

# Asset Management Plan



## Footpath & Walkway Assets

*Providing a quality lifestyle*



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The entity can choose either template to write/update their plan regardless of their level of asset management maturity and in some cases may even choose to use only the Executive Summary.

The illustrated content is suggested only and users should feel free to omit content as preferred (e.g. where info is not currently available).

This Asset Management Plan may be used as a supporting document to inform an overarching Strategic Asset Management Plan.

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## 1.0 EXECUTIVE SUMMARY

### 1.1 The Purpose of the Plan

Asset management planning is a comprehensive process ensuring delivery of services from infrastructure is financially sustainable.

This Asset Management Plan (AMP) details information about infrastructure assets with actions required to provide an agreed level of service in the most cost-effective manner while outlining associated risks. The plan defines the services to be provided, how the services are provided and what funds are required to provide over the 20 year planning period. The AMP will link to a LTFP (Long Term Financial Plan) which typically considers a 10 year planning period.

This plan covers the infrastructure assets that provide Footpath & Walkway related assets.

### 1.2 Asset Description

The Footpath network comprises:

Asset Category	Total Area (m2)	Replacement Value (\$)
Brick Paved	330,536	20,888,432
Concrete	151,766	11,159,670
Crusher Dust	19,502	1,224,236
Hotmix Bitumen	13,843	1,445,675
Gravel	2,169	162,735
<b>Total</b>	<b>517,816</b>	<b>34,880,748</b>

The total areas include driveways

#### Types of Footpaths



Brick Paved



Concrete



Crusher Dust/ Blue Dolomite



Hotmix Bitumen

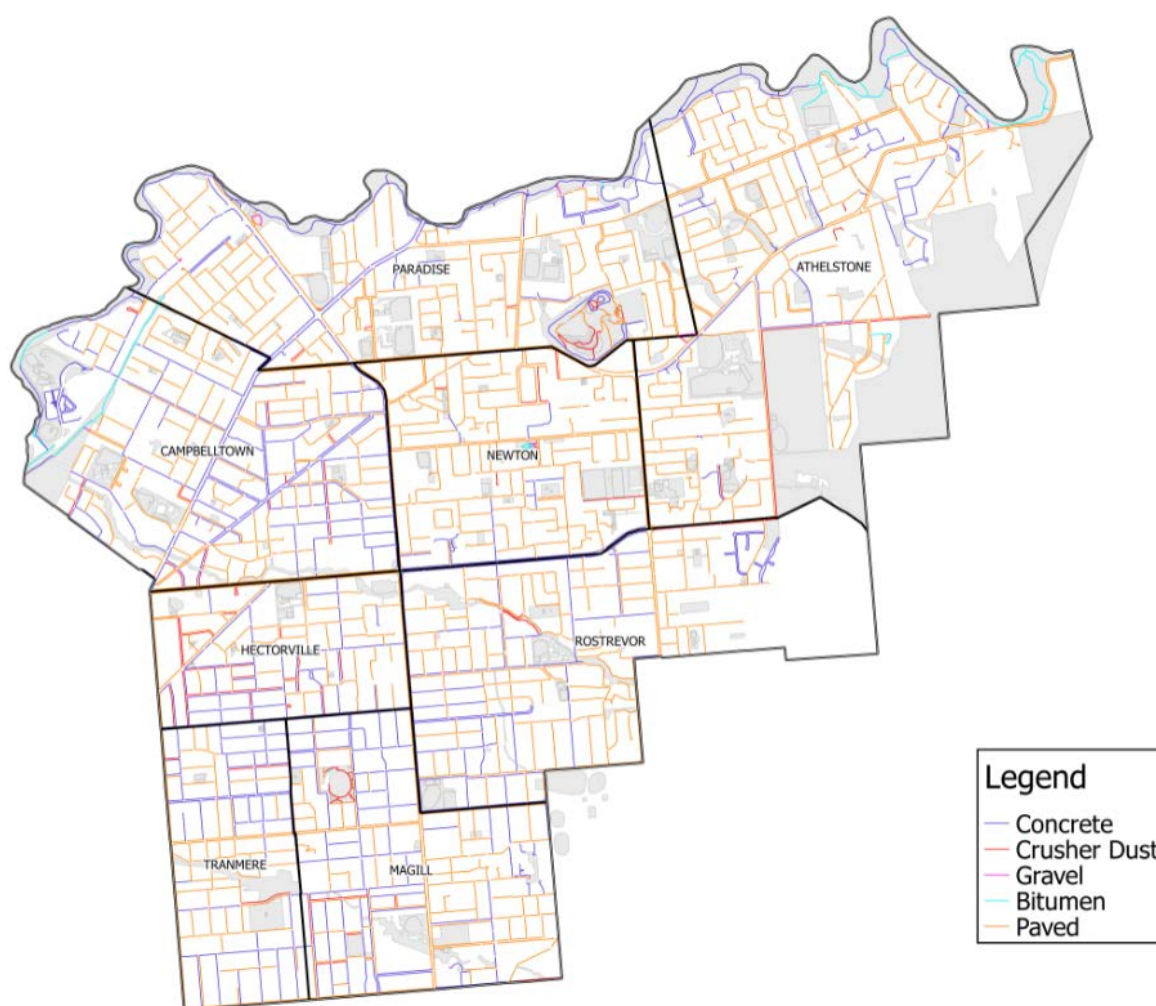


Gravel



Brick Paved

Locations of the footpath/ Walkway assets within the City are shown below:



The above infrastructure assets have significant total renewal value estimated at **\$34,880,748**

Note: The walkway assets included in this AMP were previously included in the Open Space AMP

#### 1.2.1 Review of Useful Life

As a part of the improvement plan, Council staff undertook the review of useful life of existing footpaths within the City of Campbelltown area. As a result of this review, Council staff recommended to extend the exiting useful life of Brick paved and Concrete footpaths, from 40 to 46 years and Crusher Dust from 10 to 16 years. The detailed report with recommendation is included in the Appendix G of this report.

It should be noted that this AMP is prepared with the values of recommended useful life of brick paved, concrete footpaths and crusher dust.

### 1.3 Levels of Service

Our present funding levels are sufficient to continue to provide existing services at current service levels in the medium term.

### 1.4 Future Demand

The main demands for new services are created by:



- Council's direction
- Community needs.

These demands will be addressed using a combination of managing and upgrading existing assets, and providing new assets to meet demand. Demand management practices may also include a combination of non-asset solutions, insuring against risks and managing failures.

## 1.5 Lifecycle Management Plan

### 1.5.1 What does it Cost?

The forecast lifecycle costs necessary to provide the services covered by this AMP includes operation, maintenance, renewal, acquisition, and disposal of assets. Although the AMP may be prepared for a range of time periods, it typically informs a LTFP period of 10 years. Therefore, a summary output from the AMP is the forecast of 10 year total outlays, which for the Footpath assets is estimated as \$14,645,220 for the 10 year period or \$1,464, 522 on average per year.

## 1.6 Financial Summary

### 1.6.1 What we will do

Estimated available funding for the 10 year period is \$14,660,192 or \$1,466,019 on average per year as per the LTFP or Planned Budget. This is 100.1% of the cost to sustain the current level of service at the lowest lifecycle cost.

The reality is only what is funded in the LTFP can be provided. The Informed decision making depends on the AMP emphasising the consequences of Planned Budgets on the service levels provided and risks.

The anticipated Planned Budget for Footpath Assets leaves a surplus funding of \$1,497 average per year of the forecast lifecycle costs required to provide services in the AMP compared with the Planned Budget currently included in the LTFP. This is shown in the figure below.

#### *Forecast Lifecycle Costs and Planned Budgets*

**Table 1.6.1**

Planning Year	Planned (Allocated) Acquisition Funding (\$)
2021	595,000
2022	496,320
2023	483,360
2024	494,960
2025	76,000

A detailed lists of projects included in this planning years are provided below:

#### Planned (Allocated) Acquisition Funding

Year	Project	Planned Budget (\$)
2020/ 2021	New Footpath Construction – Second footpath	480,000*
2020/ 2021	James Street, Campbelltown Golf Course Car Park	15,000
2020/ 2021	Glen Stuart Road, Magill Precinct Master Plan	15,000
2020/ 2021	Clement Road, Athelstone	45,000
2020/ 2021	Thorndon Park Pathway Link	40,000
2021/ 2022	New Footpath Construction – Second footpath	496,320*
2022/ 2023	New Footpath Construction – Second footpath	483,360*
2023/ 2024	New Footpath Construction – Second footpath	494,960*
2024/ 2025	New Footpath Construction – Second footpath	76,000*

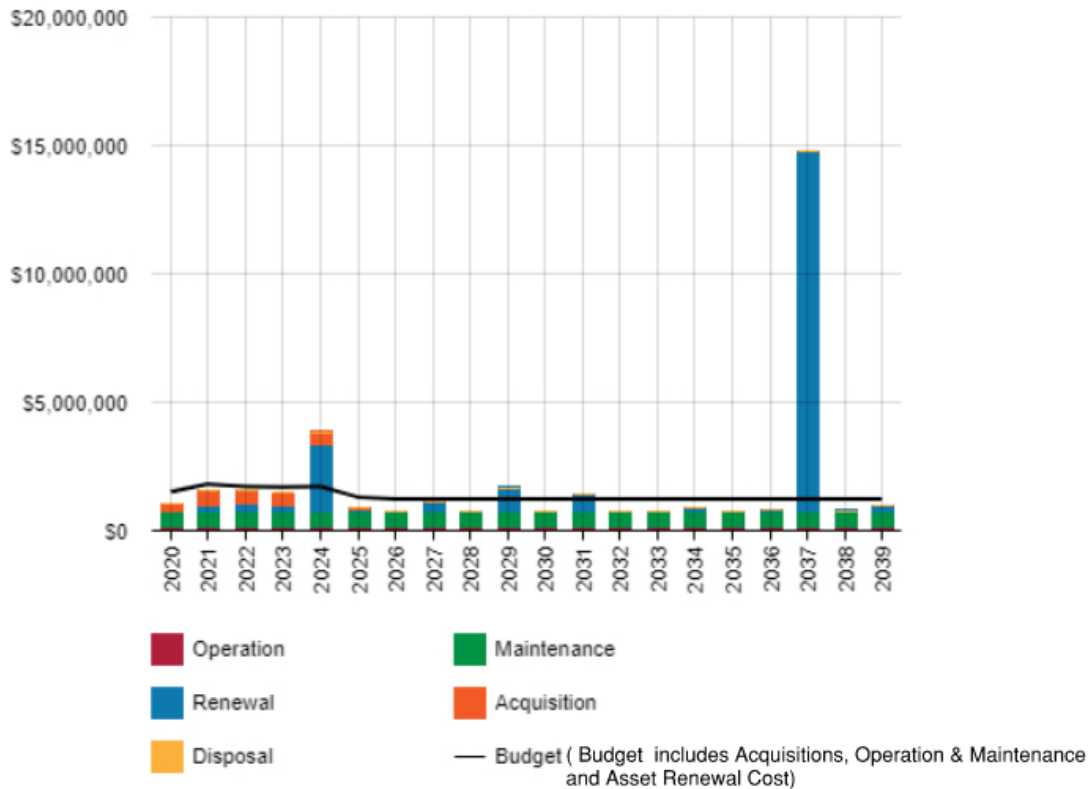
\* - complete project list of new second footpath is included in the Appendix A

#### Planned (Allocated) funds to replace narrow concrete footpath

Year	Planned Budget (\$)
2020/ 2021	126,500
2020/ 2021	126,000**
2021/ 2022	251,367.30
2022/ 2023	253,398.60
2023/ 2024	233,587.80
2024/ 2025	107,904

#### Note:

- The replacement of narrow footpaths, detailed in the above table (2020-2025), has been included in the renewal programme (Appendix D).
- \*\* \$126,000 allocated to complete last section of River Torrens Linear Park Shared Path
- The footpath programme was adopted by Council's at 18 February 2020 meeting



Note:

- The above graph details total budget expenditure (Acquisitions, Operation, Maintenance and Renewal costs)
- The above graph budgeted figures between 2020 and 2025 includes asset acquisitions
- This AMP is based on total budgeted expenditure for renewal works with 10 year average funding of \$512,000 per year
  - This level of funding creates surplus funding of \$1,497 funding per year for the 10 year
  - It should be noted that this level of funding, if continued for 20 years, will create a shortfall of \$507,466 per year

Further modelling indicates that

- For 20year planning, an average \$1,019,500 per year to complete the renewal works
- For 50year planning, an average \$810,000 per year to complete the renewal works
- The disposal life cycle costs shown are minimal, as these cost are built into renewal costs.
- Figure Values are in 2019 dollar values.

We plan to provide Footpath & Walkway Assets services for the following:

- Operations, maintenance, renewal and upgrade of all types of footpath & Walkway assets covered in the AMP.
- Renewal works as listed in the **Appendix D** within the 10 year planning period
- Continue to improve technology, processes and procedures for managing asset data thereby improving our knowledge of the assets to help make more informed decisions.

### 1.6.2 What we cannot do

We currently do 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:

- New footpath/walkway requests from the Community not listed in the endorsed footpath programme. This additional request require an approval from Council.

### 1.6.3 Managing the Risks

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

Reduction in the current funding level may incur the following risk consequences are:

- Litigation
- Financial
- Reputation

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

- Undertaking frequent inspections and maintenance to ensure that the assets meet current legislative and safety requirements.
- Allocate sufficient funds to ensure that assets meet compliance requirements
- Communicate effectively with the ratepayers.

## 1.7 Asset Management Practices

Our systems to manage assets include:

- Finance One to manage finance data
- Conquest to manage asset data.
- QGIS/Intramap to manage spatial asset data.

Assets requiring renewal/replacement are identified from either the asset register or an alternative method. These methods are part of the Lifecycle Model.

Asset Register data is used to forecast the renewal costs. This is done using the acquisition year and the useful life.

The Asset Register is used to forecast the renewal life cycle costs for this AMP.

## 1.8 Monitoring and Improvement Program

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

- further develop/improve Mobile Field Data Collection technology which will enable Staff to record defects in the Maintenance Management in Conquest Asset Management System (ASM).



- continue to use Mobile Capital Works Project Data Capture in the field. Council has developed this methodology to capture the asset data when a capital Work Project is complete. The asset team is coordinating this process with the project managers.
- develop a further data capture programme to collect cyclic maintenance works, in addition to scheduled condition assessment programme, where footpath/ walkway assets are captured every four years.
- develop inspection regimes for expired Assets based on the information contained in Conquest.
- Assess the effectiveness of permeable pavers
- train staff in order to update their knowledge with current Asset Management practices.

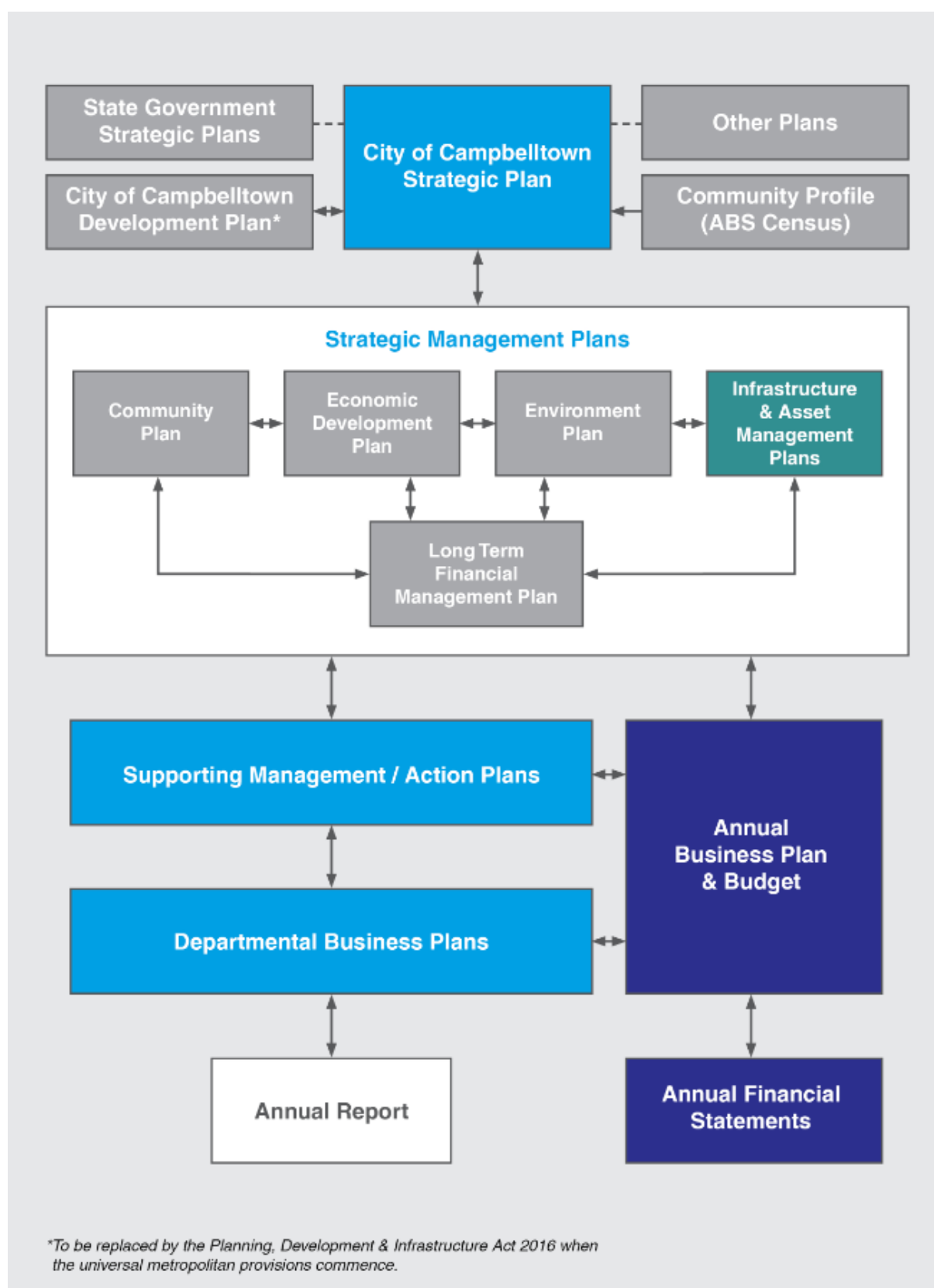
## **2.0 Introduction**

### **2.1 Background**

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

Council's Asset Management Policy has been used to develop its suite of AMPs, along with the following key planning documents:

- Campbelltown City Council Strategic Plan 2010-2020
- Campbelltown City Council Asset Capitalisation Administrative Procedure
- Campbelltown City Council Depreciation Policy
- Unit Rate Review Document
- Useful Live Review Document
- Resilient East Vulnerability Assessment and Climate Projects for the eastern Region
  - <https://www.resilienteast.com/resources>
- State of the Environment reporting ( done every 5 years, most recent is 2018)
  - [https://www.epa.sa.gov.au/data\\_and\\_publications/state\\_of\\_the\\_environment\\_reporting](https://www.epa.sa.gov.au/data_and_publications/state_of_the_environment_reporting)
- Campbelltown City Council Social Plan 2020



The infrastructure assets included in this plan have a total replacement value of **\$34,880,748**.

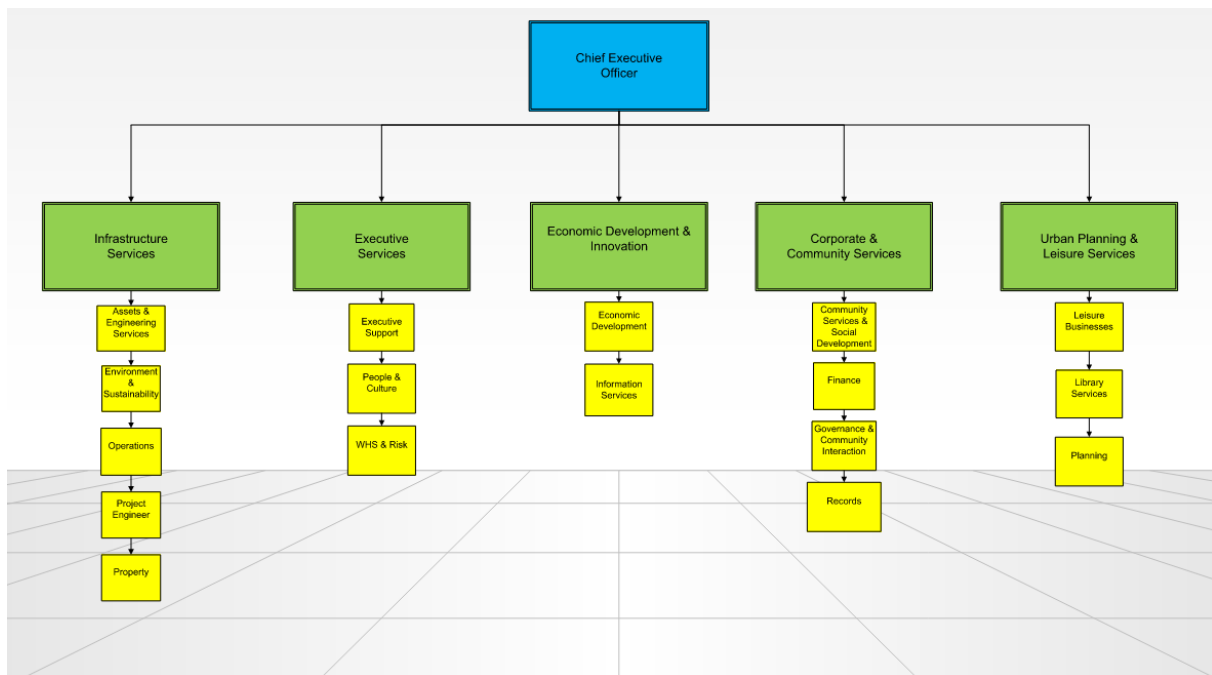
Key stakeholders in the preparation and implementation of this AMP are shown in Table 2.1.

**Table 2.1: Key Stakeholders in the AMP**

Key Stakeholder	Role in Asset Management Plan
Elected Members	<ul style="list-style-type: none"> <li>• Represent needs of community/shareholders</li> <li>• Allocate resources to meet the organisation's objectives in providing services while managing risks</li> <li>• Ensure organisation is financial sustainable.</li> <li>• Adoption of AMP</li> </ul>
CEO/ Executive Management team	<ul style="list-style-type: none"> <li>• Provide direction of AMP to meet the organisation's objectives in providing services while managing risks,</li> <li>• Ensure organisation is financially sustainable</li> </ul>
General Manager Infrastructure Services	<ul style="list-style-type: none"> <li>• Manage organisation operational activities and future strategic planning direction</li> <li>• Allocate resources</li> </ul>
Manager Assets and Engineering	<ul style="list-style-type: none"> <li>• Overseeing the design of capital works projects, documentation</li> <li>• Manage technical Level of Service</li> <li>• Co-ordination of Asset Team</li> </ul>
Manager City Operations	<ul style="list-style-type: none"> <li>• Manage the delivery of Capital Works program</li> </ul>
Maintenance Coordinator	<ul style="list-style-type: none"> <li>• Supervision of Capital Works and maintenance in relation to this asset</li> </ul>
Finance Department	<ul style="list-style-type: none"> <li>• LTFP, Asset Registers and operational financial data</li> </ul>
Team Leader Asset Planning	<ul style="list-style-type: none"> <li>• Collate asset information</li> <li>• Write, review and update AMPs</li> <li>• Manage and maintain asset management system</li> </ul>
GIS Analyst & Asset Technical	<ul style="list-style-type: none"> <li>• Assist in the development, maintenance and improvement of corporate spatial data and asset management</li> <li>• Develop, maintain and improve Council's GIS</li> <li>• Asset Management SQL Server Database Management and Scripting</li> <li>• Undertake asset related inspections</li> </ul>
Community & Ratepayers	<ul style="list-style-type: none"> <li>• End users of the services</li> <li>• Provide feedback on services</li> </ul>
Governance	<ul style="list-style-type: none"> <li>• Development of Strategic Plans and other key strategic plans</li> </ul>

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





## 2.2 Goals and Objectives of Asset Ownership

Our goal in 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 LTFP which identifies the income, expenses and funding required to provide its services to the community.

Key elements of the planning framework are:

- Levels of service – specifies the services and levels of service to be provided
- Future demand – how this will impact on future service delivery and how this is to be met
- 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 to manage provision the services
- Monitoring – how the plan will be monitored to ensure objectives are met
- Asset management improvement plan – how to improve Council’s asset management maturity.

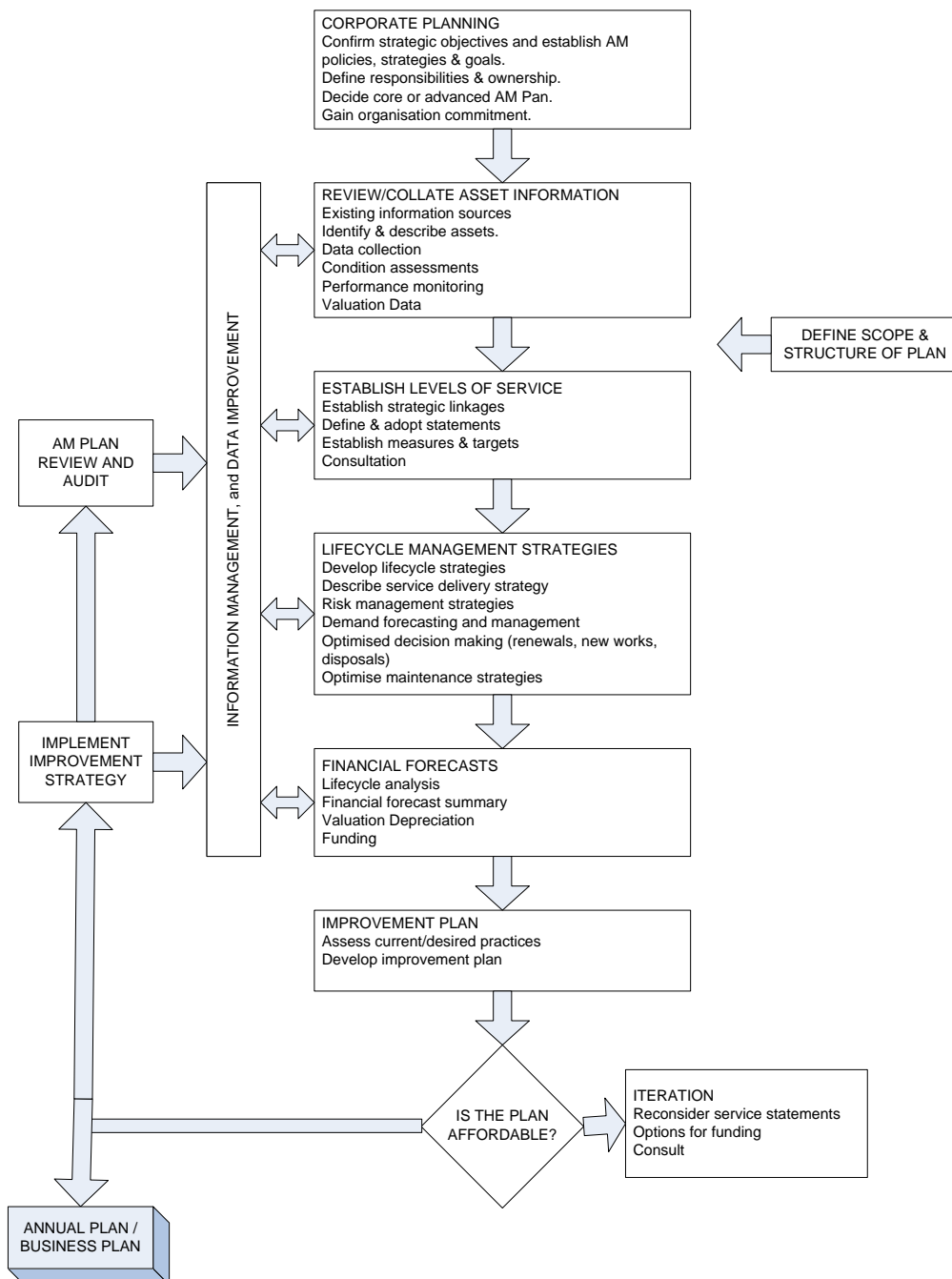
Other references to the benefits, fundamentals principles and objectives of asset management are:

- International Infrastructure Management Manual 2015 <sup>1</sup>
- ISO 55000<sup>2</sup> - is an international standard covering management of assets of any kind. The ISO 55000 series of Asset Management Standards was launched in January 2014.

A road map for preparing an Asset Management Plan is shown below.

### **Road Map for preparing an Asset Management Plan**

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



<sup>1</sup> Based on IPWEA 2015 IIMM, Sec 2.1.3, p 2 | 13

<sup>2</sup> ISO 55000 Overview, principles and terminology

### 3.0 LEVELS OF SERVICE

Level of service dictate the targeted asset performance in relation to customer expectation, and associated legislative and technical provisions. They also provide achievable milestones for the continuous upgrading of levels of service currently practiced.

Understanding the level of service required of an asset is vital for its lifecycle management as this largely determines an asset's development, operation, maintenance, replacement and disposal. Levels of service are pivotal in asset management as they have a direct financial impact due to their importance in both operational and risk-based prioritisation.

When establishing Level of Service they should be based on:

- Stakeholder Expectation – information gained from stakeholders on expected quality and price of services. Council has not yet conducting a detail level of service consultation. It is expected that detail stakeholder consultation will be done in the coming years.
- Strategic and Corporate Goals – provides guidance for the scope of current and future services offered the manner of the services delivery and defines the specific level of service, which Council wishes to achieve.
- Legislative Requirements – legislation, regulation, environmental standards and industry and Australian Standards that impact on the way these assets are managed.

#### 3.1 Customer Research and Expectations

Council's Community Satisfaction Survey asks the community to rate:

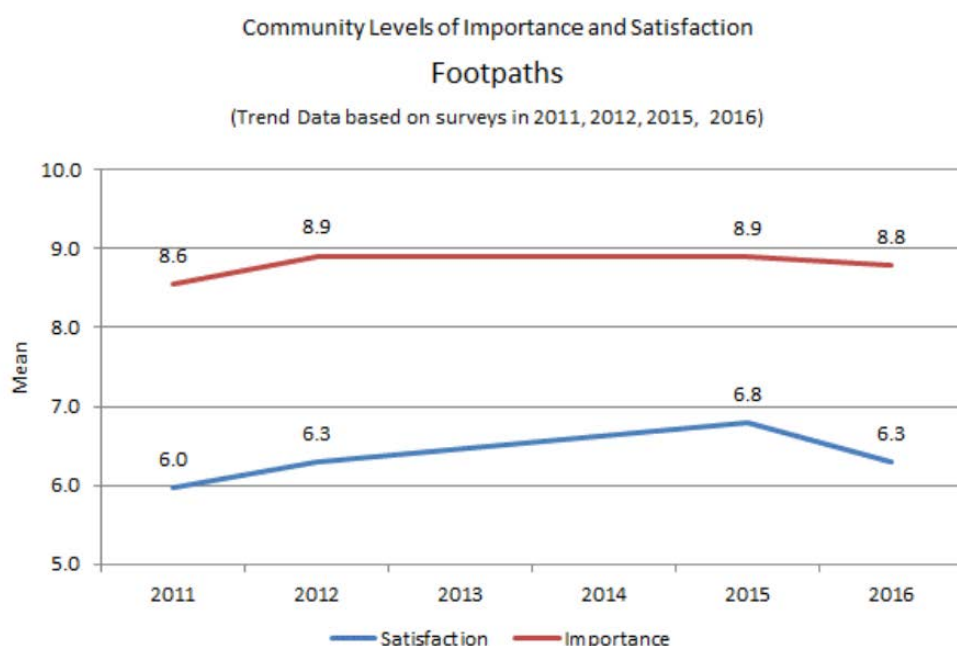
- The importance of an asset on a scale from 0 (not important at all) to 10 (very important)
- How satisfied they are with Council's performance in providing and maintaining its assets from 0 (very dissatisfied) to 10 (very satisfied).

The community was asked to rate the level of importance and level of satisfaction with bridges in the surveys conducted in 2011, 2012, 2015 and 2016. Trends have been graphed using the mean scores from these years.

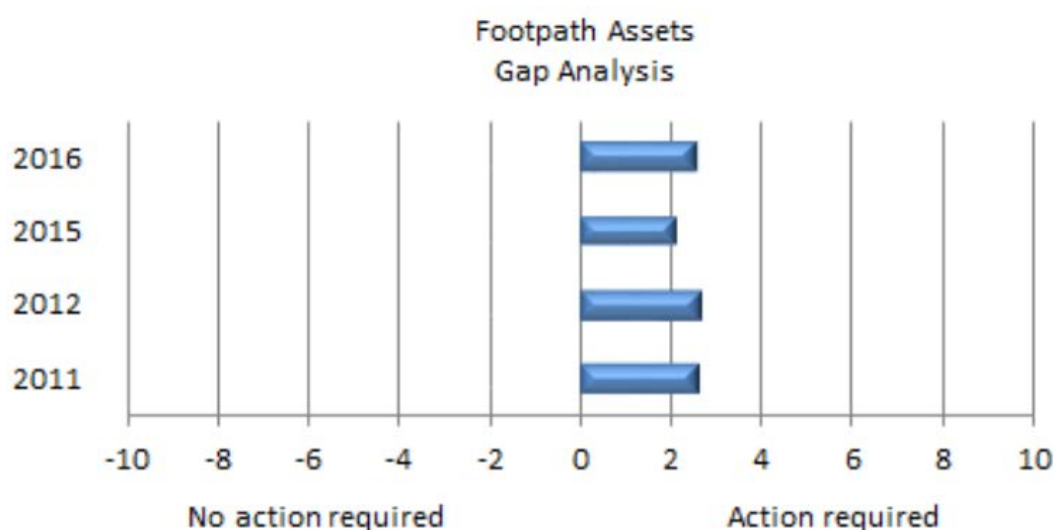
Table 3.1 summarises the results from our Customer Satisfaction Survey.

**Table 3.1: Customer Satisfaction Survey Levels**

Performance Measure	Satisfaction Level				
	Very Satisfied (8-10)	Fairly Satisfied (6-8)	Satisfied (4-6)	Somewhat satisfied (2-4)	Not satisfied (0-2)
Importance	✓				
Satisfaction		✓			



The Community consider Footpath & Walkway assets as very important and is reasonably satisfied with Council's performance in providing and maintaining these assets. The following graph shows the gap between importance and satisfaction rating for the 2016 survey year. This is useful in gauging how the community feels about the quality of service received, with the aim being to close the gap between the level of importance and the level of satisfaction.



The gap analysis shows the Community's perception of Council's performance in relation to footpath & Walkway assets and action is still required. This AMP will assist Council to close the gap between the Community importance and satisfaction rating.

It should be noted that the recent community consultation (17<sup>th</sup> February to 10<sup>th</sup> March 2020) for the Campbelltown Transport Plan (Southern section) indicated that the safety on footpath related services within the study area was at a 51% of the satisfaction level.

The outcome of the community engagement survey conducted from 12<sup>th</sup> October 2020 through to 2<sup>nd</sup> November 2020 indicated that the community consider footpath and walkway assets as



extremely important. The overall average rating provided by the community for ‘importance’ was over 9.4.

Community engagement results also indicated that they are fairly satisfied with the footpath and walkway assets by providing an average rating of 6.6 for ‘Satisfaction’.

In summary, there is an upward trend of overall ‘Importance’ and ‘Satisfaction’ measured through the community engagement survey.

### 3.2 Strategic and Corporate Goals

This Asset Management Plan is prepared under the direction of the Council’s vision, mission, goals and objectives.

Our vision is *“Campbelltown provides a quality lifestyle for its people.”*

Our mission is *“ At Campbelltown we will place a high value on living together, respecting each other’s views and building strong partnerships to support the needs of the community.”*

Our vision statement for Council’s Assets is: *“To effectively manage our City’s assets in an affordable and equitable way; ensuring the long term needs of the community are met.”*

The relevant goals and objectives and how these are addressed in this Asset Management 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
Goal 1 – Quality Living	1.3. City Infrastructure that provides a range of welcoming, attractive and safe facilities that encourage social interaction and an active community.	Provide appropriate infrastructure and services.
Goal 2 – Leadership	2.2. Investment in strong leadership through training and development	Further develop the Asset Management system to include mobile technology to assist in the management of our assets.
Goal 3 – City Planning	3.2. Effective Infrastructure and Asset Management that allows for growth	Continual development of processes and systems to ensure we have the best available data to enable us to make more informed decisions.
Goal 4 – Environmental Responsibility	4.2 Opportunities to conserve energy and resources are maximised	Investigate design options that are available in the market at the time which can be utilised to have cooler, greener and more liveable outcomes in upgrading and of renewing assets.
Goal 5 – Local economy	5.2 Business and industry partnerships which support growth in the local economy	Giving priorities to local businesses in selecting contractors for asset upgrade/ renewal works

### 3.3 Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the Footpath & Walkway Assets service are outlined in Table 3.3.

**Table 3.3: Legislative Requirements**

Legislation	Requirement
Local Government Act 1999	Sets out the role, purpose, responsibilities and powers of local governments including the preparation of a LTFP supported by AMPs for sustainable service delivery.
Local Government Act – Annual Reporting Section 428(2)(d)	A report on the condition of the public works, under the control of the Council as at the end of that year together with: (i) An estimate (current values) of the amount of money required to bring the works up to a satisfactory standard; and (ii) An estimate (current values) of the annual expense of maintain the works at that standard; and (iii) Council's programme for maintenance for that year in respect of the works.
Australian Road Rules	Contains power for Council to install and remove traffic control devices.
Disability Discrimination Act 1992	The objectives of this Act are to eliminate, as far as possible, discrimination against persons on the grounds of disability. It sets the standard for accessibility.
Australian Accounting Standards	Set out the financial reporting standards relating to, inter alia, the revaluation and depreciation of infrastructure assets.
Local Government (Financial Management) Regulations 2011	Impetus for the development of a Strategic Management Plan, comprising an (Infrastructure) AMP and LTFP.
Work Health & Safety Act 2012	To secure the health, safety and welfare of persons at work. To eliminate, at their source, risks to the health, safety and welfare of persons at work. To protect the public against risks to health or safety arising out of or in connection with the activities of persons at work, or the use of operation of various types of plant.
Highways Act 1926	Set out the legislative framework for roads and road authorities in SA
Environmental Protection Act 1993	An Act to provide for the protection of the environment: <ul style="list-style-type: none"><li>• to establish the Environment Protection Authority</li><li>• to define its functions and powers; and</li><li>• for other purposes.</li></ul>
Road Traffic Act 1961	Contains powers for Council to install or remove traffic control devices.

### 3.4 Customer Values

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

**Customer Values** indicate:

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

**Table 3.4: Customer Values**

Service Objective: Maintain the service level to meet or exceed the existing customer satisfaction level			
Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Importance	via Customer Satisfaction Survey	*The community considered bridge assets are reasonably important with the rating of 8.8	Close the gap between importance and satisfaction
Satisfaction	via Customer Satisfaction Survey	*The community is fairly satisfied with the bridge assets and the overall satisfaction level was 6.4	Close the gap between importance and satisfaction

### 3.5 Customer Levels of Service

The Customer Levels of Service are considered in terms of:

**Quality**            How good is the service ... what is the condition or quality of the service?

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

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

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

These are measures of fact related to the service delivery outcome e.g. number of occasions when service is not available, condition %'s of Very Poor, Poor/Average/Good, Very Good and 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
<b>Condition</b>	Provide footpaths & walkways that are safe and would have minimum hazards for the community	The footpath & walkway network is maintained at a minimum of Condition 3 as defined in Table 5.1.3	Perform regular condition audits, Remedy defects through Maintenance Management to ensure the network is maintained in good condition. Council undertake footpath hazard inspection every year covering the high pedestrian generators	Last condition audit was undertaken in 2017/2018. The footpath & walkway networks appears to be in a good condition.
	<b>Confidence levels</b>		Medium	Medium to High
<b>Function</b>	Provide Footpaths & walkways that meet the requirements of the community and other users of the network.	Monitor Customer Service Requests (CRMs)	Asset Management System providing detailed information regarding the footpath & walkway assets and defects, enabling planned maintenance works.	Improve function as required by regulations, if required.
	<b>Confidence levels</b>		Medium	Medium to High

<b>Capacity</b>	<p>Ensure the footpath &amp; walkway network meets the required volume capacity.</p> <p>Council current policy requires one footpath on at least one side of each street.</p>	<p>Monitor the number of CRMs relating to trip hazards/ damage/ complaint.</p> <p>Creation of an integrated network</p> <p>Develop footpath hierarchy as per the Pedestrian Access Management Plan (PAMP)</p> <p>New and renewed works to comply with AS 1428 Part 1</p>	Compliance with AS 1428 Part 1	Undertake necessary changes as required.
	<b>Confidence levels</b>		Medium	Medium to High

### 3.6 Technical Levels of Service

**Technical Levels of Service** – To deliver the customer values, and impact the achieved Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

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

- **Acquisition** – the activities to provide a higher level of service (e.g. widening a footpath/ walkway, upgrading footpath/ walkway) or a new service that did not exist previously (e.g. a new footpath/ walkway).
- **Operation** – the regular activities to provide services (e.g. cleaning, weed spraying & inspections, etc.)
- **Maintenance** – the activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life (e.g. addressing trip hazards, addressing defects identified through regular hazard/ condition inspections)
- **Renewal** – the activities that return the service capability of an asset up to that which it had originally provided (e.g. replacement of footpath/ walkway segments)

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

Table 3.6 shows the activities expected to be provided under the current Planned Budget allocation, and the Forecast activity requirements being recommended in this AM Plan.

**Table 3.6: Technical Levels of Service**

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
<b>TECHNICAL LEVELS OF SERVICE</b>				
<b>Acquisition</b>	Installation of footpath/ walkway per Council strategies and policies	Capital Works/ Budget Reviews	Operational and Capital expenditure within the annual budget.	Installation of footpath/ walkway using environmentally friendly materials (permeable paving)  Widening narrow footpaths  Installation of second footpath in high traffic pedestrian areas
		<b>Budget</b>	\$289,596	\$295,000
<b>Operation</b>	Footpath/Walk ways are in serviceable condition	Cyclic operational activities carried out efficiently.  Data collection for location via a mobility solutions in the field	Cyclic operational activities carried out efficiently.	Undertake more than one condition survey inspection within a four year period
		<b>Budget</b>	\$182,500	\$182,500
<b>Maintenance</b>	Maintenance works carried out efficiently and effectively	Number of defects	Maintenance works carried out to Service Standards	A yearly defect inspections to monitor and record defects needs to be undertaken
		<b>Budget</b>	\$528,000	\$528,000
<b>Renewal</b>	Determine areas where renewal is required in order to meet	Works carried out in line with the approved budget	Operational and Capital expenditure within the annual budget.	Complete the renewal activities as listed in the Appendix D for the next 10 years.

<sup>3</sup> IPWEA, 2015, IIMM, p 2|28.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
	current standards			
		<b>Budget</b>	\$512,000	\$512,000
<b>Disposal</b>	To remove footpath/ walkway that reach its useful life (or expired)	footpath/ walkway has reached the end of its useful life or is no longer fit for purpose	footpath/ walkway disposed in accordance with AMPs.	footpath/ walkway disposed in accordance with AMPs.
		<b>Budget</b>	\$0, as disposal cost is included in the replacement cost of footpath/ walkway.	\$0, as disposal cost is included in the replacement cost of footpath/ walkway.

Note: \* Current activities related to Planned Budget.

\*\* Forecast required performance related to forecast lifecycle costs.

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



## 4.0 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 Asset Management Plan.

**Table 4.3: Demand Management Plan**

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Population	Estimated residential population in the Campbelltown Council area is 52,192 – 2019 ERP figures.	The population is projected to growth to 63,963 by 2031.	Population growth throughout Adelaide will increase. This will result in more people using the bridges as part of their recreational activities and or commuting.	Develop demand management strategies. Demand for new assets and services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new and expanded assets to meet demand plus implementing demand management strategies where appropriate.
Climate Change	Council footpaths/ walkways are constructed based on the current environmental conditions and current environmental standards.	Temperature rise, less rainfall, weather events becoming more extreme – likelihood of drought could have an	Potential for ground movement in reactive soils during periods of drought, this may have impact on footpath assets.	Continue to monitor the footpath/ walkway network, research new engineering techniques and materials, investigate and, if appropriate, apply techniques in problem areas.

	Council has recently declared a Climate Emergency and Staff are developing a Climate Solution Strategy.	impact on the footpath assets.		Considering permeable pavers and other emerging technology, including the use of recycled materials
Social	Healthy lifestyles are promoted with people recognising the importance of social connectivity.	More people walking and using trails and footpaths	Potential for increased community expectation on services provided, i.e. People would expect higher standard footpaths	Develop master plans and strategies accordingly ensuring any increased demand is planned for strategically.  Incorporating PAMP recommendations

#### 4.4 Asset Programs to meet Demand

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

Acquiring new assets will commit the Footpath / Walkway Assets 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 LTFP (Refer to Section 5).

#### 4.5 Climate Change and Adaption

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

As a minimum we should consider both how to manage our existing assets given the potential climate change impacts, and then also how to create resilience to climate change for any new works or acquisitions. Council recently has declared a Climate Emergency and Staff are developing a Climate Solution Strategy. This strategy will be considered in future AMP's.

Opportunities identified to date for the management of climate change impacts on existing assets are shown in Table 4.5.1.

**Table 4.5.1 Managing the Impact of Climate Change on Assets**

Climate Change Description	Projected Change	Potential Impact on Assets and Services	Management
Extreme weather events	Increased frequency and duration of extreme events.	<ul style="list-style-type: none"> <li>Deterioration to assets</li> <li>Soil movement which will impact on footpath/ walkway</li> </ul>	<ul style="list-style-type: none"> <li>Undertake regular inspections including inspections following extreme weather events and ongoing monitoring.</li> </ul>

		assets eg: cause crack or trip hazard <ul style="list-style-type: none"> <li>• Comfort and exposure of those needing to use the network in extreme heat.</li> </ul>	<ul style="list-style-type: none"> <li>• Regular maintenance</li> <li>• Review of materials used in various footpath/ walkway types that perform well in the heat (including permeable paving).</li> <li>• Improve street tree planting to increase canopy cover to minimise heat impact to and from footpath</li> </ul>
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Additionally, the way in which we construct new assets should recognise that there is opportunity to build in resilience to climate change impacts. Buildings resilience will have the following benefits:

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

Table 4.5.2 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
Extreme Weather Event	Footpaths can become damaged due to excessive soil movements	Review of materials/ design methods used in various footpath/ walkway types that perform well in the heat (including permeable paving).

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

## 5.0 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the Footpath & Walkway Assets 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 Asset Management Plan are shown in Table 5.1.1.

**Table 5.1.1: Assets covered by this Plan**

Asset Category	Dimension (m2)	Replacement Value (\$)
Brick Paved	330,536	20,888,432
Concrete	151,766	11,159,670
Crusher Dust	19,502	1,224,236
Hotmix Bitumen	13,843	1,445,675
Gravel	2,169	162,735
<b>TOTAL</b>		<b>34,880,748</b>

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

#### Operation and Maintenance Strategies

The organisation will operate and maintain assets to provide the defined level of service to approved budgets in the most cost-efficient manner. The operation and maintenance activities include:

- Scheduling operations activities to deliver the defined level of service in the most efficient manner,
- Undertaking maintenance activities through a planned maintenance system to reduce maintenance costs and improve maintenance outcomes. Undertake cost-benefit analysis to determine the most cost-effective split between planned and unplanned maintenance activities (50 - 70% planned desirable as measured by cost),
- Maintain a current infrastructure risk register for assets and present service risks associated with providing services from infrastructure assets and reporting Very High and High risks and residual risks after treatment to management and Council,
- Review current and required skills base and implement workforce training and development to meet required operations and maintenance needs,
- Review asset utilisation to identify underutilised assets and appropriate remedies, and over utilised assets and customer demand management options,
- Maintain a current hierarchy of critical assets and required operations and maintenance activities,
- Develop and regularly review appropriate emergency response capability,
- Review management of operations and maintenance activities to ensure Council is obtaining best value for resources used.

Standard Defects have been configured in the Asset Management System to enable defects to be collected against any bridge component in the field.

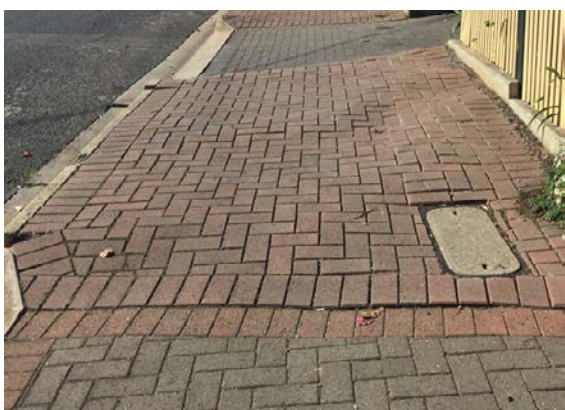
Standard defects photographs are listed below:



Tree roots causing paver lifts



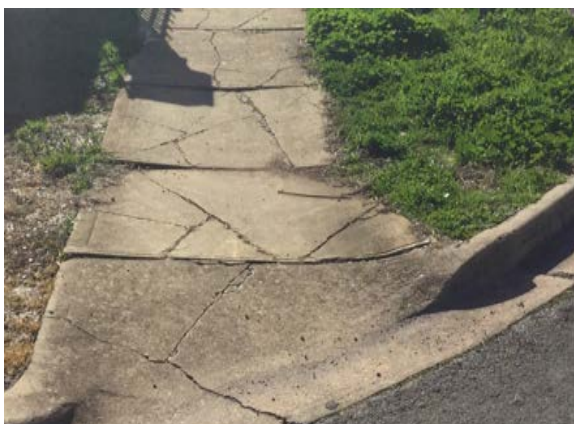
Trip due to service pits and other factors



Uneven surfaces



Depression caused water ponding



Cracking due to age and soil movements

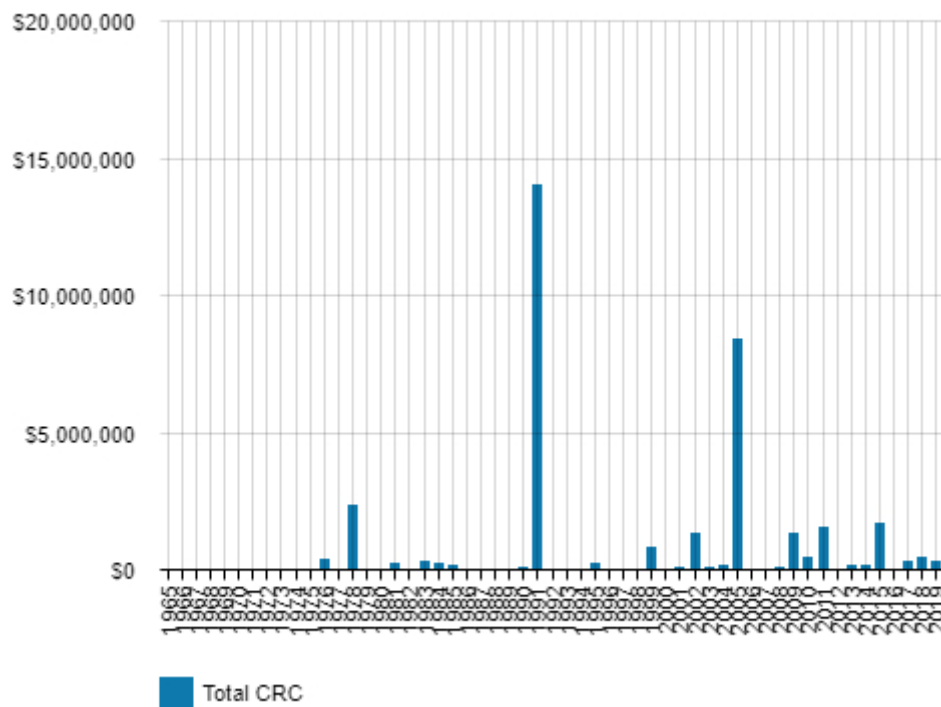


Missing sections of footpath

Notes: All of these defects are managed through Council maintenance programme



**Figure 5.1.1: Asset Age Profile**



All figures are shown in 2019 dollar values

The asset age profile is shown from 1976 to 2019

### 5.1.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available. Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

**Table 5.1.2: Known Service Performance Deficiencies**

Location	Service Deficiency
Various locations	<ul style="list-style-type: none"> <li>Poor footpath construction, eg: constructed over uncompacted common trench leading to premature failure of footpath or inadequate base</li> <li>Soil movement impacting footpath base which leads to movement around the pavers hence posing for trip hazards</li> <li>Footpath trip hazards or cracks due to heavy vehicle loading during building activities.</li> </ul>
Some older concrete footpaths are not wide enough to accommodate wheelchair/ gofer/ pram use.	<p>Footpath is not wide enough. Width is generally less than 1.5m as required in Council's Footpath Development and Maintenance Policy.</p> <p><i>Council have approved to widen footpaths under this category, works will be completed over several years (Refer to Council report dated 18 February 2020).</i></p>

Footpaths affected by trees, infill development or soil movements

- Footpath generally lift around joints due to tree root invasion or soil movements.
- Trip hazards/ damage on concrete paths as a result of heavy vehicles loading during building activities.

The above service deficiencies were identified from regular inspections and customer notifications.

### 5.1.3 Asset condition

Apart from the scheduled condition assessment programme where footpath/ walkway assets are captured every four years, specific data capture programme is underway to collect cyclic maintenance works in high pedestrian generator area on yearly basis. The asset condition survey is undertaken by experienced Council staff.

Condition is measured using a 1 – 5 grading system<sup>4</sup> as detailed in Table 5.1.3. It is important that consistent condition grades be used in reporting various assets across an organisation. This supports effective communication. At the detailed level assets may be measured utilising different condition scales, however, for reporting in the AM plan they are all translated to the 1 – 5 grading scale.

**Table 5.1.3: Simple Condition Grading Model**

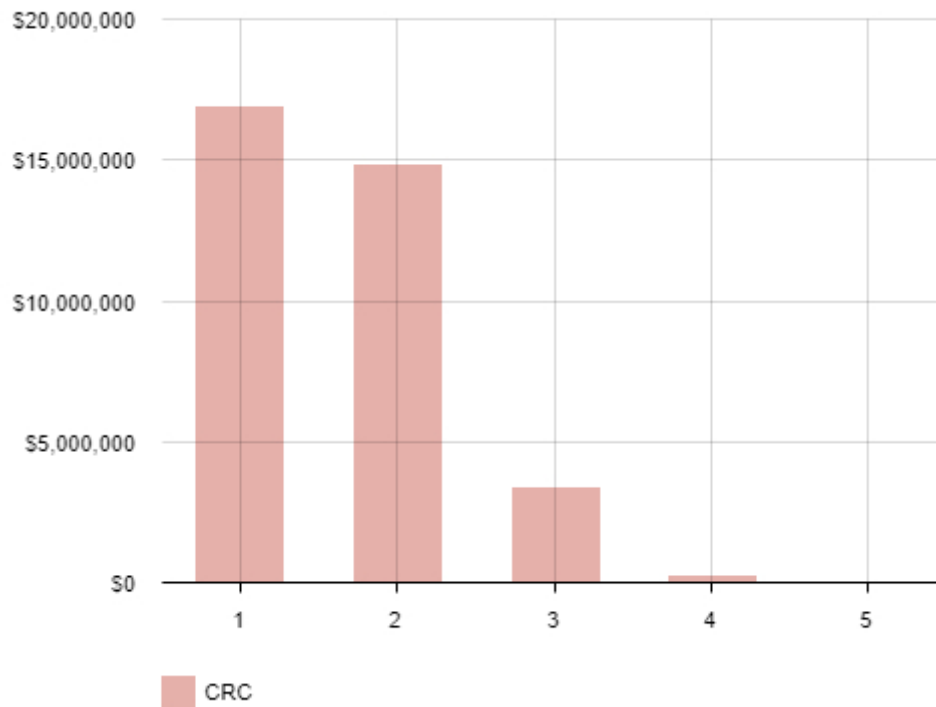
Condition Grading	Description of Condition
1	<b>Very Good:</b> only planned maintenance required
2	<b>Good:</b> minor maintenance required plus planned maintenance
3	<b>Fair:</b> significant maintenance required
4	<b>Poor:</b> significant renewal/rehabilitation required
5	<b>Very Poor:</b> physically unsound and/or beyond rehabilitation

The condition profile of our assets is shown in Figure 5.1.3.

<sup>4</sup> IPWEA, 2015, IIMM, Sec 2.5.4, p 2 | 80.



**Figure 5.1.3: Asset Condition Profile**



(Asset Values represented by Condition 1 - \$16,841,876; Condition 2 - \$14,830,424; Condition 3 - \$3,010,277 & Condition 4 - \$198,171)

All figure values are shown in 2019 dollar values.

## 5.2 Operations and Maintenance Plan

Operations include regular activities to provide services. Examples of typical operational activities include weed spraying, asset inspection and asset management cost.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include defects and trip hazard repairs.

The trend in maintenance budgets are shown in Table 5.2.1.

**Table 5.2.1: Maintenance & Operation Budget Trends**

Year	Maintenance Budget (\$)	Operation Budget (\$)
2016/2017	491,032	156,015
2017/2018	522,649	187,499
2018/2019	533,479	177,105

Note: For this AMP, for operation and maintenance budgets, average value of 2017/18 and 2018/19 are used

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 will be identified and highlighted in this AMP 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.

The service hierarchy is shown in Table 5.2.2.

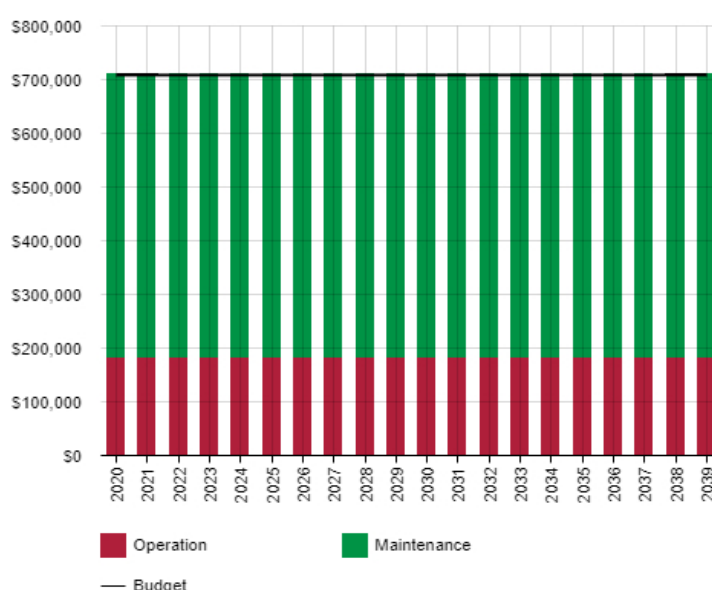
**Table 5.2.2: Asset Service Hierarchy**

Service Hierarchy	Service Level Objective
Footpaths/ Walkways	To provide a safe, accessible, connected footpath network for the community and visitors

### 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 and not replaced, 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**



Note that all costs are shown in 2019 dollar values

### 5.3 Renewal Plan

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

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

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

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 5.3. Staff undertook a detailed review of useful lives of footpath/ walkway assets within the city recently. A detailed report completed with recommendations is provided in the Appendix G.

This AMP utilised the recommended useful lives of the footpath/ walkway

**Table 5.3: Useful Lives of Assets**

Asset (Sub)Category	Useful life (previous AMP)	Useful life in the current AMP*
Brick Paved Footpath	40	46
Concrete Footpath	40	46
Crusher Dust Footpath	10	16
Hotmix Bitumen Footpath	30	30
Gravel Footpath	20	20

\*Staff undertook a detailed review of useful lives of footpath/ walkway assets within the city recently. A detailed report completed with recommendations is provided as an Appendix G to the AMP.

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

#### 5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a footpath / walkway segment that reaches its useful life or rates as a condition 4 and 5), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a footpath / walkway).<sup>5</sup>

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

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<sup>5</sup> IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.

- Potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.
- Have a high utilisation and subsequent impact on users would be greatest,
- The total value represents the greatest net value to the organisation,
- Have the highest average age relative to their expected lives,
- Are identified in the AMP as key cost factors,
- Have high operational or maintenance costs, and
- Where replacement with modern equivalent assets would yield material savings.

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**

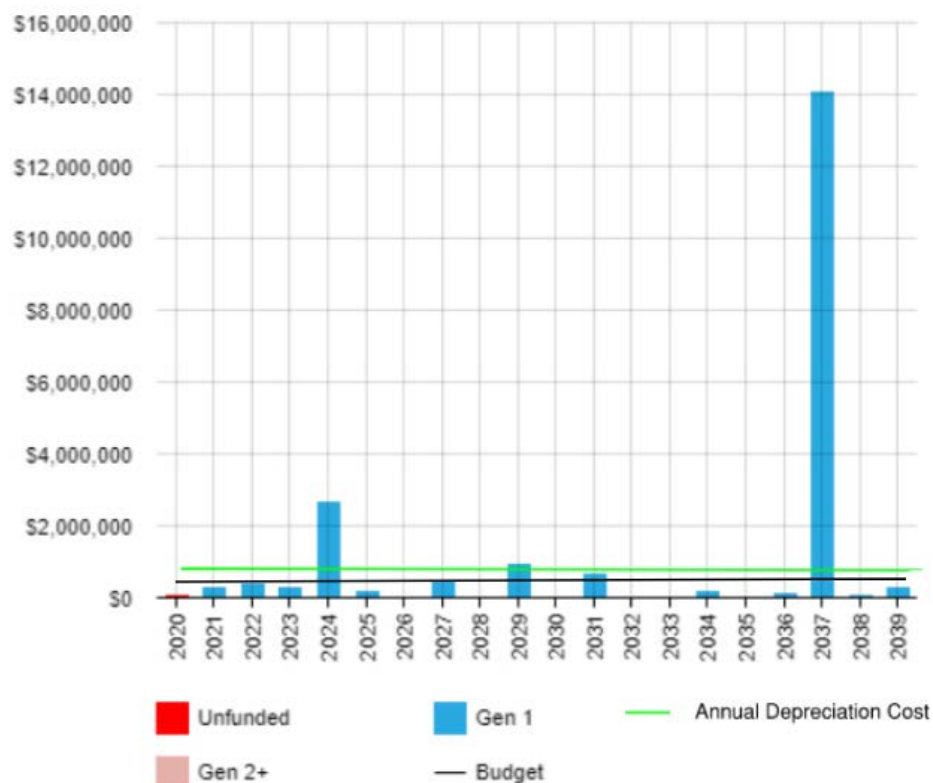
Criteria	Weighting
Risk and Safety	25%
Physical Condition	20%
Financial impact	20%
Social impact	20%
Environmental Impact	15%
<b>Total</b>	<b>100%</b>

#### 5.4 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.4. A detailed summary of the forecast renewal costs is shown in Appendix D.

**Figure 5.4: Forecast Renewal Costs**

20yr cycle



Note:

The unfunded amount of \$32,880, year 2020, is associated with the following segments of paved footpaths:

- Left Footpath – Essex Street from Graves Street to Andrea Avenue
- Right Footpath - Maple Avenue from Jenkins to Swan Avenue

Staff inspected these footpath segments and have extended their useful lives based on a field condition assessment. Ongoing monitoring of the paths condition will be undertaken. Images below shows the recent photos taken at these footpaths.

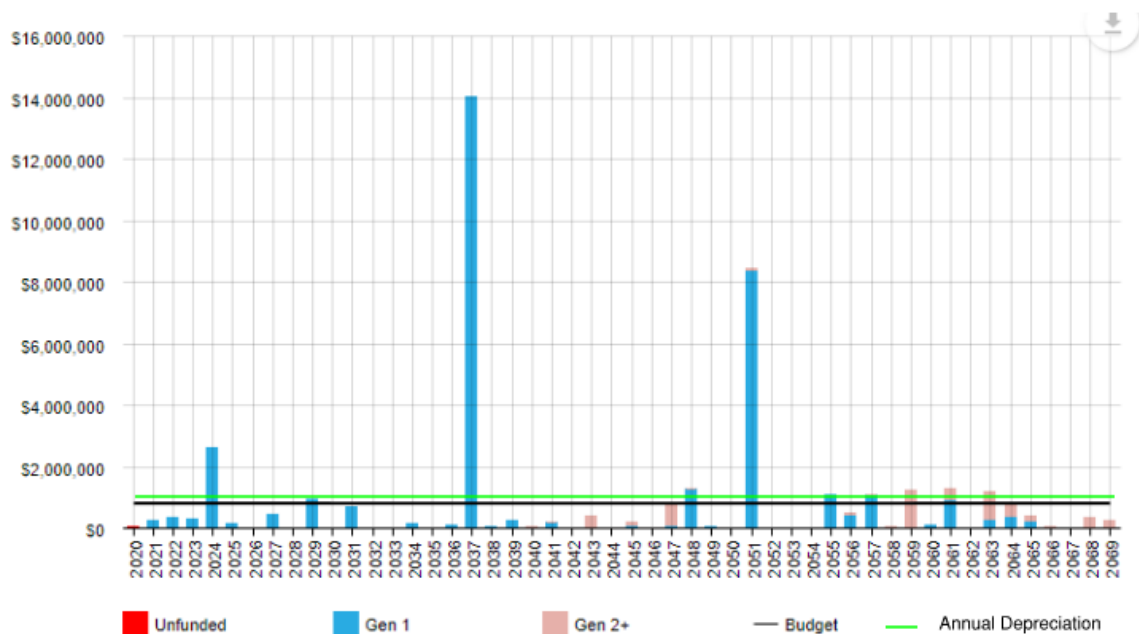


Essex Street



Maple Avenue

### 50yr Cycle



### Notes:

- Budget shown on the 20year cycle graphs is \$512,000 which represent the 10year average renewal cost. It should however be noted that this value is worked out to be \$688,169 for the extended life scenario.
- Budget shown on the 50 year cycle graphs is \$810,000 which represent the 50year average renewal cost
- The current annual depreciation cost (based on the original useful life) is \$822,000 for the footpath asset stock. This value is retained and included in the 50yr cycle graph.
- Gen 1: refers to the first renewal figure shown on a particular asset, or group of assets, within the planning period.

- Gen 2: refers to the next generations of an asset, or group of assets, within the planning period. For example an asset with a 5 year life cycle would show up multiple times in a 20 year planning period.
- All figure values are shown in 2019 dollar values.

## 5.5 Acquisition Plan

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

### 5.5.1 Selection criteria

Proposed upgrade of existing assets and new assets are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with other parties. Potential upgrade and new works should be reviewed to verify that they are essential to the entity's 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 based on funding available, then scheduled in future works programmes. The priority ranking criteria is detailed in Table 5.4.1.

**Table 5.5.1: Acquired Assets Priority Ranking Criteria**

Criteria	Weighting
Social Impact	20%
Financial Impact	20%
Environmental impact	15%
Legislative Impact	20%
Risk and Safety	25%
Total	100%

Further to the above selection criteria, Council at its meeting on 17 December 2019 has endorsed the direction of Council's future Footpath Programme as being:

- the replacement of narrow concrete footpaths to provide 1.5m wide paths where practical and
- installing second footpaths based on the Pedestrian Access and Mobility Plan (PAMP) and the Footpath Development and Maintenance Policy and
- no longer providing a new footpath for streets that don't have a footpath unless there is a strong demand from the residents residing in that street to do so.

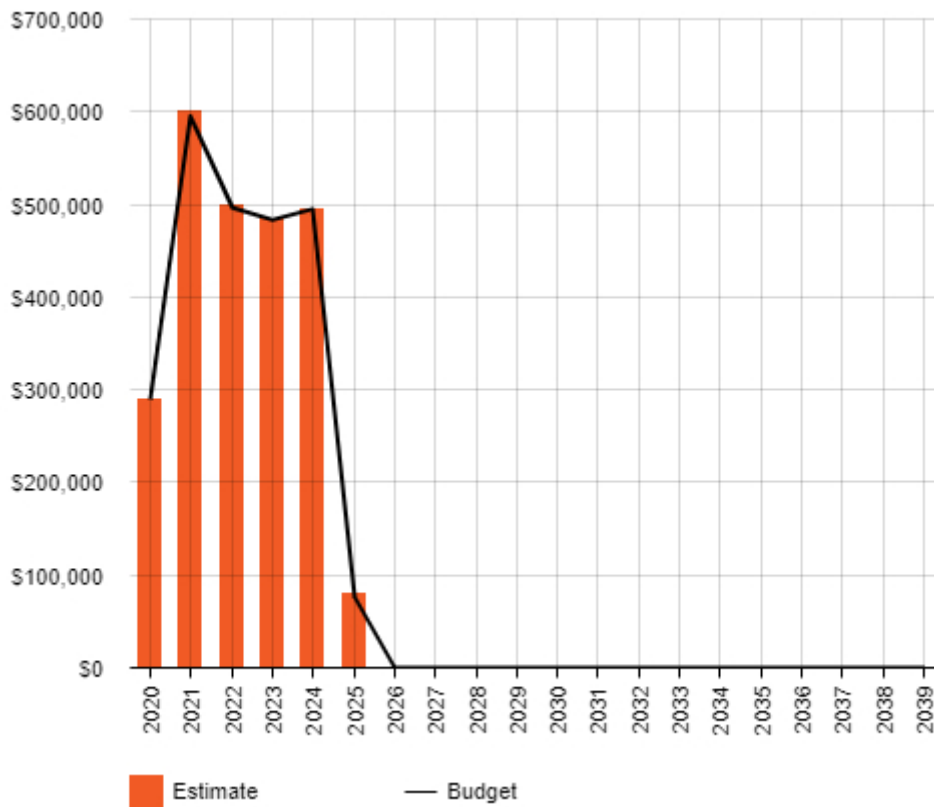
The developed footpath programme is based from this direction and was endorsed by Council at its meeting on 18 February 2020 and has been reflected in this plan, including the future acquisition plan.

### 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**



Planned (Allocated) Acquisition Funding

Year	Project	Planned Budget (\$)
2020	New Footpath Construction	289,596
2021	New Footpath Construction – Second footpath	480,000*
2021	James Street, Campbelltown Golf Course Car Park	15,000
2021	Glen Stuart Road, Magill Precinct Master Plan	15,000
2021	Clement Road, Athelstone	45,000
2021	Thorndon Park Pathway Link	40,000
2022	New Footpath Construction – Second footpath	496,320*
2023	New Footpath Construction – Second footpath	483,360*
2024	New Footpath Construction – Second footpath	494,960*
2025	New Footpath Construction – Second footpath	76,000*

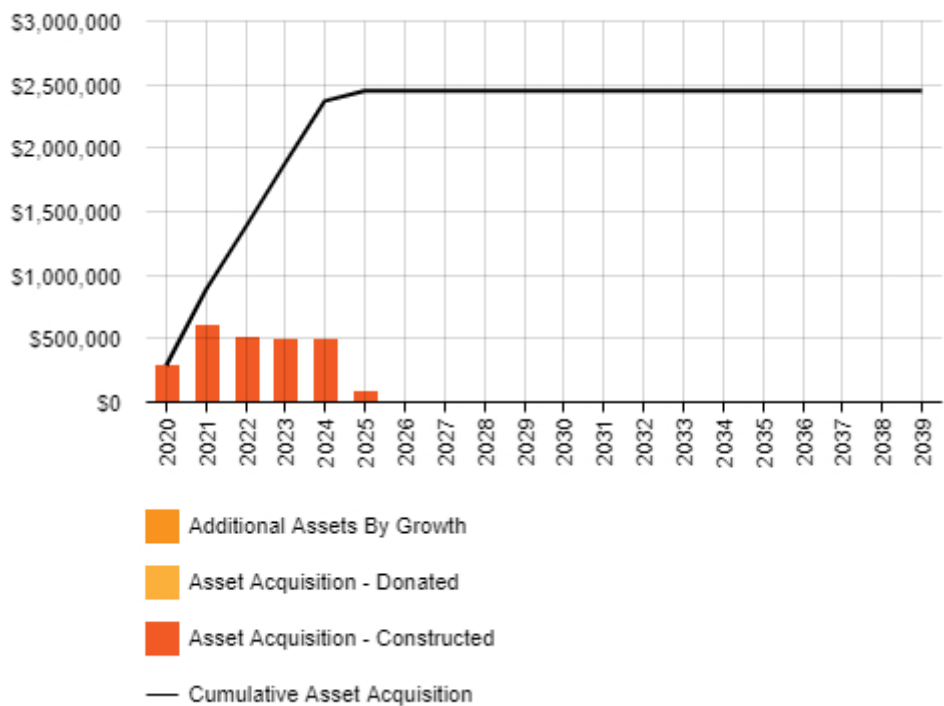
\* These projects are show as acquisitions in the Fig 5.5.2 below

All figure values are shown in 2019 dollar values.

When Council commits to new assets, they must be prepared to fund future operations, maintenance and renewal costs. They must also account for future replacement cost when reviewing

long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in Figure 5.5.2.

Figure 5.5.2: Acquisition Summary



All figure values are shown in 2019 dollar values.

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

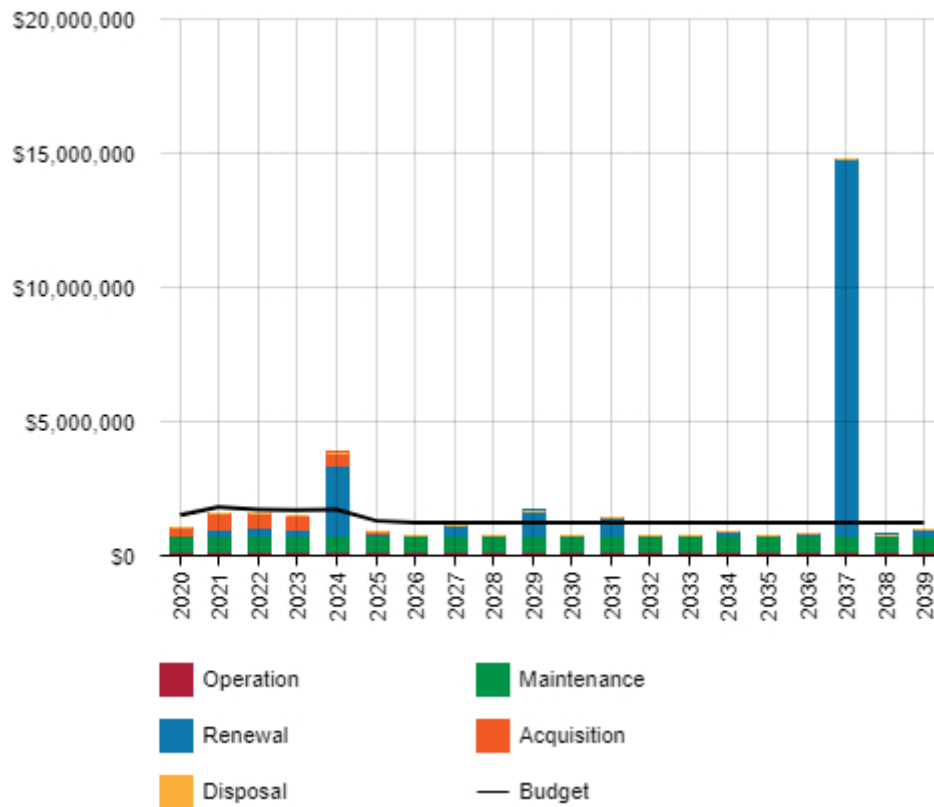
There will be enough funding to complete the new projects, as per the endorsed programme, up to the year 2025.

Summary of asset forecast costs

The financial projections from this asset plan are shown in Figure 5.5.3. These projections include forecast costs for acquisition, operations, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The graph represents the forecast costs needed to minimise the life cycle costs associated with the service provision. The gap between the forecast work and the proposed budget (available funding) is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

**Figure 5.5.3: Lifecycle Summary**



### **Summary of total Funding**

- The above graph details total budget expenditure (Acquisitions, Operation, Maintenance and Renewal costs)
- The above graph budgeted figures between 2020 and 2025 includes assets acquisitions
- This AMP is based on total budgeted expenditure for renewal works with 10 year average funding of \$512,000 per year
  - This level of funding create surplus funding of \$1,497 funding per year for the 10 year
  - It should be noted that this level of funding, if continued for 20 years, will create a shortfall of \$507,466 per year

Further modelling indicates that

- For 20year planning, an average \$1,019,500 per year to complete the renewal works
- For 50year planning, an average \$810,000 per year to complete the renewal works
  - **Therefore, it is recommended that \$810,000 is allocated per year to cover the life cycle-cost of footpath and walkway assets**

- The disposal life cycle costs shown are minimal, as these cost are built into renewal costs.
- Figure Values are in 2019 dollar values.

## **5.6 Disposal Plan**

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of these assets are also outlined in Table 5.6.

Assets Identified for disposal is listed in Appendix D under 10year renewal programme. The disposal of cost of these assets are included in the asset replacement cost.

## 6.0 RISK MANAGEMENT PLANNING

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

Risk Management is defined in ISO 31000:2018 as ‘coordinated activities to direct and control with regard to risk’<sup>6</sup>.

An assessment of risks<sup>7</sup> associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

### 6.1 Critical Assets

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

**Table 6.1 Critical Assets**

Critical Asset(s)	Failure Mode	Impact
Footpaths/ Walkways	Trip Hazards	Causing fall and injuries to users
Footpaths/ Walkways	Narrow footpath	Non-compliance in particularly for people in wheel chair

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.

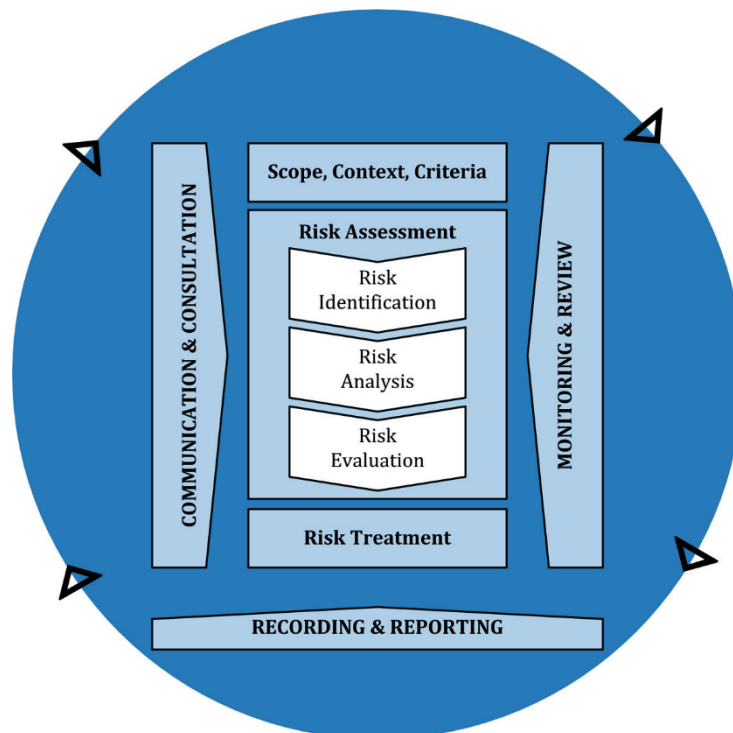
It is an analysis and problem-solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

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

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<sup>6</sup> ISO 31000:2009, p 2

<sup>7</sup> REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote



**Fig 6.2 Risk Management Process – Abridged**

*Source: ISO 31000:2018, Figure 1, p9*

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

An assessment of risks<sup>8</sup> 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.

**Table 6.2: Risks and Treatment Plans**

<sup>8</sup> REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Footpath/ Walkway Assets in general	Lack of funding to operate, maintain and renew assets	VH	Asset data managed and maintained within an Asset Management System and fully utilised to perform analysis to assist in making informed decision and appropriate funding recognise in the LTFP e.g. determining optimum intervention levels, priorities etc. Implement the best cost effective and environmentally friendly options.	Low	Can be significantly high depending on the asset type and option selected.
	Inadequate asset management planning	H	Ensure essential information is captured in the Asset Management System – correct unit rates, useful lives and condition information to determine lifecycle costs.	Low	Can be significantly high depending on the accuracy of asset data.
	Underestimated or unknown condition and lifecycle performance resulting in structural failure	H	Undertake regular survey and condition audits at least once every four years.  Review unit rates and useful lives on a yearly basis.	Low	Can be significantly high depending on the asset type.
	Under design of an asset	H	Ensure all designs and construction complies with relevant Standards and Council requirements.	Low	Can be significantly high depending on the asset type.



	Changing environmental conditions	H	Record and monitor assets that are impacted by environmental changes. Investigate using different materials and techniques to counter changes.  Useful lives may be required to be shortened for assets in identified areas.	Low	Can be significantly high depending on the asset type and option selected.
	Maintenance level below technical level or Standards	H	Ensure maintenance is carried out in accordance with Australian Standards and Council specifications.	Low	Can be significantly high depending on the asset type.

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

We do not currently measure our resilience in service delivery. This will be included in future iterations of the AMP.

### 6.4 Service and Risk Trade-Offs

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

#### 6.4.1 What we cannot do

This section is not applicable at present as Council will allocate sufficient funds to meet the delivery of Footpath/ Walkway assets for the next 10 years.

#### 6.4.2 Service trade-off

This section is not applicable at present as Council will allocate sufficient funds to meet the delivery of Footpath/ Walkway assets for the next 10 years.

#### 6.4.3 Risk trade-off

This section is not applicable at present as Council will allocate sufficient funds to meet the delivery of Footpath/ Walkway assets for the next 10 years.

## 7.0 FINANCIAL SUMMARY

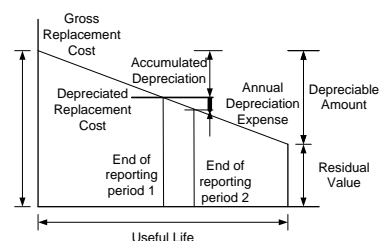
This section contains the financial requirements resulting from the information presented in the previous sections of this Asset Management Plan. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

### 7.1 Financial Statements and Projections

#### 7.1.1 Asset valuations

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

Current (Gross) Replacement Cost	\$34,880,748
Depreciable Amount	\$34,880,748
Depreciated Replacement Cost <sup>9</sup>	\$15,506,101
Depreciation	\$822,000



Key assumptions made in preparing the valuations were:

- Straight line depreciation
- All figures are based on 2018/19 unit rates
- Yearly review of Useful Lives and Unit Rates
- Regular condition surveys every 4 years of the footpath assets

#### 7.1.2 Sustainability of service delivery

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

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have 100.1% of the funds required for the optimal renewal of assets.

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

This AMP 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 10 year period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs over the 10 year planning period is an average of \$1,464,522 per year.

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<sup>9</sup> Also reported as Written Down Value, Carrying or Net Book Value.

The proposed (budget) including acquisitions, operations, maintenance and renewal funding is \$1,466,019 on average per year, meaning there will be surplus funding of \$1,497 per year for the next 10 years. This indicates that 100.0% of the forecast costs needed to provide the services documented in this AMP are accommodated in the proposed budget. This calculation is based of existing assets only.

### Long term – 50 year financial planning period

#### Summary of finance

- Planned total budget per year is \$810,000
- Total funding required to complete renewal works is \$40,493,996
- Total fund available (utilised the current allocation in the LTFP of \$822,000) to complete required renewal works is \$40,500,000
- Asset Renewal Funding Ratio is 100%
- Surplus of funding is \$120.08 per year

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

Table 7.1.3 shows the forecast costs (outlays) for the 10 year long-term financial plan.

Forecast costs are shown in 2018/2019 dollar values.

**Table 7.1.3: Forecast Costs (Outlays) for the Long-Term Financial Plan**

Year	Forecast Acquisition (\$)	Forecast Operation (\$)	Forecast Maintenance (\$)	Forecast Renewal (\$)	Forecast Disposal (\$)
2020	290,000	182,500	528,000	32,880	-
2021	600,000	182,500	528,000	261,925	-
2022	500,000	182,500	528,000	355,742	-
2023	485,000	182,500	528,000	281,194	-
2024	495,000	182,500	528,000	2,631,214	-
2025	80,000	182,500	528,000	137,904	-
2026	-	182,500	528,000	-	-
2027	-	182,500	528,000	428,303	-
2028	-	182,500	528,000	24,483	-
2029	-	182,500	528,000	936,575	-
2030	-	182,500	528,000	-	-
2031	-	182,500	528,000	674,844	-
2032	-	182,500	528,000	13,279	-
2033	-	182,500	528,000	7,665	-
2034	-	182,500	528,000	164,588	-
2035	-	182,500	528,000	-	-
2036	-	182,500	528,000	96,783	-
2037	-	182,500	528,000	14,032,805	-
2038	-	182,500	528,000	48,503	-
2039	-	182,500	528,000	260,634	-

## 7.2 Funding Strategy

The proposed funding for assets is outlined in Council's budget and LTFP.

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

### 7.3 Valuation Forecasts

During the formulation of this plan, it is anticipated that asset numbers are forecast to remain consistent as there is no plan to add or remove assets from service.

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

### 7.4 Key Assumptions Made in Financial Forecasts

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

Key assumptions made in this AMP are:

- Council Asset Data registry reflects accurate data with a confidence level of  $\pm 10\%$
- Operation and Maintenance cost remain within the same range for the next 10 years
- Council will allocate sufficient funding to meet operations, maintenance and renewal expenditure.
- The useful Lives of the footpath/walkway types are accurate
- Present service levels to remain constant over the life of this AMP
- Nil Growth
- All valuations are based on 2018/19 unit rates

### 7.5 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this AMP are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is classified on a A - E level scale<sup>10</sup> in accordance with Table 7.5.1.

**Table 7.5.1: Data Confidence Grading System**

Confidence Grade	Description
A. Highly reliable	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment. Dataset is complete and estimated to be accurate $\pm 2\%$
B. Reliable	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate $\pm 10\%$

<sup>10</sup> IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

Confidence Grade	Description
C. Uncertain	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated $\pm 25\%$
D. Very Uncertain	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy $\pm 40\%$
E. Unknown	None or very little data held.

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 6.5.1.

**Table 7.5.1: Data Confidence Assessment for Data used in AM Plan**

Data	Confidence Assessment	Comment
Demand drivers	Reliable	Based on Council's adopted Asset Management Policy
Growth projections	Reliable	Data based on government populations data
Acquisition forecast	Reliable	Data based on past experience
Operation forecast	Reliable	Expenditures have been apportioned across each asset class
Maintenance forecast	Reliable	Council will allocate sufficient funds to meet maintenance forecast
Renewal forecast - Asset values	Reliable	Unit Rates are reviewed each year and endorsed independently. Asset values are calculated using unit rates multiplied by valuation measurement.
- Asset useful lives	Reliable	Useful lives are reviewed yearly and endorsed independently.
- Condition modelling	Reliable	Council undertakes a detailed bridge survey and condition audit every 4 years.
Disposal forecast	Reliable	Based on the financial data

## 8.0 PLAN IMPROVEMENT AND MONITORING

### 8.1 Status of Asset Management Practices<sup>11</sup>

#### 8.1.1 Accounting and financial data sources

This AMP utilises accounting and financial data. The source of the data is from Council's corporate finance system, Finance One.

#### 8.1.2 Asset management data sources

This AMP also utilises asset management data. The source of the data is from Council's Asset Management Data System, Conquest.

### 8.2 Improvement Plan

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

*Table 8.2: Improvement Plan*

Task	Task	Responsibility	Resources Required	Timeline
1	Further develop Mobile Technology for field work defect recording and Maintenance Management in Conquest AMS	GIS Analyst, Team Leader Asset Planning	GIS Analyst, Team Leader Asset Planning, IT, Depot Staff Equipment: Mobile Device	1 to 2 years

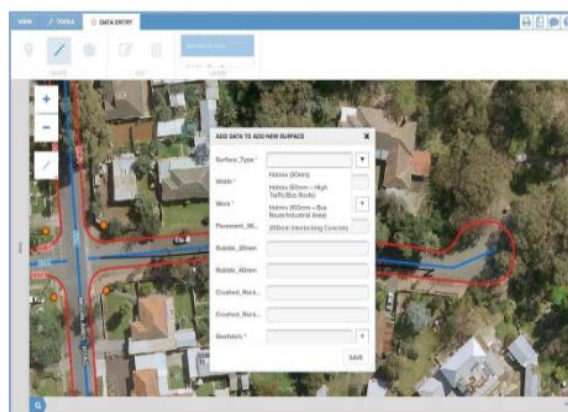
*Tree Assets – mobile maintenance management – recording Tree Defects in the field*



<sup>11</sup> ISO 55000 Refers to this the Asset Management System

2	Continue program for data collection of cyclic maintenance works	GIS Analyst, Team Leader Asset Planning, Coordinators, Team Leaders, Outside Staff	GIS Analyst, Team Leader Asset Planning, Depot Staff Equipment: Mobile Device	Ongoing for all Asset Classes
3	Develop Inspection Regimes for expired Assets (Fully Depreciated Assets past their useful lives)	GIS Analyst, Team Leader Asset Planning, Coordinators, Team Leaders, Outside Staff	GIS Analyst, Team Leader Asset Planning, Depot Staff Equipment: Mobile Device	12 month cycle

**Recording Proposed Capital Works in the field**



**Recording Proposed Capital Works in the field – Mapped**



4	Undertake risk assessment inspections	GIS Analyst, Team Leader Asset Planning, Coordinators, Team Leaders, Outside Staff	GIS Analyst, Team Leader Asset Planning, Depot Staff Equipment: Mobile Device	12 month cycle
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### **8.3 Monitoring and Review Procedures**

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

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

The AMP has a maximum life of 4 years and is due for complete revision and updating within 2 years of appointment of new Council.

### **8.4 Performance Measures**

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

- The degree to which the required forecast costs identified in this AMP are incorporated into the LTFP
- The degree to which the 1-5 year detailed works programs, budgets, business plans and corporate structures take into account the 'global' works program trends provided by the AMP
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Plan and associated plans
- The Asset Renewal Funding Ratio achieving Council's adopted target (100%).



## 9.0 REFERENCES

- IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/IIMM](http://www.ipwea.org/IIMM)
- IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/namsplus](http://www.ipwea.org/namsplus).
- IPWEA, 2015, 2nd edn., 'Australian Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/AIFMM](http://www.ipwea.org/AIFMM).
- IPWEA, 2015, 3rd edn., 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/IIMM](http://www.ipwea.org/IIMM)
- IPWEA, 2012 LTFP Practice Note 6 PN Long-Term Financial Plan, Institute of Public Works Engineering Australasia, Sydney
- ISO, 2018, ISO 31000:2018, Risk management – Guidelines
- Towards 2020 – Campbelltown City Council Strategic Plan
- Annual Financial Statements for the Year Ended 30 June 2019.

## 10.0 APPENDICES

### Appendix A Acquisition Forecast

#### A.1 – Acquisition Project Summary

Year	Project	Planned Budget (\$)
2020/ 2021	New Footpath Construction – Second footpath	480,000*
2020/ 2021	James Street, Campbelltown Golf Course Car Park	15,000
2020/ 2021	Glen Stuart Road, Magill Precinct Master Plan	15,000
2020/ 2021	Clement Road, Athelstone	45,000
2020/ 2021	Thorndon Park Pathway Link	40,000
2021/2022	New Footpath Construction – Second footpath	496,320*
2022/ 2023	New Footpath Construction – Second footpath	483,360*
2023/ 2024	New Footpath Construction – Second footpath	494,960*
2024/ 2025	New Footpath Construction – Second footpath	76,000*

**Table A3 - Acquisition Forecast Summary**

Year	Constructed (\$)	Donated (\$)	Growth (\$)
2020	290,000	-	-
2021	600,000	-	-
2022	500,000	-	-
2023	485,000	-	-
2024	495,000	-	-
2025	80,000	-	-
2026	-	-	-
2027	-	-	-
2028	-	-	-
2029	-	-	-
2030	-	-	-
2031	-	-	-
2032	-	-	-
2033	-	-	-
2034	-	-	-
2035	-	-	-
2036	-	-	-
2037	-	-	-
2038	-	-	-
2039	-	-	-

## A.2 – Detailed Project List of Second Footpaths\*

Road	From	To	Estimated Cost (\$)
Clairville Road	Palumbo Avenue	House No. 124, Clairville Road	11,280
Karawirra Avenue	St Bernards Road	Nalara Avenue	16,400
Savas Road	St Bernards Road	Nalara Avenue	16,800
Hamilton Terrace	Gorge Road	Stradbroke Road	20,800
Manresa Court	Gorge Road	Backhill Road	20,000
Grantley Avenue South			15,068
North Street	West Street	32 North Street	12,000
Ind Street	Back of car park	School Gate	4,800
Leabrook Drive	Sheila Street	Bend to east of Shiela	5,600
Foster Avenue	corner	Mitchell Street	10,400
Harris Street	Torrens Avenue	Reservoir Road	22,400
Springfiled Avenue	Brookside Avenue	Russell Road	18,000
Crowle Road	Darley Road	Church entrance	8,400
Gorge Road	Walkway Entrance	Model Avenue	16,000
Russell Road	Springfiled Road	Lower Athelstone Road	4,800
Fairleys Road	Luringa Street	Rita Avenue	5,200
Brookside Road	Cul-de-sac	School	13,200
Leabrook Drive			7,386
Palumbo Avenue	Clairville Road	Liascos Avenue	23,600
Lower Athelstone Road	Linear Park Court	Kimber Place	68,640
George Street	River Drive	Torrensview Road	21,840
Stradbroke Road & Morialta Road	Leabrook Drive	Swan Avenue	42,080
Koonga Avenue	St Bernards Road	Jury Avenue	42,640
Gameau Road	Junction Road	Darley Road	30,160
Junction Road	Greenglade Drive	Victor Road	10,880
Montacute Road	Ellerslie Drive	Maryvale Road	5,280
<b>Total Estimated Cost for the year 2020/21</b>			<b>\$473,654</b>

McShane Street	Mines Road	Hill Street	26,960
Fox Avenue	Addisson Road	Marybank Terrace	30,000
Russell Road	Gorge Road	Springfield Avenue	27,840
Avenue Road	Gorge Road	George Street	45,440
Shakespeare Avenue	Moore Street	Fourth Street	26,720
Tracy Avenue	George Street	Heather Court	4,240
Young Street	Allan Street	Goodwin Street	15,680
Church Road	Hollister Avenue	Bridge	21,200
Liascos Avenue	Palumbo Avenue	Devon Avenue	8,880
Shakespeare Avenue	Norama Avenue	Third Street	7,280
Shakespeare Avenue	Glynburn Road	Moore Street	26,000
Hamilton Terrace	Nicola Court	Gorge Road	19,760

Hakea Avenue	Addisson Avenue	Quondong Avenue	26,640
Addisson Avenue	Maryvale Road	Hakea Avenue	30,800
Kurrajong Avenue	Montacute Road	Nestor Street	5,600
Moorlands Road	Montacute Road	Ross Road	34,080
Picadilly Crescent	Clairville Road	Lower North East Road	5,440
Barons Street	Reid Avenue	Arthur Street	44,080
Church Street	St Bernards Road	Holmes Avenue	35,280
Stoneybrook Drive	Weewanda Road	Cul-de-sac	8,640
Stoneybrook Drive	Weewanda Road	Ridgefield Avenue	16,800
Playford Road	Diane Avenue	Chatswood Grove	28,960
<b>Total Estimated Cost for the year 2021/22</b>			<b>\$496,320</b>

Linda Drive	Lorrelle Avenue	Kurrajong Avenue	22,080
Lorelle Avenue	Stradbroke Road	No. 9 Lorrelle Avenue	5,200
Frost Street	Graves Street	Robran Court	21,600
Harris Street	Reservoir Road	Torrens Avenue	22,000
Elsinore Drive	Packer Crescent	CMO Gate	10,080
Vagnoni Avenue	Ramsey Avenue	Brentwood Grove	18,000
Brentwood Grove	Vagnoni Avenue	Bills Avenue	7,520
Elmwood Avenue	Brentwood Grove	Road End	9,920
West Street	Hectorville Road	North Street	23,040
Nalarra Avenue	Savas Road	Sparks Terrace	5,600
Pritchard Avenue	Malpas Street	Sparks Terrace	12,000
Leonard Street	St Bernards Road	Bricknell Street	23,200
Fisher Street	Arthur Street	Wilson Street	9,120
Maple Avenue	Jenkins Avenue	Koonga Avenue	13,440
Meadowvale Road	Schulze Road	Brookside Road	36,720
River Drive	Lower Athelstone Road	Palm Court	34,320
Reservoir Road	House No. 26	House No. 52	7,920
Ozone Parade	Reservoir Road	Silvermere Avenue	2,960
Silvermere Avenue	Ozone Parade	Ridgefield Avenue	8,560
Ross Road	Wensleydale Avenue	Moorlands Road	1,920
Flinders Parade	Crozier Avenue	Roclin Avenue	5,120
Adair Street	Crozier Avenue	Playford Road	9,840
Reserve Road	Wyn Street	Cresdee Road	19,440
Reserve Road	Cedar Avenue	Clairville Road	3,840
James Street	Shepherd Lane	Lower North East Road	39,360
East Street	Pinneri Street	Hectorville Road	10,240
Robson Road	Ross Road	Watson Street	14,080
Ross Road	McCarthy Street	Robson Road	4,000
Fourth Street	Strathmore Avenue	Shakespeare Avenue	12,400
Crestwood Drive	Galaxy Way	Maryvale Road	5,760
Angelina Drive	George Street	Resthaven Retirement	6,800
Thorndon Crescent	George Street	Torrens Avenue	5,600

Denmead Avenue	Hambledon Road	Road Bend	10,480
Reynell Road	St Bernards Road	Linwood Avenue	9,840
Dutton Avenue	Eve Street	Reid Avenue	10,240
Wyn Street	Reserve Road	Hancock Avenue	21,120
<b>Total Estimated Cost for the year 2022/23</b>			<b>\$483,360</b>
James Street	Sycamore Terrace	Golf Course	16,960
Tandanya Avenue	Reid Avenue	Weaver Street	8,000
Maple Avenue	Bonvue Road	Bus Stop	3,360
Raymond Avenue	Coventry Drive	Sportsground	7,680
Raymond Avenue	Coventry Drive	Sportsground	8,640
Ridgefield Avenue	Silvermere Avenue	Tennis Court	6,400
Weewanda	Ridgefield Avenue	Stoneybrook Drive	6,800
Sunset Strip	Judith Drive	Maryvale Road	6,000
Grantley Avenue North	Morialta Road West	Malpas Street	10,080
Vincent Avenue	Robert Street	Bernard Street	15,280
Sare Street	Reid Avenue	Hectorville Road	20,720
Hudson Avenue	Sparks Terrace	Morialta Road	26,480
Jury Avenue	Koonga Avenue	Sparks Terrace	19,280
Second Street	Shakespeare Avenue	Arthur Street	21,920
Colton Avenue	Gladstone Avenue	St Bernards Road	50,640
Aurora Court	Walkway	Aurora Drive	1,760
Palm Court	River Drive	RTL Shared Path	7,200
Lorraine Street	Coventary Drive	Reserve	4,320
Torrens Avenue	Harris Street	Thorndon Crescent	6,160
Judith Drive	Sunset Strip	Cul-de-sac	17,760
Rosemary Avenue	Judith Drive	Cul-de-sac	11,600
Burton Road	Shepherdson Road	Hockley Terrace	28,560
Shepherdson Road	Addison Avenue	Burton Road	25,200
Nestor Street	Kurrajong Road	Victoria Avenue	13,280
Victoria Avenue	Nestor Street	Galatea Avenue	14,800
Galatea Avenue	Victoria Avenue	Kurrajong Avenue	8,560
Kurrajong Avenue	Castle Street	Galatea Avenue	11,040
Maple Road	Ramsay Avenue	Robertson Avenue	3,120
Robran Court	Playford Road	Frost Street	8,080
Wenselydale Avenue	Ross Road	Eve Street	11,520
Crozier Avenue	Adair Street	House No. 98	27,200
Diane Avenue	Playford Road	Wessen Street	12,080
Anderson Court	Playground	Wessen Street	4,960
Anderson Court	Kindy	House No. 3	4,880
North Street	Grande Street	Hectorville Road	6,640
Pinneri Street	East Street	Gosford Street	10,880
Henry Street	Gosford Street	Robson Road	11,680
McCarthy Street	Ross Road	Weaver Street	15,440
<b>Total Estimated Cost for the year 2023/24</b>			<b>\$494,960</b>

Horwood Aveue	Judith Drive	Cul-de-sac	3,280
Judith Street	Reynell Road	Horwood Avenue	9,840
Linwood Avenue	Reynell Road	Strathearn Avenue	5,920
Nalara Avenue	Strathearn Avenue	Koonga Avenue	9,760
Nalara Avenue	Koonga Avenue	Savas Road	13,040
Mann Court	Olive Street	Cul-de-sac	4,880
Robert Street	Vincent Avenue	Cul-de-sac	13,840
Koonga Avenue	House No. 68	Maple Avenue	15,840
<b>Total Estimated Cost for the year 2024/25</b>			<b>\$76,400</b>

## Appendix B      Operation Forecast

### B.1 – Operation Forecast Assumptions and Source

Operation costs will remain unchanged for next 20 years. The operation forecast figure listed in the table below is based on the average operation costs that Council has incurred in the last two financial years.

### B.2 – Operation Forecast Summary

NAMS+ Outputs Summary for Renewal

*Table B2 - Operation Forecast Summary*

Year	Operation Forecast (\$)	Additional Operation Forecast (\$)	Total Operation Forecast (\$)
2020	182,500	-	182,500
2021	182,500	-	182,500
2022	182,500	-	182,500
2023	182,500	-	182,500
2024	182,500	-	182,500
2025	182,500	-	182,500
2026	182,500	-	182,500
2027	182,500	-	182,500
2028	182,500	-	182,500
2029	182,500	-	182,500
2030	182,500	-	182,500
2031	182,500	-	182,500
2032	182,500	-	182,500
2033	182,500	-	182,500
2034	182,500	-	182,500
2035	182,500	-	182,500
2036	182,500	-	182,500
2037	182,500	-	182,500
2038	182,500	-	182,500
2039	182,500	-	182,500

## Appendix C Maintenance Forecast

### C.1 – Maintenance Forecast Assumptions and Source

Maintenance costs will remain unchanged for next 20 years. The maintenance cost forecast figure listed in the table below is the average maintenance costs that Council has incurred in the last two financial years.

### C.2 – Maintenance Forecast Summary

NAMS+ Outputs Summary for Renewal

*Table C2 - Maintenance Forecast Summary*

Year	Maintenance Forecast (\$)	Additional Maintenance Forecast (\$)	Total Maintenance Forecast (\$)
2020	528,000	-	528,000
2021	528,000	-	528,000
2022	528,000	-	528,000
2023	528,000	-	528,000
2024	528,000	-	528,000
2025	528,000	-	528,000
2026	528,000	-	528,000
2027	528,000	-	528,000
2028	528,000	-	528,000
2029	528,000	-	528,000
2030	528,000	-	528,000
2031	528,000	-	528,000
2032	528,000	-	528,000
2033	528,000	-	528,000
2034	528,000	-	528,000
2035	528,000	-	528,000
2036	528,000	-	528,000
2037	528,000	-	528,000
2038	528,000	-	528,000
2039	528,000	-	528,000



## Appendix D     Renewal Forecast Summary

### D.1 – Renewal Forecast Assumptions and Source

The renewal summary is generated through National Asset Management System+ (NAMS+) based on the information contained in Council's Asset Register.

It is assumed that Council will allocate enough funds to meet the renewal projects expenditure.

### D.2 – Renewal Project Summary

The project titles included in the lifecycle forecast are included in the table D.4

### D.3 – Renewal Forecast Summary

NAMS+ Outputs Summary for Renewal

***Table D3 - Renewal Forecast Summary***

### D.4 –Renewal Plan

Detail output from NAMS+ Report for the Register Method

Year	Renewal Forecast (\$)	Renewal Budget (\$)
2020	32,880	512,000
2021	261,925	512,000
2022	355,742	512,000
2023	281,194	512,000
2024	2,631,214	512,000
2025	137,904	512,000
2026	-	512,000
2027	428,303	512,000
2028	24,483	512,000
2029	936,575	512,000
2030	-	512,000
2031	674,844	512,000
2032	13,279	512,000
2033	7,665	512,000
2034	164,588	512,000
2035	-	512,000
2036	96,783	512,000
2037	14,032,805	512,000
2038	48,503	512,000
2039	260,634	512,000

## D.5 –Projected and LTFP Budget

Year	Forecast Renewals (\$)	Planned Renewal Budget (\$)	Annual Budget Surplus/ Shortfall (\$)	Cumulative Budget Surplus/ Shortfall (\$)
2020	32,880	512,000	479,120	479,120
2021	261,925	512,000	250,075	729,195
2022	355,742	512,000	156,258	885,453
2023	281,194	512,000	230,806	1,116,259
2024	2,631,214	512,000	(2,119,214)	(1,002,955)
2025	137,904	512,000	374,096	(628,859)
2026	-	512,000	512,000	(116,859)
2027	428,303	512,000	83,697	(33,162)
2028	24,483	512,000	487,517	454,355
2029	936,575	512,000	(424,575)	29,780
2030	-	512,000	512,000	541,780
2031	674,844	512,000	(162,844)	378,936
2032	13,279	512,000	498,721	877,657
2033	7,665	512,000	504,335	1,381,992
2034	164,588	512,000	347,412	1,729,404
2035	-	512,000	512,000	2,241,404
2036	96,783	512,000	415,217	2,656,621
2037	14,032,805	512,000	(13,520,805)	(10,864,184)
2038	48,503	512,000	463,497	(10,400,687)
2039	260,634	512,000	251,366	(10,149,321)

Note: shortfall funding figures are shown within the brackets

## 10 Year Renewal Plan

Asset ID	Asset Category	Side	Location	Planned Renewal Year	Renewal Forecast (\$)
34576	Hotmix	NA	Walkway - Greenglade Drive, Linear Park	2021	5,877
34578	Hotmix	NA	Walkway - James Street Reserve	2021	3,548
888888	RTLP	NA	Shared Paths - Athelstone - Last section	2021	126,000
11103	Concrete	Left	Moules Road from St Bernards Road to Glen Stuart Road	2021	75,000
97609	Concrete	Left	Montacute Road from Rosina Street to Gilbert Street	2021	21,500
97610	Concrete	Left	Montacute Road from Gilbert Street to Verona Avenue	2021	21,500
101018	Concrete	Left	Newton Road from Weymouth Street to Hancock Avenue	2021	8,500
<b>Total for the Year 2021</b>					<b>\$261,925</b>

Asset ID	Asset Category	Side	Location	Planned Renewal Year	Renewal Forecast (\$)
101098	Concrete	Right	Lower North East Road from Darley Road to Mitchell Street	2022	14,016
101153	Concrete	Left	Koonga Avenue from Forest Avenue to Colleen Street	2022	13,080
101151	Concrete	Left	Koonga Avenue from Rostrevor Avenue to Tyinga Avenue	2022	7,449
102450	Concrete	Right	Lower North East Road from start of concrete fp to Glen Court	2022	14,300
10137	Concrete	Left	Grantley Avenue South from Moules Road to Morialta Road West	2022	18,829
10707	Concrete	Left	Koonga Avenue from St Bernards Road to Kingswell Avenue	2022	8,108
10735	Concrete	Left	Savas Road from St Bernards Road to Courtabie Avenue	2022	41,702
10777	Concrete	Left	Ross Road from East Street to St Bernards Road	2022	101,388
11108	Concrete	Right	Hill Street from Elm Road to Hart Street	2022	17,592
10923	Concrete	Left	Lincoln Road from Junction Road to Road Closure	2022	32,629
11351	Concrete	Right	Ann Street from Lower North East Road to Coronation Avenue	2022	7,745
34575	Concrete	NA	Walkway - Riverview Drive, Linear Park	2022	69,451
34574	Gravel	NA	Walkway - Clark Crescent, Linear Park	2022	9,453
<b>Total for the Year 2022</b>					<b>\$355,742</b>
11473	Concrete	Right	Acasta street from Ellerslie Drive to Orbona Street	2023	5,493
11476	Concrete	Right	Heyes Court from Orbona Street to Cul-de-sac	2023	4,577
11478	Concrete	Right	Medway Crescent from Ellerslie Drive (South) to Ellerslie Drive (North)	2023	41,419
11036	Concrete	Left	Medway Crescent from Ellerslie Drive (South) to Ellerslie Drive (North)	2023	46,282
11038	Concrete	Left	Heyes Court from Orbona Street to Cul-de-sac	2023	4,811
11039	Concrete	Left	Primrose Avenue from Launer Avenue to Medway Crescent	2023	6,645
11040	Paved	Left	Atlantic Avenue from Arcoona Avenue to Callana Avenue	2023	17,629
10731	Concrete	Left	Karawirra Avenue from St Bernards Road to Courtabie Avenue	2023	50,826
10721	Concrete	Left	Hudson Avenue from Morialta Road East to Sparks Terrace	2023	33,149
102307	Concrete	Right	Albion Terrace from Mundon Steet to Newton Road	2023	16,088
97746	Concrete	Right	Wembley Avenue from Sheppard Street to Gundry Street	2023	16,296
97747	Concrete	Right	Wembley Avenue from Gundry Street to Laver Street	2023	18,184
101065	Concrete	Left	Reynell Road from Rostrevor Avenue to Cecil Street	2023	9,719
97638	Concrete	Right	Morialta Road East from Egerton Avenue to Derwent Avenue	2023	10,076
<b>Total for the Year 2023</b>					<b>\$281,194</b>
97630	Paved	Left	Morialta Road East from Sandra Avenue to Durant Avenue	2024	11,105
97658	Paved	Left	Gorge Road from Campbell Road to Moseley Road	2024	67,531
97698	Paved	Right	Lower Athelstone Rd from Brookside Road to Russell Road	2024	28,541
97617	Paved	Right	Montacute Road from Robson Road to Moorlands Road	2024	33,267
97614	Paved	Right	Montacute Road from Newcut Street to Gaffney Place	2024	25,929
97568	Paved	Right	St Bernards Road from Patola Street to Leonard Street	2024	19,444
97571	Paved	Right	St Bernards Road from Leonard Street to Alton Avenue	2024	36,181
69768	Paved	Left	Rostrevor Avenue from Strathearn Avenue to Reynell Road	2024	7,927
101080	Paved	Left	Magill Road from Gladstone Avenue to Jervois Avenue	2024	17,891
101029	Paved	Right	Newton Road from Rosedale Court to Graves Street	2024	22,376
101030	Paved	Right	Newton Road from Graves Street to Andrea Avenue	2024	20,510
101031	Paved	Right	Newton Road from Andrea Avenue to Clairville Road	2024	17,441
99309	Paved	Left	Robson Road from Ellythorpe Avenue to Henry Street	2024	6,142
101091	Concrete	Right	Lower North East Road from Lennox Street to Brooker Avenue	2024	10,144

101092	Concrete	Right	Lower North East Road from Brooker Avenue to Hambledon Road	2024	9,669
101093	Concrete	Right	Lower North East Road from Hambledon Road to Downer Avenue	2024	14,953
101078	Paved	Left	Magill Road from Hunt Avenue to Birkinshaw Avenue	2024	20,954
101084	Paved	Left	Magill Road from Lorne Avenue to St Bernards Road	2024	61,108
101086	Concrete	Right	Lower North East Road from Seymour Grove to Trafford Road	2024	7,543
101712	Paved	Right	Roma Grove from Road Closure to Walkway	2024	4,432
101167	Concrete	Left	Lower North East Road from Byfield Avenue to Darley Road	2024	18,796
101163	Concrete	Left	Lower North East Road from Mines Road to Hill Street	2024	31,145
101164	Concrete	Left	Lower North East Road from Hill Street to Ann Street	2024	17,477
102449	Paved	Left	Gorge Road from Car Park to Day Street	2024	50,338
10148	Paved	Left	First Street from Shakespeare Avenue to Central Avenue	2024	18,391
10168	Paved	Left	Douglas Street from Deirdre Grove (w bdry) to Church Street	2024	9,868
10194	Concrete	Left	Birkinshaw Avenue from Brookside Avenue (s bdry) to Shakespeare	2024	27,484
10260	Paved	Left	Pine Street from Cresdee Road to Clairville Road	2024	8,665
10271	Paved	Left	Wemyss Street from Clairville Road to Ballater Avenue	2024	7,585
10286	Paved	Left	Shepherd Lane (North) from Cul-de-sac to Shepherd Lane	2024	5,080
10325	Paved	Left	Else Avenue from Osborne Street to Elm Road	2024	13,270
10716	Paved	Left	Jury Avenue from Sparks Terrace to Koonga Avenue	2024	23,881
10724	Paved	Left	Maurice Avenue from Hudson Avenue to Jenkins Avenue	2024	26,451
10739	Paved	Left	Maud Street from St Bernards Road to Sandra Avenue	2024	31,145
10752	Concrete	Left	Keith Street from Reid Avenue to Cul-de-sac	2024	15,377
10773	Concrete	Left	Jervois Avenue from Magill Road to Hawker Street (n bdry)	2024	19,733
10796	Paved	Left	Glen Avenue from Richardson Avenue to Arthur Street	2024	9,033
10602	Paved	Left	Adair Street from Playford Road to Crozier Avenue	2024	14,480
10613	Paved	Left	Orchard Grove from Lomman Avenue to Forest Avenue	2024	20,752
10628	Paved	Left	Arcadia Avenue from Church Road to Road Closure	2024	21,291
10356	Paved	Left	Lincoln Road from Lincoln Court to Junction Road	2024	16,146
10527	Paved	Left	Spartan Crescent from Cul-de-sac to Kurrajong Avenue	2024	16,005
10563	Paved	Left	Seneca Court from Stradbroke Road to Cul-de-sac	2024	18,998
11013	Paved	Left	Theodore Avenue from Tempest Avenue to Bernard Street	2024	41,239
11015	Paved	Left	Nestor Street from Kurrajong Avenue to Antares Way	2024	22,442
11029	Paved	Left	Greenknoll Avenue from Treefern Avenue (e bdry) to Launer Avenue	2024	23,665
11045	Paved	Left	Pattinson Road from Papagni Avenue to Gorge Road	2024	34,075
11046	Paved	Left	Flotta Street from Papagni Avenue (int) to Lauretta Street	2024	7,231
11118	Paved	Left	Gorge Road from Stradbroke Road to Ivy Street	2024	59,385
11086	Paved	Left	Gorge Road from Ryan Avenue to Coulls Road	2024	105,474
11122	Paved	Left	Porter Terrace from Leabrook Drive to Porter Terrace	2024	13,169
11128	Paved	Left	Lorenz Street (camp) from Park Street to Newton Road	2024	2,131
11125	Paved	Left	Lorenz Street (camp) from Reserve Road to Park Street	2024	20,007
11140	Paved	Left	Courtobie Avenue from Karrawirra Avenue to Koonga Avenue	2024	9,178
11149	Paved	Left	Magill Road from Glynburn Road to Galway Grove	2024	17,541
11152	Concrete	Left	Mann Court from Olive Street to Cul-de-sac	2024	8,939
11172	Paved	Right	Nalara Avenue from Koonga Avenue to Strathearn Avenue	2024	14,400
11177	Crusher Dust	Right	Koonga Avenue from St Bernards Road to Nalara Avenue	2024	18,458
11185	Paved	Right	Nalara Avenue from Savas Road to Karrawirra Avenue	2024	8,100
10925	Paved	Left	Junction Road from Melville Road to Lincoln Road	2024	24,544
10922	Paved	Left	Gothic Drive from Pitt Street to Road Closure	2024	22,411
10938	Concrete	Left	Elmwood Avenue from Brentwood Grove to Road Closure	2024	16,252
10952	Concrete	Left	Donaldson Drive from Clark Crescent to Cul-de-sac	2024	48,834
10953	Concrete	Left	Bridget Street from Ellen Street to River Drive	2024	24,827
10959	Paved	Left	Tabitha Drive from Mepsted Crescent to River Drive	2024	37,541



10972	Paved	Left	Gembrook Road from Meadowvale Road to Kym Street	2024	23,296
10822	Concrete	Left	Angas Road from Koongarra Avenue to Moules Road	2024	25,369
10873	Paved	Left	Mundon Street from Albion Terrace to Clairville Road	2024	10,402
10876	Paved	Left	Albion Terrace from Cedar Avenue to Clairville Road Bend	2024	15,316
10883	Concrete	Left	Spencer Street from Clairville Road to Lower North East Road	2024	27,756
10889	Paved	Left	Clairville Road from Piccadilly Crescent to Trafford Road	2024	16,710
11500	Paved	Right	Lomman Avenue from Forest Avenue to Gilbert Street	2024	44,912
11486	Paved	Right	Clairville Road from Newton Road to Rasheed Avenue	2024	56,548
11520	Paved	Right	Emery Road from Coronation Avenue to Kapoola Avenue (s bdry)	2024	24,628
11561	Paved	Right	Glynburn Road from Reid Avenue to Hectorville Road	2024	32,426
11394	Paved	Right	Schulze Road from Gorge Road to Lorenz Street	2024	18,513
11443	Paved	Right	Linda Drive from Lorelle Avenue to Kurrajong Avenue	2024	32,837
11450	Paved	Right	Emanuel Street from Stradbroke Road to Cul-de-sac	2024	34,542
11453	Paved	Right	Hilda Avenue from Crozier Avenue to Graves Street	2024	18,611
11469	Paved	Right	Sprankling Avenue from Gilbert Street to D'angelica Court	2024	13,149
11348	Paved	Right	Chapel Street from Mines Road to Ann Street	2024	60,508
11342	Paved	Right	Poplar Crescent from Wicks Avenue to Walkway	2024	11,684
11344	Concrete	Right	Laurel Avenue from Beech Avenue to Sycamore Terrace	2024	6,443
11354	Paved	Right	Grivell Street from Hill Street to Ann Street	2024	22,021
11363	Concrete	Right	Lincoln Road from Junction Road to Road Closure	2024	25,016
11294	Paved	Right	Lloyd street from Moorlands Road to Cul-de-sac	2024	32,697
11319	Paved	Right	Moore Crescent from Heading Avenue to Lennox Street	2024	12,252
11206	Paved	Right	Keith Street from Reid Avenue to Cul-de-sac	2024	12,102
11209	Paved	Right	Arthur Street from Glynburn Road to Fourth Street	2024	127,074
11210	Paved	Right	Arthur Street from Fourth Street to First Street	2024	89,500
11225	Concrete	Right	Reid Avenue from Glynburn Road to St Bernards Road	2024	127,987
11239	Concrete	Right	Ballantyne Street from Magill Road to Pulford Grove (w bdry)	2024	8,401
11261	Concrete	Right	Sare Street from Reid Avenue to Hectorville Road	2024	31,005
11262	rusher Dus	Right	South Street from Hectorville Road to East Street	2024	39,046
11271	Paved	Right	Magarey Avenue from Grace Avenue to Reid Avenue	2024	14,343
11288	Concrete	Right	Harrow Avenue from Barons Street to Fisher Street	2024	15,131
12380	Hotmix	NA	Walkway - Athelstone Recreation Reserve	2024	11,469
11597	Paved	Right	Naylor Avenue from Quinn Avenue to Stradbroke Road	2024	20,750
11677	Paved	Right	Church Court from Homes Avenue to Cul-de-sac	2024	13,441
11802	Paved	Right	Shepherd Lane (North) from Cul-de-sac to Shepherd Lane	2024	5,044
11850	Paved	Left	Doran Street from Melville Road to Gothic Drive	2024	16,074
11827	Paved	Right	Ann Street from Victor Road to Road Closure	2024	25,310
32873	Paved	Left	Thomson Place from Rita Avenue to Thomson Avenue	2024	6,172
32990	Paved	Left	Michele Road from Avenue Road to Walkway	2024	13,914
36136	Paved	Right	Glenda Drive from Alena Street to Robert Street	2024	24,493
<b>Total for the Year 2024</b>					<b>\$2,631,214</b>

12365	Gravel	NA	Walkway - Gorge Road, Linear Park	2025	13,125
34502	Crusher Du	NA	Walkway - from Stoneybrook Drive to Gorge Road	2025	13,365
11401	Concrete	Right	Bridget Street from Ellen Street to River Drive	2025	25,384
11404	Concrete	Right	Fayden Drive from Heather Court to Cul-de-sac	2025	24,276
11405	Concrete	Right	Donaldson Drive from Clark Crescent to Cul-de-sac	2025	46,742
11543	Concrete	Right	Armagh Avenue from McCarthy Avenue to Aysgarth Avenue	2025	15,012
<b>Total for the Year 2025</b>					<b>\$137,904</b>
11440	Crusher Du	Right	Maryvale Road from Montacute Road to Addison Avenue (n bdr)	2027	113,482
11318	Crusher Du	Right	Wemyss Street from Clairville Road to Ballater Avenue	2027	7,151
11322	Crusher Du	Right	Avenida Street from Road Closure (s bdr) to Clairville Road	2027	11,928
10935	Crusher Du	Left	Stewart Street Carpark from Road Closure to Campbell Road	2027	5,070
10589	Crusher Du	Left	Papagni Avenue from Pattinson Road to Road Closure	2027	13,366
10629	Crusher Du	Left	Hardy Court from Cul-de-sac to Day Street	2027	10,965
10562	Crusher Du	Left	Whites Lane from Road Closure to Stradbroke Road	2027	37,275
10682	Crusher Du	Left	Magill Rd - extension from Norton Summit Road to Council Bour	2027	31,313
10236	Crusher Du	Left	Charles Street from Glynburn Road to Sando Avenue	2027	8,976
10239	Crusher Du	Left	Pierson Street from Reid Avenue to Hectorville Road	2027	26,212
10247	Crusher Du	Left	Coolickey Avenue from Laver Street to McCarthy Avenue	2027	7,360
97745	Crusher Du	Left	Wembley Avenue from East Street to Laver Street	2027	14,527
34567	Gravel	NA	Walkway - from Obahn to Junction Road	2027	4,539
34571	Gravel	NA	Walkway - from Osborne Street to Obahn	2027	6,642
12095	Crusher Du	Right	Virginia Road from Papagni Avenue to Redford Street	2027	21,440
12148	Crusher Du	Right	Acacia Avenue North from Clairville Road to Cresdee Road	2027	6,098
11719	Crusher Du	Right	Melville Grove from West Street to Hectorville Road	2027	21,169
11746	Crusher Du	Right	Barons Street from Arthur Street to Reid Avenue	2027	60,323
11760	Crusher Du	Left	Laver Court from Laver Street to Cul-de-sac	2027	3,394
11755	Crusher Du	Right	Laver Court from Laver Street to Cul-de-sac	2027	3,309
11790	Crusher Du	Right	Porchester Street from Hambledon Road to Denmead Avenue	2027	13,764
<b>Total for the Year 2027</b>					<b>\$428,303</b>
12021	Hotmix	Right	Banksia Crescent from Quondong Avenue to Sheoak Drive	2028	24,483
<b>Total for the Year 2028</b>					<b>\$24,483</b>
11806	Crusher Du	Right	Garden Avenue from Lower North East Road to Mines Road	2029	14,855
11584	Crusher Du	Right	Leabrook Drive North (30 n) from Forest Avenue to Corner / Surfa	2029	15,915
12206	Crusher Du	Right	Gundry Street from Reid Avenue to Wembley Avenue	2029	12,957
12207	Crusher Du	Right	Wensleydale Avenue from Eve Street to Ross Road	2029	17,318
12142	Crusher Du	Right	Avenida Street from Montacute Road to Road Closure - 4th crk	2029	9,172
12357	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	58,086
12359	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	24,373
12361	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	42,556
12362	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	22,069
12363	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	50,331
12364	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	49,543
12368	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	37,330
12369	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	46,462
12376	Hotmix	NA	Walkway - Athelstone Recreation Reserve	2029	54,777
12378	Hotmix	NA	Walkway - Athelstone Recreation Reserve	2029	40,888
12400	Hotmix	NA	Walkway - Athelstone Recreation Reserve	2029	26,389
12401	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	5,494
12402	Hotmix	NA	Walkway - Athelstone Recreation Reserve	2029	29,076
12335	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	11,549
12341	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	13,245
12342	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	57,739

12343	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	55,760
12353	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	41,753
12354	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	7,108
12281	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	4,042
12278	Hotmix	NA	Walkway - Produce Court, Linear Park	2029	5,372
12304	Hotmix	NA	Walkway - James Street Reserve	2029	47,240
12382	Hotmix	NA	walkway - Coventry Drive, Linear Park	2029	47,224
12383	Hotmix	NA	Walkway - Gorge Road, Linear Park	2029	47,015
12396	Hotmix	NA	Walkway - Athelstone Recreation Reserve	2029	812
97594	Crusher D	Left	Leabrook Drive North (50 n) from Corner / Surface Change no 49	2029	3,481
97637	Crusher D	Left	Morialta Road East (130) from Swan Avenue to Stradbroke Road	2029	36,644
<b>Total for the Year 2029</b>					<b>\$936,575</b>

**Note:**

Footpath renewals are not identified for the years 2026 and 2030





## Appendix F Budget Summary by Lifecycle Activity

### Key Assumptions Made:

- The existing footpath assets will achieve their assumed useful life
- The existing footpath assets classes have been constructed using sound engineering and design practices to ensure they are fit for purpose
- The unit rates for replacement of footpath assets classes are realistic
- Accuracy of future financial forecasts may be improved in future revisions of the footpath AMP
- Operation and maintenance costs and service levels remain the same for next 20 years.

**Table F1 – Budget Summary by Lifecycle Activity**

Year	Acquisition (\$)	Operation (\$)	Maintenance (\$)	Renewal (\$)	Disposal (\$)	Total (\$)
2020	289,552	182,500	528,000	512,000	-	1,512,052
2021	595,000	182,500	528,000	512,000	-	1,817,500
2022	496,320	182,500	528,000	512,000	-	1,718,820
2023	483,360	182,500	528,000	512,000	-	1,705,860
2024	494,960	182,500	528,000	512,000	-	1,717,460
2025	76,000	182,500	528,000	512,000	-	1,298,500
2026	-	182,500	528,000	512,000	-	1,222,500
2027	-	182,500	528,000	512,000	-	1,222,500
2028	-	182,500	528,000	512,000	-	1,222,500
2029	-	182,500	528,000	512,000	-	1,222,500
2030	-	182,500	528,000	512,000	-	1,222,500
2031	-	182,500	528,000	512,000	-	1,222,500
2032	-	182,500	528,000	512,000	-	1,222,500
2033	-	182,500	528,000	512,000	-	1,222,500
2034	-	182,500	528,000	512,000	-	1,222,500
2035	-	182,500	528,000	512,000	-	1,222,500
2036	-	182,500	528,000	512,000	-	1,222,500
2037	-	182,500	528,000	512,000	-	1,222,500
2038	-	182,500	528,000	512,000	-	1,222,500
2039	-	182,500	528,000	512,000	-	1,222,500



## 11.0 Objective

To assess the useful life of footpath/walkways using a representative sample of footpath assets.

## 12.0 Scope

This report covers the assessment of the useful life of Council's footpath within the City of Campbelltown.

## 13.0 Background

Council's footpath asset stock comprises.

- 330,536m<sup>2</sup> of paved footpaths (63.8%)
- 151,766m<sup>2</sup> of Concrete Footpaths (29.3%)
- 19,502m<sup>2</sup> of Crusher Dust Footpaths (3.8%)
- 13,843m<sup>2</sup> of Hotmix Bitumen footpath (2.7%)
- 2,169m<sup>2</sup> of Gravel Footpaths (0.4%)

Current (Gross) Replacement Cost of Footpath Assets is \$34,880,748 based on 2019-dollar value.

## 14.0 Current Useful Lives

The below table summarises the current useful life within the Council Asset Register and the recommended Average useful life as detailed within the IPWEA guidelines.

Footpath Type	Current Useful Life	*Useful life Range	*Average useful Life
Concrete	40	40 ~ 80	54
Hotmix Bitumen	30	20 ~ 50	28
Brick Paved	40	30 ~ 60	46
Crusher Dust	10	5 ~ 40	16
Gravel	20	-	-

\* Information extracted from IPWEA – Practice Note 12 2017

## 15.0 Methodology

Footpath assets that would have their end of life (expire) within the next 10 years is the primary criterion considered in selecting the footpath samples for inspection.

### Other Criteria used in selecting the samples

- Given gravel footpaths represent – 0.4% of the overall footpath network this asset type was excluded from the survey.
- More samples inspected within the reactive soil areas, map showing reactive soil zones provided under Section 5.1.3
- Samples were selected to cover a broad area of the entire City

The below table provides the summary of footpath types and the total areas of footpath that would meet the above criteria.

Footpath Type	Total Area of Footpath (m2) (Group A)	Total Area meeting Primary Criterion (m2) (Group B)	Percentage*
Brick Paved	330,536	189,626	57.4%
Concrete	151,766	87,018	57.3%
Crusher Dust	19,502	19,502	100%
Hotmix Bitumen	13,843	7,188	51.9%

\* Percentage of footpath area meeting the primary criterion over the total footpath area

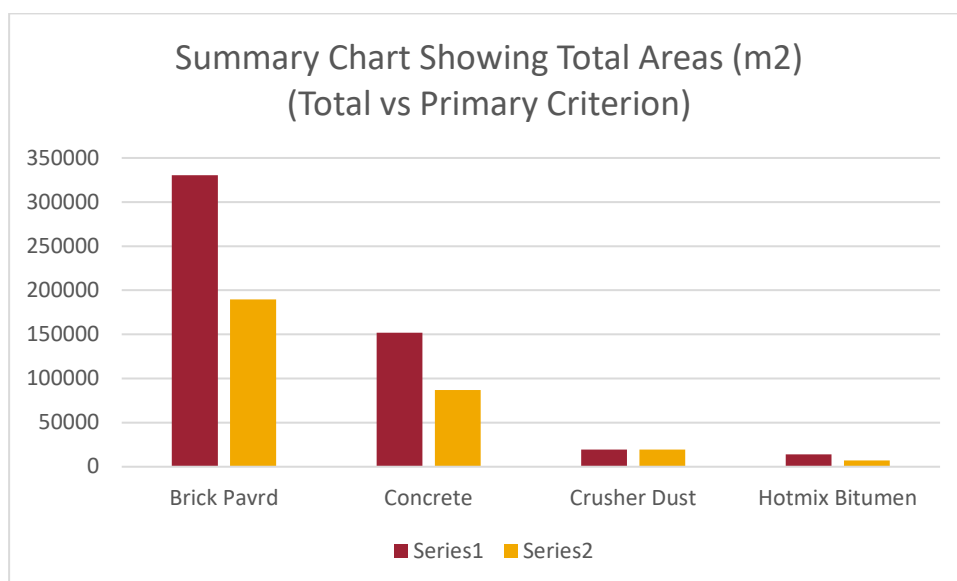
Below table summarises the sample selected from each Category

Footpath Type	Total Area meeting Primary Criterion (m2)	Total Area of Samples Inspected (m2)	Overall Sample Inspected as a Percentage
Brick Paved	189,626	20,469	10.8%
Concrete	87,018	8,257	9.5%
Crusher Dust	19,502	2,003	10.3%
Hotmix Bitumen	7,188	695	9.7%

Accordingly,

- 21 Samples of Paved Footpaths
- 12 Samples of Concrete Footpaths
- 6 Samples of Crusher Dust Footpaths and
- 2 Samples of Hotmix Bitumen Footpaths, were selected for the assessment.

The below graphs represent the selected footpath types within the city and the information on the footpath that considered under the study.



Notes:

- Series 1 - Total footpath areas in m2 within the City – refer to Section 3.0

- Series 2 – Total footpath areas in m2 that would meet the criteria within the City – refer to Section 5.0

## 15.1 Footpath Assessment Samples

### 5.1.1 Condition Grading

Condition Grading	Description of Condition
1	<b>Very Good:</b> only planned maintenance required
2	<b>Good:</b> minor maintenance required plus planned maintenance
3	<b>Fair:</b> significant maintenance required
4	<b>Poor:</b> significant renewal/rehabilitation required
5	<b>Very Poor:</b> physically unsound and/or beyond rehabilitation

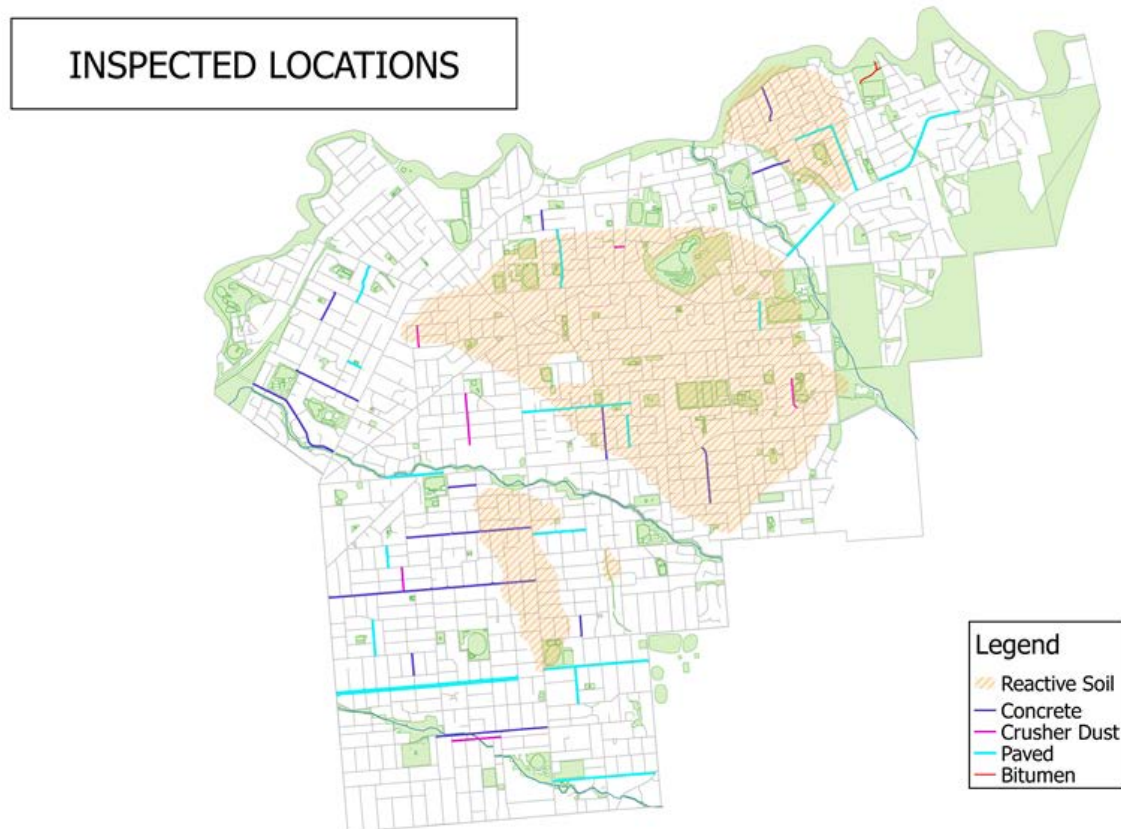
### 5.1.2 Samples selected for Inspection

Asset ID	Location	Footpath Type	Current Condition	Expiry Year
10532	Left Footpath - Robert Street from Vincent Avenue to Cul-De-Sac	Paved	3	2031
10942	Left Footpath - Moseley Road from Gorge Road to Vagnoni Avenue	Paved	3	2031
11173	Right Footpath - Strathearn Avenue from ST Bernards Road to Rostrevor Avenue	Paved	3	2031
11265	Right Footpath - Stralia Avenue from Wembley Avenue to South Street	Paved	3	2031
11274	Right Footpath – Rodney Avenue from Hallet Avenue to Grace Avenue	Paved	3	2031
11353	Right Footpath - Kapoola Avenue from Ann Street to Church Road	Paved	3	2031
11418	Right Footpath - Russel Road from Gorge Road to Lower Athelstone Road	Paved	3	2031
11496	Right Footpath – Rangeview Drive from Lomman Avenue to Richland Road	Paved	3	2031
11512	Right Footpath - Davenport Terrace from Koongarra Avenue to Moules Road	Paved	3	2031
32357	Left Footpath - Donald Street from Chapel Street to Deans Road	Paved	3	2031
10757	Left Footpath - Arthur Street from Fourth Street to Ferris Street	Paved	3	2031
10767	Left Footpath - Arthur Street from Glynburn Road to Barons Street	Paved	3	2031
11071	Left Footpath - Playford Road from Newton Road to Chatswood Grove	Paved	3	2031
11086	Left Footpath - Gorge Road from Ryan Avenue to Coulls Road	Paved	2	2023
11209	Right Footpath - Arthur Street from Glynburn Road to Fourth Street	Paved	3	2018

11210	Right Footpath - Arthur Street from Glynburn Road to Fourth Street	Paved	3	2018
11234	Right Footpath - Woodforde Road from St Bernards Road to Glen Stuart Road	Paved	3	2031
11514	Right Footpath – Moules Road from St Bernards Road to Glen Stuart Road	Paved	3	2031
97604	Left Footpath - Montacute Road from Munchenberg Avenue to Meadow Avenue	Paved	3	2031
97662	Left Footpath - Gorge Road from Schulze Road to Greenbank Road	Paved	3	2031
97698	Right Footpath - Lower Athelstone Road from Brookside Road to Russell Road	Paved	3	2018
10700	Left Footpath – Quinn Avenue from Thompson Avenue to Montacute Road	Concrete	3	2031
10732	Left Footpath – Grantley Avenue North from Morialta Road West (S) to Malpas Street	Concrete	3	2031
10838	Left Footpath - Glamis Avenue from Renown Avenue to Hallet Avenue	Concrete	3	2031
10913	Left Footpath - McShane Street from Hill Street (NBdry) to Ann Street	Concrete	3	2031
10967	Left Footpath - Kym Street from Schultze Road to Gladys Crescent	Concrete	3	2031
11130	Left Footpath – Mines Road from Lower North East Road to McShane Street	Concrete	3	2031
11286	Right Footpath - Binnswood Street from Robson Road to Moorlands Road	Concrete	3	2031
11383	Right Footpath - Brentwood Grove from Vagnoni Avenue to Urban Avenue (S Bdry)	Concrete	3	2031
10774	Left Footpath - Reid Avenue from Glynburn Road to St Bernards Road	Concrete	3	2031
10777	Left Footpath - Ross Road from East Street to St Bernards Road	Concrete	3	2018
11147	Left Footpath – James Street from Lower North East Road to Andrew Avenue (N Bdry)	Concrete	3	2031
11216	Right Footpath - Shakespeare Avenue from Birkinshaw Avenue to St Bernards Road	Concrete	3	2031
10398	Left Footpath – Waterbury Road from Greenwillow Avenue to Silkes Road	Crusher Dust	3	2025
10776	Left Footpath - Colton Avenue from Gladstone Avenue to Lorne Avenue	Crusher Dust	3	2022
11141	Left Footpath - Gundry Street from Reid Avenue to Wembley Avenue	Crusher Dust	3	2031
11790	Right Footpath – Porchester Strret from Hambledon Road to Denmead Avenue	Crusher Dust	3	2021

12029	Right Footpath - Victoria Avenue from Nestor Street to Road Closure	Crusher Dust	2	2025
97531	Right Footpath - Wyn Street from Road Closure to Reserve Road	Crusher Dust	2	2025
12378	Liner Park Walkway – Athelstone Recreation Reserve	Hotmix Bitumen	2	2029
12380	Liner Park Walkway – Athelstone Recreation Reserve	Hotmix Bitumen	2	2024

### 5.1.3 Map


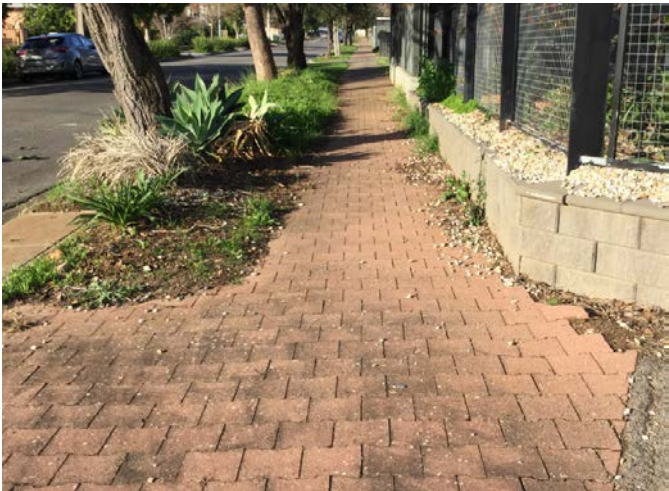


The above map shows the inspected locations of various footpath types that meet the selection criteria and the below table summarise the site observation on each location inspected.




Refer to the appendix of this report that shows all footpath types and locations.




Experienced Engineering and Assets staff undertook and reviewed the footpath inspections.






Asset ID	Photo Taken	Condition Given
10532	<p>Left Footpath - Robert Street from Vincent Avenue to Cul-de-Sac</p>  <p>Observation: Minor maintenance works may be required, no notable defects. Overall condition of the footpath is good</p>	2
10942	<p>Left Footpath - Moseley Road from Gorge Road to Vagnoni Avenue</p>  <p>Observation: Regular minor maintenance works have been carried out over the years. Overall condition of the footpath is good</p>	2
11173	<p>Right Footpath – Strathearn Avenue from St Bernards Road to Rostrevor Avenue</p>  <p>Observation : Overall condition of the footpath is good</p>	2






11265	Right Footpath - Stralia Avenue from Wembley Avenue to South Street	2
	 <p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>	
11274	Right Footpath - Rodney Avenue from Hallet Avenue to Grace Avenue	2
	 <p>Observation : Overall condition of the footpath is good</p>	
11353	Right Footpath – Kapoola Avenue from Ann Street to Church Road	2
	 <p>Observation : Overall condition of the footpath is good</p>	
11418	Right Footpath – Russell Road from Gorge Road to Lower Athelstone Road	2

	 <p>Observation : Overall condition of the footpath is good</p>	
11496	<p>Right Footpath – Rangeview from Lomman Avenue to Richland Road</p>  <p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>	2
11512	<p>Right Footpath – Davernport Terrace from Koongarra Avenue to Moules Road</p>  <p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>	2
32357	<p>Left Footpath - Donald Street from Chapel Street to Deans Road</p>	2




	 <p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>	
10757	<p>Left Footpath - Arthur Street from Fourth Street to Ferris Street</p>  <p>Observation: Minor maintenance works may be required to fix undulations, no notable major defects. Overall condition of the footpath is good</p>	2
11076	<p>Left Footpath - Arthur Street from Glynburn Road to Barons Street</p>  <p>Observation: Minor maintenance works may be required to fix undulations and tree lifts, no notable major defects. Overall condition of the footpath is good</p>	2
11071	<p>Left Footpath - Playford Road from Newton Road to Chatswood Grove</p>	2






	 <p>Observation : Overall condition of the footpath is good</p>	
11086	<p>Left Footpath - Gorge Road from Ryan Avenue to Coulls Road</p>  <p>Observation: Minor maintenance works may be required to fix minor cracking of pavers, no notable major defects. Overall condition of the footpath is good</p>	3
11210	<p>Right Footpath - Arthur Street from Glynburn Road to Fourth Street</p>  <p>Observation: Minor maintenance works may be required to tree lifts, no notable major defects. Overall condition of the footpath is good</p>	2
11234	<p>Right Footpath - Woodforde Road from St Bernards Road to Glen Stuart Road</p>	2




	 <p>Observation: Overall condition of the footpath is good</p>	
11514	<p>Right Footpath – Moules Road from St Bernards Road to Glen Stuart Road</p>  <p>Observation: Overall condition of the footpath is good</p>	2
97604	<p>Left Footpath - Montacute Road from Munchenberg Avenue to Meadow Avenue</p>  <p>Observation: Overall condition of the footpath is good</p>	2
97662	<p>Left Footpath - Gorge Road from Schulze Road to Greenbank Road</p>	3



	 <p>Observation: Minor maintenance works may be required to fix tree lifts, no notable major defects. Overall condition of the footpath is good</p>	
97698	<p>Right Footpath - Lower Athelstone Road from Brookside Road to Russell Road</p>  <p>Observation: Minor maintenance works may be required to fix tree lifts, edges but no notable major defects. Overall condition of the footpath is good</p>	2
10700	<p>Left Footpath - Quinn Avenue from Thompson Avenue to Montacute Road</p>  <p>Observation : Overall condition of the footpath is good</p>	3
10732	<p>Left Footpath - Grantley Avenue North from Morialta Road West (S) to Malpas Street</p>	2

	 <p>Observation: Some segments have been replaced lately. Overall condition of the footpath is good</p>	
10838	<p>Left Footpath - Glamis Avenue from Renown Avenue to Hallet Avenue</p>  <p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>	2
10913	<p>Left Footpath - McShane Street from Hill Street (N Bdry) to Ann Street</p>  <p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>	2
10967	<p>Left Footpath - Kym Street from Schultze Road to Gladys Crescent</p>	2



	 <p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>	
11130	<p>Left Footpath - Mines Road from Lower North East Road to McShane Street</p>  <p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>	2
11286	<p>Right Footpath - Binnswood Street from Robson Road to Moorlands Road</p>  <p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>	2
11383	<p>Right Footpath – Brentwood Grove from Vagnoni Avenue to Urban Avenue (S Bdry)</p>	2



Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good

10774 Left Footpath - Reid Avenue from Glynburn Road to St Bernards Road

2



Observation: Minor maintenance works may be required to fix cracking, no notable major defects. Overall condition of the footpath is good




11147 Left Footpath – James Street from Lower North East Road to Andrew Avenue (N Bdry)



3






Observation: Minor maintenance works may be required to fix cracking and undulations, no notable major defects. Overall condition of the footpath is good



11216	Right Footpath - Shakespeare Avenue from Birkinshaw Avenue to St Bernards Road	2
 <p>Observation: Overall condition of the footpath is good</p>		
10398	Left Footpath - Waterbury Road from Greenwillow Avenue to Silkes Road	2
 <p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>		
10776	Left Footpath - Colton Avenue from Gladstone Avenue to Lorne Avenue	2
 <p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>		

11141	Left Footpath - Gundry Street from Reid Avenue to Wembley Avenue	2
	 <p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>	
11790	Right Footpath - Porchster Street from Hambledon Road to Denmead Avenue	2
	 <p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>	
12029	Right Footpath - Victoria Avenue from Nestor Street to Road Closure	2
	 <p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>	



97531	Right Footpath - Wyn Street from Road Closure to Reserve Road	2
		
<p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>		
12378	Liner park Walkway – Athelstone Recreation Reserve	2
		
<p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>		
12380	Liner park Walkway – Athelstone Recreation Reserve	2
		
<p>Observation: Minor maintenance works may be required, no notable major defects. Overall condition of the footpath is good</p>		

## 16.0 Summary

Footpath Type	Sample Size	Existing useful Life	Assessed Useful Life	*Recommendation
Paved	21	40	50	Extend useful life to 46 years
Concrete	12	40	50	Extend useful life to 46 years
Crusher Dust	6	10	20	Extend useful life to 16 years
Hotmix Bitumen	2	30	30	Use the existing useful life of 30 years
Gravel	-	20	20	Use the existing useful life of 20 years

The condition assessment and subsequent recommendations of the footpath asset are based on the sample set used in the survey.

## 17.0 Conclusions

The conclusions following the review and assessment of the useful life for the footpath asset class are;

- The sample of footpaths within the Council area was a strong, diverse representation of the overall network, that being approximately 10% of the area with footpaths meeting various criteria (end of life within the next 10 years).
- Through the inspection it was found that the average useful life, as defined through the IPWEA guidelines, more accurately represents the actual performance of the footpaths within Councils network.
- Given the performance of the various footpath asset class the paved, concrete and crusher dust footpath types could have their useful life extended within recommended guidelines.

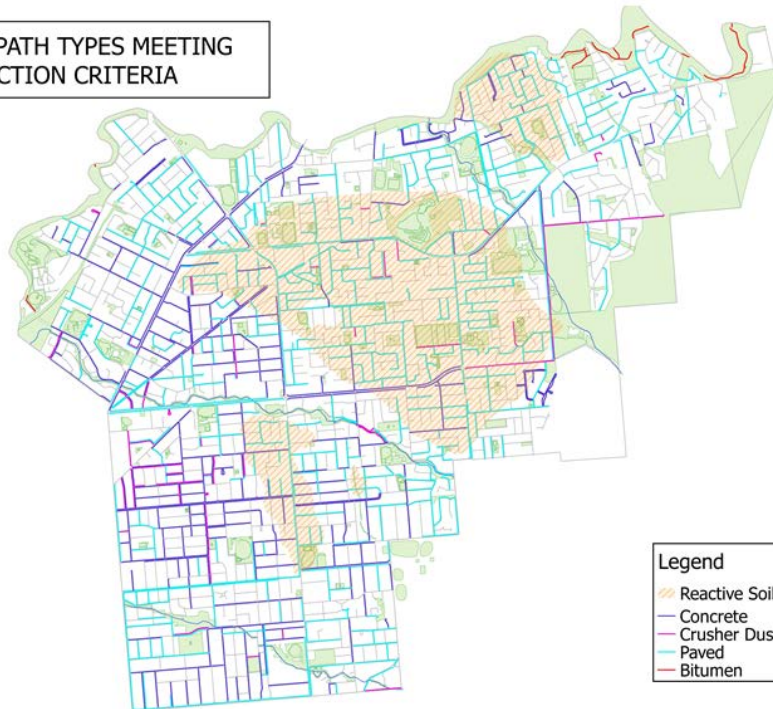
## 18.0 Recommendation

Remaining consistent with the IPWEA guidelines, it is recommended that the following useful life values be adopted by Council.

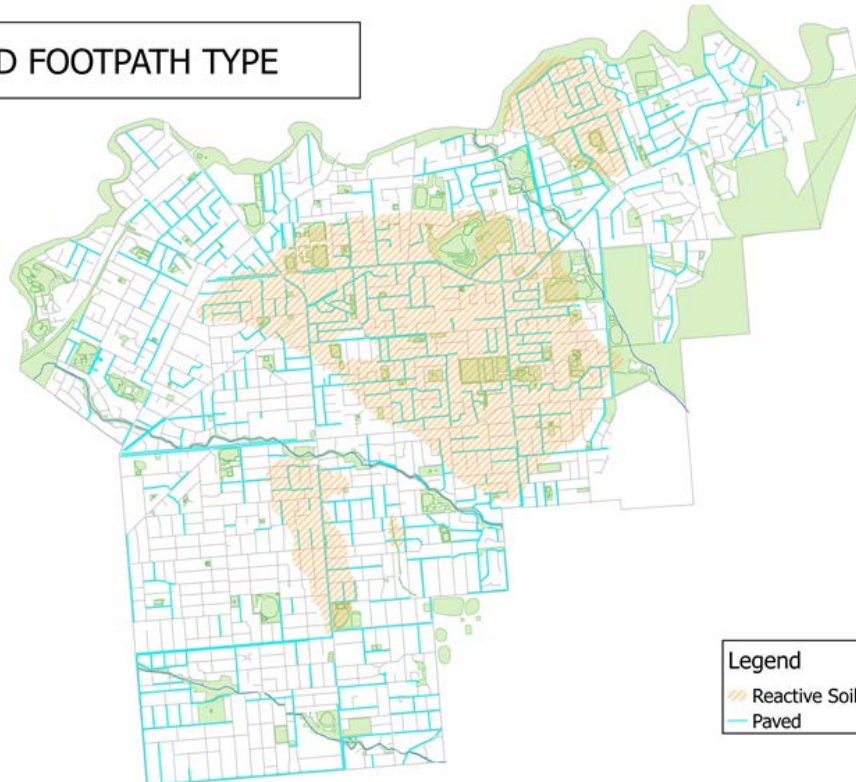
- Paved footpaths - 46 years
- Concrete footpaths - 46 years
- Hotmix Bitumen footpaths - 30 years
- Gravel footpaths - 20 years
- Crusher Dust footpaths - 16 years

## Annexure

ALL FOOTPATH TYPES MEETING  
SELECTION CRITERIA

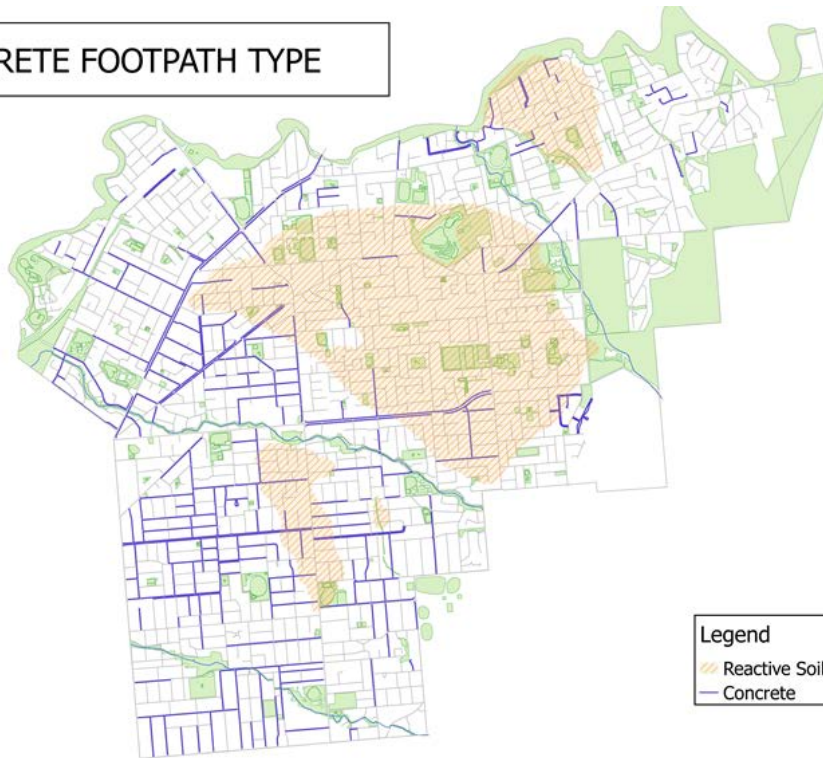


PAVED FOOTPATH TYPE



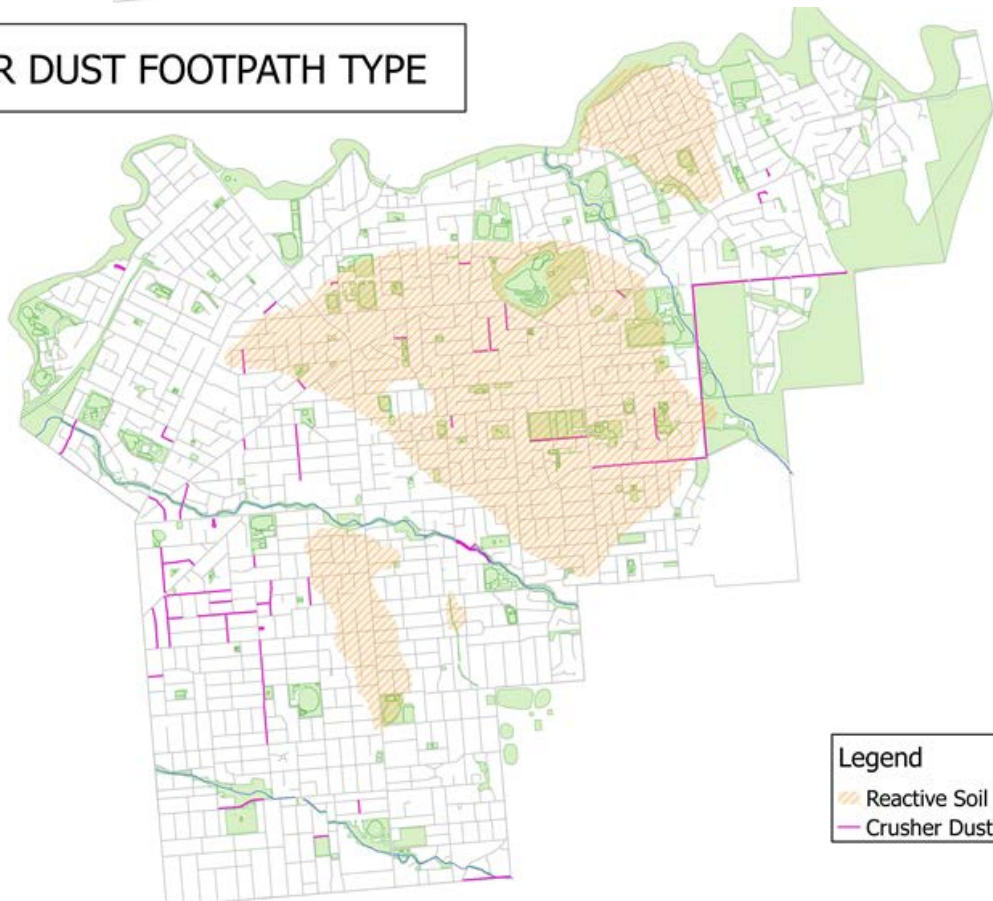


### CONCRETE FOOTPATH TYPE



Legend  
Reactive Soil  
Concrete

### CRUSHER DUST FOOTPATH TYPE



Legend  
Reactive Soil  
Crusher Dust

## BITUMEN FOOTPATH TYPES

