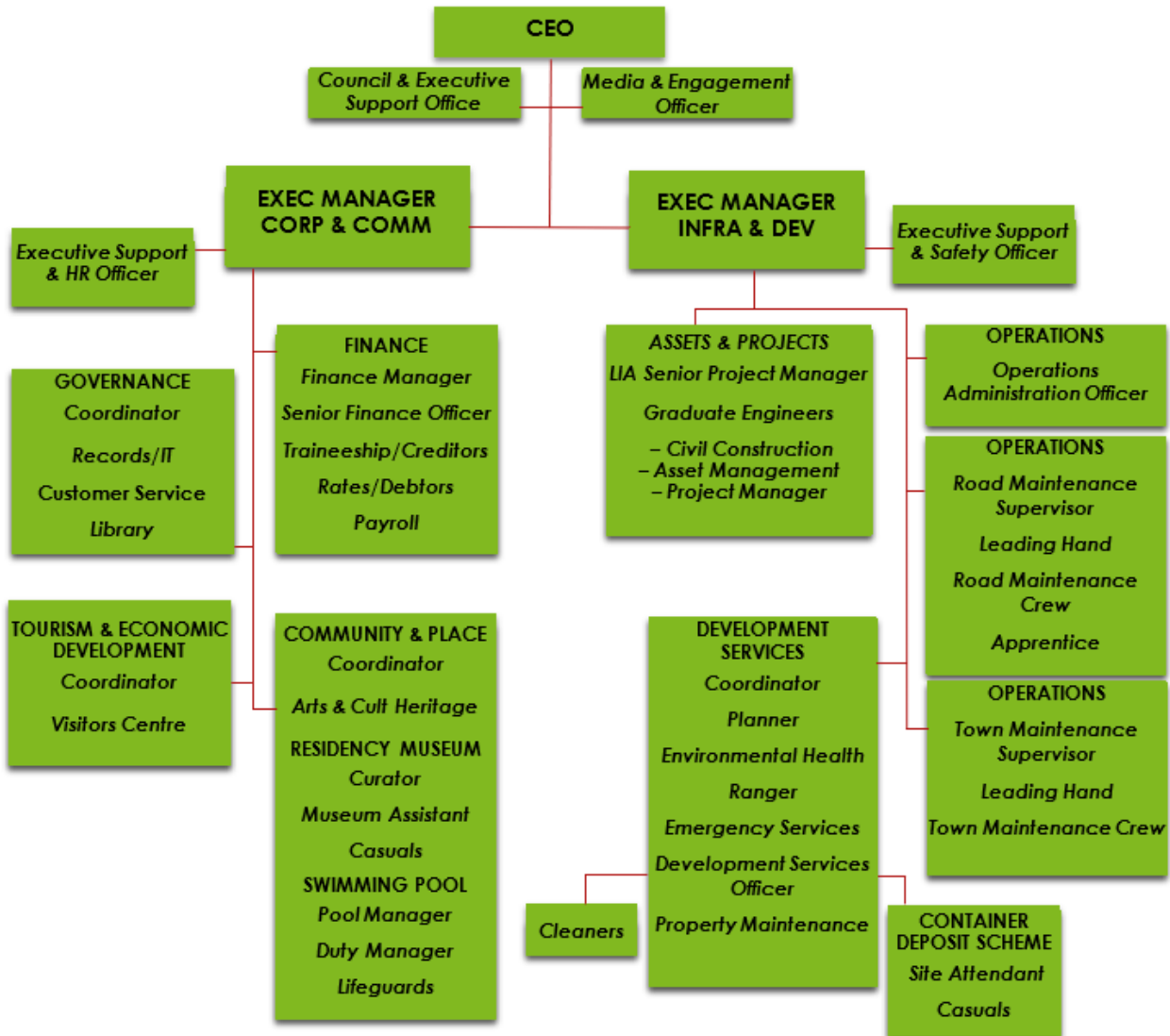
Key stakeholders in the preparation and implementation of this AM Plan are shown in Table 2.1.

Table 2.1: Key Stakeholders in the AM Plan

Key Stakeholder	Role in Asset Management Plan
Councillors	<ul style="list-style-type: none"> • Represent needs of community/shareholders, • Allocate resources to meet planning objectives in providing services while managing risks, • Ensure service sustainable. • Funding of paths and path services
Executive Leadership Team	<ul style="list-style-type: none"> • Prioritise and support the development of a suite of asset management plans • Utilise the findings and recommendations from asset management plans to better inform forward planning, including considerations for budget and updating long term financial plan
Corporate Services	<ul style="list-style-type: none"> • Regularly review and update asset register, ensuring valuations are current and accurate • Comply with the Shire’s significant accounting Policies document • Provision of administration support
Infrastructure Services	<ul style="list-style-type: none"> • Provide local knowledge and detailed condition reports on all the Path assets • Provide information around maintenance schedules and ability to meet technical and customer levels of service
External Parties	<ul style="list-style-type: none"> • Community residents and businesses – provision of feedback and desired levels of service • Tourists and ad hoc visitors – provision of feedback and desired levels of service • Schools, Hospitals, and other community facilities – provision of feedback and desired levels of service • Neighbouring Local Governments – knowledge and experience sharing • Federal and State Government authorities and agencies provide legislative and best practice guidance • Main Roads WA –approval of works on designated Main Roads and Highways

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

Diagram 2- Shire of York Organisational Structure



2.2 Goals and Objectives of Asset Ownership

Our goal for managing infrastructure assets is to meet the defined level of service (as amended from time to time) in the most cost-effective manner for present and future consumers. The key elements of infrastructure asset management are:

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

Key elements of the planning framework are

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

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

- International Infrastructure Management Manual 2015 1
- ISO 550002

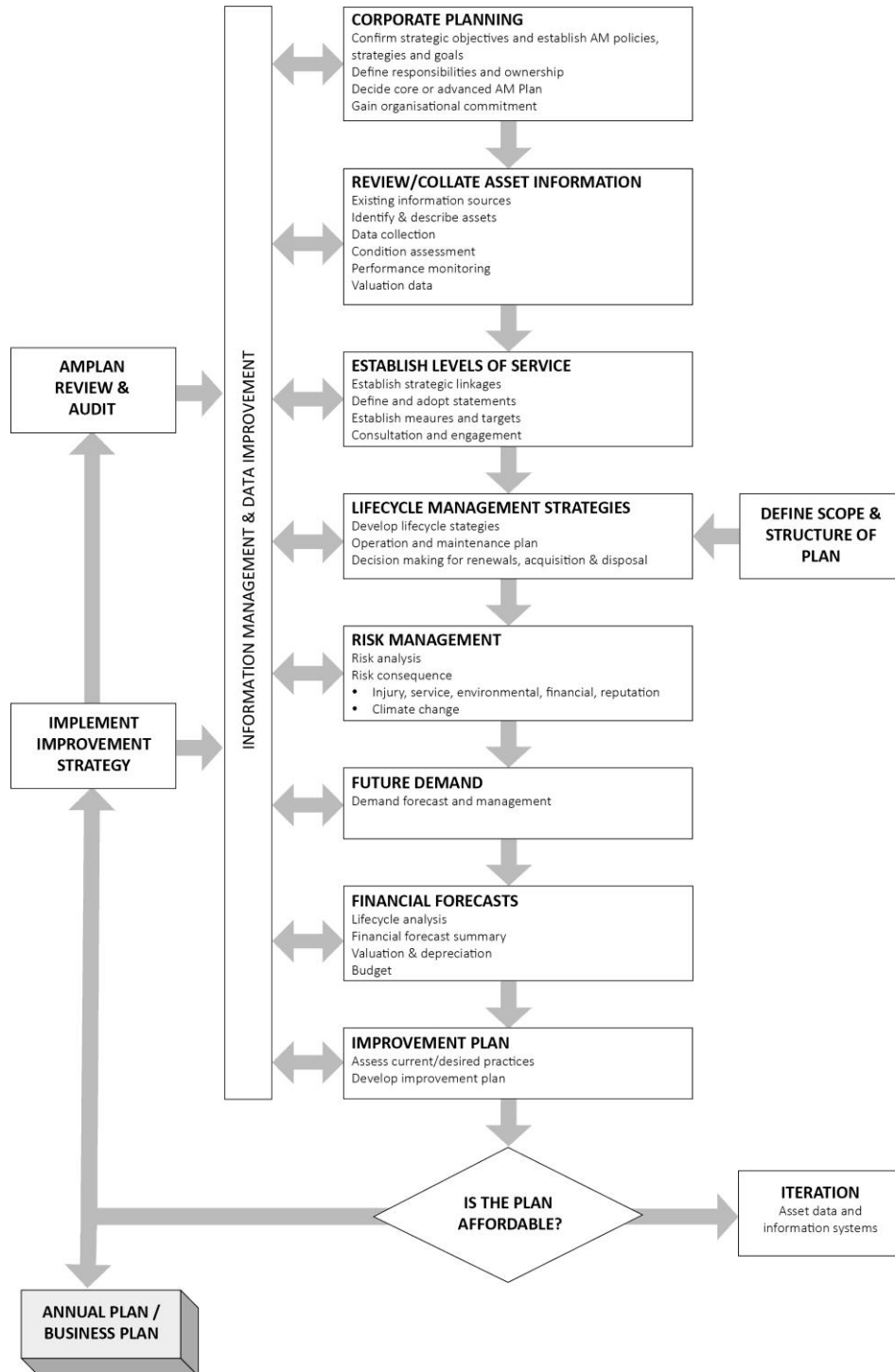
¹ Based on IPWEA 2015 IIMM, Sec 2.1.3, p 2 | 13

² ISO 55000 Overview, principles, and terminology

A road map for preparing an AM Plan is in Diagram 3.

Diagram 3: Road Map for preparing an Asset Management Plan

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



3 Levels of Service

3.1 Customer Research and Expectations

The community was consulted about path network needs in 2016 as part of the Disability Access Inclusion Planning. There is no recent specific research and expectations.

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

Our vision is:

Community, Councillors and Council staff all contributed to the vision and stated that they wanted the Shire of York to be:

- *A proud community, which values and preserves its history, heritage, rural character, and country lifestyle.*
- *A cohesive and vibrant community, respecting diversity and working together with a strategic vision*
- *A friendly and safe place with strong community spirit*
- *An economically strong community, with growth in employment, businesses, agriculture, and tourism*
- *A place with easy access to a full range of social services, including medical, education, law, and order*
- *A unique and beautiful place, attractive to residents, businesses, and visitors – a town where people can come to learn and experience different things away from the city*
- *A place with hope for the next generation, where heritage, the natural environment, farming, and new developments are in balance*
- *A place of opportunity where our young people have a sense of what it means to belong to a community and be included*
- *A community recognised locally, nationally, and internationally for its heritage, arts and crafts, and approach to tourism*
- *A Council, which provides leadership and vision, and is committed to working with all the diverse elements of the community to create a future of promise.*

Our mission is:

- *To Build our History*
- *To Create our Future*

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

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

Goal	Objective	How Goal and Objectives are addressed in the AM Plan
The Place to Be	To be a close-knit community full of life, in a welcoming and accessible place for all.	Connect places of interest with walking paths, provide opportunities for exercise
Driving the York Economy Forward	To have a vibrant, diverse, and prosperous local economy which creates local jobs, business opportunities and a positive image for the Shire	Connect places of interest with walking paths,
A leader in sustainable environment	To be a place which is renowned for the quality of its natural environment, the astounding beauty of the landscape, and the care taken by the community	Promote pedestrian and low impact transport options. Allow enjoyment of the open air and exercise.
Built for lifestyle and resilience	To have a built environment which supports community, economy, and the environment, respects the past and creates a resilient future.	Connect places of interest with walking paths.
Strong Leadership and Governance	To have an effective and responsive leadership and governance, where a sense of collective purpose and shared direction combine to work together.	Provide well managed and sustainable assets.

3.2 Legislative Requirements

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

Table 3.3: Legislative Requirements

Acts	Subordinate Requirements	Requirement
<i>Local Government Act 1995</i>	Regulations, 1996 Functions and General Regulations, 1996 Financial Management Regulations, 1996 Administration Regulations, 1996	Annual Valuation Budget and Approval Financial Planning Financial Reporting Governance Procurement Rules IPR Framework Accounting standards
<i>Planning and Development Act 2005</i>	Town Planning Scheme Local Planning Strategy	Developer contribution schemes New assets and changing demand for assets Planning Requirements
<i>Main Roads Act 1930</i>	Works on highways Signage and line marking requirements	Signs and line marking State Highways and Main Roads Speed zoning Network reporting
<i>Road Traffic Code (Traffic Act 1974 and various other Acts)</i>	Design Standards As of right usage	Path Infrastructure requirements to meet as of right use Path Safety Requirements
<i>Work health and Safety Act 2020</i>	Occupational Health and Safety Regulations	Safe work practices Safety at worksites Public Safety
<i>Limitation (of Public Liability) Act 2005</i>	Common law Insurance Requirements	Asset inspection and management requirements Evidence based maintenance system addressing risks appropriately
<i>Disability Services Act, 1993</i>	Universal Access	Universal access provisions Design Standards
<i>State Records Act 2000</i>	Preservation of public records	Record keeping

3.3 Customer Values

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

Customer Values indicate:

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

Table 3.4: Customer Values

Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Functional, trafficable	Action requests	12 requests average per year over 2-year period	Deteriorating service quality and risks of service interruptions increasing.
Functional, link places	Customer satisfaction survey	unknown	unknown
Affordable	Sustainably funded	unknown	achieve
Value for Money	Customer satisfaction survey	unknown	satisfactory
Compliant (including safe)	No accidents caused by faulty paths	Satisfactory	Satisfactory
	Paths universal access compliant	Not satisfactory	Satisfactory
Amenable	Complaints received	unknown	Satisfactory
Environmentally Conscious	No applicable to paths	n/a	n/a
Socially enhancing	Customer satisfaction survey	unknown	Satisfactory

3.4 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 3.5: Customer Level of Service Measures

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Condition	% of the path network in average to very good condition	Percent of portfolio in poor or better condition	Currently 65% of paths are in average to very good condition (condition score 3 to 1)	If renewal and maintenance funding is sustained at the proposed level target will be achieved in 10 years
	<i>Confidence levels</i>		High (Professional Judgement supported by extensive data)	Medium (Professional judgement supported by data sampling)
Function	Assets comply with design, construction, and maintenance standards	Annual inspection	100% of assets are functional but approximately 70% are non-compliant with universal access standards	Propose to bring all assets to compliant standard in year 1 of plan
	<i>Confidence levels</i>		High (Professional Judgement supported by extensive data)	Medium (Professional judgement supported by data sampling)
Capacity	Percentage of required paths constructed	Percentage of sites connected	Guesstimate 80% of sites connected (sites are not identified)	Connect 100% of sites within 10 years if new asset funding is maintained
	<i>Confidence levels</i>		Low (Professional Judgement with no data evidence)	Low (Professional Judgement with no data evidence)

3.5 Technical Levels of Service

The Technical Levels of Service relates to the activities and allocation of associated resources to support activities that best achieve the desired customer values and customer levels of service. These are operational or technical measures of performance. Technical service measures are linked to the four (4) asset lifecycle phases and their associated programs(plans). Annual capital budgets (Capex) cover Acquisition and/or Renewal phases. Operating budgets (Opex) cover the Operation and Maintenance phase.

Descriptions of activities are summarized below:

- **Phase 1-Acquisition- New Asset** -This involves the allocation of capital funds to acquire new asset. Examples of transport asset acquisitions include activities that may provide a higher level of service (e.g., Purchasing and installing concrete slabs for footpaths, sourcing of accessible pedestrian ramps, Installing tactile indicators for footpath etc).
- **Phase 2- Renewal- Asset Renewal** -Renewal works typically involve the allocation of capital funds to return the service capability of an asset up to that which it had originally provided (e.g., resurfacing of worn-out footpaths with new layer of asphalt or concrete, reconstruction of extensively damaged footpaths from the base up, surface treatments such as seal coating or micro surfacing etc)
- **Phase 3- Operate/Maintain- Operational Services**-These are regular service activities and are known as “soft” services as they often fluctuate subject to service demand requirements for example opening hours, cleaning, mowing grass, energy requirements or inspections may be cyclical depending on certain times of the year or demand for services as a result of external factors such as events or seasonal changes.
- **Phase 3- Operate/Maintain- Planned (Preventative) Maintenance Services** -Planned (Preventative) Maintenance activities are “hard” services. These maintenance activities are “known”, are routine in nature and deemed necessary maintain the asset to an appropriate service level to achieve the predicted service life of the asset. Examples of maintenance activities include, road patching, unsealed road grading, building and/or structure repairs. Not performing planned maintenance activities will directly result in a decreased service life of the asset.
- **Phase 3- Operate/Maintain- Reactive Maintenance Services** -Reactive Maintenance activities are also “hard” services but are unpredictable and directly correlate with the performance of Planned Maintenance services, for example the failure to regularly perform shoulder maintenance grading of sealed roads may result in an increase in reactive maintenance mobilisations to address drainage or pavement issues after a significant weather event.

It is therefore important to balance maintenance programs with Planned (Preventative) Maintenance activities and Reactive Maintenance works in order to remove the risk of asset failure which is unlikely to match customer values or levels of service requirements.

Reactive Maintenance mobilisations are typically initiated using the Shire’s Action Request portal located on the Shire’s website.

Role of Asset Manager -Asset managers therefore need to plan, implement, and control technical service levels to influence service outcomes and asset life.³ **Table 3.6** shows the expected activities provided under the current 10 year Planned Budget allocation and the required activities and associated budget forecasts recommended in this AM Plan.

Table 3.6: Technical Levels of Service

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Acquisition	Provide new path connections	New path constructed	Not Known	200 metres new path per year
		Budget	<i>\$variable</i>	<i>\$75,000 per annum</i>
Operation	Operate the path network	Paths inspected and kept clean and clear.	Quarterly inspection and clearing, respond to action requests	Quarterly inspection and clearing, respond to action requests
		Budget	<i>included in maintenance</i>	<i>Included in maintenance</i>
Maintenance	Maintain the path network	Describe the Measure being used for performance monitoring	Not Known	Quarterly maintenance
		Budget	<i>Average for the Planning Period of the Planned Budget for Maintenance</i>	<i>Average for the Planning Period of the Forecast Cost for Maintenance</i>
Renewal	Replace aged and worn-out path	Percent network in poor or better condition	No renewal activity occurring	Clear 50% back log and emerging work need over 5 years
		Budget	<i>\$0 per annum</i>	<i>\$55,000 per annum</i>
Disposal	No disposal planned	n/a	n/a	n/a
		Budget	<i>\$0 per annum</i>	<i>\$0 per annum</i>

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 Drivers

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.

4.2 Demand Forecasts

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

4.3 Demand Impact and Demand Management Plan

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

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

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

Table 4.3: Demand Management Plan

Changes	Current provision	Projection	Impact on Services	Demand Management Plan
Population Growth	No provision	Very slow growth or slight contraction is currently identified	No substantive impact	No requirement
Changing Age Demographic	No provision	Increasing older demographic	Increase focus on safety and universal access	Design new and replacement work
Infill Residential Development	No provision	Minimal infill development expected.	No substantive impacts	No requirement
Precinct Development	No provision	None planned	No substantive impact	No requirement
Service Expectation increases	Included in AM PLAN	Expected demand for increased connectivity and quality of service	Increased service expectations Increasing use of paths has been noted	Set service levels, monitor and update
Motorised scooters, high speed bicycles, electric bikes and changing service requirements	No Provision	Not currently identified as a significant concern	No substantive impact	Monitor laws and adjust if required
Economy tightening	No Provision	Tightening of availability of finance Need to prioritise, justify, and demonstrate value for money from investments	Reduced funding and/or more competition for available funds	Better investment and decision making Source grant funding and developer contribution support
Environmental Concerns	No provision	Increasing expectations to protect and increase vegetation and greenspace Shift to non-motorised transport will increase pedestrian traffic	Minimal. Marginal increase in maintenance costs for vegetation control	No requirement

4.4 Asset Programs to meet Demand

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 Shire to ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan (Refer to **Section 5**).

4.5 Climate Change Adaptation

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

How climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which we respond and manage those impacts.³

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

Risk and opportunities identified to date are shown in **Table 4.5.1**

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

Climate Change Description	Projected Change	Potential Impact on Assets and Services	Management
Rainfall	Higher intensity rainfall events during winter	No expected impacts on paths Possible impacts of water runoff or standing water	No requirement
Extended Dry periods	Longer periods without rain	No expected impacts on paths	No requirement
Temperature	Higher temperatures and more frequent hot days	Shorter bitumen path lifespans May need to consider shade structures in the POS plan	Use concrete
Fire risk	Increased fire risk	No expected impacts on paths	No requirement

³ IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

Any new assets that are developed should recognise the opportunity to design in resilience to significant weather events. Building resilience may yield the following benefits:

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

Table 4.5.2 summarises some asset climate change resilience opportunities.

Table 4.5.2 Building Asset Resilience to Climate Change

New Asset Description	Climate Change impact These assets?	Build Resilience in New Works
Paths	None identified	No requirement

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

The stormwater plan could inform placement of path infrastructure.

5 Lifecycle Management Plan

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

5.1 Background Data

5.1.1 Physical parameters

The assets covered by this AM Plan are shown in **Table 5.1.1**. The Shire has a basic path network inclusive of main street and other linkages. The age profile of the assets included in this AM Plan are shown in **Figure 5.1.1**.

Table 5.1.1: Assets covered by this Plan

Road Name	Start Chainage	End Chainage	Location	Asset Class	Asset Sub Class	Material type	Length (m)	Width (m)	Replacement Value (as new)
ANDREWS AVENUE	12	373	Left	Path	Footpath	Insitu Concrete	374	2.0	\$ 81,188
ANDREWS AVENUE	383	683	Left	Path	Footpath	Insitu Concrete	307	2.0	\$ 66,644
AVON TERRACE	206	1176	Left	Path	Footpath	Red Asphalt	970	1.2	\$ 63,345
AVON TERRACE	985	1345	Left	Path	Footpath	Red Asphalt	360	1.2	\$ 23,509
AVON TERRACE	1364	1565	Left	Path	Footpath	Red Asphalt	191	1.3	\$ 13,512
AVON TERRACE	1575	1725	Left	Path	Footpath	Insitu Concrete	150	2.0	\$ 32,562
AVON TERRACE	1735	1945	Left	Path	Footpath	Brick Paving	210	2.5	\$ 85,475
AVON TERRACE	1955	2085	Left	Path	Footpath	Brick Paving	130	2.0	\$ 42,331
AVON TERRACE	2093	2253	Left	Path	Footpath	Brick Paving	223	2.8	\$ 101,659
AVON TERRACE	2300	2315	Left	Path	Footpath	Red Asphalt	40	1.8	\$ 3,918
AVON TERRACE	1222	1298	Right	Path	Footpath	Insitu Concrete	77	1.8	\$ 15,044
AVON TERRACE	1301	1316	Right	Path	Footpath	Insitu Concrete	16	1.8	\$ 3,126
AVON TERRACE	1321	1349	Right	Path	Footpath	Insitu Concrete	30	1.8	\$ 5,861
AVON TERRACE	1575	1655	Right	Path	Footpath	Insitu Concrete	80	2.0	\$ 17,366
AVON TERRACE	1665	1725	Right	Path	Footpath	Insitu Concrete	60	2.0	\$ 13,025
AVON TERRACE	1735	1945	Right	Path	Footpath	Brick Paving	210	2.5	\$ 85,475
AVON TERRACE	1955	1965	Right	Path	Footpath	Insitu Concrete	10	2.5	\$ 2,714
AVON TERRACE	1964	2074	Right	Path	Footpath	Brick Paving	118	2.5	\$ 48,029
AVON TERRACE	2095	2195	Right	Path	Footpath	Insitu Concrete	100	2.0	\$ 21,708
AVON TERRACE	2195	2245	Right	Path	Footpath	Brick Paving	50	2.0	\$ 16,281
AVON TERRACE	2255	2290	Right	Path	Footpath	Brick Paving	35	2.0	\$ 11,397
BROOK STREET	69	180	Left	Path	Footpath	Insitu Concrete	114	1.5	\$ 18,560
BROOME STREET	5	245	Right	Path	Footpath	Red Asphalt	180	1.5	\$ 14,693
CARDWELL ROAD	5	375	Left	Path	Footpath	Red Asphalt	376	1.8	\$ 36,831
CENTENNIAL DRIVE	525	640	Right	Path	Footpath	Insitu Concrete	115	2.0	\$ 24,964

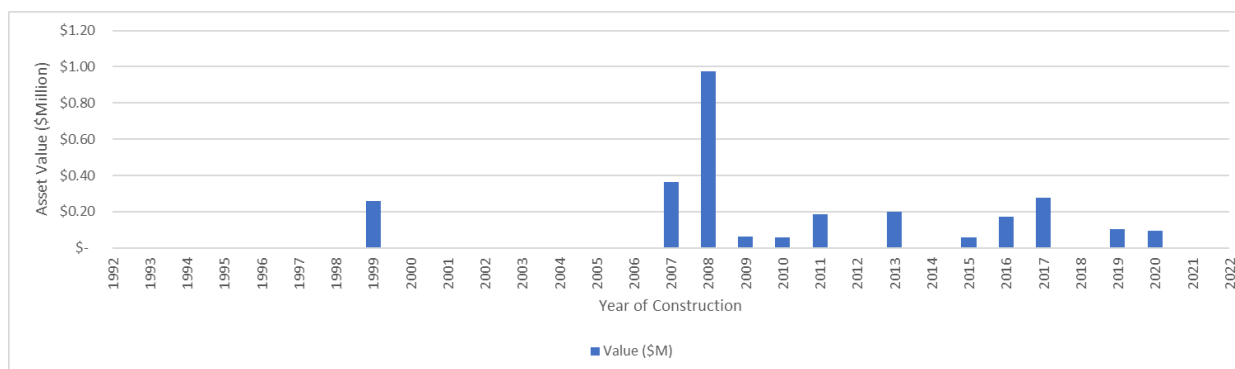
Road Name	Start Chainage	End Chainage	Location	Asset Class	Asset Sub Class	Material type	Length (m)	Width (m)	Replacement Value (as new)
CLIFFORD STREET	7	187	Left	Path	Footpath	Insitu Concrete	192	1.1	\$ 22,924
CLIFFORD STREET	188	228	Left	Path	Footpath	Insitu Concrete	38	1.5	\$ 6,187
CLIFFORD STREET	223	528	Left	Path	Footpath	Insitu Concrete	311	1.5	\$ 50,634
FORD STREET	395	675	Right	Path	Footpath	Insitu Concrete	280	2.0	\$ 60,782
FORD STREET	685	805	Right	Path	Footpath	Insitu Concrete	120	2.0	\$ 26,050
FORD STREET	938	1024	Right	Path	Footpath	Insitu Concrete	89	1.8	\$ 17,388
FORD STREET	1020	1128	Right	Path	Footpath	Insitu Concrete	107	1.6	\$ 18,582
FORD STREET	1129	1158	Right	Path	Footpath	Insitu Concrete	32	1.8	\$ 6,252
GEORGIANA STREET	5	25	Left	Path	Footpath	Red Asphalt	20	1.5	\$ 1,633
GEORGIANA STREET	35	70	Left	Path	Footpath	Red Asphalt	35	2.0	\$ 3,809
GEORGIANA STREET	80	110	Left	Path	Footpath	Red Asphalt	30	2.0	\$ 3,265
GEORGIANA STREET	120	150	Left	Path	Footpath	Red Asphalt	30	2.0	\$ 3,265
GEORGIANA STREET	165	385	Left	Path	Footpath	Red Asphalt	220	1.2	\$ 14,367
GLEBE STREET	435	525	Left	Path	Footpath	Brick Paving	90	2.3	\$ 33,702
GLEBE STREET	5	165	Right	Path	Footpath	Red Asphalt	160	2.0	\$ 17,414
GLEBE STREET	175	240	Right	Path	Footpath	Red Asphalt	65	2.0	\$ 7,075
GLEBE STREET	310	375	Right	Path	Footpath	Brick Paving	65	2.4	\$ 25,398
GLEBE STREET	385	525	Right	Path	Footpath	Brick Paving	140	2.2	\$ 50,145
GREY STREET	125	265	Right	Path	Footpath	Red Asphalt	140	2.0	\$ 15,238
HOWICK STREET	5	265	Left	Path	Footpath	Brick Paving	260	2.5	\$ 105,827
HOWICK STREET	5	95	Right	Path	Footpath	Insitu Concrete	90	2.3	\$ 22,468
HOWICK STREET	105	165	Right	Path	Footpath	Insitu Concrete	17	2.4	\$ 4,428
HOWICK STREET	153	173	Right	Path	Footpath	Insitu Concrete	20	2.3	\$ 4,993
HOWICK STREET	175	238	Right	Path	Footpath	Insitu Concrete	63	2.2	\$ 15,044
HOWICK STREET	247	265	Right	Path	Footpath	Insitu Concrete	18	2.3	\$ 4,494
JOAQUINA STREET	7	83	Left	Path	Footpath	Brick Paving	71	2.8	\$ 32,367

Road Name	Start Chainage	End Chainage	Location	Asset Class	Asset Sub Class	Material type	Length (m)	Width (m)	Replacement Value (as new)
JOAQUINA STREET	83	124	Left	Path	Footpath	Brick Paving	41	2.7	\$ 18,023
JOAQUINA STREET	122	183	Left	Path	Footpath	Insitu Concrete	71	2.7	\$ 20,807
JOAQUINA STREET	5	192	Right	Path	Footpath	Brick Paving	194	2.7	\$ 85,280
LINCOLN STREET	5	265	Right	Path	Footpath	Red Asphalt	260	2.0	\$ 28,298
LOWE STREET	5	135	Left	Path	Footpath	Brick Paving	130	2.2	\$ 46,564
LOWE STREET	86	96	Right	Path	Footpath	Brick Paving	10	2.1	\$ 3,419
LOWE STREET	87	92	Right	Path	Footpath	Brick Paving	3	5.1	\$ 2,491
MACARTNEY STREET	5	125	Left	Path	Footpath	Brick Paving	120	2.5	\$ 48,843
MACARTNEY STREET	135	170	Left	Path	Footpath	Brick Paving	35	2.3	\$ 13,106
MACARTNEY STREET	170	265	Left	Path	Footpath	Insitu Concrete	95	2.4	\$ 24,747
MACARTNEY STREET	275	297	Left	Path	Footpath	Red Asphalt	22	1.5	\$ 1,796
MACARTNEY STREET	310	375	Left	Path	Footpath	Red Asphalt	65	2.6	\$ 9,197
MACARTNEY STREET	385	485	Left	Path	Footpath	Red Asphalt	100	1.5	\$ 8,163
MACARTNEY STREET	495	625	Left	Path	Footpath	Red Asphalt	130	1.5	\$ 10,612
MACARTNEY STREET	8	76	Right	Path	Footpath	Insitu Concrete	125	2.3	\$ 31,205
MACARTNEY STREET	135	190	Right	Path	Footpath	Brick Paving	55	2.4	\$ 21,491
MACARTNEY STREET	310	375	Right	Path	Footpath	Red Asphalt	65	2.6	\$ 9,197
MACARTNEY STREET	498	713	Right	Path	Footpath	Red Asphalt	213	4.9	\$ 56,798
MACARTNEY STREET	710	757	Right	Path	Footpath	Insitu Concrete	52	2.0	\$ 11,288
MACARTNEY STREET	768	898	Right	Path	Footpath	Insitu Concrete	129	2.1	\$ 29,403
MACARTNEY STREET	900	1070	Right	Path	Footpath	Insitu Concrete	170	2.0	\$ 36,904
NEW STREET	6	356	Right	Path	Footpath	Insitu Concrete	360	2.0	\$ 78,149
NEWCASTLE STREET	5	165	Right	Path	Footpath	Red Asphalt	160	2.0	\$ 17,414
NEWCASTLE STREET	175	235	Right	Path	Footpath	Red Asphalt	60	2.0	\$ 6,530
NEWCASTLE STREET	245	680	Right	Path	Footpath	Red Asphalt	435	2.0	\$ 47,345
NORTHAM CRANBROOK	34481	34595	Right	Path	Footpath	Insitu Concrete	86	1.4	\$ 13,068

Road Name	Start Chainage	End Chainage	Location	Asset Class	Asset Sub Class	Material type	Length (m)	Width (m)	Replacement Value (as new)
NORTHAM CRANBROOK	34608	34776	Right	Path	Footpath	Insitu Concrete	180	1.4	\$ 27,352
NORTHAM CRANBROOK	34796	35166	Right	Path	Footpath	Insitu Concrete	373	1.4	\$ 56,680
NORTHAM CRANBROOK	35172	35292	Right	Path	Footpath	Insitu Concrete	121	1.5	\$ 19,700
NORTHAM CRANBROOK	35344	35494	Right	Path	Footpath	Red Asphalt	158	1.8	\$ 15,477
NORTHAM CRANBROOK	35524	35664	Right	Path	Footpath	Red Asphalt	154	1.8	\$ 15,085
RADNOR ROAD	6	156	Left	Path	Footpath	Insitu Concrete	170	1.6	\$ 29,523
RAILWAY STREET	5	115	Left	Path	Footpath	Red Asphalt	110	2.0	\$ 11,972
RAILWAY STREET	125	265	Left	Path	Footpath	Red Asphalt	140	1.5	\$ 11,428
SOUTH STREET	5	105	Left	Path	Footpath	Insitu Concrete	100	2.4	\$ 26,050
SOUTH STREET	115	365	Left	Path	Footpath	Insitu Concrete	250	2.4	\$ 65,124
SOUTH STREET	375	460	Left	Path	Footpath	Insitu Concrete	85	2.4	\$ 22,142
SOUTH STREET	480	515	Left	Path	Footpath	Insitu Concrete	35	2.6	\$ 9,877
SOUTH STREET	515	610	Left	Path	Footpath	Brick Paving	95	2.4	\$ 37,121
SOUTH STREET	615	712	Left	Path	Footpath	Insitu Concrete	97	2.6	\$ 27,374
SOUTH STREET	712	750	Left	Path	Footpath	Insitu Concrete	38	2.6	\$ 10,724
SOUTH STREET	520	610	Right	Path	Footpath	Red Asphalt	90	2.1	\$ 10,285
SOUTH STREET	610	716	Right	Path	Footpath	Red Asphalt	106	2.1	\$ 12,114
SOUTH STREET	716	755	Right	Path	Footpath	Insitu Concrete	39	2.1	\$ 8,889
SUBURBAN ROAD	5	95	Left	Path	Footpath	Red Asphalt	90	1.5	\$ 7,347
SUBURBAN ROAD	104	233	Right	Path	Footpath	Insitu Concrete	131	1.5	\$ 21,328
SUBURBAN ROAD	245	318	Right	Path	Footpath	Insitu Concrete	72	1.5	\$ 11,722
SUBURBAN ROAD	325	410	Right	Path	Footpath	Insitu Concrete	85	1.5	\$ 13,839
SUBURBAN ROAD	413	475	Right	Path	Footpath	Insitu Concrete	66	1.2	\$ 8,596
TREWS ROAD	27	74	Left	Path	Footpath	Insitu Concrete	47	1.5	\$ 7,652
TREWS ROAD	79	138	Left	Path	Footpath	Insitu Concrete	59	1.5	\$ 9,606
TREWS ROAD	146	175	Left	Path	Footpath	Insitu Concrete	29	1.5	\$ 4,721

Road Name	Start Chainage	End Chainage	Location	Asset Class	Asset Sub Class	Material type	Length (m)	Width (m)	Replacement Value (as new)
TREWS ROAD	181	323	Left	Path	Footpath	Insitu Concrete	142	1.5	\$ 23,119
ULSTER ROAD	28	113	Left	Path	Footpath	Insitu Concrete	66	1.7	\$ 12,178
ULSTER ROAD	555	600	Left	Path	Footpath	Red Asphalt	49	2.0	\$ 5,333
ULSTER ROAD	609	1349	Left	Path	Footpath	Red Asphalt	733	1.9	\$ 75,791
ULSTER ROAD	5	262	Right	Path	Footpath	Red Asphalt	266	2.0	\$ 28,951
ULSTER ROAD	262	405	Right	Path	Footpath	Red Asphalt	142	2.0	\$ 15,455
ULSTER ROAD	262	405	Right	Path	Footpath	Red Asphalt	142	2.0	\$ 15,455
ULSTER ROAD	402	557	Right	Path	Footpath	Red Asphalt	145	1.9	\$ 14,993

Figure 5.1.1: Asset Age Profile



All figure values are shown in current day dollars.

Most paths were constructed post 2007 in concrete with an estimated life of 60 years. Around 15% of paths by value (23.5% by area) were constructed in 1999 in asphalt. These paths have an estimated life of around 30 years. These paths have not been renewed, and are the same paths identified in the condition profile in **section 5.1.3** as being in poor or very poor condition.

5.1.2 Asset capacity and performance

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

Table 5.1.2: Known Service Performance Deficiencies

Location	Service Deficiency
Multiple Locations around network	Path intersection treatments are missing tactile marking, grab rails and kerb ramps are often missing or in poor condition
Multiple locations identified in the backlog register	Approximately \$0.42 million value of Paths are currently in very poor condition which below the adopted standard for intervention.

The above service deficiencies were identified from the path condition survey (2022)

5.1.3 Asset condition

Condition is currently monitored by a formal condition survey in 2022.

Condition is measured using a 1 – 5 grading system⁴ 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.

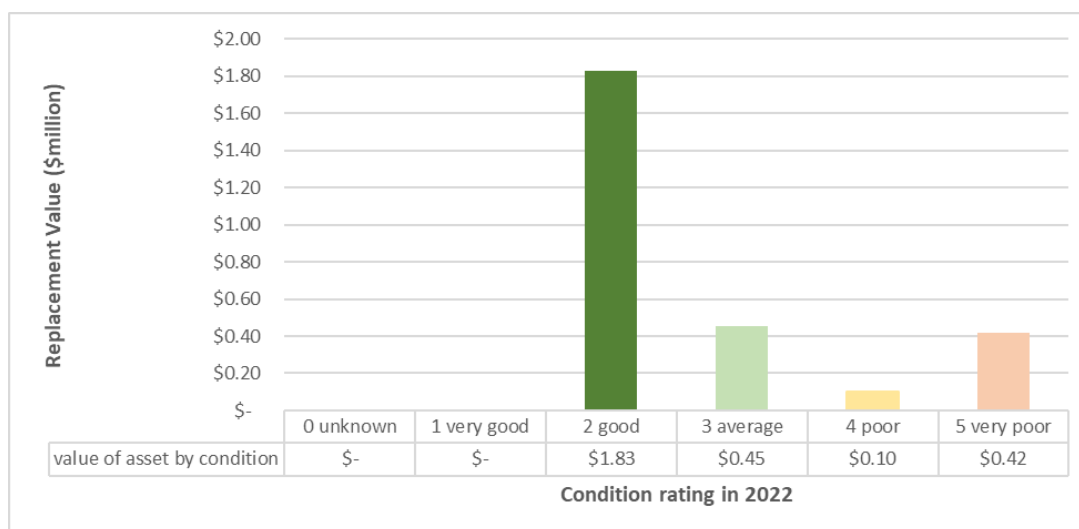
⁴ IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

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**.

Figure 5.1.3: Asset Condition Profile



Condition was assessed in 2022. Approximately 15% by value (26.5% by area) are in very poor condition and below the standard of intervention adopted in this plan.

All figure values are shown in current day dollars.

5.2 Operations and Maintenance Plan

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

Maintenance Services includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include pipe repairs, asphalt patching, and equipment repairs.

The trend in maintenance budgets are shown in **Table 5.2.1**.

Table 5.2.1: Maintenance Budget Trends

Year	Maintenance Budget
2021-2022	Estimated \$50,000
2022-2023	Estimated \$50,000
2023-2024	\$42,000

Note that this tables shows historical expense, current budget and budget proposed in this plan. Historical investment data is not available as path costs have been included under road maintenance. There is no specified allocation in the budget or long-term financial plan for path maintenance and it is presumed this will be fully funded.

Note the Shire does not currently budget or account for maintenance costs of paths separately to road maintenance. The proposed allocation is an estimate only with no source data.

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.

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.

A sample of the current asset hierarchy from the Path asset register is shown in Table 5.2.2, as regular inspections and planned maintenance work is completed, additional component information is able to be added to the asset register.

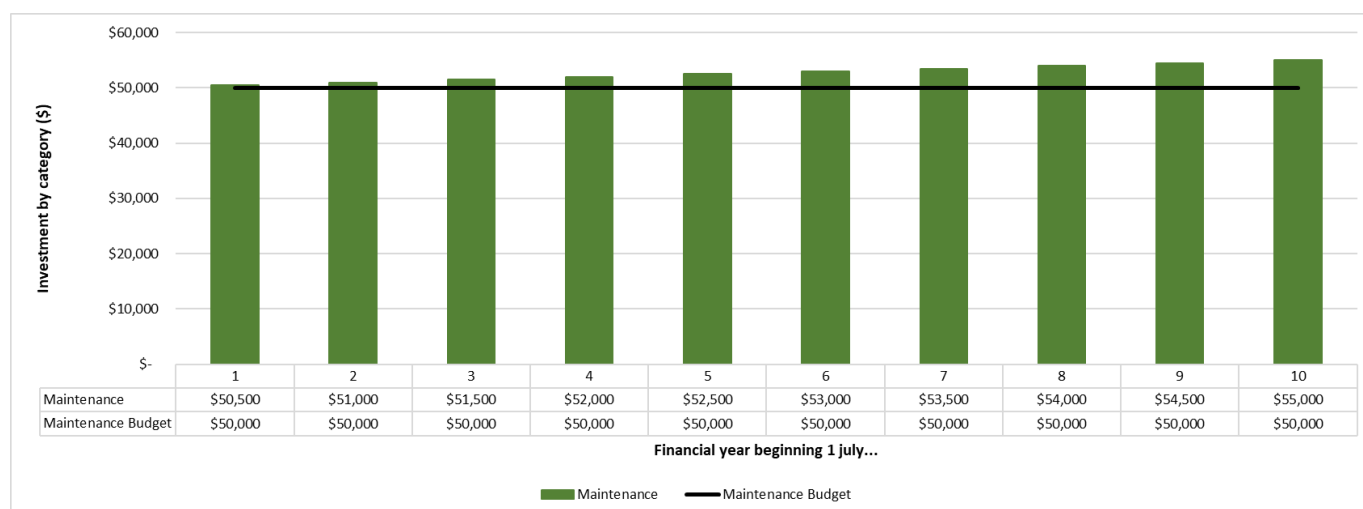
Table 5.2.2: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
Shared path	Off road path providing access to pedestrians, bikes, and other mobility devices
Footpath	Off road path providing access to pedestrians

Summary of forecast operations and maintenance costs

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

Figure 5.2: Operations and Maintenance Summary



All figure values are shown in current day dollars.

Historically path maintenance has been budgeted and accrued to the same account as road maintenance making analysis difficult. The estimate provided is based on an assumption that 5% (\$50,000) of the historical maintenance budgeted in 2022 is for path maintenance.

The allocated maintenance budget does not include an estimated \$20,000 to fix immediate defects and universal access requirement non-conformances. These are listed as an improvement action.

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

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 an acquisition resulting in additional future operations and maintenance costs.

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

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

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in **Table 5.3**. Asset useful lives were last reviewed on 30 June 2022.⁵

Table 5.3: Useful Lives of Assets

Asset (Sub)Category	Useful life
Path, concrete	40
Path, asphalt	30
Path, brick	35

The estimates for renewals in this AM Plan were based on the asset register, as updated 2022.

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

⁵ Enter Reference to Report documenting Review of Useful Life of Assets

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g., Resurfacing worn out footpath to provide smooth walking surface, rebuilding an extensively damaged footpaths from base up), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements

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

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

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
Compliance (safety)	Takes immediate priority
Condition	40% out of 100%
Risk Consequence	25% out of 100%
Service Benefit	20% out of 100%
Social Value	15% out of 100%
Total	100%

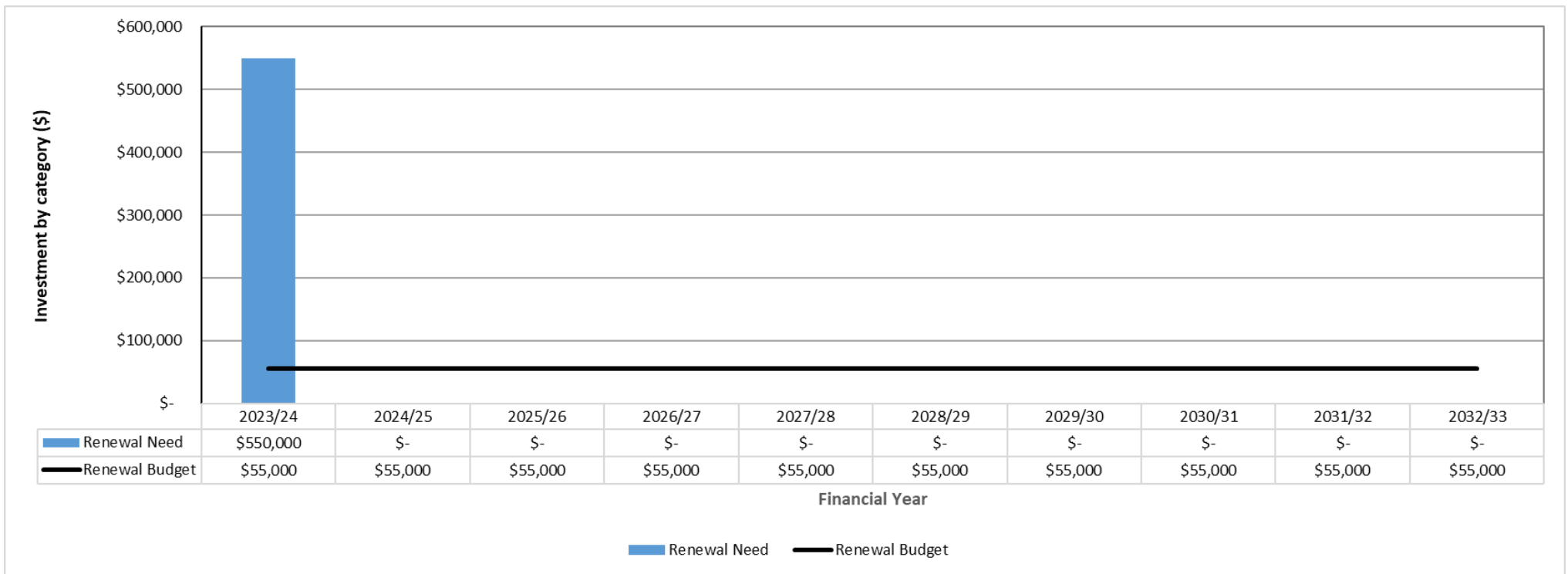
Note that no provision has been made in the renewal plan for prioritization of service benefits, community demand. This plan is based on “safety first”, “other priorities assessed on their merit”.

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

5.4 Summary of future renewal costs

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

Figure 5.4.1: Forecast Renewal Costs



All figure values are shown in current day dollars.

Note that the graph shows a renewal need of \$0.55 Million in year 1 of the plan (2023/24), and no additional emerging need in the remainder of the 10 years. This is work that is past due date based on the adopted service levels. The funding allocation assumes that this backlog will be cleared over the 10-year period of this plan.

The required annual expenditure on renewal to achieve this is \$0.055 million per annum. The logic here is that a modest annual commitment of funds will yield the required result, will not unduly impact the overall budget, will show the community steady progress, is sustainable and allows flexibility to respond to changing priorities.

The LTFP to 2026 has allocated \$0.13 million to path capital works and assuming this is continued into a new LTFP this leaves funds available for modest path network acquisition.

5.5 Acquisition Plan

Acquisition planning and the acquisition of new assets may result from growth, demand requirements, social or environmental needs or donations. New assets are typically defined as works which will upgrade or improve an existing asset beyond its existing capacity or provide a new service.

5.5.1 Selection criteria

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

At present the only instruction provided to staff on new footpath need is from the DAIP. A recommendation is made in this AMP to adopt and regularly update a path master plan

Table 5.5.1: Acquired Assets Priority Ranking Criteria

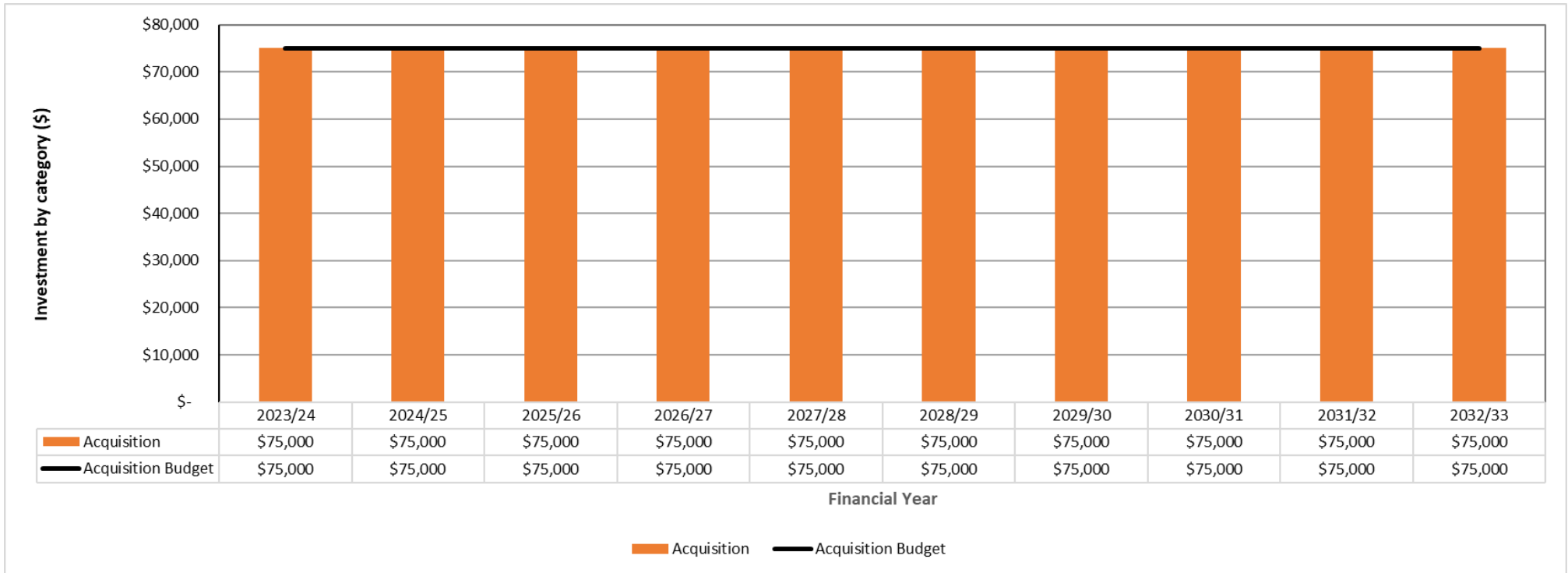
Criteria	Weighting
Safety (Compliance)	Immediate Priority (100 %)
Total	100%

At present the only guidance provided to staff on requirements for acquisition (new and path upgrades) is the DAIP. This is not to prevent the Council reviewing and updating that strategy or developing an alternative master plan to identify and prioritise improvement action.

Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised 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 proposed \$75,000 is based on the average cost to build 200 metres of compliant concrete path, 2.1 metres wide in a typical Shire location. The principle being that a small incremental network improvement every year will produce significant benefits over time.

When the Shire 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 Shire.

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.

Additional maintenance costs for the new acquisitions are individually minimal but add up over time. Maintenance budget should be increased annually proportional to the additional acquisitions.

5.6 Disposal Plan

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

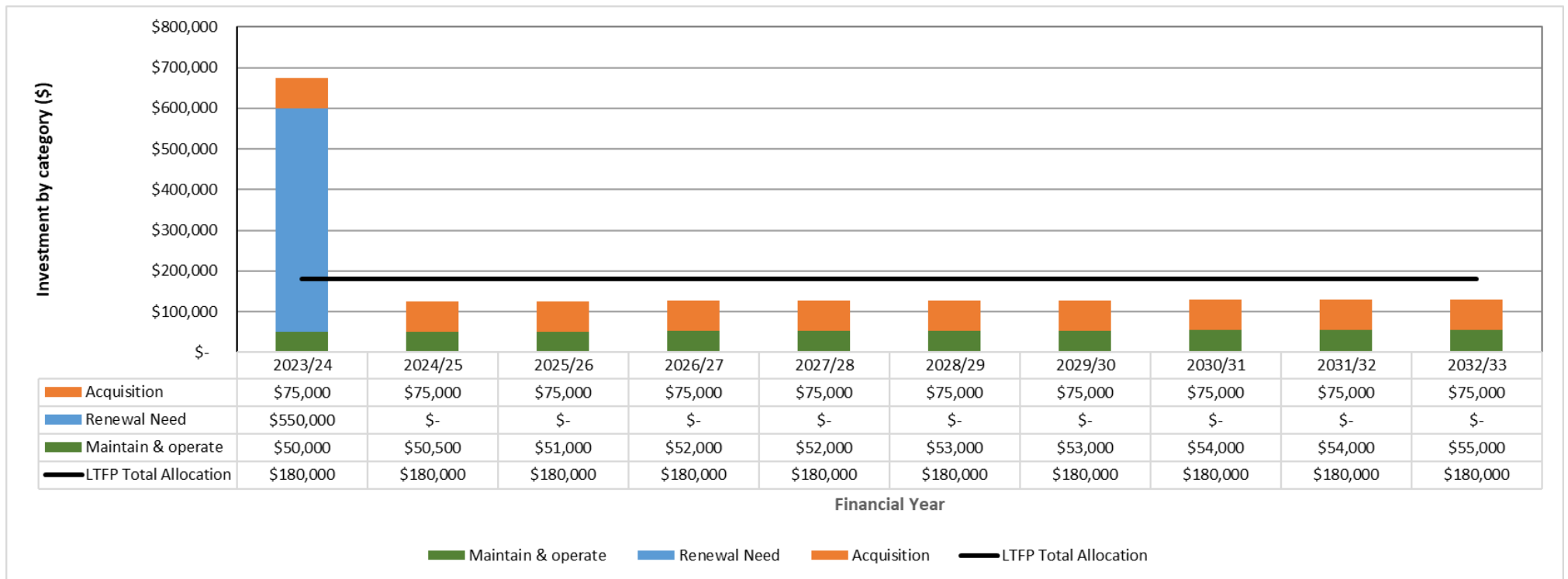
Asset	Reason for Disposal	Timing	Disposal Costs	Operations & Maintenance Annual Savings
Nil	n/a	n/a	n/a	n/a

5.7 Summary of asset forecast costs

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

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

Figure 5.7.1: Lifecycle Summary (all figure values are shown as of 30 June 2022)



6 Risk Management

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 risks⁸ 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	Failure Mode	Impact
No critical path assets identified		
Assets in very poor or poor condition (requiring attention in the 10-year period) include (numbers indicate sections) <ul style="list-style-type: none"> • AVON TERRACE 1364-1565 • AVON TERRACE 985-1345 • AVON TERRACE 206-1176 • BROOME STREET 5-245 • CARDWELL ROAD 5-375 • GEORGIANA STREET 35-70 • GEORGIANA STREET 5-25 • GEORGIANA STREET 80-110 • GEORGIANA STREET 120-150 • GEORGIANA STREET 165-385 • LINCOLN STREET 5-265 • MACARTNEY STREET 275-297 	Performance and safety issues emerging	Higher monitoring and maintenance requirements

⁷ ISO 31000:2009, p 2

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

•	MACARTNEY STREET	310-375		
•	MACARTNEY STREET	385-485		
•	MACARTNEY STREET	495-625		
•	MACARTNEY STREET	498-713		
•	NEWCASTLE STREET	5-165		
•	NEWCASTLE STREET	245-680		
•	RAILWAY STREET	5-115		
•	RAILWAY STREET	125-265		
•	SOUTH STREET	520-610		
•	SOUTH STREET	610-716		
•	SUBURBAN ROAD	5-95		
•	ULSTER ROAD	402-557		
•	ULSTER ROAD	609-1349		
•	ULSTER ROAD	262-405		
Numbers indicate the sections of path				

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.

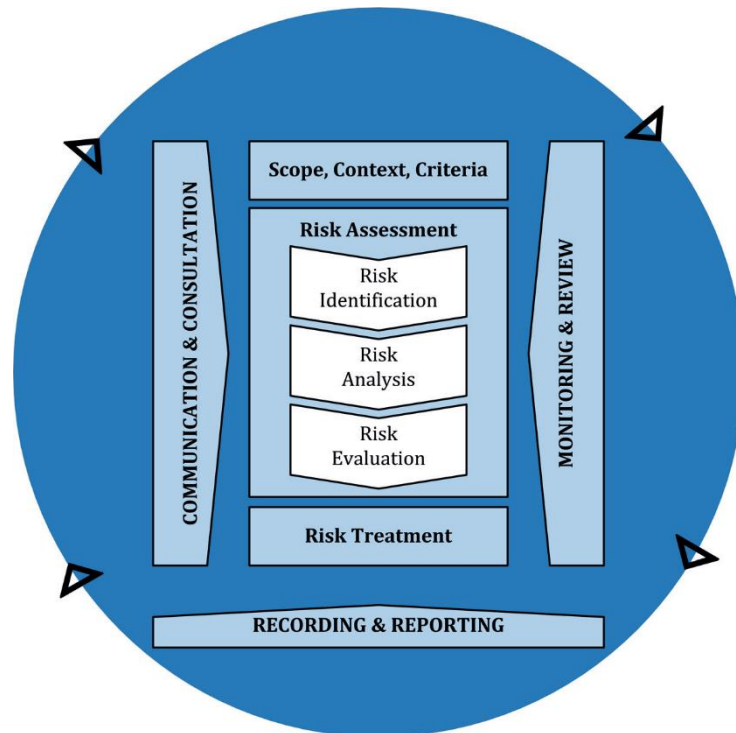


Fig 6.2 Risk Management Process – Abridged

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 risks⁹ 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.

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

Table 6.2: Risks and Treatment Plans

Identified Risk	Consequence	Likelihood	Consequence Rating	Assessed Risk	Treatment	Residual Risk
Asset failure causes loss of service. Failure may include a loss of function, damage, obstruction or poor performance	Loss of service, loss of reputation.	Likely	Minor	Moderate	Regular inspections Provide timely maintenance Replace assets prior to failure	Low
Lack of knowledge of assets	Unexpected event, loss of service, loss of reputation.	Likely	Minor	Moderate	Regular inspections	Low
Asset defect contributes to major accident	Major accident up to and including death.	Unlikely	Severe	High	Conform to design and construction standards	Moderate
Asset defect contributes to minor accident.	Minor accident including personal injury or property damage.	Probable	Medium	Moderate	Conform to design and construction standards Maintain and inspect assets regularly	Low
Public Liability claim	Financial Cost, Reputational damage.	Possible	Major	High	Conform to design and construction standards Maintain and inspect assets regularly	Moderate
Universal access requirements not met	Disabled access restricted, reputation damage, potential damage claim, potential admin penalties.	Unlikely	Medium	Moderate	Conform to universal access standards	Low
Loss of Budget	Unable to fully complete improvement, replacement or	Unlikely	Major	Moderate	Prioritise expenditure with focus on operation and	Low

Identified Risk	Consequence	Likelihood	Consequence Rating	Assessed Risk	Treatment	Residual Risk
	maintenance works costs incurred.				preservation of existing assets Adopt LTFP	
Change in demand - Shire Growth	New residents not provided with access.	Rare	Minor	Low	Include path network planning in scheme and development approval considerations	Low
Change in demand – service standards	Residents demand higher service standards or new assets.	Possible	Major	High	Set service standards and budget in agreement with ratepayers	Low
Change in demand – external requirement	Unexpected need to construct new or upgrade path linkages.	Possible	Major	High	Active involvement in regional planning	Low

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 AM 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:

- Immediately renew the entire backlog of required renewal works.

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:

- Functional requirements on older paths, past recommended intervention point will be met, but the standard of service will be less than minimum specified

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:

- Older sections of paths, past recommended intervention point, will have escalated risk factors and will require more inspection and maintenance. (See risk) Risks may include reputational, safety, WHS or loss of service

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 / forecast renewal costs for next 10 years), and
- medium term forecast costs/proposed budget (over 10 years of the planning period).

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio¹⁰ 100%

The renewal funding ratio is the ratio of net Present Value of planned renewal investment to the net present value of renewal funding need. Note exclusion of acquisition and maintenance.

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have 100% of the funds required for the optimal renewal of assets. Asset renewal funding ratio is the ratio of the Net Present Value of planned renewal works to the Net present value of estimated need.

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

Medium term – 10-year financial planning period

This AM Plan identifies the forecast operations, maintenance and renewal costs required to provide an agreed 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 \$0.19 Million on average per year.

The proposed (budget) operations, maintenance and renewal funding is \$0.10 Million (assuming maintenance costs) on average per year giving a 10-year funding balanced budget each year. This

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

indicates that 100% of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget. Note, these calculations exclude acquired assets.

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

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

Table 7.1.3 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 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 (including revising the long-term financial plan).

We will manage the ‘gap’ by developing this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community.

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

Year	Acquisition	Operation & Maintenance	Renewal	Disposal
2023	\$ 75,000	\$ 50,000	\$ 55,000	\$ -
2024	\$ 75,000	\$ 50,500	\$ 55,000	\$ -
2025	\$ 75,000	\$ 51,000	\$ 55,000	\$ -
2026	\$ 75,000	\$ 51,500	\$ 55,000	\$ -
2027	\$ 75,000	\$ 52,000	\$ 55,000	\$ -
2028	\$ 75,000	\$ 52,500	\$ 55,000	\$ -
2029	\$ 75,000	\$ 53,000	\$ 55,000	\$ -
2030	\$ 75,000	\$ 53,500	\$ 55,000	\$ -
2031	\$ 75,000	\$ 54,000	\$ 55,000	\$ -
2032	\$ 80,000	\$ 64,500	\$ 55,000	\$ -

Forecast costs are shown in 2022-dollar values.

7.2 Funding Strategy

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

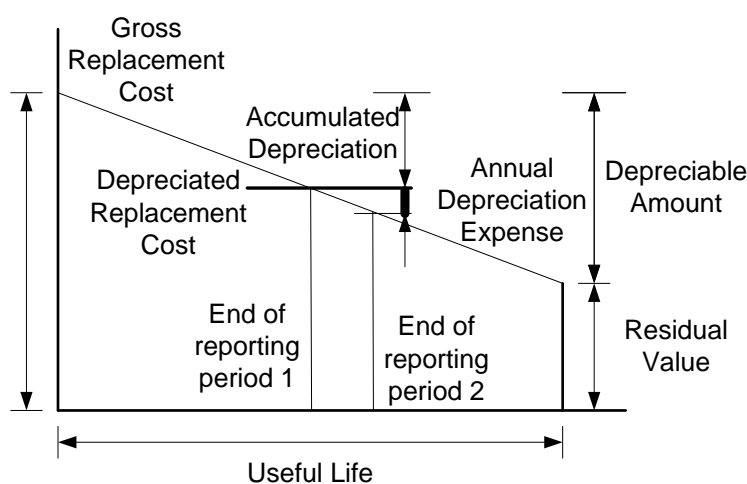
The financial strategy of the Shire determines how funding will be provided, whereas the AM Plan communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

7.3 Valuation Forecasts

7.3.1 Asset valuations

The best available estimate of the value of assets included in this AM Plan are shown below. The assets are valued at Fair value by cost replacement method, as of 30 June 2022.

- Replacement Cost (Current/Gross) \$2,796,092
- Depreciable Amount \$2,796,092
- Depreciated Replacement Cost¹¹ \$1,634,952
- Cumulative Depreciation \$1,161,139
- Annual Depreciation \$ 75,240



7.3.2 Valuation forecast

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

Additional assets will 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.

7.4 Key Assumptions Made in Financial Forecasts

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

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

Key assumptions made in this AM Plan are:

- The asset register, condition data and other source information is a true reflection of the real world (see confidence statement)
- The assets are of sufficiently uniform design, construction, quality, and usage that reliable statistical forecasts can be made.
- The assets are being (and have been) maintained and operated appropriately, such that useful lives will be achieved.
- No data was available to estimate a maintenance budget. Historically path maintenance has been combined with road maintenance expense. The path maintenance was estimated to be 5% of the total historical spend on road, path and bridge maintenance.
- Costs of assets are estimated on average project costs, without project plans or site inspection. On the average these are statistically reliable, but in the individual case variation can be expected
- The current level of capital investments in paths (\$0.13 Million per annum) will be renewed the new LTFP

7.5 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is classified on a A - E level scale¹² in accordance with Table 7.5.1.

Table 7.5.1: Data Confidence Grading System

Confidence Grade	Description
A. Very High	Data based on sound records, procedures, investigations, and analysis, documented properly, and agreed as the best method of assessment. Dataset is complete and estimated to be accurate \pm 2%
B. High	Data based on sound records, procedures, investigations, and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate \pm 10%
C. Medium	Data based on sound records, procedures, investigations, and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is complete but up to 50% is extrapolated data and accuracy estimated \pm 25%

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

D. Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy \pm 40%
E. Very Low	None or very little data held.

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

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

Data	Confidence Assessment	Comment
Demand drivers	C	Demand drivers are minimal, evidence is limited
Growth projections	B	Growth is projected as minimal
Acquisition forecast	B	This depends on whether this plan is followed or needs to be adjusted
Operation forecast	D	This is an estimated based on no data and limited understanding
Maintenance forecast	D	This is an estimated based on no data and limited understanding
Renewal forecast - Asset values	C	Based on a comprehensive condition survey (2022), assessment of needs and forecast of works needed
- Asset useful lives	C	Industry standards have been adopted
- Condition modelling	C	Modelling was simple projection and based on current condition data, generic assumptions of useful life, typical deterioration pattern, and typical use and maintenance expectations. Data for more complete modelling was not available
Disposal forecast	A	No disposals forecast

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

8 Plan Improvement and Monitoring

8.1 Status of Asset Management Practices¹³

8.1.1 Accounting and financial data sources

This AM Plan utilises accounting and financial data. The source of the data is the adopted Long Term Financial Plan, extracts from Annual budgets and Annual reports and the 2022 Asset Valuation Report.

8.1.2 Asset management data sources

This AM Plan also utilises asset management data. The source of the data is extracts from the Asset Register, as updated 2022.

8.2 Improvement Plan

It is important that the Shire recognise areas of their 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

Item	Description	Responsibility	Resources required	Priority	Timeline
1	Urgently undertake maintenance works to install tactile markers and other universal access provisions, fix existing defects and kerb ramps on all paths	EMIDS	Estimate \$20,000 In house capability	Very high	Immediate
2	Establish a firm annual commitment to footpath renewal funding in the LTFP, with a focus on improving older and degraded sections of path.	Council	TBA	Very high	June 2023
3	Identify and pursue grant funding opportunities for path works.	EMIDS	TBA	High	June 2024
4	Prepare a simple map showing the existing path network, identified extensions and proposed improvement priorities. Circulate for comment and adopt by Council to provide guidance on priority investment needs for path acquisition and funding consideration	EMIDS	TBA	High	June 2024

¹³ ISO 55000 Refers to this as the Asset Management System

5	Implement the service levels on a trial basis	EMIDS	TBA	Medium	June 2026
6	Hold a community and Council workshop on path service levels	EMDIS	TBA	High	June 2023
7	Establish separate cost centres for the reporting of footpath maintenance and capital works.	Finance	TBA	Medium	June 2024
8	Undertake Internal reviews of performance and issues- June 2023,2024,2025.	EMIDS	TBA	Medium	June 2023, 2024, 2025
9	Undertake external AMS audit June 2026.	EMIDS	TBA	Medium	June 2026
10	Adopt a data management plan including scheduled updates of footpath data.	EMIDS	TBA	Low	June 2025
11	Review service levels.	EMIDS	TBA	Very Low	June 2027
12	Develop and document processes for key functions such as valuation, acceptance of new assets, inspection, forward works planning and similar.	EMIDS	TBA	Very Low	Future

8.3 Monitoring and Review Procedures

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

The AM Plan 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 AM Plan has a maximum life of 4 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' works program trends provided by the AM Plan,
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans,
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90 – 100%).

9 References

1. IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
2. IPWEA, 2015, 3rd edition, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
3. IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/namsplus.
4. IPWEA, 2015, 2nd edition., 'Australian Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/AIFMM.
5. IPWEA, 2020 'International Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney
6. IPWEA, 2018, Practice Note 12.1, 'Climate Change Impacts on the Useful Life of Assets', Institute of Public Works Engineering Australasia, Sydney
7. IPWEA, 2012, Practice Note 6 Long-Term Financial Planning, Institute of Public Works Engineering Australasia, Sydney, <https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn6>
8. 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>
9. ISO, 2014, ISO 55000:2014, Overview, principles, and terminology
10. ISO, 2018, ISO 31000:2018, Risk management – Guidelines
11. Long Term Financial Plan, Shire of York, 2016
12. Corporate Business Plan, Shire of York, 2020
13. Operational Policy Asset Management, Shire of York, 2016
14. Strategic Community Plan 2020-2030, Shire of York, 2020
15. Annual Budget 2021-22, Shire of York, 2021
16. Annual Budget 2022-23, Shire of York, 2022
17. Disability and Inclusion Plan, Shire of York, 2016

Appendix A Acquisition Forecast

A.1 – Acquisition Forecast Assumptions and Source

An acquisition of 200 metres of new path to be constructed each year is assumed.

Location of new assets is not specified here

A.2 – Acquisition Project Summary

Specific project sites not identified

Table A3 - Acquisition Forecast Summary

Year	Constructed	Donated	Growth
2023	\$75,000	\$-	\$-
2024	\$75,000	\$-	\$-
2025	\$75,000	\$-	\$-
2026	\$75,000	\$-	\$-
2027	\$75,000	\$-	\$-
2028	\$75,000	\$-	\$-
2029	\$75,000	\$-	\$-
2030	\$75,000	\$-	\$-
2031	\$75,000	\$-	\$-
2032	\$75,000	\$-	\$-

Appendix B Operation Forecast

B.1 – Operation Forecast Assumptions and Source

Operation costs are included in the maintenance budget

Operation costs (inspection, cleaning) do not require separate accounting)

B.2 – Operation Forecast Summary

See Maintenance budget

Table B2 - Operation Forecast Summary

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
n/a	See maintenance		

Appendix C Maintenance Forecast

C.1 – Maintenance Forecast Assumptions and Source

No direct evidence of maintenance costs was available. Historically path maintenance has been accrued to the road maintenance general ledger account. For this plan it was assumed that 5% of the annual road maintenance budget was spent on paths and this was sufficient to need. This will need to be reviewed over time.

C.2 – Maintenance Forecast Summary.

Table C2 - Maintenance Forecast Summary

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2023	\$50,000	\$-	\$50,000
2024	\$50,000	\$500	\$50,500
2025	\$50,000	\$1,000	\$51,000
2026	\$50,000	\$1,500	\$51,500
2027	\$50,000	\$2,000	\$52,000
2028	\$50,000	\$2,500	\$52,500
2029	\$50,000	\$3,000	\$53,000
2030	\$50,000	\$3,500	\$53,500
2031	\$50,000	\$4,000	\$54,000
2032	\$50,000	\$4,500	\$54,500

All costs are in 2022 dollars

Appendix D Renewal Forecast Summary

D.1 – Renewal Forecast Assumptions and Source

The renewal forecast is based on an existing backlog of works and planned completion of all backlog and emerging need over a 10-year period

D.2 – Renewal Project Summary

A draft renewal plan is under consideration

D.3 – Renewal Forecast Summary

Table D3 - Renewal Forecast Summary

Year	Renewal Forecast	Renewal Budget
2023	\$55,000	\$55,000
2024	\$55,000	\$55,000
2025	\$55,000	\$55,000
2026	\$55,000	\$55,000
2027	\$55,000	\$55,000
2028	\$55,000	\$55,000
2029	\$55,000	\$55,000
2030	\$55,000	\$55,000
2031	\$55,000	\$55,000
2032	\$55,000	\$55,000

All costs are in 2022 dollars

D.4 –Renewal Plan

A detail renewal plan identifying projects and priorities is under consideration

Appendix E Disposal Summary

E.1 – Disposal Forecast Assumptions and Source

No disposals forecast.

E.2 – Disposal Project Summary

No disposals forecast

E.3 – Disposal Forecast Summary

Table E3 – Disposal Activity Summary

Year	Disposal Forecast	Disposal Budget
all	No activity planned	\$-

