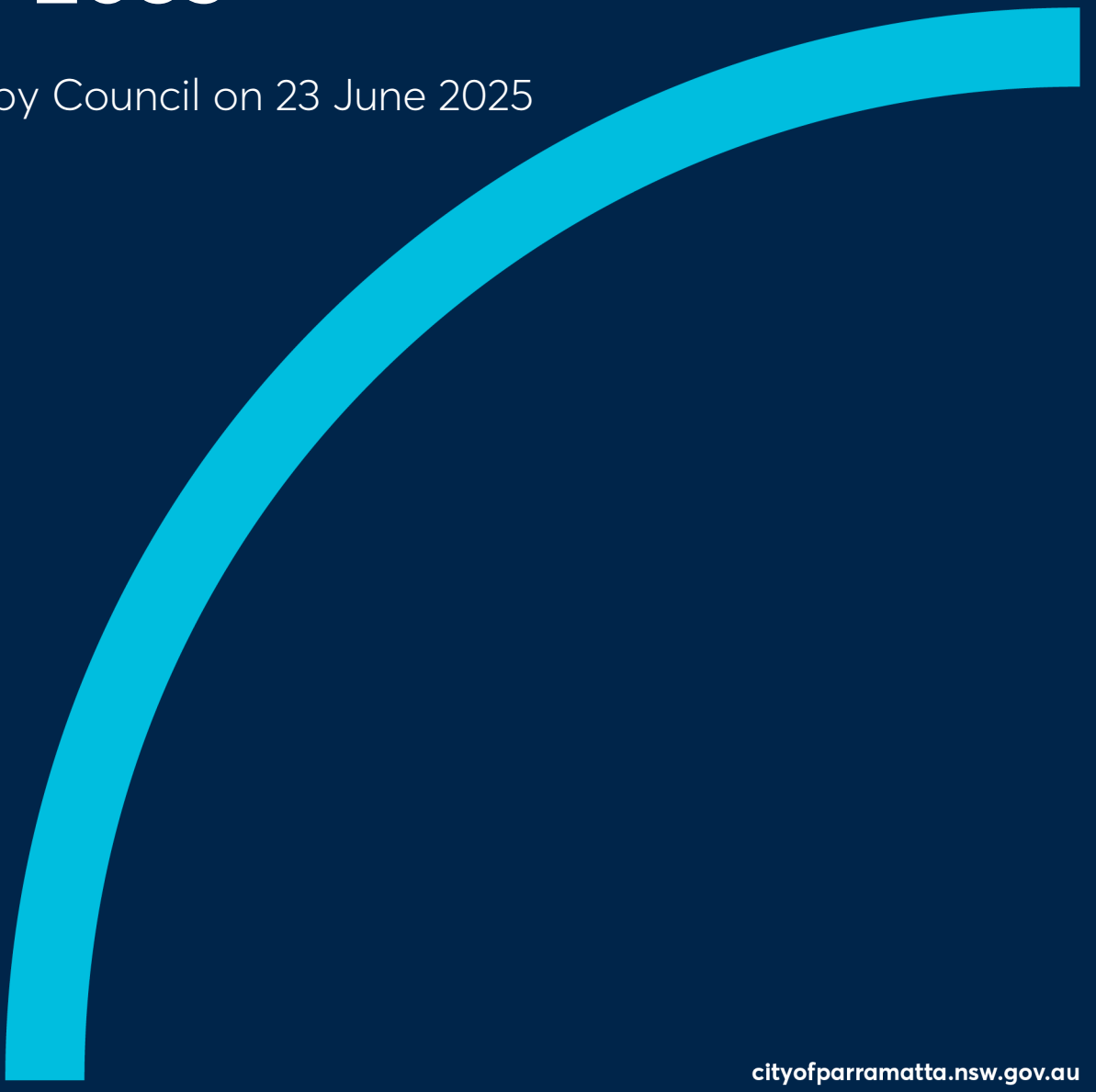
CITY OF PARRAMATTA

Road Infrastructure Asset Management Plan 2026-2035

Adopted by Council on 23 June 2025



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Recognition and Commitment to the Dharug People

Wadyiman Barramada gulbanga naadyi Barramadagal Dharug Ngurrayin, badu, burra barramadagal dharug yurayin.

City of Parramatta recognises the Dharug People as First Australians, peoples of the oldest continuous living culture in the world.

For more than 60,000 years, Parramatta has been home to the Baramadagal and other Dharug peoples, the Traditional Owners of the land we call the City of Parramatta today. The Baramadagal and other Dharug Peoples have cared for and nurtured the habitat, land, and waters for thousands of generations, and maintain an ongoing connection to Parramatta and its surrounding areas.

As a community, we can learn from the resilience and community spirit of First Nations People to best ensure a sustainable city for all. Parramatta has always been an important meeting place for the First Nations People, particularly the Parramatta River, which has provided life and vitality since the beginning of time (The Dreaming).

The name Parramatta is derived from the word Baramada/Burramatta or 'place where the eels lie down' (breeding location for eels within the Parramatta River). City of Parramatta recognises the significance of this area for all First Nations People as a site of early contact between the First Australians and European colonists, and Parramatta remains an important meeting place for the First Nations community.

First Nations People continue to play a vital role in the ecological, economic, social and cultural life of Parramatta, while maintaining a distinct culture built on the principles of Caring for Country, the primacy of family, and the dignity and governance of Elders.

At City of Parramatta, we aspire to a future where the cultures, histories and rights of all First Nations People are understood, recognised, and respected by all Australians. City of Parramatta is committed to playing an active role in making this future a reality. City of Parramatta is proud to acknowledge the ongoing stewardship of Country by Dharug and other First Nations People and to celebrate their enduring wisdom, strength, and resilience.

Always Was, Always Will Be, Aboriginal Land.

Photo credit: Ken Leanfore

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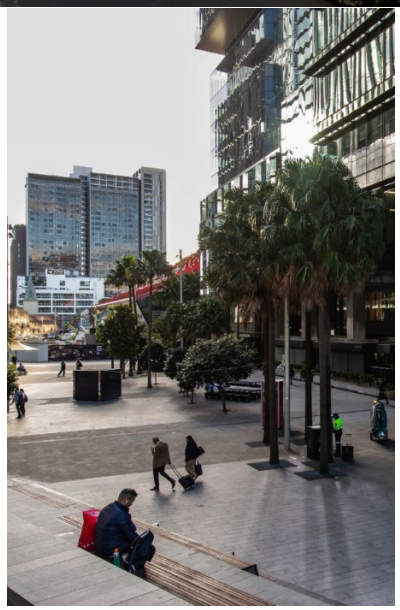
CoPC Photos & Document Control Sheet



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1.0

EXECUTIVE SUMMARY

1.1 THE PURPOSE OF THE PLAN

Asset management planning is a comprehensive process to ensure delivery of services from infrastructure is provided in a financially sustainable manner.

This Road Infrastructure (RI) Asset Management Plan details information about infrastructure assets including 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 the services over a 10-year planning period.

1.2 ASSET DESCRIPTION

Council provides essential infrastructure such as roads, paths, kerb and gutter, bridges, transport assets, and shared structures within its Local Government Area for the benefit of both the residents and visitors to the area.

City of Parramatta Council is responsible for the care and maintenance of the Road Infrastructure (RI) portfolio with a replacement value of **$2,028,780,837** (as at 30/06/2024).

1.3 LIFECYCLE MANAGEMENT PLAN

1.3.1 What does it Cost

The projected outlays necessary to provide the services covered by this Road Infrastructure Asset Management Plan (RI AMP) include operations, maintenance, renewal, and upgrade of existing assets over the 10-year planning period is **$761,742,334** or **$7.6 million** on average per year excluding major new and upgrade assets. Council has several large projects in the next 3 years including the completion of several major infrastructure upgrades.

1.3.2 What we will do

Council plans to provide RI asset services for the following purposes:

- Operation, maintenance, renewal, and upgrade of RI Assets to meet service levels set out in annual budgets.
- Explore all avenues for grants and subsidies to increase expenditure on road, cycleway, and bridge assets.
- Review Capital Works Programmes annually and prioritise works accordingly.
- Ensure new works receive renewal and maintenance at required intervals to ensure projected useful lives of the asset are achieved.
- Improve the underlying information with an annual review of service level trends.
- Allocation of approximately **$201M** in renewal spending on existing assets within the 10-year planning period.

1.3.3 What we cannot do

The limited funding allocation for new asset creations, program level funding and operational budgets compromises the desired level of service. Works and services that cannot be provided under present funding levels are:

Provision of all the additional roads, footpaths and bridges to support the services desired by the community and increased demand.

1.3.4 Plans for Future

Council plans to operate and maintain road infrastructure assets to achieve the following strategic objectives:

- Ensure the network is maintained at a safe and functional standard as set out in this AMP.
- Maximise the asset's useful life whilst minimising life cycle expenditure.
- Maintain the asset's functionality to ensure that it remains 'fit for purpose' and compliant with statutory requirements.
- Allow for future expansion of the network as demand increases over time.

1.3.5 How Council measure performance

a) **Quality -** The RI assets will be maintained to an acceptable physical condition. The acceptable condition for most RI assets is 3 on Council's 0-5 rating scale. Refer to Section 5 for details on condition rating and current conditions of road infrastructure assets. As asset management practices become more advanced, the acceptable condition has been refined based on asset function and hierarchy. Those assets categorised as 'premium' will be maintained to a higher standard due to their organisational or community importance and/or income producing capabilities. Further information regarding the hierarchy and functional classification of the assets can be found in the main body of this AMP.

b) **Function - Council's RI assets are essential in providing services that allow Council to undertake its core duties and pro**vide the community access to travel.

The key functional objectives that will be met are:

- To ensure that all roads, footpath, transport assets (traffic and bus facilities), and bridges are maintained at a safe and functional standard.
- To investigate improvement requests and, if considered appropriate, make safe and repair in a timely manner as defined in Council's maintenance response target levels of service.
- To provide services as appropriate to local demographics, usage and demands.
- To provide assets and services in a cost-effective manner that is sustainable in the long term.

The main functional consequence of failures in any RI is that Council may not be able to provide the assets to complete its core duties. The community may also suffer a loss of accessibility and access to services.

c) **Safety –** Roads, footpaths, bridges, and ancillary assets are inspected on a regular basis. Frequency of inspections and routine maintenance may vary depending on the functional classification or hierarchy of the asset.

Council's civil infrastructure maintenance levels of service are under review. Defects are prioritised and repaired in accordance with Council's documented response times in the customer service charter and the maintenance levels of service.

1.4 ASSET MANAGEMENT PRACTICES

CoPC has developed schedules for infrastructure assets condition survey of the entire LGA. This involves condition survey, assessments, condition rating and evaluation to identify the performance of the RI asset portfolio over the next 10 years. It has been identified that to maintain the levels of service desired by the community, funding levels need to be maintained for the next 10 years. A decrease in funds to carry out a combination of renewal and new works will cause the levels of service to decrease, and certain Council assets may become unfit for purpose.

1.5 MONITORING AND IMPROVEMENT PROGRAM

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

- Continue to improve asset information and knowledge.
- Predict demands, undertake predictive modelling for optimised decision making.
- Continue to develop the 10 year forward programme of transportation assets maintenance and renewal activities necessary to achieve a satisfactory level of service

INTRODUCTION

2.1 BACKGROUND

Parramatta is experiencing a changing demographic profile from a suburban community with an employment centre into a diverse, urban location with major employment, residential, recreation and education facilities.

The City of Parramatta Council (CoPC) provides a range of services to its local community as well as the wider community. To deliver these services it operates and maintains a range of RI assets throughout the Local Government Area (LGA). Council has acquired these assets through a variety of means, such as construction or by contribution from developers, state government and others.

The CoPC Road Infrastructure Asset Management Plan (RI AMP) documents the current management, financial and technical practices by Council for its existing road infrastructure asset portfolio, as well as provides information on strategies and programs that will affect future asset outcomes. The fundamental purpose of this RI AMP is to improve Council's long-term strategic management of its RI assets to cater for services into the future.

Council's RI assets are valued at **$2.03 billion**. The assets that make up this group include:

- Roads – Surace, base and subbase.
- Bulk earthworks (Formation).
- Kerb and Gutter.
- Bridges.
- Footpath and shared user paths.
- Ancillary Assets (Civil) - (Traffic facilities/LATM's, bus facilities, street furniture, and at-grade car parks).
- Other structures /shared structures - (Public lighting, utility services, free-standing/digital units, outdoor dining area blinds, sound walls, retaining walls, fence, railing, staircases, shades, and umbrella structures, etc.

Key issues for RI related assets include:

- Delivering on our customer's numerous requirements detailed in the Community Strategic Plan and Community Infrastructure Strategy.
- Coordinating and controlling a diverse portfolio that has is being renewed, managed, maintained and operated to differing standards by numerous service providers throughout the organisation.
- Coordinating a diverse RI portfolio that is continually evolving from the delivery of new assets from both internal and external sources.
- Maintaining asset renewal metrics and ensuring capital works are optimised to maintain service levels.
- Understanding the future demand required from the numerous service providers within Council.

This AMP communicates the actions required for the responsive management of assets (and services provided from assets), compliance with regulatory requirements, and funding needed to provide the required levels of service over a 10 and 20 year planning period.

2.2 PURPOSE OF ASSET MANAGEMENT PLANS

Asset Management Plans are a means for documenting the management, financial, engineering, and technical practices to ensure that the level of service required by the community from a class of infrastructure assets is provided at the lowest life cycle cost.

The identification of future needs, management options and cash flows provide the ability to even out peak funding demands. In this way, AMP's assist the Council and Executive team in making informed decisions in relation to the allocation of resources and to communicate this information to the public.

This AMP provides the framework to ensure that City of Parramatta Council's RI assets are operated, maintained, renewed, and upgraded to ensure that Council's RI related levels of service are achieved in the most cost effective and sustainable way.

2.3 SCOPE OF THIS ASSET MANAGEMENT PLAN

The plan provides a rational and controlled framework for asset lifecycle management, risk management and financial management to be conducted effectively and to the satisfaction of stakeholders. By providing a framework to detail and examine existing management practices for RI assets, City of Parramatta Council is better equipped to meet community service expectations and can form the basis of an improvement program to progressively meet identified gaps in asset management.

This plan has been developed considering available information, input from Council Officers, Asset Owners, and in association with asset data collection, condition assessment, and maintenance and operational costs for RI assets across the Council area.

The AMP follows the format for AMP's recommended in Section 4 of the International Infrastructure Management Manual[1].

The AMP is to be read with the City of Parramatta Asset Management Strategy and Integrated Planning and Reporting Framework documents. This includes the Asset Management Policy, Asset Management Strategy, Delivery Program, Operational Plan, and Resourcing Strategy, which work together to translate the overarching vision of the Community Strategic Plan.

The infrastructure assets covered by this asset management plan are shown in Table 1. These assets are used to support a broad range of services to the community.

Table 1: Assets covered by this Plan

Asset Category	Dimension	Replacement Value
Roads	652 km	$963,168,885
Kerbs	1270 km	$342,756,099
Bridges	109	$193,997,958
Footpath	902km	$268,750,303
Ancillary Asset - Car Park At Grade, LATM & Other Structures	LATM - 1291 Sites Car Park - 133 Sites	$145,930,699
Total		**$1,914,603,944**

[1] IPWEA, 2015, Sec 4.2, Example of an Asset Management Plan Structure, pp 4|37 – 39.

Table 2: Asset Class, Category, Subcategory and Financial Summary of the RI Portfolio

Asset Component/Class	Replacement Value	Depreciation Expense	Accumulated Depreciation	Written Down Value
Roads includes K&G	$1,305,924,985	$17,836,361	$416,790,976	$889,134,009
Footpath/pathways	$268,750,303	$4,214,578	$83,321,989	$185,428,314
Bridge	$193,997,958	$1,694,037	$29,124,620	$164,873,338
Car Park (At Grade), LATM & Other Structures	$145,930,699	$1,988,015	$40,277,511	$105,653,188
Bulk Earthworks	$114,118,440			$114,118,440
Total	**$2,028,780,837**	**$25,733,296**	**$569,516,581**	**$1,459,264,256**

2.4 KEY STAKEHOLDERS

Key stakeholders in the preparation and implementation of this asset management plan are shown in Table 3.

Table 3: Key Stakeholders in the AMP

Key Stakeholder	Roles	Responsibility
Councillors	• Represent needs of community/shareholders, • Allocate resources to meet planning objectives in providing services while managing risks. • Ensure service is sustainable. • Provide stewardship by ensuring the protection of assets for current and future generations. • Approve Council's Asset Management Policy, Strategy and Plans.	• Adoption of Asset Management Policy, Asset Management Strategy and Asset Management Plans. • Approval of budget allocations that ensure appropriate non-discretionary funding provision for renewal, maintenance and operation of Council assets in the Long Term Financial Plan (LTFP) and Long Term Infrastructure Plan (LTIP).
Strategic Asset Management	• Have a broad understanding of asset management issues and the continuous improvement approach being adopted. • Support the delivery of the Asset Management Policy, Strategy and Plans. • Monitor, evaluate and assist in the delivery of asset management improvement projects/actions. • Review and implement, where possible, external audit recommendations relating to asset management. • Raises awareness throughout the organisation of the benefits of committing	• Provide strategic direction, knowledge sharing and monitor the progress of the Asset Management Strategy Improvement Plan. • Supports and monitors the implementation progress of the Asset Management Strategy and performance. • Facilitates the rollout of the CoPC Asset Management Information System and ongoing enhancements.

Key Stakeholder	Roles	Responsibility
	to a strategic asset management approach. • Identify opportunities and support development for improvement in relation to the planning, development and management of assets. • Advocate for improved strategic asset management outcomes. • Recommends budget allocations for renewal expenditure as per Council's LTFP & LTIP. • Approves forward schedule of asset audits and AMP reviews.	• Increase awareness of the importance of integrated service planning and asset management across all levels of the organisation and Council's Risk & Audit Committee. • Oversee Council assets are proactively inspected to monitor condition, levels of service and ensure Council assets are fit for purpose.
Asset Management Coordinator	• Ensure the development and implementation of Council's Asset Management Policy, Plans and Processes and for their integration with Council's Integrated Planning and Reporting Framework under the Local Government Act. • Report on the status and effectiveness of Asset Management within Council. • Development and implementation of Council's Asset Management Plans and Processes and for their integration with Council's Integrated Planning and Reporting Framework under the Local Government Act. • Ensure integration and compliance of the Asset Management Policy and Strategy with other policies and business processes of Council. • Ensure compliance with legal obligations. • Ensure sound business principles are reflected in the Asset Management strategies and plans that are developed. • Receipt of fair value valuations at end of financial year, provision of budgets from the long term financial plan, receipt of projections relating to expenditure gaps. • Management of this Asset Management Plan including periodic updates and revisions to maintain its relevance with internal and external changes and ensure alignment with the relevant Service Plan.	• Works very closely with asset owners, Information Technology and Finance team to provide high level oversight for the routine asset condition survey, revaluation and statutory reporting. • Provide oversight and work closely with other parts of council for the implementation of the corporate asset management system. • Provide specialist technical advice and guidance on asset management matters to the organization and external customers. • Actively participate in Council's strategic initiatives such as Community Strategic Plan and Strategic Infrastructure Plan for Council. • Ensure compliance with relevant Acts and Regulations as they relate to civil assets, regarding the NSW Local Govt. Act, the NSW Planning and Environment Act and the NSW Roads Act and the Civil Liabilities Act.
Asset Owner	• Conduct network level planning and investigations to facilitate development of upgrade, new programs, projects, and maintenance program. • Responsible for scheduling of asset inspection for the entire LGA.	• Sustainable asset management and planning (including asset systems, asset data and information management).

Key Stakeholder	Roles	Responsibility
	• Auditing inspection and taking appropriate action to ensure LOS is maintained at a satisfactory level. • Recording keeping on usage, demands, asset capacity and functionality. • Ensure condition survey, inspections records are recorded in Council's corporate system. • The condition report is updated and readily available for reporting purposes. • Develop 4yr and 10yr programs for all classes of assets. • Renewal and maintenance modelling to produce economical treatment for different asset classes. • Participate in the review and update of the Service Plan and Asset Management Plan and the development of Key Performance Indicators. • Prepare Council report for specified assets as and when requested by Councillors/Executive team.	• Planning and investigation to develop New, Upgrade, Expansion programs. • Renewal modelling and program development. • Ensure compliance with design and construction standards. • Develop, monitor, and review the Service Plan including service performance indicators.
Manager Roads Delivery	• Responsible for scheduling and delivery of the capital works program for the asset class.	• Asset delivery according to the annual capital works program.
Civil Works Manager	• Responsible for provision of the agreed maintenance and operational levels and standards for the assets in consideration of long-term sustainability. • Participate in the review and update of the Service Plan and Asset Management Plan and the development of Key Performance Indicators to measure performance	• Asset maintenance, inspection, and repairs. • Develop and deliver asset maintenance plans.
Finance Business Partner	• Ensure financial resourcing is available to deliver Council Plan, Strategic Resource Plan, and Community Plan. • Prepare and deliver Council annual budget and reporting outlining Council performance against Council Plan and Budget.	• Ensure financial resourcing is available to deliver Council Plan, Strategic Resource Plan, and Community Plan. • Prepare and deliver Council annual budget and reporting outlining Council performance against Council Plan and Budget.
Ratepayers/ Community Present & Future residents and community	• Will ultimately provide input into the services required and the cost the community is prepared to pay. • Primary users of transport infrastructure assets	

2.5 PARRAMATTA LOCAL GOVERNMENT AREA

The City of Parramatta is located at the head of the Parramatta River 24km west of Sydney Harbour and covers an area of 84 square kilometres. Parramatta takes its name from the Burramatta Clan, the traditional owners of this area. Parramatta was the first self-sustaining European settlement and the local community of today reflects the diversity of the broader Australian people. Parramatta is the gateway to Western Sydney, an area that is home to 1 in 10 Australians. It is the fastest growing region of NSW with the population projected to grow by another 600,000 by 2036. The Parramatta City population is estimated to be 256,729 as of the 30th June 2021 and is forecast to grow to 446,021 by 2041.

Parramatta is home to Sydney's second CBD which contributes to the economic, social, cultural, health and educational sectors of the local area, as well as to Western and the Greater Sydney areas. The Parramatta LGA is a provider of medical, legal, educational, and professional services, being the largest concentration of financial and business services institutions outside the Sydney CBD and home to over 60 government departments.

These functions will strengthen over the next twenty years as NSW government and Council plans for the city's future development. Through a combination of urban renewal, rezoning and reuse of government land, up-zoning within the CBD as the residential and worker population significantly increases.

These changes will also be accompanied by changes to the demographic and cultural composition of the city's populations. The City of Parramatta is now planning to ensure there will be sufficient community facilities and necessary infrastructure within proximity to Parramatta's CBD to support the wellbeing of these new populations.

Council currently is a significant provider of community and recreational facilities, within the Parramatta LGA, as well as providing regional services and transport network to Western Sydney residents. It is anticipated that the LGA will continue to provide significant community services (both government and non-government) to local and regional residents, reflecting its significance as a key regional centre in Greater Western Sydney.

Designated as the premier Regional City in the Government's Metropolitan Plan for Sydney 2036, Parramatta is uniquely positioned to support the need to establish 280,000 additional jobs in Western Sydney by 2036. Parramatta is the cultural and commercial capital of one of Australia's most significant economic regions. The recent Parramatta Square development is one of the biggest urban redevelopments in Australia, which provides additional central business facilities, office space for up to 13,000 workers, a new public domain and more retail and dining options.

2.6 GOALS AND OBJECTIVES OF ASSET MANAGEMENT

City of Parramatta Council exists to provide services to its community. Some of these services are provided by infrastructure assets. We have acquired infrastructure assets by works delivered under contract, construction, project delivered by our staff and assets constructed by developers and others to meet increased levels of service.

Council's 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.
- Linking to a long-term financial plan which identifies required, affordable expenditure and how it will be financed.[2]

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.
- Life cycle management – how to manage its existing and future assets to provide defined levels of service.
- Financial summary – what funds are required to provide the defined services.
- Asset management practices – how we manage provision of the services.
- Monitoring – how the plan will be monitored to ensure objectives are met; and
- Asset management improvement plan – how we increase asset management maturity.

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

- International Infrastructure Management Manual 2015[3]
- ISO 55000[4]

2.7 WHAT WILL THIS ASSET MANAGEMENT PLAN ACHIEVE

The focus of this RI AMP is managing Council's assets and resources pro-actively. It will enable Council to:

- Have precise knowledge of what Council owns or has responsibility or legal liability for.
- Record and extract information on all assets in a register down to an identifiable level.
- Report on our annual depreciation and asset consumption at an asset component level.
- Measure and monitor the condition, performance, utilisation and costs of assets down to the managed component level and aggregate this data up to give outputs of cost and performance at the portfolio level.
- Understand and record the current levels of service in terms of responsiveness and performance.
- Understand the likely future levels of service required based on population growth, demographic changes and community expectations.
- Understand the long term (10 years) funding needs of Council's Road asset portfolio to meet strategic expectations in both capital and maintenance expenditure.
- Measure, monitor and report on the condition, performance and functionality of Council assets against prescribed service levels and regulatory requirements.
- Develop and maintain uniform processes across the whole organisation for the evaluation of any investment in:
    a. Renewal, upgrades and expansions of existing assets.
    b. Creation of new assets.
    c. Maintenance of existing assets.
    d. Operational expenditure to deliver services.

[2] Based on IPWEA 2015 IIMM, Sec 1.3, p 1| 8
[3] Based on IPWEA 2015 IIMM, Sec 2.1.3, p 2| 13
[4] ISO 55000 Overview, principles and terminology

2.8 PLAN FRAMEWORK

In the application of this AMP, Council has developed a whole of life approach to the management of its RI assets. Council has focused on providing an interdisciplinary view of asset management with the development of an Asset Management Policy and framework for the organisation.

The specific elements considered in this AMP are to:

- Demonstrate accountability and responsible stewardship of RI assets.
- Identify least-cost options to provide agreed levels of service.
- Assess existing RI asset stocks and their capacity, condition and functional adequacy.
- Document the Levels of Service that will be provided to the community.
- Identify future demand for RI assets.
- Manage the risks of road, kerb, footpath, traffic facilities, car parks, street furniture and bridge asset failures and risks of capacity failures.
- Undertake Life Cycle Management.
- Provide the basis for long-term financial planning.
- Monitor the plan to ascertain if it is meeting Council's objectives

2.9 PARRAMATTA STRATEGIC OBJECTIVES

City of Parramatta is the cultural and geographical heart of Greater Sydney and is fast emerging as a leader in our region and a booming and innovative global city with a view to the year 2050. Our city's ambitious and forward-thinking aspirations for the future are outlined in the community's vision statement within our draft Community Strategic Plan 2025-2050 (CSP).
Our Vision is: *"AT Parramatta: Local Heart, Global Outlook"*.
Underpinning the Vision are 5 long-term Strategic Pillars that provide the big picture results, which the community would like Council and its many partners to focus on achieving. These Pillars are:

- We all belong - *An equitable and socially connected city.*
- We put people first - *A regenerative and resilient city.*
- We are an economic powerhouse - *A prosperous, productive and ambitious city.*
- We nurture our environment - *A regenerative and resilient city.*
- We are future focused - *A leading and forward-looking city.*

This AMP is prepared under the direction of the City of Parramatta's vision, mission, goals and objectives. These strategic objectives will be included within the long-term planning when considering Building assets both current and into the future, as well as during any renewal programs.

The Pillars and Strategic Actions of the CSP that this Asset Management Plan will support Council to deliver are listed below.

Strategic Pillars in the Draft Community Strategic Plan 2025-2050 (CSP)	Outcome	Draft CSP Strategic Actions that Roads Infrastructure Asset Management Plan will support
We all belong	A diverse, creative, inclusive and inspiring city.	1.2.1 Recognise, protect, and share Parramatta's rich, diverse and evolving heritage and histories. 1.4.1 Enable access to a diverse range of creative and cultural experiences, events and public domain activations, both day and night.
We put people first	An equitable and socially connected city.	2.3.2 Prioritise community health in the design of our city and services, to ensure that people can live well throughout their lives. 2.4.1 Plan and deliver an accessible City and services with universal design principles, so they can be enjoyed by all. 2.4.2 Create and facilitate places and activities that support community safety. 2.5.1 Deliver and maintain quality public open spaces and community facilities, providing shared spaces for people to play and connect.
We nurture our environment	A regenerative and resilient city.	4.1.1 Deliver a climate positive and resilient City through the planning, design, construction and operation/management of our city. 4.1.2 Partner and plan to support our communities as they adapt to key shocks and stresses such a flooding, urban heat and bushfires. 4.1.3 Promote low-carbon transportation options such as walking, biking and public transport through our integrated transport advocacy and planning. 4.3.1 Ensure our streets, public spaces and waterways are clean and tidy, instilling a sense of civic pride. 4.4.1 Protect, diversify and enhance tree canopy across the local government area. 4.5.1 Deliver a continuous regional parkland spanning Global Parramatta from Lake Parramatta to Sydney Olympic Park. 4.5.2 Deliver and advocate for a healthy, liveable and sustainable Parramatta River catchment to make the river swimmable again.
We are future-focused	A leading and forward-looking city.	5.1.3 Facilitate and advocate for the provision of First Nations spaces within the City. 5.2.2 Leverage opportunities for continuous improvement, data, technology and innovative solutions for how we plan and manage our city. 5.3.1 Deliver ethical city leadership and responsible financial management that reflects community needs and aspirations. 5.3.2 Collaborate with all levels of government and non-government agencies to support sound strategic planning for the city 5.4.1 Provide high-quality customer service and effective communication to our community 5.6.1 Deliver and advocate for best practice public and active transport that connects Greater Sydney and supports our city's economic productivity. 5.6.2 Advocate for and deliver integrated transport solutions which enable seamless travel for all users across our city, while reducing road congestion

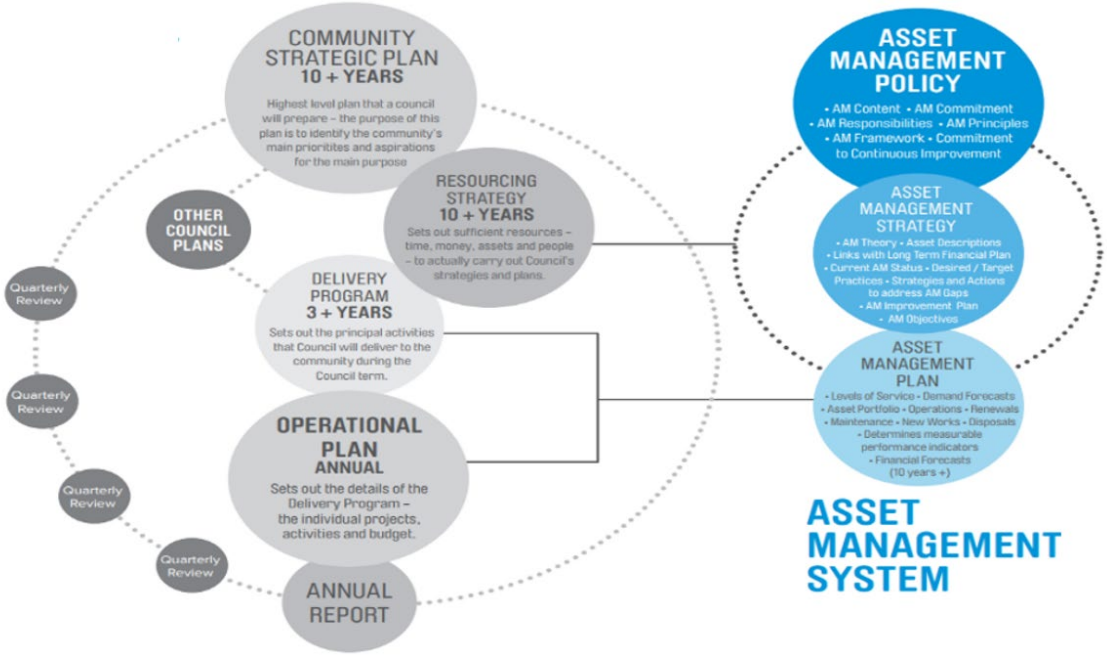
2.10 LINK TO CORPORATE STRATEGIES

The Asset Management Strategy provides guidance to Council's Long Term Financial Plan and to the Community Strategic Plan. Council's role is to locally govern for all residents, visitors and ratepayers, and provide a range of programs and services that meet the needs of our community. This role is encapsulated through the Council's Community Strategic Plan.

The RI Asset Management Plan in turn provides input to the Financial Plan and the Annual Budget. From this the Capital Works Program for infrastructure maintenance and renewals programs are developed.

The diagram below outlines the linkages between Council's Community Strategic Plan and the process for the development of AMP's.

Figure 1 Linkages between AMP and Key Strategic Documents and Activities

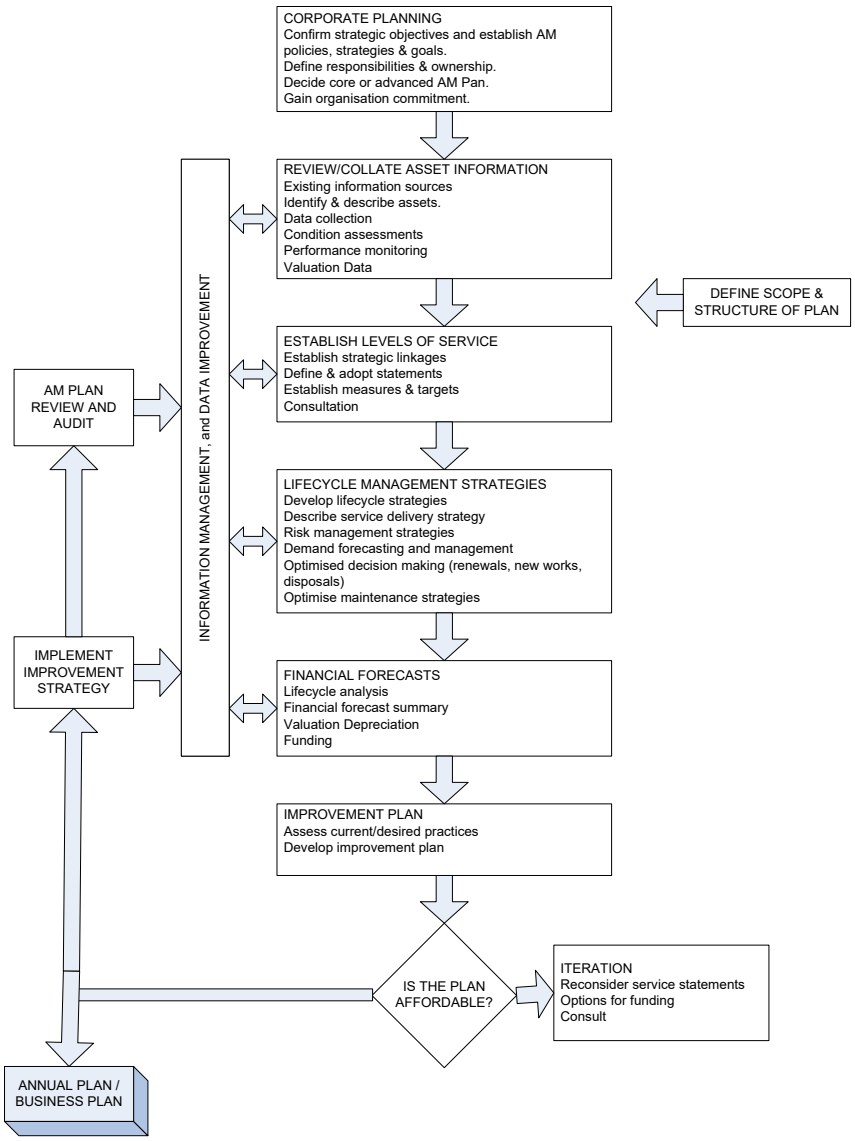


2.11 CORE AND ADVANCE ASSET MANAGEMENT

This AMP is prepared as a 'core' asset management plan over a 10-year planning period in accordance with the International Infrastructure Management Manual[5]. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long-term financial planning and reporting. Core asset management is a 'top down' approach where analysis is applied at the 'system' or 'network' level and should be regarded primarily as a snapshot of current practices and strategies. In contrast, advanced asset management is a 'bottom-up' approach, which seeks to optimise activities and programs to meet agreed service standards through development of management tactics based on collection and analysis of key information on asset condition, performance, lifecycle costs, risk costs and treatment options.

Future revisions of this AMP will move towards 'advanced' asset management using a 'bottom up' approach for gathering detailed asset information for individual assets to support the provision of activities and programs to meet agreed service levels in a financially sustainable manner.

Fig 2: Road Map for preparing an Asset Management Documents



[5] IPWEA, 2015, IIMM.

3.0

LEVEL OF SERVICE

3.1 ASSET HIERARCHY

In accordance with the International Infrastructure Management Manual, Council acknowledges that the primary purpose of an asset hierarchy is to ensure that appropriate management, engineering standards and planning practices are applied to the asset based on its function. It also enables more efficient use of limited resources by allocating funding to those assets that are in greater need and the costs are better justified.

3.1.1 Roads and Kerb

At present, Council has adopted a roads and kerbs hierarchy as defined below. The roads and kerbs hierarchy classification provides a consistent classification of roads and kerbs predominantly based on their role within the overall road and kerb network which relates to their use and risk to users should they fail.

Highways and Declared State Roads are the responsibility of TfNSW and are not included in Council's Road Hierarchy. Roads not adopted by Council as their assets to maintain, such as unformed tracks on public land or Crown land or roads managed by other authorities and/or under private ownership including private shopping centres and private developments are not included in Council's Road Hierarchy. Roads shared with neighbouring Councils have been identified with the costs to maintain being shared between the responsible municipalities.

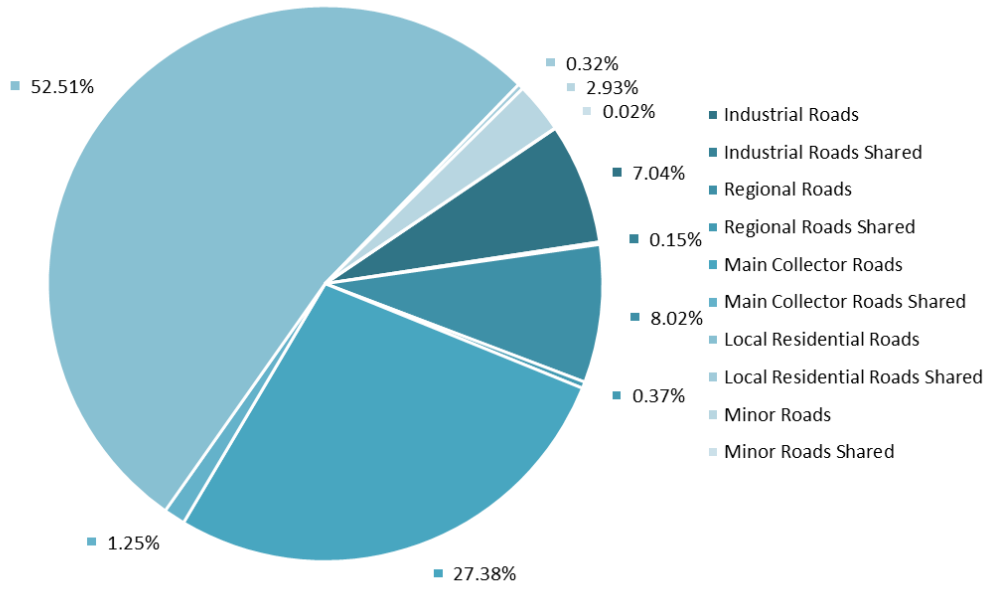
The hierarchy classification has been documented as follows.

Table 5: City of Parramatta Council Roads and Kerbs Hierarchy

Roads and kerbs Hierarchy	Service Function/Definition
Industrial Roads	Carry traffic having a trip end within the specific area; and Direct access to properties.
Industrial Roads – Common boundary	Same as industrial roads. Common boundary, each Council managing its own side.
Regional Roads	Longer distance strategic traffic movements; Connection between State arterial and main and secondary collector roads. Access to public transport. Through movement of public transport;
Regional Roads - Common boundary	Same as regional roads. Common boundary, each Council managing its own side.
Secondary Collector Roads	Connection between regional and local roads. Carry traffic having a trip end within the specific area. Direct access to properties. Access to public transport; and Local cycle movements.
Secondary Collector Roads - Common boundary	Same as secondary collector roads. Common boundary, each Council managing its own side.

Roads and kerbs Hierarchy	Service Function/Definition
Commercial Roads	Carry traffic having a trip end within the specific area; and Direct access to properties.
Main Collector Roads	Connection between regional and local roads. Carry traffic having a trip end within the specific area. Direct access to properties. Access to public transport; and Local cycle movements.
Commercial Roads Common boundary	Same as commercial roads. Common boundary, each Council/authority managing its own side.
Main Collector Roads Common boundary	Same as main collector roads. Common boundary, each Council managing its own side.
Local Residential Roads	A minor street whose primary function is to provide local residential property access; and Direct access to properties.
Local Residential Common boundary	Same as local residential roads. Common boundary, each Council managing its own side.
Minor Roads	A minor street whose primary function is to provide local residential property access; and Direct access to properties.
Minor Roads Common boundary	Same as minor roads. Common boundary, each Council managing its own side.

Figure 3: Distribution (%) of City of Parramatta Council Roads Network Area by Hierarchy as of 2021



3.1.2 Footpath

The City of Parramatta Council owns and manages approximately 1,472, 220 m^2 of footpaths, which are constructed and located within the road reserve, many of which are in varying condition.

At present, Council has adopted a footpath hierarchy which has been based upon the Road NAASRA Classification System as defined by AustRoads publications. The NAASRA system provides a consistent classification of roads predominantly based on their role within the overall road network.

The hierarchy classification has been documented below as follows.

Table 6: Footpath Hierarchy

NAASRA CLASS	NAASRA Definition	Footpath Hierarchy
1	Those roads which form the principal avenue for communication between major regions of the Commonwealth, including direct connections between capital cities.	Extreme
5	Those roads which provide almost exclusively for one activity or function, and which cannot be assigned to Classes 1, 2, 3 or 4.	High
6	Those roads whose main function is to form the principal avenue of communication for massive traffic movements.	High
7	Those roads, not being Class 6, whose main function is to supplement the Class 6 roads in providing for traffic movements or which distribute traffic to local street systems.	Moderate
8	Those roads, not being Class 6 or 7, whose main function is to provide access to abutting property.	Low
9	Those roads which provide almost exclusively for one activity or function, and which cannot be assigned to Classes 6, 7 and 8.	Low

3.1.3 Bridges

The City of Parramatta Council owns and manages approximately 109 bridges, which are constructed and located within the road reserve, many of which are in varying condition. Council also owns and manages bridges within parks and open space areas, which have also been included in this model.

At present, Council has adopted a bridge hierarchy as defined in the Table below. The bridge hierarchy classification provides a consistent classification of bridges predominantly based on their role within the overall bridge network which relates to their use and risk to pedestrians should they fail.

The hierarchy classification has been documented as follows.

Table 7: City of Parramatta Bridge Hierarchy

Bridge Hierarchy	Definition
Distributor	Bridges constructed on Distributor roads
Collector	Bridges constructed on Collector roads
Local Access	Bridges constructed on Local Access roads
Open Spaces	Bridges constructed within Open Spaces such as reserves and foreshore

3.2 LEVEL OF SERVICE HIERARCHY

The levels of service decision-making hierarchy at Council flows from:

- legislative requirements, to
- community expectation, to
- Council strategies.

Council uses the levels of service to measure its performance and establish forward works programs, maintenance schedules and delivery programs for short- and long-term planning.

3.3 CUSTOMER RESEARCH AND EXPECTATIONS

This AMP is prepared to facilitate consultation initially through feedback on draft AMP's prior to adoption by the Council. The AMP incorporates community consultation on service levels and costs of providing the service. This assists the Council and stakeholders in matching the level of service required, service risks and consequences with the community's ability and willingness to pay for the service.

Council conducts regular Community Surveys to measure satisfaction with services and to identify priorities. An annual survey polls a sample of residents on their level of satisfaction with Council's services. The customer satisfaction survey that was conducted in December 2023 reports the performance gaps and priority rankings.

Fig 4: Services and Facilities –Comparison to Targets

Community satisfaction results					
Measure	Target	2020	2021	2022	2023
Overall mean of community satisfaction rating of Council facilities	-	3.37	3.42	3.26	3.34
Opportunity to have your say on key issues affecting community	-	3.48	3.40	3.23	3.22
Council promoting sustainable transport options including footpaths, cycleways and public transport	-	-	3.59	3.28	3.26
Council is forward thinking	-	3.45	3.47	3.15	3.23
Council is innovative	-	3.50	3.34	3.13	3.22
Council's efforts to increase recycling	-	3.60	3.43	3.31	3.18
Planting of trees in your local area	3.59	3.59	3.71	3.38	3.34

Availability of parks, bushland or other green spaces	-	-	4.12	3.70	3.78
Food inspections	-	3.62	3.71	3.28	3.64
Patrolling and enforcement of parking regulations	3.48	3.48	3.52	-	-
Provision of cycleways and facilities	3.55	3.55	3.69	3.40	3.39
Maintenance of footpaths	3.58	3.58	3.67	3.24	3.24
Condition of local suburban roads	3.55	3.55	3.67	2.96	3.10
Waste collection services	3.92	3.92	4.00	3.76	3.71
Cleanliness of streets	3.82	3.82	3.86	3.53	3.39
Library services	92%	88%	90%	3.84	3.98
Parramatta Artists' Studios		3.63	3.51	3.29	3.34
Riverside Theatres	4.00	4.00	3.84	3.69	3.75
Community hub services (PHIVE/ WPCCL)	-	-	-	-	3.63
Provision of information on community issues, developments, and Council initiatives	3.46	3.46	3.43	3.24	3.20
New developments are in keeping with local character	-	3.00	3.06	2.79	-
New developments are well planned	-	3.03	3.07	2.72	2.90
Development Application Service	3.21	3.21	3.21	2.73	2.89
Availability of parking in commercial centres (city centre/local centres)	3.02	3.02	3.08	2.77	2.82

It is important that our community have a say. Obtaining community feedback on the condition of our assets is important for council to understand as it impacts how we prioritise work, allocate Council budget, make recommendations to Councillors on future budget decisions, including the level of rates required to fund important infrastructure and improve safety and quality of life for our community.

Council must maintain community infrastructure to acceptable standards for safety and functional usage. However, when determining the community levels of service, we look beyond the minimum standards and work with the community to define acceptable standards for a range of assets, so we can better align resources with community priorities.

Community Survey results

Council undertook community consultation via five in-person ward workshops from March to June 2024 which comprised a total of 194 residents and 13 Councillors representing the community.

In small table groups, the residents completed a participatory budgeting exercise to help determine future Council spending and better understand the priorities for each ward. Figures 5 and 6 below show the average results on spending and top priorities by each ward – this may indicate a performance expectation gap.

Fig 5: Community priorities VS our spend

Community proposed spend

Budget categories	% proposed spend	% current spend	% difference
Major works and construction	12.9%	13% (4)	- 0.1%
Maintaining roads, footpaths and drains	12.3%	17% (1)	- 4.7%
Parks, public spaces and recreation	11.0%	15% (2)	- 4%
Planning and development	11.0%	7% (7)	+ 4%
Waste management	9.6%	12% (5)	- 2.4%
Engineering and traffic	8.8%	2% (11)	+ 6.6%
Environmental sustainability	8.6%	4% (9)	+ 4.6%
Library and community services	7.8%	8% (6)	- 0.2%
Culture and events	7.4%	6% (8)	+ 1.4%
Administration and corporate services	6.9%	14% (3)	- 7.1%
Trade and fleet management	3.7%	2% (10)	+ 1.7%

Our current spend as per DPOP

Fig 6: Top 3 priorities by ward

Dundas	Parramatta	Rosehill	North Rocks	Epping
Major works and construction (14.9%)	**Planning and development (12.8%)**	Maintaining roads, footpaths and drains (14.1%)	Major works and construction (15.2%)	Maintaining roads, footpaths and drains (12.9%)
Waste management (12.5%)	Major works and construction (12.7%)	Major works and construction (12.4%)	Parks, public spaces and recreation (12.3%)	**Engineering and traffic (11.6%)**
Parks, public spaces and recreation (11.3%)	Parks, public spaces and recreation (11.6%)	Parks, public spaces and recreation (10.7%)	Maintaining roads, footpaths and drains (12.0%)	Planning and development (11.5%)

Workshop participants were asked what changes or improvement they would like to see in their local area by 2050. The top themes that were gathered from workshop feedback and helped in the development of Parramatta 2050 are illustrated below in Fig 7.

Fig 7: Changes or improvements in local area by 2050

The top themes:

- Improvement of **mobility infrastructure** (public and active transport)
- Improvement and increase of **social infrastructure**
- Preserving and expanding **green space and associated amenities**
- Improved **planning, city design** and **place making**
- More and improved **community services** in local areas

3.4 STRATEGIC AND CORPORATE GOALS

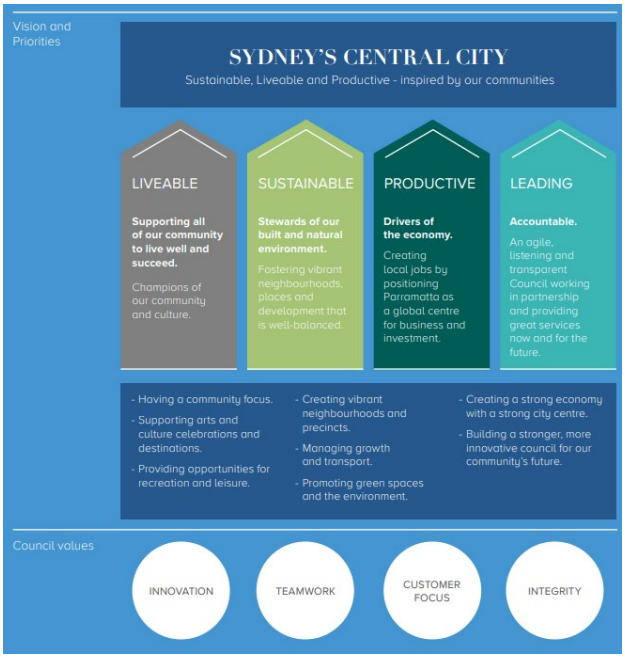
This AMP is prepared under the direction of the City of Parramatta's vision, mission, goals and objectives.

Our vision is: *Sydney's central city, sustainable, liveable, and productive – inspired by our communities.*

Underpinning the City of Parramatta Vision are 6 Key Result Areas (KRAs) that provide the big picture results, which the community would like Council and its many partners to focus on achieving. These KRAs are as follows.

- Fair - We can all benefit from the opportunities our City offers
- Accessible - We can all get to where we want to go
- Green - We care for and enjoy our environment
- Welcoming - We celebrate culture and diversity - past, present and future
- Thriving - We benefit from having a thriving CBD and local centres
- Innovative - We collaborate and champion new ideas to create a better future

Fig 8: City of Parramatta Vision and Priorities Framework



Relevant goals and objectives and how these are addressed in this asset management plan are:

Table 8: Priorities and how these are addressed in this Plan

Goal	Objective	How Goal and Objectives are addressed in AMP
Building a stronger, more innovative council for our community's future	Ensuring we provide high quality services and projects that meet the needs of our community whilst being open and transparent and financially prudent. We will engage and communicate with our community about our plans and progress and ensure that we continue to provide inspirational leadership and good governance. We will provide responsive regulatory functions that address community issues. Be at the forefront of innovation by harnessing leading-edge technology.	City of Parramatta plan for the total cost of ownership of Council assets and services. Asset management governance supports evidence-based decision making. Council will utilise predictive modelling in order to model the performance of council's assets
Managing Growth and Transport	Work with government partners to improve connections and traffic flow within and through the City of Parramatta to connect people to jobs and the rest of the region. Managing the parking and transport needs of residents, visitors and workers. Create truly great spaces and places for the community through well managed development. Ensure that green and open spaces are created, protected and maintained in line with population growth. Advocate to State and Federal agencies and business to ensure that there is the right infrastructure at the right time including traffic and transport solutions, schools and open space planning. Harnessing the benefits of growth for all.	Council will maintain community infrastructure as per our asset management policy and strategies and seek to meet and manage community expectations around safety, amenity and access.
Promoting green spaces and the environment	To create a green city by creating and maintaining green spaces, bushland and waterways for residents and visitors to enjoy. To create an eco-efficient city that through good planning uses less energy and water whilst recycling more waste efficiently as the City grows – doing more with less. Protect and enhance our natural bushland.	Council will ensure natural areas and bushland is sustainably funded to ensure environment protection outcomes are met.
Providing opportunities for recreation and leisure	Create more active travel options and maintain accessible and high quality facilities to promote healthy and active lifestyles amongst our growing local government area. Maintain the City's reputation as a premier sporting destination.	Council will ensure the provision of open space and recreational areas that our community and residents can utilise to facilitate healthy and active lifestyles.

Creating a strong economy with a strong city centre	Create a centre that can generate jobs for everyone, attract business and investment and provide better services in order to meet the demands of population growth. Create a well-connected, efficient city and neighbourhoods, attract high skill knowledge intensive jobs and promote Parramatta as a knowledge hub and a centre for ideas and excellence. Ensure that Parramatta Square Development is the key economic driver to deliver world-class office, retail, residential and public space to accommodate growth and stimulate employment. Work with key partners to create a city centre that is a high value-adding, employment hub and driving force behind the generation of new wealth in Western Sydney.	Council will plan for the delivery of major developments to ensure world class public domain areas are maintained to an agreed level of service and contributes to the value adding force behind new growth in employment and residential populations
Having a community focus	Foster and celebrate a sense of community that is friendly, welcoming and embraces diversity. Respect, protect and celebrate the Aboriginal and European heritage, songlines, stories and history of our city. Create a place that encourages social connectivity and is inclusive and accessible for all. Understand the needs of the community and ensure the provision of relevant, accessible and exceptional services.	Council will maintain and plan for public artworks and heritage interpretation assets within the LGA. This includes ensuring maintenance plans and adequate funding is secured to manage these asset types.
Supporting arts and culture celebrations and destinations	Celebrate our cultural life and build positive perceptions of Parramatta by delivering a program of high quality festivals, local and major events and street activities. Provide a variety of cultural experiences and attractions unique to Parramatta which make it a destination of choice for residents and visitors.	No asset related outcome
Creating vibrant neighbourhood and precincts	Drive renewal in key precincts in order to increase jobs, housing, development and transport options including Epping, Camellia, Westmead, Wentworth Point, the Greater Parramatta to Olympic Park (GPOP) areas. Create welcoming and distinctive local neighbourhoods, that foster a sense of community and local identity for residents right across the Local Government area.	Council will continue to invest in the assets within key precincts including the upgrade of existing assets, planning for new assets, and maintaining/ renewing assets when they underperform

The City of Parramatta will exercise its duty of care to ensure public safety in accordance with the infrastructure risk management plan prepared in conjunction with this AMP. Management of infrastructure risks is covered in Section 7.

3.5 LEGISLATIVE REQUIREMENTS

There are many legislative requirements relating to the management of assets. These include:

Table 9: Legislative Requirements

Legislation	Requirement
Local Government Act	Sets out role, purpose, responsibilities and powers of local governments. Draft Bill 2009 includes the preparation of a long term financial plan supported by asset management plans for sustainable service delivery. The purposes of this Act are as follows: (a) to provide the legal framework for an effective, efficient, environmentally responsible and open system of local government in New South Wales, (b) to regulate the relationships between the people and bodies comprising the system of local government in New South Wales, (c) to encourage and assist the effective participation of local communities in the affairs of local government, (d) to give councils: • the ability to provide goods, services and facilities, and to carry out activities, appropriate to the current and future needs of local communities and of the wider public • the responsibility for administering some regulatory systems under this Act • a role in the management, improvement and development of the resources of their areas, (e) to require councils, councillors and council employees to have regard to the principles of ecologically sustainable development in carrying out their responsibilities.
Environmental Planning and Assessment Act 1979	An Act to institute a system of environmental planning and assessment for the State of New South Wales. Among other requirements the Act outlines the requirement for the preparation of Local Environmental Plans (LEP), Development Control Plans (DCP), Environmental Impact Assessments (EIA) and Environmental Impact Statements.
Protection of the Environment Operations Act 1997	Council is required to exercise due diligence to avoid environmental impact and among others are required to develop operations emergency plans and due diligence plans to ensure that procedures are in place to prevent or minimise pollution.
Building Code of Australia (BCA)	The objectives of the BCA are to enable the achievement and maintenance of acceptable standards of structural sufficiency, safety (including safety from fire), health and amenity for the benefit of the community now and in the future. These goals are applied so that the BCA extends no further than is necessary in the public interest, are cost effective, easily understood, and are not needlessly onerous in its application. The BCA contains technical provisions for the design and construction of buildings and other structures, covering such matters as structure, fire resistance, access and egress, services and equipment, and certain aspects of health and amenity.
Australian Standards & Codes of Practice	Various AS relevant to the asset class. Referenced in the Building Code of Australia. Governs a vast range of building construction and management
Crown Lands Act	An Act to provide for the administration and management of Crown land in the Eastern and Central Division of the State of NSW Council has large holdings of Crown land under it care control and management.
Road Transport (Safety and Traffic Management) Act 1999	Facilitates the adoption of nationally consistent road rules in NSW, the Australian Road Rules. It also makes provision for safety and traffic management on roads and roads related areas including alcohol and other drug use, speeding and other dangerous driving, traffic control devices and vehicle safety accidents.
Road Transport (General) Act	Provides for the administration and enforcement of road transport legislation.

2005 Road Transport (General) Amendment Regulation 2008	It provides for the review of decisions made under road transport legislation. It makes provision for the use of vehicles on roads and road related areas and also with respect to written off and wrecked vehicles.
Roads Act 1993	Sets out rights of members of the public to pass along public roads, establishes procedures for opening and closing a public road, and provides for the classification of roads. It also provides for declaration of the RTA and other public authorities as roads authorities for both classified and unclassified roads, and confers certain functions (in particular, the function of carrying out roadwork) on the RTA and other roads authorities. Finally, it provides for distribution of functions conferred by this Act between the RTA and other roads authorities and regulates the carrying out of various activities on public roads.
Australian Accounting Standards	Prescribes requirements for recognition and depreciation of property, plant and equipment assets.
Dam Safety Act 2015 and Dam Safety Regulations 2019.	The legislation under the Act and Regulation stipulates the requirements for management of Dams and Detention Basins.

3.6 CURRENT LEVEL OF SERVICES

3.6.1 Level of Service Description

Levels of service (LOS) underpin asset management decisions, it defines service quality for a particular activity or service area against which service performance can be measured. When levels of service are considered collectively, they provide clarity and assist with meeting council's strategic objectives. They provide the basis for the life-cycle management strategies and works programme identified within the AMP.

Levels of service support the Organisation's strategic goals and are based on customer expectations and statutory requirements.

Levels of service can be broken down into three basic aspects:

Function – its purpose for the community.

Design Parameters – what is required of and from the asset itself.

Performance & Presentation - the effectiveness of the service and ensuring it is safe, clean and appropriate for use.

The objective of asset management is to enable assets to be managed so that agreed Levels of Service are consistently delivered in the most cost effective way. There are two types of Level of Service:

- 'Community' Levels of Service are related to the service that the customer receives. The community expectations regarding levels of service are communicated to Council via consultation. These levels of service are also established by Council taking the communities expectations, legislative requirements and available funding into account.

- 'Technical' Levels of Service are operational in nature and are how Council officers establish and manage the operation and maintenance required to ensure that the Customer Levels of Service are being achieved.

By setting community and technical levels of service, Council can assess and monitor its assets performance. Council can then be held accountable and is able to report to the community on the

asset performance. In the long term this will ensure that Council funds are spent where the community want them to be spent, and assets are maintained in the most cost effective manner.

Council is developing the performance targets from the established level of services and incorporated improvement action plan, future versions of this AMP will include all classes of assets LOS and KPI's.

3.6.2 Strategic Level of Services

Community Levels of Service, communicate the philosophies of Council in relation to the management of the RI assets portfolio including the rehabilitation and renewal of these assets as they deteriorate due to age and use.
The strategic level of service relates to how the community receives the service in terms of safety, quality, quantity, reliability, responsiveness, cost/efficiency and legislative compliance.

The feedback and responses allow Council to set the performance standards at the strategic level providing guidance for the management of Council's RI asset portfolio.

The performance standard for this section is simply based on the number of complaints or Service Requests received by the community. The performance targets identified with in the customer service and technical LOS allows Council to adequately maintain the assets and deliver services.

3.7 CUSTOMER LEVEL OF SERVICE

Customer Levels of Service measure how the customer receives the service and whether value to the customer is provided. Customer levels of service measures used in the AMP are:

Quality	How good is the service. W*hat is the condition of the road surface?*
Function	Is it suitable for its intended purpose. *Is it the right sized footpath to provide the access required?*
Capacity/Use	Is the service over or under used. D*o we need more or less of these assets? How effectively is the footpath being used?*

The current and expected customer service levels are detailed in Tables 10–12 shows the expected levels of service based on resource levels in the current long-term financial plan.

Organisational measures 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. Key performance criteria have been developed based on LOS and targets set to measure the performance for different class of assets.

These provide a balance compared to customer perception that can be more subjective.

Table 10: Customer Level of Service

Key Performance Measure	Level of Service	Performance Measurement Process	Performance Target
Quality	Well maintained and suitable transport network	Number of customer requests relating to road maintenance. Completion of the and projects (CAPEX and Renewal) within the financial year. Development of annual renewal program.	<1% of the total population per annum 90% of renewal program valued for the FY delivered. 95% of CAPEX delivered in FY. Programs developed with the prescribed timeframe.
Function, capacity and availability	Transport assets meet community needs. Assets are available in suitable condition for public use all year round. A commitment to continually provide services in the most cost-effective manner. Planning of CBD/town centre as focal point – infrastructure assets to support the business district, commercial space, offices, retails facilities, logistic infrastructure, public transport (network connections), cultural and recreational centres.	Annual Customer Voice satisfaction and importance in condition of roads and civil assets. Number of road closures due to degraded asset condition. Lifecycle costs are captured within performance modelling. Planning studies, modelling and strategies developed for infrastructure deliver to meet the demand.	Level 2 Priority (Satisfaction to Importance). Road closure - <2 per annum. 100% compliance to standards (technical and accounting). Planning document being developed.
Responsiveness	Response time to customer requests.	Time taken to finalise road related requests.	>80% of requests adequately responded with in the timeframe.
Safety	Transport assets are safe for residents and users. Assets are routinely inspected for hazards and risk free.	Number of injuries attributable to transport assets condition. No of reportable incidents due to defects per year <=10	Number of claims Council has settled due to design and condition. Not more than claims 3 per annum. Assets inspected twice in FY and recorded in asset systems.
Environment	A commitment to continually improve environmental efficiencies and promote sustainability.	Aim to reduce the use of natural resources when constructing new/ existing assets	Not currently measured.

3.8 TECHNICAL LEVEL OF SERVICE

Technical Levels of Service measures are based on what the city does to ensure delivery of the service. These measures support customer measures and tend to be used internally. Technical measures can also be further divided into longer term measures for asset management planning, measure performance, and shorter-term operational measures for delivering asset life-cycle activities.

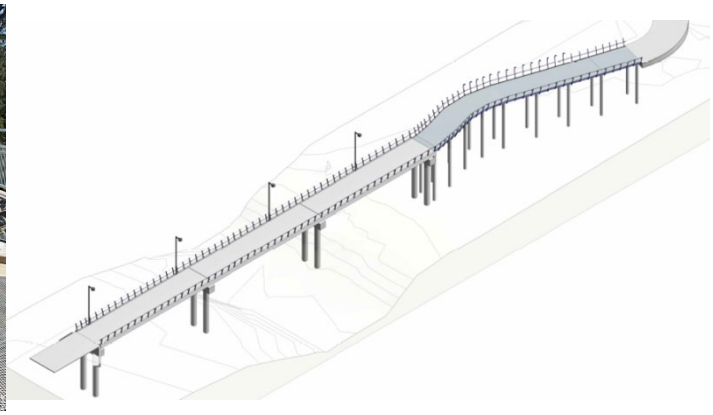
Detailed Technical Levels of Service are required to assess performance on a day-to-day basis to guide decision making and workflows. The prime objective in setting the Technical or operational Levels of Service is to set targets that will lead to achieving the desired Community-based Service Levels. These include response times, work standards and condition ratings.

These technical measures relate to the allocation of resources to service activities to best achieve the desired customer outcomes and demonstrate effective performance.

Technical service measures are linked to the activities and annual budget allocation to particular asset based on the following categories.

- Acquisition – the activities to provide a higher level of service (e.g. road widening or construction of new road, new facilities to meet the growth demand.
- Operations – the regular activities to provide services (e.g. opening hours, cleansing, mowing grass, energy, 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. road patching, unsealed road grading, building and structure repairs),
- Renewal – the activities that return the service capability of an asset up to that which it had originally (e.g. road resurfacing and pavement reconstruction, pipeline replacement and building component replacement),
- Upgrade/New – the activities to provide a higher level of service (e.g. widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library).

Service Managers, Finance and Asset Managers collaboratively plan, implement and control technical service levels to influence the customer service levels.[6]



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

Table 11: Technical Level of Service

Asset Category	Key Performance	Measures Level of Service	Performance Measure Process	Performance Target
Road	Quality	Provide smooth sealed road surface, improved ride quality. Resurfacing of road surface, pavement repair/replacement – Roads to be in satisfactory condition. (Renewal) Pothole patching and road repairs to avoid extensive damage to the road pavements. (Maintenance)	Condition assessment every five years. Completion of the annual capital and renewal program for the FY. Surface, pavement condition and useful life. 90% of service request actioned within allocated time.	90% of all road seals be in satisfactory condition i.e. rated condition 3 or better (on a rating scale of 1-5). Completion of condition audits every four years. 90% of renewal program value delivered in FY. 80% heavy patching, road patching and maintenance completed for the FY. Maintain current performance.
	Capacity	Provide carriageway width and road capacity sufficient for traffic volumes	Review geometric design	Minimum to satisfy current Australian Standard
		Provide pavements of sufficient pavement thickness and capacity to carry loads from traffic	Review pavement design	As per Project Reliability section in the Business Process Manual and analysis recommended by Austroads Pavement Design Guide
	Safety	Provide road surface free from hazards. Routine sweeping, making sure roads are cleaned and free from debris. (Operational)	Insurance claims/incidents. Apply a risk management approach to road inspections. Inspection and condition survey. Frequency of cleaning.	Number of claims Council has settled due to design and condition. Claims - not more than 3 per annum. 50% to be inspected annually. Scheduled street sweeping program – maintain current performance.
		Street Lighting	Adequate Light Levels as per AS 1158.0:2005	Illuminate for a safer road environment, new facilities on the road to have sufficient lighting and complying with the new public lighting standard.

Asset Category	Key Performance	Measures Level of Service	Performance Measure Process	Performance Target
	Function	Adequate road widths for traffic demands	Minimum widths as part of design and construction specifications.	All new dedicated assets meet design and construction specifications.
Kerb and Gutter	Quality	Provide lateral support to road pavement and roadside drainage	Condition rating (carried out on a 5 yearly cycle)	90% of all kerb and gutter in satisfactory condition i.e. rated condition 3 or better (on a rating scale of 1-5)
	Capacity	Provide effective road drainage.	Condition surveys	More than 90% of kerb & gutter sections are free from water ponding 24 hours after storm event
	Safety	Provide roadside drainage free from trip hazards	Insurance claims/incidents	Number of claims Council has settled due to design and condition. Not more than 3 per annum.
	Function	Provide effective road drainage	Appropriate grades	All longitudinal grades > 0.6%
Footpaths and Shared User Paths	Quality	Compliant, accessible, and well-maintained (smooth), aesthetically pleasing pathways for convenient travel across the LGA. Percentage of footpaths in excellent - fair condition (1-3) and percentage in poor or very poor condition (4-5).	Condition rating (completed within a 5-year cycle). CBD Paving guideline Annual inspections/audits.	>90% of network condition score <3. All replacements to comply with CBD guidelines. Fewer than 200 customer maintenance requests for pathways annually.
	Capacity	Sufficient width of paths for footpath and SUP. Meeting the demand/growth. Reconstruction to comply with town centre master plans.	Geometric design, meet Austroads design standard (Part 6A). Widening paths, compliance to CBD Guidelines.	Minimum to satisfy current Australian Standards. Increased usage of 'active transport' (walking cycling). CBD & town centre public domain space area developed in section to meet new guidelines.
	Safety	Reduces insurance claims annually related to pathways. Remove hazards	Annual audits	<80% of footpath network without defect. Insurance claim <20pa.

Asset Category	Key Performance	Measures Level of Service	Performance Measure Process	Performance Target
		and trips in public domain space/nature strip area. Paths are constructed to CoP/TfNSW standards. Appropriate facilities for impaired people.	Insurance claims/incidents reports. Inspections/compliance with specifications.	The new footpath is constructed as per Austroads standards. Longitudinal fall and cross fall are correct, ramp, and landing are constructed to council and TfNSW standard.
		Street Lighting	Adequate Light Levels as per AS 1158.0:2005. Public light inspection	Illuminate public and pedestrian areas to a standard that provides a safe and comfortable visual environment for pedestrians at night.
	Function	Fully accessible paths connecting to facilities, community buildings, transport hub etc. Path linkage to local, regional, and recreational network	Annual audits Identify missing links	>90% compliant paths in LGA. DDA Compliance. Crossings on pedestrian desire line. The number of customer requests <20pa on accessibility and linkage.
Ancillary Asset - Transport Assets (Traffic facilities, LATM's, bus facilities, street furniture, and car parks). Other structures /shared structures (Public lighting, utility services, free-standing/digital	Quality	Well-maintained asset meets community standards and high-quality device and facilities/fit for purpose.	Condition rating (completed within a 5-year cycle). Annual inspections/audits.	>90% of asset condition score <3. All replacements to comply with new standards and CBD guidelines. Fewer than 200 customer maintenance requests for particular asset type annually.
	Capacity	Asset capacity is sufficient, without any obstruction, and efficiency/output is >80%. Asset meets service demand/growth.	Audit/inspection to confirm asset meets design standard, TfNSW traffic guidelines, and meets DDA requirement.	Minimum to satisfy current Australian Standards, TfNSW guidelines and standards.
	Safety	Reduces insurance claims annually related to the particular asset type. Asset kept at the safe operating level.	Annual audits of ancillary asset.	Asset meets current WHS standards, design guidelines and DDA requirements. Insurance claim <20pa.

Asset Category	Key Performance	Measures Level of Service	Performance Measure Process	Performance Target
units, blinds, sound walls, retaining walls, fence, railing,			Insurance claims/incidents reports. Inspections/compliance with specifications.	
		Public Lighting	Adequate Light Levels as per AS 1158.0:2005. Public light inspection	Illuminate public and pedestrian areas to a standard that provides a safe and comfortable visual environment for pedestrians at night.
	Function	Asset functioning well, appropriate for its intended use.	Audit asset is fit for purpose. Regulation/design changes.	Asset meets technical/industry standard >90%.
Bridges	Quality	Well-maintained and suitable bridge and overpass structures.	Customer requests	<100 request/complaints per annum.
	Flooding	Variability of climate and flood frequency impact on the serviceability of bridges.	Map bridge vulnerability under various flood scenarios	Improve flood resilience of the bridge network.
	Design Parameters	Carry out Level 3+ survey of strategic bridges	Bridge is suitable to meet future demand	Know the Load (capacity, design, performance etc) for 20 strategically important bridges per annum. (Level 3)
	Customer Satisfaction	Condition of bridge and overpass structures.	Customer Survey	Score >= 6 out of 10 in LGA Annual Customer Survey
	Responsiveness	Response time to customer requests.	Time taken to close requests.	> 70% of all requests adequately responded to within target.
	Condition – bridge and overpass structures.	Level 2 condition assessment of bridge and overpass structure assets network every 3 years.	Condition Assessment	On average, bridge and overpass structure network to be in Overall Condition 2.5 (out of 5) or better, with 1 being the best.

It is important to monitor the service levels provided regularly as these will change. The current performance is influences by work efficiencies and technology, and customer priorities will change over time. Review and establishment of the agreed position which achieves the best balance between service, risk and cost is essential.

Table 12: Technical Level of Service – Bridge Assets (Component level)

ROUTINE MAINTENANCE ITEMS	INTERVENTION LEVEL	RESPONSE TIME		
		HIERARCHY		
		Regional Collector Industrial	Local Residential Minor	Performance Targets
ROAD BRIDGE				
1.0 – Road				
1.1 Retro-reflective markers Maintenance	Reflective markers are damaged or missing or obscured as identified by Council Staff > 3 missing	5 Days	14 Days	80%
1.2 Joint Maintenance	Worn expansion joints, cork joint, compression joint or assembly joint / seal require rehabilitation due to abrasion / tearing	90 Days	120 Days	80%
1.3 Bridge Wearing Surface Maintenance	>150mm wide or 50mm deep pothole and/or >50mm vertical displacement and/or >20m^2 plate size crocodile cracking	90 Days	120 Days	80%
1.4 Kerbs Maintenance	Replacement of between 3m and 20m of kerb which holds water extending > 1m into roadway and/or < 20m of kerb where rotation, vertical or horizontal displacement > 100mm	365 Days	365 Days	80%
2.0 - Guardrail / Barriers				

2.1 Guardrail / Barrier Maintenance (S)	Guardrail / balustrade identified as having loose bolts connections, safety issue or accident damage and/or approach rails misaligned or about to fall over, safety issue*	Make safe / Isolate 1 Day	Make safe / Isolate 1 Day	80%
2.2 Guardrail / Barrier Maintenance (NS)	Guardrail / balustrade identified as having loose bolts connections, non-safety issue or accident damage and/or approach rails misaligned requiring repair, non-safety issue	90 Days	120 Days	80%
3.0 - Road Drainage				
3.1 Road Drainage Maintenance	Scuppers, drains, gully traps >50% blocked and non-draining	20 Days - Timber 30 Days - Other	40 Days - Timber 60 Days - Other	80%
4.0 - Waterway, Vegetation and Debris				
4.1 Deck & Footway Cleaning	**Routine Maintenance** Build-up of aggregate, soil & debris capable of: a) Supporting vegetation growth b) Impeding flow of water	As Per Cleansing Program	As Per Cleansing Program	80%
4.2 Deck & Footway Cleaning	**Emergency Works *** Build-up of aggregate, soil & debris capable of: a) Supporting vegetation growth b) Impeding flow of water	2 Days	2 Days	80%
4.3 Waterway Clearing	**Routine Maintenance** Where debris impedes the performance of the bridge / culvert structure > 50% of waterway exit points blocked	As Per Natural Resources Program	As Per Natural Resources Program	80%
4.4 Waterway Clearing	**Emergency Works *** Where debris impedes the performance of the bridge / culvert structure > 50% of waterway exit points blocked	4 Days	7 Days	80%
5.0 - Footpaths				
5.1 Footpath Maintenance	>40mm vertical displacement for area less than $5m^2$ and/or 20mm wide cracks over a distance of 1m or more.	Make safe 1 day Replace 14 days	Make Safe 2 Days Replace 28 days	80%

6.0 - Expansion Joints				
7.0 - Bearings				
7.1 Bearing Maintenance	Bearings show signs of significant cracking, splitting or bulging may be present. Moderate misalignment or lateral movement may be present. Dowels may be severely corroded.	120 Days – Investigation Up to 2 Years to complete repair	120 Days – Investigation Up to 2 Years to complete repair	80%
8.0 - Superstructure				
8.1 Timber Deck Maintenance	Local decay, insect infestation, or crushing of some timber laminates may exist. Some relative movement between laminates may be observed under traffic. There may be local loss of prestress and the tie down bolts may be loose. The defects are only affecting the deck locally < $20m^2$	30 Days Make Safe Immediately	120 Days Make Safe Immediately	80%
8.2 Deck Maintenance	Some delamination's, significant cracks or spalls may be present. Corrosion of non-prestressed reinforcement may be present, but loss of section is minor. There is not sufficient concern to warrant an analysis to ascertain the impact on the strength and/or serviceability of either the element or the bridge.	180 Days	365 Days	80%
8.3 Superstructure Maintenance	Bracing, crossheads, bearers show signs of wear, rot, termite presence, decay, spalling or cracking. Material defects or damage to beams/stringers, fasteners, soffit, Cross-bracing or coatings. Debris/dirt build-up, impact damage, excessive movement / vibration, dampness through deck, condition of air release holes. All affecting less than 20% of structure.	180 Days	365 Days	80%
9.0 - Substructure				

9.1 Substructure Maintenance	Columns, piles, headstock show signs of wear, rot, termite presence, decay, spalling or cracking. Material defects to piles, footings, walls, or cap beams. All affecting less than 20% of structure.	180 Days	365 Days	80%
9.2 Abutment Maintenance	Abutment show signs of wear, rot, termite presence, decay, spalling, cracking or loose components. All affecting less than 20% of structure.	180 Days	365 Days	80%
10.0-General				
10.1 Graffiti Offensive	When graffiti is visible to the public	1 Day	1 Day	80%
10.2 Graffiti Non-Offensive	When graffiti is present	4 Days	7 Days	80%
10.3 Painting	The paint work is no longer effective on significant areas. There will be exposed timber or metal or concrete.	60 Days	90 Days	80%
10.4 Termite Treatment	Application of termite treatment	Every 6 months	Annually	80%

Note: * Current activities and costs (currently funded).
** Desired activities and costs to sustain current service levels and achieve minimum life cycle costs (not currently funded)

3.9 DESIRED LEVEL OF SERVICE

An initial Community (Strategic) and Technical (Operational) Levels of Service document to guide and assist Council has been developed regarding ongoing management of its RI Assets portfolio. Any changes in the future to the Levels of Service for any of Council's RI assets will be in accordance with this document.

The development of the Levels of Service has considered:

- Customer research and expectations
- Strategic goals and objectives
- Legislative requirements
- Current asset condition
- Road Hierarchy
- Funding requirements

The RI assets condition and hierarchy categorisation framework is continually being reviewed through the 10 year Plan and 1 year (operational plan) and 4 year (delivery program) Programs. It is intended to use this framework to guide and establish more specific levels of service and performance criteria, asset management, transport asset maintenance and renewal and expenditure prioritisation into the future.

Table 13: Road Classification and intervention level

Council's Classification	NAASRA Classification	Description	Intervention Condition Level
Regional Roads	Class 6	Regional	3
Main Collector	Class 7	Collector Roads	3
Secondary Collector			
Residential Road	Class 8	Local Roads	4
Minor Roads	Class 9	Minor Roads	4
Commercial Roads	Class 7, 8, 9	Commercial Roads	3
Industrial Roads	Class 5	Industrial Roads	3

Further development of the levels of service will be undertaken in consultation with the various business units within Council. These will be documented in future revisions of this AMP.

The asset management planning process includes the development of three scenarios to develop Levels of Service that are financially sustainable.

Scenario 1 – What we need to do (spend) in the next 10 years to sustain current service levels plus planned upgrade new / new assets / services aligned with the Long Term Financial Plan, Delivery Program, Operational Plan, and Asset Strategy.

Scenario 2 – What we need to do (spend) in the next 10 years to sustain current service levels plus planned upgrade new / new assets / services using Method 2 (Condition Modelling) or Method 3

(Network Renewals / Defect Repairs).

Scenario 3 – What we can do and be financially sustainable with AMP's matching Long Term Financial Plan (LTFP), identifying major capital renewal and upgrade/new proposals that cannot be done in the next 10 years, determining the service consequences (service levels below desired levels) and service risks associated with the deferral of these proposals.

What options do we have?

Resolving the funding shortfall involves several steps:

- Improving asset knowledge so that data accurately records the asset inventory, how assets are performing, and when assets are not able to provide the required service levels.
- Improving our efficiency in operating, maintaining, renewing, and replacing existing assets to optimise lifecycle costs.
- Identifying and managing risks associated with providing services from infrastructure.
- Making trade-offs between service levels and costs to ensure that the community receives the best return from infrastructure.
- Identifying assets surplus to needs for disposal to make saving in future operations and maintenance costs.
- Consulting with the community to ensure that water infrastructure services and costs meet community needs and are affordable.
- Developing partnership with other bodies, where available to provide services.
- Seeking additional funding from governments and other bodies to better reflect a 'whole of government' funding approach to infrastructure services.

What happens if we don't manage the shortfall?

It is likely that we will have to reduce service levels in some areas, unless new sources of revenue are found. For civil infrastructure, the service level reduction may include reduction of the frequency of routine maintenance such as street sweeping, road and drainage maintenance, and delay on delivery of new structures. Reduction in maintenance in other areas may accelerate the consumption of some asset groups.

What can we do?

We can develop options, costs, and priorities for future civil infrastructure services, consult with the community to plan future services to match the community service needs with ability to pay for services, and maximise community benefits against costs. Seek funding from State Government for delivery of planned works.

4.0

FUTURE DEMAND

4.1 DEMAND DRIVERS

Demand Drivers predominately affecting the RI assets portfolio 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.

Demand for new services is being managed through a combination of managing existing assets, where appropriate upgrade of existing assets and providing new assets to meet demand through a variety of delivery mechanisms mentioned within Section 5 of this report.

Council can currently sustainably fund and maintain its existing roads, footpath and bridges portfolio to a satisfactory condition, which will allow it to meet existing community and operational demands. Almost 84% of transport assets currently score a condition rating of 3 or better (Satisfactory). Further in-depth long term planning is still required to identify if Council has the required asset in the required place to perform the required function.

The RI assets portfolio is being managed to ensure continued service provision as well as allowing for the future growth. Given Parramatta's geographical significance, planning for both the current and future communities is required and will need to include services for groups outside of the Parramatta LGA, being the wider Sydney region.

Additional in-depth and long term planning is required to identify if Council has the required asset in the required place to perform the required function. To assist in addressing the demand into the future Council is currently undergoing numerous detailed planning studies to ensure that the future growth of the LGA is accounted for. These studies take into consideration the meeting of demand from Council's existing stock, future programmed assets via a range of delivery mechanisms, as well as service delivery via assets owned by other organisations.

Demographic analysis for the Parramatta LGA demonstrates that the population is extremely diverse which results in a need for access to a full range of social infrastructure. Current trends also identify a need for flexible, multi-purpose facilities that cater to a broad range of interests and that can adapt as needs change.

The CBD of Parramatta is undergoing a substantial planning review by Council to facilitate the significant growth for the LGA and region. This will have a substantial increase and further concentrate worker and residential population numbers. To address this, Council is also undergoing its own significant property redevelopment program of its CBD assets to facilitate growth of the organisation, community and region.

Future versions of this AMP will take into consideration the numerous Strategies and Programs currently under development by Council, including the financial considerations for each being Capital New, Renewal, Maintenance and Operational requirements. These Strategies and Programs include but are not limited to:

1. Lennox Bridge Car Park Redevelopment.
2. Riverside Theatre.

3. Parramatta Riverbank.
4. Multi Storey Car Park Redevelopment Projects.
5. North Parramatta Urban Growth Release.
6. Parramatta Square (PS) Redevelopment – Project recently completed.

As stated above, Council is undertaking planning studies forecasting the growth and demand into the future and considering the delivery mechanisms to meet future service delivery targets.

It is envisaged that demand identification and management will be further and continually identified though stakeholder engagement within this AMP and then delivered through an annual and four year Program consisting of:

- Acquisition, Disposal and Reclassification.
- Development.
- Capital New and Renewal.
- Maintenance and Operation.

4.2 DEMAND FORECAST

The present position and projections for demand drivers that may impact future service delivery and utilisation of assets have been identified in number of recent studies undertaken by Council, being the Community Infrastructure Strategy and the CBD Infrastructure Needs Study, which were undertaken in 2017 and 2019. The findings of the studies have been used to inform the draft Developer Contribution Plan. Further studies are underway, and demand forecast for civil infrastructure will be developed once the revised environment, social, economic strategies are formally adopted by Council.

4.3 KEY TRENDS

Various factors that may impact on road assets in the future as a result of population growth include:

- Residential development
- Town centre improvement/CBD Planning and proposals
- Growth in industrial areas
- Traffic trends and travel patterns
- Car ownership
- Annual vehicle usage
- Fuel prices
- Vehicle types and configurations
- Public transport

4.4 Parramatta CBD Planning Study and CBD Planning Proposal

A major Council objective that will impact the demand on RI assets within the CBD and surrounds is the current Parramatta CBD Planning Study. The objectives of this Strategy are:

1. To set the vision for the growth of the Parramatta CBD as Australia's next great city.
2. To establish principles and actions to guide a new planning framework for the Parramatta CBD.
3. To provide a clear implementation plan for delivery of the new planning framework for the Parramatta CBD.

The Parramatta CBD Planning Strategy sets the direction for the project and details the 'Actions' that will inform a future Planning Proposal to amend the planning controls for the CBD. Further details are available on Council website.

The work required to implement the identified actions and progress a formal Planning Proposal for the CBD are detailed in the Strategy's 'Implementation Plan'. This includes several technical studies, including an infrastructure needs analysis. Most asset classes will require Needs/Impact Studies that will inform the infrastructure needs analysis which Council is currently undertaking as part of the review of the Parramatta CBD Planning Framework.

4.4.1 Implications for the Asset Management Plan

In the 15/16 financial year City Strategy assessed the implications of what increases in FSR with no height limits may have on the Parramatta CBD and surrounds (North Parramatta and Harris Park) in terms of required community facilities, traffic, transport, environment, storm water and heritage. This is being referred to as an Infrastructure Needs Assessment for Social Services, Education & Community Facilities.

The increase in FSR and the impacts upon existing assets will be further considered in detail, including whether the existing assets have appropriate capacity to receive new future additional network demands or if new assets are required to meet service delivery requirements.

As the new planning controls will also allow for the significant growth in workers and residents and in turn impact Council's building and infrastructure network, Council's review process is also identifying all of the required infrastructure that the Parramatta City Centre needs over the next 10 - 20 years in this study area. In doing so, it will also identify the proportion of 7.11 funds that will be required to deliver the Needs Assessment. At the end of this review process there will be a new draft Civic Improvement Plan and 7.11 plan for Parramatta City Centre, with funds allocated to different areas of Council for delivery of the works, including Council's building and RI portfolio.

Future RI requirements in consultation of the above mentioned process will be identified and included within future versions of this AMP.

4.5 DEMAND MANAGEMENT

Demand Management into the future for Council will need to consider:

- Maximising patronage within existing assets.
- Upgrading existing assets.
- Providing new assets to meet demands.
- Managing the demand by non-asset solutions.

4.5.1 Demographics

CoP's population is estimated to be 256,729 in 2021(confirmed), 287,289 forecasted for 2022 and estimated forecast of 446,021 in 2041 resulting in an increase of 55.25 % from 2022-41.

Table 14: Demographic – CoP Census

SECTION	STATEMENT 2024	SOURCE 2024
POPULATION	256,729 in 2021 (3,056 people per km2)	Profile Id (2021 Census)
	446,021 forecast for 2041 (5,310 people per km2)	Forecast Id
	Median age = 35 years (NSW = 39 years)	ABS 2021 Census
	84% feel welcome living in our city	Our City My Life Survey 2023
DWELLINGS	92,109 occupied dwellings in 2021	ABS 2021 Census
	188,447 dwellings forecasted for 2041	Forecast Id
	40.5% residents live in a flat or apartment	ABS 2021 Census
DIVERSITY	53.3% of residents were born overseas	Profile Id (2021 Census)
	56.4% speak a language other than English at home	ABS 2021 Census
	o 12.4% Mandarin	
	o 6.4% Cantonese	
	o 5.5% Korean	
EDUCATION AND EMPLOYMENT	36.1% of residents hold a bachelor's degree or higher	ABS 2021 Census
	97.6% employment rate in June 2023	Economic Id
	23.6% of residents work within the LGA	Profile Id (2021 Census)
	Median household income = $2,051 per week (NSW = $1,829)	ABS 2021 Census
VULNERABLE COMMUNITIES	13.1% of households are 'low income', earning less than $650 per week	ABS 2021 Census
	15.6% of households are in housing stress	Housing Id
	4.1% of people require assistance with daily living activities	ABS 2021 Census
	16.5% of residents reported that they do not speak English well or at all	Profile Id (2021 Census)
LOCATION	The City of Parramatta covers 84km2 at the centre of metropolitan Sydney, 24km west of Sydney CBD	
CONNECTION	Home to the Dharug peoples for more than 60,000 years	
	Australia's oldest inland European settlement	
HERITAGE	Parramatta Park is a World Heritage Listed site	
	More than 750 significant archaeological sites	
	More than 50 State significant heritage sites	
ENVIRONMENT	36.7% vegetation cover including 22.6% tree canopy cover	Urban Monitor methodology and data (2016)
	11 days in 2023 over 35°C	BOM (2024) - data over 2023 calendar year
ECONOMY	2.3 million people live within a 45-minute commute to the Parramatta CBD	PwC (2016)
	Gross Regional Product = $28.21 billion	Economic Id (NIEIR 2022)
	168,019 people work in the City of Parramatta	Economic Id (June 2022)
	5,435 jobs created 2016-2021	Economic Id
	30,591 businesses call Parramatta home	Economic Id (ABS 2022)
	23.4% vacancy in Parramatta's commercial office buildings	Property Council of Australia (July 2023)

Council has a diverse demographic base which is constantly changing. As identified below, Council needs to consider numerous factors when planning for its RI assets into the future.

Parramatta's median age in 2016 was 34 and comparatively young when compared to 36 for Greater Sydney and 38 for NSW. Data from the 2016 Census indicated that approximately 74 per cent of Parramatta's residents worked outside the Parramatta local government area; the majority working in the Sydney CBD. Local residents made up less than 20 per cent of our total Parramatta workers. Around 120,000 people are employed in Parramatta, of which more than 43,000 work in the Parramatta city centre, with many coming from Blacktown, The Hills Shire, Holroyd, Penrith, Hornsby and other areas.

4.5.2 Planning

In order to understand Demand in more detail into the future, Council is also both internally and through the procurement of various external consultants reviewing and identifying specific community needs. Infrastructure team is collaboratively working with Corporate Strategy team to develop planning tool for infrastructure group factor demand forecast in treatment proposal for new assts and renewal program.

Council has also created through its Social Outcomes, City Strategy team a set of Social Infrastructure Guides as a series of high level social infrastructure needs for major development hotspots across the Parramatta LGA, including Parramatta CBD, Granville, Westmead and Epping. The Guides identify the current capacity of social infrastructure within these areas as well as highlighting broad trends and challenges in social infrastructure provision. It is envisaged that this current study will be expanded to other parts of the LGA to assist in asset planning into the future for both the RI, land and building portfolio.

4.6 DEMAND MANAGEMENT PLAN

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 include non-asset solutions, insuring against risks and managing failures. The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 14.

The objective of demand management is to actively seek to modify customer demands for services to:

- optimise the utilisation and performance of existing assets.
- reduce or defer the need for new assets.
- meet the organisations strategic objectives.
- deliver a more sustainable service.
- respond to customer needs.

It is vital to the success of the AMP that demand factors be analysed comprehensively and their impact quantified in terms of the following:

- the effect of the growth of the asset network.
- any possible future need to increase or decrease infrastructure.
- the implementation of non-asset solutions, such as managing demand.

In addition to the factors mentioned above, risk affects demand for services and consequently the following must be taken into account:

- the methodology and accuracy of forecasts.
- the uncertainty of forecasts.
- any unforeseen natural factors.

As shown in future sections of this plan, acquiring new assets will commit 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 in Section 5.

Future plan revisions will consider the costs of climate change, water restrictions, technology, urban consolidation, and other possible variables.

Table 15: Demand Management Plan

Demand factor	Impact on service	Demand Management Plan	Action
Changing Demographics and increased population	Increased traffic volume on existing roads, additional road maintenance, renewal funding demand, road upgrades and requirement for traffic calming devices. Demand for major extensions in road network. Service interruptions and time delays for road users due to increased traffic and works. Increased population densities will require upgrades of existing assets and services as well as new assets and services. Capacity increase, additional facilities in public domain space.	On-going delivery of Council's Capital Project identified in program level. Deferred Maintenance and Upgrade works to provide more inclusive and accessible facilities. Service levels will need to be reviewed to meet the demand shift. Consideration will need to be given to user pays/ capacity to pay. Establish use of sustainable transport devices. Maintain up-to- date asset management systems and undertake regular reviews of Asset Management Plans.	Promote public transport around residential & commercial areas. Awareness programs to encourage public transport. Introduce new or modified traffic control system at congested locations. Renewal of roads according to the standards to cater for increased traffic loads. Encourage the use of sustainable transport modes i.e. cycling. Monitor changes in traffic to ensure roads meet the users' needs. Assess the correct road renewal treatments to cater for vehicle use patterns. Increase in maintenance budget in line with road network expansion. Ensure adequate capital asset renewal funding in long term financial budget plans. Maximise funding obtained from external grant sources for road rehabilitation. Seek state government funding for better management of heavy vehicle routes. Controls in place for industry areas and restrictions for heavy vehicle use on the local road network. Support alternative delivery and access arrangement for local business activities. Analyse customer requests to optimise the use and performance of existing road services and look for non-asset based solutions to meet demand for services.
Land use changes and additional dwellings	Increase in gifted roads to Council (local access roads) from new subdivisions which will increase renewal and maintenance costs towards roads. Needs comparatively higher structural strength pavement to support increase traffic load. Increase in AADT, causing accelerated deterioration due to heavy vehicles	Identified heavy traffic routes needed to be upgraded to withstand higher axle loads. Restrictions for heavy vehicles. Consider delivery though additional, consolidated or more efficiently used assets. Consider assets delivered through alternate means e.g. VPAs	
Increase costs for materials and contracts	Inflation of construction prices exceeds annual increases in civil construction expenditure. Increased costs to maintain infrastructure assets. Reduction in maintenance and operation expenditure will delay maintenance reduce the life cycle of the asset.	Continually review renewal modelling ensuring forecasting is accurate. Appropriate procurement processes to ensure competitive pricing.	
Rising Community expectations	Community expectation for standard of services is rising. Desired service level provision increased over time.	Desired service level provision increased over time. Identify service gap, increase resources and funding to fill the gaps. If necessary, outsources to improve service delivery.	
Increasing Environmental and Design Standards	Higher standards for new and renewed infrastructure causing higher costs to build, maintain and operate assets.	Ensure appropriate design standards for assets. Ensure whole of life costs are identified within any project prior to approval.	

5.0

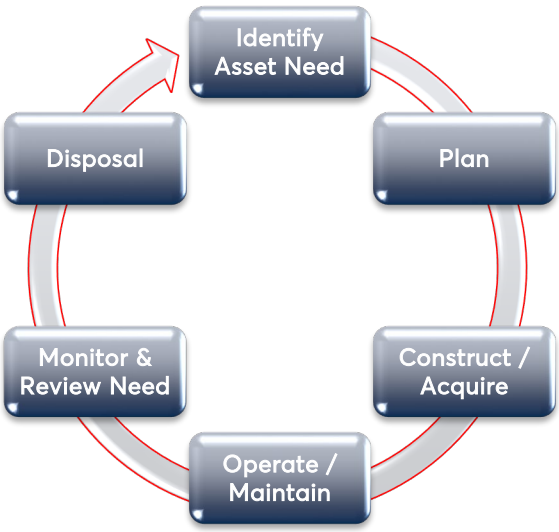
LIFECYCLE MANAGEMENT PLAN

5.1 LIFE-CYCLE MANAGEMENT PRINCIPLES

The lifecycle management plan details how the City of Parramatta Council plans to manage and operate the assets at the agreed levels of service (defined in Section 3) while managing life cycle costs.
Life-cycle Management is recognised by Council as an essential component of this AMP. This section of the Plan provides details of the data and processes required to effectively manage, renew and upgrade Council's asset portfolio. It also documents the analysis that Council undertakes regularly to predict and monitor expected future expenditures required to effectively manage the portfolio.

Undertaking life-cycle asset management means considering all management options and strategies as part of the asset life cycle, starting with the planning phase and ending with disposal. The objective of managing the assets in this manner is to look at long-term cost impacts (or savings) when making asset management decisions. Figure 5.1 below provides a graphical representation of the asset life cycle including each of the stages an asset passes through during its life.

Figure 9: Life Stages of Infrastructure Assets



5.1.1 Delivery of Council's 10 year Asset Management Plan

The development of Council's RI AMP in line with the Asset Management Policy and Strategy allows Council to plan, identify and implement an annual and four year delivery program for Council's RI assets in line with a lifecycle management strategy consisting of:

- Acquisition or Development.
- Operating.
- Maintenance; and

- Capital Renewal; or Disposal

Delivery mechanisms of the above and the new asset creation process vary from internal to external resources and include commissioning through various business units within Council. Future iterations of this AMP will further consolidate and refine the various delivery programs.

5.2 BACKGROUND DATA

5.2.1 Asset Hierarchy

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

5.2.2 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.

Table 16: Known Service Performance Deficiencies

Location	Service Deficiency
Roads	Backlog of asset renewals and short term reduction of asset renewal may cause surface and underlying base to deteriorate further

5.2.3 Asset Condition

The condition of the road asset portfolio is measured by assessing the condition of each of the following elements:

- Surface
- Subbase
- Base
- Formation

5.2.4 Condition Scores – Road Infrastructure Condition

The RI portfolio's physical componentised condition rating as a percentage of gross replacement cost, being:

1.	As new, requires normal maintenance only:	6.4%
2.	Good condition, requires minor maintenance:	48.2%
3.	Acceptable condition, requires significant maintenance:	29.8%
4.	In very poor condition, requires renewal:	13.9%
5.	Unserviceable or unusable	1.7%

There is a broad range of asset condition. Condition "0" indicates that no condition data is held in the asset register.

Condition is measured using a 1 – 5 grading system[7] as detailed in Table 17.

Table 17: Simple Condition Grading Model

Condition Grading	Description of Condition
1	**Very Good**: A near new asset with no visible signs of deterioration. only planned maintenance required.
2	**Good**: An asset in a very good overall condition but with some early stages of deterioration evident. Minor maintenance required plus planned maintenance
3	**Fair**: An asset in fair overall condition. Deterioration in condition would be obvious and there would be some serviceability loss. Significant maintenance required
4	**Poor**: An asset in poor overall condition. Deterioration would be quite severe and would be starting to limit the serviceability of the asset. Maintenance costs would be high and significant renewal/rehabilitation is required
5	**Very Poor**: An asset in extremely poor condition with severe serviceability problems and needing rehabilitation immediately. There would be an extreme risk in leaving the asset in service. Pphysically unsound and/or beyond rehabilitation

5.3 MEASURING THE CONDITION OF COUNCIL'S ASSETS

5.3.1 Asset Condition Assessment Methodology

The essence of good asset management is to understand the condition of Council's assets and the various types of distresses that affect them and to use this data to assist in maintaining the level of service the community desires in the context of affordability, intergenerational equity and minimised risk of asset failure.

The condition rating scale of Council's RI assets are detailed below. The surface condition index with SCI and PCI weighting scores are on Table 16.

Road condition assessment methodology and rating

The condition of the sealed road network is measured as follows:

- Measuring the severity and extent of crocodile cracking.
- Measuring the severity and extent of linear cracking.

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

- Measuring the extent and severity of pavement defects (i.e. corrugations and depressions).
- Measuring the extent and severity of rutting defects.
- Measuring the extent of roughness (i.e. ride quality).
- Measuring the extent of local surface texture defects (such as potholes).
- Measuring the extent of surface texture defects (such as flushing, bleeding and stripping).
- Measuring the extent of ravelling on asphalt road surfaces.

Road wearing surfaces such as asphalt are over time, subjected to surface condition deterioration, which can always be attributed to the following, or a combination, of the following:

- Cracking due to shrinkage or inadequate pavement strength.
- Loss of smooth driving surface shape due to deformation of wearing surface or pavement base materials.
- Hardening of the binder over time leading to loss of surface aggregate or cracking of surface.
- Loss of texture due to flushing of bituminous binders or embedment of sprayed seal aggregate into underlying surfaces.

Deterioration has three general causes: environmental due to weathering and aging and structural caused by repeated traffic loadings.

In most cases, road surface and pavement distresses result from both environmental and structural causes. However, it is important to try to distinguish between the two in order to select the most effective rehabilitation techniques.

The rate at which the road surface or pavement deteriorates depends on its environment, traffic loading conditions, original construction quality, and interim maintenance procedures. Poor quality materials or poor construction procedures can significantly reduce the life of a road. As a result, two roads constructed at the same time may have significantly different lives, or certain portions of a road may deteriorate more rapidly than others. On the other hand, timely and effective maintenance can extend a road's life. Timely crack sealing can reduce the effect of moisture ingress into the road pavement, thereby ensuring the integrity of the road pavement and road surface. For example, potholes generally develop from cracking.

Table 18: Road Condition Rating

Roads - Surface Condition Pavement
Condition 1: Excellent shape with a smooth and uniform surface profile following intended geometry across the entire pavement area. Perfect condition with no evidence of underlay pavement distress, movement, or distortion in any form.
Condition 2: Good shape with a generally smooth and uniform surface profile, although minor signs of subtle distortion or the presence of isolated and localised pavement distress may be present. May display sporadic but localised areas of fatigue cracking with minimal pumping or pavement deformation.
Condition 3: Fair to reasonable pavement shape which may exhibition moderate areas of minor deformation, distortion, or movement of the underlay pavement structure. May display minor to moderate areas of obvious pavement distress, consisting of such things as significant surface deformations, fatigue cracking or potholes with obvious deformation. Pavement condition is generally sufficient to provide reasonable function with localised patching.
Condition 4: Poor pavement condition, due to substandard shape and or substantial areas of deformation or pavement failure across the pavement structure. The asset is functional, although comfort and amenity may be compromised. Requires capital renewal to adequately address the condition.
Condition 5: Failed pavement with disrupted function and at end of life. Substantial areas of complete failure and or the condition renders it non-functional in providing a reasonable pavement structure. Appearance displeasing to the casual observer and imminent replacement required.
Notes: *The above definitions are generic and apply to all sealed carpark pavements.*

Minor deformations represent deviations from the intended smooth surface profile typically <25mm vertical displacement per meter measured across the deformation. Major deformations include all types of localised depressions or humps which typically exceeding 50mm of peak vertical displacement across the deformation.

Figure 10: Pavement Condition Matrix

Pavement Condition Matrix				
Score	Shape	Fatigue Cracking & or Minor Deformations	Major Localised Deformations	Pavement Failures
1	Excellent	< 1%	Nil	0
2	Good	1 - 10%	Isolated & Minimal	< 5%
3	Fair	10 - 40%	Moderate	5 - 20%
4	Poor	40 - 70%	Substantial	20 - 35%
5	Disruptive to Function	>70 %	Extensive	>35 %

Table 19: Rigid Road Surface Condition Rating

Surface Condition Rigid Road
Condition 1: New construction, with perfect alignment and a sound surface condition showing no indications of distortion. Excellent appearance, visually pleasing, no obvious blemishes or weak growth and a clear uninterrupted drainage path across all areas of the pavement to the associated kerb or spoon drain for runoff disposal.
Condition 2: Sound construction with good surface condition and no or barely perceptible distortion <50mm but may show limited surface ageing or joint stepping < 5mm, successful reinstatements, isolated slight surface defects or minor distress not exceeding 10% of the inspection area. Pavement grade and drainage run-off is of sufficient standard for an uninterrupted path into the street or drainage pit. Sporadic and isolated weed or vegetation may be present.
Condition 3: Fair to reasonable construction with a serviceable surface showing some surface aging. Significant areas of surface defects 10 to 25%, including obvious distortions or displacements from fractured concrete slabs or misaligned pitchers may be evident. However, these distortions, displacements, pavement grade and their associated drainage is of sufficient standard so as to provide reasonable run-off from the pavement surface.
Condition 4: Construction may display substantial surface deterioration from material disintegration over the majority of the surface and or substantial areas 25 to 50% of surface defect or distortion which may consist of displacement, substantial undulations or depressions and considered obtrusive to motor vehicle traffic. The distortions and associated drainage facilities failed to provide a reasonable drainage path to the street resulting in significant areas of ponding which may remain for considerable periods of time.
Condition 5: Construction displays predominant areas of intense surface distress and or substantial distortion or displacement of the pavement in general. The facility displays areas of complete drainage failure and or the pavement condition renders it a safety hazard or substantial obstacle to motor vehicle traffic. Appearance displeasing to the casual observer and suggest that facility requires complete replacement.
Notes: The above definitions are considered generic and apply to all non-Asphalt hard standing constructions regardless of material type. Defects include Cracking >5mm wide or Cracking with >5mm differential movement, Chipping or spalling >150mm diameter & >25mm depth, corner or edge breaks >150 diagonal or 15mm distortion.

Figure 11: Non-Flexible ROW Condition Matrix

ROW Non-Flexible Condition Matrix				
Score	Age Estimate	Defects	Distortion	Displacement
1	Brand New	0	0	
2	Almost New (likely < 15 yrs)	< 10%	< 25mm	<5mm
3	Some Ageing (15 to 60 yrs)	10 - 25%	25 - 50mm	5 - 10mm
4	Significant Ageing (>60 yrs)	25 - 50%	50 - 100mm	10 - 30mm
5		>50 %	>100mm	>30mm

Service levels are linked to condition levels as this determines at what condition the asset should be in before it is renewed.

The condition of the City of Parramatta Council's roads and kerbs asset stock is determined by a visual inspection carried out by an external contractor, with the latest condition assessment undertaken by the consultant in 2024. This roads and kerbs condition data has since been updated to reflect the changes in condition as a result of major renewal and upgrade works delivered via Council's capital works program and roads and kerbs works delivered via Council's preventative maintenance program.

Based on the outcomes of the road and kerb network visual inspections, a condition of the road and kerb segment assessed for each of the defect criteria is determined and assigned to each road and kerb segment by the inspector for each of the condition distresses.

The SCI and PCI scores have been based on a weighted formula using representative selected condition scores for the road wearing surface and pavement for each road segment.

The weightings below have been applied to each condition score to calculate the indices for each road segment as shown below.

Table 20: SCI & PCI Scores

Surface Condition Index	Weighting	Pavement Condition Index	Weighting
Environmental Cracking	75	Roughness	38
Ravelling	100	Rutting	38
Surface Texture Defects	100	Crocodile Cracking	73
Crocodile Cracking	75	Deformations	98
Deformations	75		

Kerb & Gutter condition assessment methodology and rating

The condition of the kerb network is measured as follows:

- Measuring the severity and extent of cracking.
- Measuring the severity and extent of vertical and horizontal displacement.

All kerbs (including traffic island kerbs and medians) over time are subjected to various distresses, which can always be attributed to the following, or a combination, of the following:

- Cracking due to shrinkage or inadequate concrete strength.
- Poor pavement subgrade or compaction of pavement, resulting in differential movement.
- Tree root movement and penetration either from Council's street trees or trees within private property.
- Vehicles mounting the kerb / traffic loadings.

In general terms, kerbs that are not subjected to any of the above deterioration conditions can remain in a serviceable condition for a significant period without the need for replacement. Whereas kerbs that are subjected to some or all of the above distresses can deteriorate rapidly and will often require continual repair.

Table 21: Kerb & Gutter Condition Rating

Kerb & Gutter – Surface Condition

Condition 1: Almost new construction in excellent condition showing no surface deterioration, cracking or misalignment, providing completely unrestricted longitudinal storm-water drainage adjacent to the road pavement over the entire assessment length. Surface reveals only very fine grits within the smooth material finish.
Condition 2: Structure and materials in sound condition showing only occasional cracking or minor defects affecting less than 10% of the assessment length. Surface may show limited surface ageing by revealing the tops of sporadic stone aggregates although still exhibiting a smooth surface profile. Kerb or gutter may display negligible distortion which is not readily apparent and typically less than 25mm vertical movement within a 2 metre dimension along the asset. Displacements are estimated to be typically less than 15mm from cracks or misalignment of precast sections. These defects do not appear to cause ponding or impede storm water drainage adjacent to the road pavement.
Condition 3: Structure displays signs of surface deterioration associated with reasonable surface aging displaying more substantial portions of the stone aggregates or the construction is affected by sporadic areas of cracking or localised minor defects typically effecting between 10% and 25% of the assessment length. The structure may display minor distortion being typically <75mm vertical movement within a 2 metre dimension along the asset or less than 25mm displacement resulting from cracks or misalignment of precast sections. These defects may appear to cause localised minor ponding but do not appear to impede storm water drainage adjacent to the road pavement.
Condition 4: The construction material displays substantial surface deterioration or is affected by significant (25% to 50%) areas of cracking or minor defects or major defects effecting <25% of the assessment length. The structure may display distortion greater than 75mm vertical movement within a 2-metre dimension along the channel or greater than 25mm stepping resulting from cracks or misalignment of precast sections. This may also include the rolling back of sections which cause a step and drainage obstruction between the road and channel. These defects may appear to cause significant ponding in the channel and impede the water drainage adjacent to the road pavement.
Condition 5: Any part of the construction is damaged, defective, distorted or rolled back to the point of structural and functional failure. Extreme distortion or damage is such that the asset is unable to perform any reasonable drainage function and will compromise the adjacent pavement.
Condition 9: The structure is likely present, although completely or predominantly (>75% of the section) hidden from view and condition cannot be determined. This score is excluded from average segment condition calculations.
Notes: *The above definitions are considered generic and apply to all drainage constructions regardless of material type.* *Minor Defects include Cracking with <15mm displacement and generally regardless of intensity, Chipping or spalling removing <50% of the structures cross profile or < 75mm distortion or < 25mm displacement.* *Major Defects includes Cracking with >15mm differential movement or such intensity and displace as to create a breakdown in the integrity of the structure. This will also include displacement >25mm, Distortion >75m.*

Figure 12: Kerb & Gutter Condition Matrix

KERB Condition Matrix				
Score	Age Estimate	Minor Defects	Major Defects	Function
1	Almost New (likely < 5 yrs.)	0	0	Good
2	Minor Ageing (5 to 15 yrs.)	< 10%	0	Good
3	Moderate Ageing (15 to 40 yrs.)	10 - 25%	<10%	Fair
4	Significant Ageing (>40 yrs.)	25 - 50%	10 - 25%	Poor
5	N/A	>50 %	> 25%	Blockage

Bridge condition assessment methodology and rating

Bridge condition is a summary indicator, assessed from individual component conditions, which in turn is derived from the Level Two Bridge inspections. The condition of a bridge is determined by combining the bridge component condition information for each component of the bridge and rated in terms of each of the "condition states" defined in general terms in Table below.

Table 22: Bridge Condition Measurement Scales

Bridge Condition Rating	Condition	Generalised Description of asset condition

1	Excellent	The structure and components are in new or near-new condition showing no signs of deterioration
2	Good	The structure and components are in good condition with little or no deterioration. Superficial cracks and discoloration may be present but without effect on strength and/or serviceability. Only planned maintenance.
3	Fair	The structure and components show deterioration of a minor nature. Minor surface defects may be present but without loss of section or effect on the serviceability of the element. Significant maintenance is required, inclusion in the repair program.
4	Poor	The structure and components show advanced deterioration and loss of effective section. Deterioration is to the point that there is concern a structural analysis is warranted to ascertain the impact on the strength and/or serviceability of the element. Significant maintenance required, inclusion in renewal/safety upgrade.
5	Very Poor	The structure/component is no longer providing the level of service required of it due to extensive deterioration. Unserviceable, extensive renewal work required.

The level 2 inspection are conducted by the third party (consultants) as per the agreed scheduled for valuation purposes and program development. The condition ratings are based on the TfNSW bridge inspection procedure manual for each element and registered against each asset as described on general terms as state on the table above.

Inspections of varying detail are required on a regular basis to continually monitor the condition and performance of Council bridge. The various level of inspection is shown below, with proposed inspection frequencies as detailed. Additional asset condition inspections may be required after the major flooding events or to coincide with asset revaluation requirements.

Table 23 - Bridge Inspection Details

Inspection Level	Inspection Type	Inspection Frequency	Inspection Description
Level 1	Routine	All Bridges = annually	A visual inspection to check the general serviceability of a structure to road users and to identify any emerging defects. L1 inspection checklist to be completed.
Level 2	Condition Assessment	1.Concrete Bridges/ Culverts = 5 yrs 2. Timber bridges = 4 yrs plus additional as required	Comprehensive visual inspections to assess the condition of a structure and its major components. The principal objectives are to identify significant defects in structural members above ground level, and to record the extent, severity and criticality of each defect and the appropriate remedial actions.
Level 3	Detailed	As required	Conducted on a needs basis to assess the structural condition and capacity a structure that has been identified as a potential candidate for rehabilitation, strengthening or replacement. This level of inspection may include materials testing and analysis, structural analysis or load testing in addition to the visual inspection to assess and quantify the condition, behaviour and rate of deterioration of a structure.

Footpath condition assessment methodology and rating

The condition of footpath in the entire LGA is being regularly surveyed. A condition survey of Council's footpaths was undertaken in 2022 by external consultants.

The following table below provides details of the condition rating scales for Council's footpath asset.

Table 24: Footpath Condition Measurement Scales

Footpath – Surface Condition

Condition 1: Almost new construction, with perfect alignment and excellent surface condition displaying no defects, substantial surface blemishes, post construction patching or reinstatements. Surface reveals only very fine grits within the smooth material finish.
Condition 2: Sound construction with good surface condition and no perceptible distortion but may show limited surface ageing by revealing the tops of sporadic stone aggregates although still exhibiting a smooth surface profile. May include joint stepping < 10mm, successful reinstatements, isolated slight surface grinding or minor distress not exceeding 10% of the inspection area.
Condition 3: Reasonable construction with a serviceable surface showing reasonable surface aging displaying more substantial portions of the stone aggregates. May display minor surface defects, moderate to heavy surface grinding, areas of substantial surface deterioration or distortion. Such distortions may consist of stepping which is estimated to be typically between 10mm – 20mm vertical movement or reasonably obvious undulations typically up to 75mm or the presence of non-reinstated sections. The extent of Minor and Major defects will typically affect <30% and <10% respectively of the area targeted for assessment.
Condition 4: Construction may display substantial surface deterioration from material oxidation over the majority of the surface creating a rough surface from highly exposed and missing aggregate material. May contain between 30% to 50% or <30% of minor or major defects respectively or distortion which may consist of stepping estimated to be typically but not exclusively between 20mm to 50mm vertical movement or obvious undulations typically between 75 to 150mm and obtrusive to pedestrian traffic.
Condition 5: Construction displays >50% or >30% areas of minor or major surface distress respectively, extreme ageing, substantial distortion typically > 150mm and a likely impediment to pedestrian traffic or the presence of >50mm trip or shear displacements within the predominant pedestrian traffic area.
Condition 9: Indicates condition not assessed and usually because of restricted ATSV access or no footpath structure exists in the inspection zone.
Notes: *The above definitions are considered generic and apply to all hard standing constructions regardless of material type.* *Minor Defects includes Cracking, <10mm wide, chipping or spalling <150mm diameter & <20mm depth, corner or edge breaks < 150mm diagonal <15mm distortion. Cracking, stepping and distortion attributes with dimensions not meeting major defect definitions below.* *Major Defects includes cracking >10mm wide and 500mm in length, cracking with >10mm vertical differential movement and 500mm in length, Stepping, with >20mm sharp & vertical displacement, occurring across a continuous 150mm or greater horizontal distance, Distortion >75mm vertical movement over a 500mm distance. Smashed bays displaying fractures or breaks, creating three or more separated pieces.* *Stepping is defined as unintended movement, displacement, or damage to, the footpath asset structure, where these are located wholly within the footpath structure.* *Cracking is defined as clearly visible breaks, fractures, or faults, in the footpath surface caused by unintended movement, displacement or damage to, the footpath asset structure.*

A prioritised list of repairs is prepared annually and issued for implementation to the extent of available funds. Defect audits are undertaken by asset staff, recorded and maintenance instruction issued to maintenance team for appropriate action. The frequencies of audits are as follows:

- High usage paths – yearly
- Medium usage paths – every 2 years
- Low usage paths – every 5 years.

Local Area Traffic Management (LATM) condition assessment methodology and rating

The condition of LATM device in the entire LGA was surveyed by external consultants in June 2024.

The following table below provides details of the condition rating scales for Council's LATM asset.

Table 25: LATM Condition Measurement Scales

LATM – Surface Condition
Condition 1: Asset appears in as new or excellent condition showing no significant markings or any damage or deterioration to any structures or material surfaces that form part of the device. All structures are clean and devoid graffiti, moss, general blemishes or other signs of aging and its condition makes it easily identifiable from significant distance by the road user.
Condition 2: Asset appears to be in good condition with no perceptible distortion or misalignment of the structure and able to carry out its intended function, but may display minor cosmetic damage, limited surface ageing or blemishes or fine cracks which are not readily apparent without close detailed inspection.
Condition 3: Asset appears to be in fair but still serviceable condition showing obvious material aging or displays more substantial damage or disintegration, but these have not compromised the structures integrity or its function. Typically requires monitoring but no immediate need for maintenance intervention.
Condition 4: Asset considered sub-standard but functional, may display significant surface deterioration or damage which appears to compromise its intended function. Targeted maintenance will be sufficient to bring the structure to full service level.

Condition 5: Asset condition unsatisfactory or failed. Structure displays a substantial extent and or severity of defects, distress, displacement or distortion such that its function is substantially of completely compromised. The asset typically requires a full replace or reconstruction as the most efficient means to achieve full service level.
Condition 9: No assessment available. The asset is masked, or photo imagery is insufficient to enable identification and or condition assessment.
Notes: *The above definitions are considered generic and apply to all constructions regardless of material type or design structure.* *Minor Defects includes Cracking <15mm wide, Step Displacements < 15mm, Concrete Chipping, spalling or Rounding <75mm, Barrier rail corrosion, minor damage or misalignment.* *Major Defects includes Step Cracking >15mm wide, Displacements > 15mm, Concrete Chipping, spalling or edge breaks >75mm. Obvious displacement, distortion misalignment or damage.*

Car Park condition assessment methodology and rating

The condition of Car Parks at grade in the entire LGA was surveyed by external consultants in June 2024.

Off-Road Carpark Segments: assessment applied at 20m intervals with an average calculated for each carpark segment.

On-Road Carpark Segments: one assessment applied for each carpark segment.

The following table below provides details of the condition rating scales for Council's at grade Car Park asset.

Table 26: Car Park Surface Condition Measurement Scales

Car Park – Surface Condition
Condition 1: New surfacing, typically less than 2 years old displaying dark, smooth textured and visually pleasing asphalt, or a spray seal displaying uniform, tightly packed stone coverage and devoid of stripping or flushing. Excellent surface appearance, no obvious cracks, blemishes, or repairs apparent.
Condition 2: Good surface condition but may show limited surface ageing, successful reinstatements or isolated surface defects or minor distress not exceeding 10% of the inspection area. May display sporadic but localised ravelling, stripping, or flushing.
Condition 3: Fair to reasonable condition providing a serviceable surface with some aging apparent. May display minor to moderate areas of surface defect or distress (10% to 40%), consisting of active and or passive destresses such as cracking, potholes, sealed cracks, flushing, stripping and temporary patches. Surface condition is generally sufficient to provide reasonable function.
Condition 4: Poor surface condition, due to significant aging or material disintegration over most of the surface and or displays substantial areas 40% to 70% of surface defects or distress, consisting of such things as cracking, potholes, sealed cracks, flushing, stripping and temporary patches. Surface condition likely providing compromised function and in need of renewal.
Condition 5: Surface displays predominant areas of intense distress and or substantial material disintegration. Contains substantial areas of complete failure and or the condition renders it non-functional in providing a water seal for the unlaying pavement structure. Appearance displeasing to the casual observer and imminent replacement required.
Notes: *The above definitions are generic and apply to all Asphalt or spray seal carpark surfaces.* *Surface Defects include all types of cracking >1mm wide, potholes, surface corrugations, delamination's, crack sealing, temporary surface repairs, stone stripping, binder bleeding or flushing.*

Figure 13: Car Park – Sealed Surface Condition Matrix

Carpark -Sealed Surface Condition Matrix				
Score	**Age Estimate AC & SS Respectively**	**All Surface Condition** (Excluding Stripping)	**Stripping**	**Ravelling**
1	Almost New (likely < 2 yrs.)	< 1%	< 2%	1
2	Minor Ageing (< 8 yrs. < 5 yrs.)	1 - 10%	2 - 10%	2
3	Moderate Ageing (< 15 yrs. <10 yrs.)	10 - 40%	10 - 20%	3
4	Significant Ageing (< 30 yrs. < 18yrs.)	40 - 70%	20 - 50%	4
5	Extreme Ageing (> 30 yrs. > 18yrs.)	>70 %	>50 %	5

Table 27: Car Park Pavement Condition Measurement Scales

Car Park – Pavement Condition
Condition 1: Excellent shape with a smooth and uniform surface profile following intended geometry across the entire pavement area. Perfect condition with no evidence of underlay pavement distress, movement, or distortion in any form.
Condition 2: Good shape with a generally smooth and uniform surface profile, although minor signs of subtle distortion or the presence of isolated and localised pavement distress may be present. May display sporadic but localised areas of fatigue cracking with minimal pumping or pavement deformation.
Condition 3: Fair to reasonable pavement shape which may exhibition moderate areas of minor deformation, distortion, or movement of the underlay pavement structure. May display minor to moderate areas of obvious pavement distress, consisting of such things as significant surface deformations, fatigue cracking or potholes with obvious deformation. Pavement conditions are generally sufficient to provide reasonable function with localised patching.
Condition 4: Poor pavement conditions, due to substandard shape and or substantial areas of deformation or pavement failure across the pavement structure. The asset is functional, although comfort and amenity may be compromised. Requires capital renewal to adequately address the condition.
Condition 5: Failed pavement with disrupted function and at end of life. Substantial areas of complete failure and or the condition renders it non-functional in providing a reasonable pavement structure. Appearance displeasing to the casual observer and imminent replacement required.
Notes: *The above definitions are generic and apply to all sealed carpark pavements.* *Minor deformations represent deviations from the intended smooth surface profile typically <25mm vertical displacement per meter measured across the deformation.* *Major deformations include all types of localised depressions or humps which typically exceeding 50mm of peak vertical displacement across the deformation.*

Figure 14: Car Park – Pavement Condition Matrix

Carpark -Pavement Condition Matrix				
Score	Shape	Fatigue Cracking & or Minor Deformations	Major Localised Deformations	Pavement Failures
1	Excellent	< 1%	Nil	0
2	Good	1 - 10%	Isolated & Minimal	< 5%
3	Fair	10 - 40%	Moderate	5 - 20%
4	Poor	40 - 70%	Substantial	20 - 35%
5	Disruptive to Function	>70 %	Extensive	>35 %

Current Road Infrastructure asset condition

Table 28: RI Condition Measurement Scales

The current road infrastructure asset condition scoring is as follows:

Road asset condition

Roads Condition Rating Data based on GRC		
Cond.	GRC	%
1	$ 60,601,888.53	6.4
2	$ 460,013,778.17	48.2
3	$ 284,069,354.83	29.8
4	$ 132,545,069.10	13.9
5	$ 16,640,521.27	1.7
Total	$ 953,870,611.90	100.0

Roads Condition Data					
PCI Rating	1	2	3	4	5

SCI -Sites	194	1859	1177	339	47
Actual Area (m2)	301166.4	3024596.4	2070678.6	557360.2	57789.6
Active Defect % - Area	260.52	61131.99	350669.56	191834.31	37765.96
Cond Area	300905.88	2963464.41	1720009.04	365525.89	20023.64
Condition Rating %	5.6	55.2	32.0	6.8	0.4
SCI Rating	1	2	3	4	5
SCI -Sites	369.00	736.00	1012.00	969.00	191.00
Actual Area	578199.4	1079755.2	1732102.6	1683342.2	272947.1
Active Defect % - Area	739.87	17252.37	131427.97	368132.79	134536.54
Cond Area	577459.53	1062502.83	1600674.63	1315209.41	138410.56
Condition Rating %	12.3	22.6	34.1	28.0	2.9
Combined Rd Condition Assessment					
Ranking	1	2	3	4	5
PCI - Condition Rating %	5.6	55.2	32.0	6.8	0.4
SCI - Condition Rating %	12.3	22.6	34.1	28.0	2.9
Overall %	**9**	**39**	**33**	**17**	**2**

Condition Score	1	2	3	4	5	Sum
Surface GRC	$22,121,437	$47,780,176	$72,619,453	$65,790,654	$10,121,696	
Pavement GRC	$23,188,314	$261,709,194	$139,342,824	$40,893,750	$3,928,418	
Subbase GRC	$15,292,137	$150,524,408	$72,107,078	$25,860,664	$2,590,407	
Total	$60,601,889	$460,013,778	$284,069,355	$132,545,069	$16,640,521	$953,870,612
Condition Rating %	6.35%	48.23%	29.78%	13.90%	1.74%	

Kerb & Gutter asset condition

K&G Condition Data			
Cond.	Length (m)	GRC	%
1	4709	$ 4,988,718.18	1.6
2	12443	$ 171,637,851.61	53.5
3	4726	$ 144,015,953.03	44.9
4		$ 114,331.00	0.0
5		$ -	0.0
Total	21878	$ 320,756,853.82	100.0

Bridge asset condition

Condition based on GRC.

Bridge Condition Data		
Cond.	Units/ Nos.	%
1	30	27.52
2	72	66.06
3	7	6.42

4		7
5	0	0
Total	109	107

Footpath asset condition

Footpath Condition Data			
Condition	Area (m^2)	GRC	%
1	315,553	$54,511,312	24.1
2	797,318	$120,211,798	53.1
3	352,176	$50,793,246	22.4
4	6,302	$721,486	0.3
5	871	$112,548	0.0
Total	1,472,220	$226,350,390	100.0

LATM asset condition

LATM Condition Data			
Cond.	Sites	GRC	%
1	43	$ 1,618,509.26	2.109097
2	778	$ 45,630,930.31	59.46216
3	442	$ 28,246,149.24	36.80786
4	28	$ 1,243,853.29	1.620879
Total		$ 76,739,442.10	100

Car Park Asset Condition

Car Park Condition Data			
Cond.	SCI Sites	PCI Sites	%
1	9	11	7
2	51	95	54
3	60	26	32
4	13	5	7
5	0	0	0
Total	133	137	100

5.4 OPERATION AND MAINTENANCE PLAN

Operations include regular activities to provide services such as public health, safety and amenity, e.g. safer road environment, cleaning, street sweeping, grass mowing and street lighting.

Routine maintenance is the regular on-going work that is necessary to keep assets operating, including instances where portions of the asset fail and need immediate repair to make the asset operational again.

5.4.1 Operation and Maintenance Plan

Operations activities affect service levels including quality and function through the types and timing of activities, and the design of the infrastructure. Examples of these include street sweeping, removal of debris and grass mowing with the road reserve. Operational activities also include proactive and reactive inspections, undertaken by in-house technical staff and/or specialist contractors. Operations activities do not improve the condition of assets.

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. e.g., road patching but excluding rehabilitation or renewal.

Over time, minor faults can occur within the road network. Council addresses the repairs and maintenance of these faults (i.e. pothole repairs and crack sealing) on the basis of defined intervention levels and response times. The intervention level defines the condition, state or risk level associated with an asset, i.e. the point in time at which the asset is considered to be below an acceptable level of service. Maintenance is scheduled as soon as the asset reaches this point.

Maintenance may be classified into reactive, planned, and specific maintenance work activities.

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

Planned maintenance is repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown experience, prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Actual past maintenance expenditure is shown in Table 29.

Table 29: Maintenance Expenditure Trends

Year (Financial Year ending)	Maintenance Expenditure (Actual)
2023	$6,234,970
2024	$5,789,203
2025	$5,740,110

Planned maintenance work as a percentage of total maintenance expenditure is not identified. Information on this will be developed for the next revision of this asset management plan, as higher proportions of planned maintenance expenditure to reactive maintenance will provide better value.

Maintenance expenditure levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance expenditure levels are such that will result in a lesser level of service, the service consequences and service risks have been identified and service consequences highlighted in this AMP and service risks considered in the Infrastructure Risk Management Plan.

5.4.2 Operation and Maintenance Strategies

City of Parramatta Council 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 operational 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 assets use to identify under used assets and appropriate remedies, and over used 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 best value for the resources used.

Asset operation is necessary to keep the asset appropriately utilised. Operational costs are running costs to service the asset. Operational expenditure and maintenance expenditure in the organisation financial systems requires review to ensure correct charges for each work activities are charges correctly. Typical operational activities for RI assets include:

- Pavement Sweeping.
- Street and Gutter litter collection.
- Weed spraying / treatment.
- Emergency call outs.
- Traffic Management Control.

Although maintenance has been on 'reactive' for roads, kerbs and gutters, recently more emphasis has been on proactive especially in the high pedestrian areas. The inspection process needs to be further developed and budgeted for in the Operational Budget.
The more proactive inspections that are undertaken, in theory should, reduce the total amount of maintenance required on assets based on the principle that early intervention of maintenance defects has a 5 to 1 cost saving. Correcting this issue is part of an overall improvement strategy.

5.5 ROUTINE MAINTENANCE PLAN

Maintenance are those minor works necessary to keep assets on their expected life-cycle path. Failing to carry out necessary maintenance when it is required will result in assets deteriorating faster than expected.

Not achieving the expected life from assets costs an organisation in the long run as it will be forced to renew its assets earlier resulting in higher annual capital renewal expenditures. In addition, as the overall condition of the assets deteriorates the annual maintenance cost will rise as assets in poorer condition require more maintenance.

When determining the required maintenance in year 2022 based on the distribution of the Roads and kerbs asset stock, Council has adopted an 'As a percentage of Replacement Cost' approach to determine the Required Annual Maintenance. This is consistent with the International Infrastructure Management Manual and other industry standards. The percentage of the Replacement Cost adopted for Roads and kerbs assets is as follows.

Council's current 10 Year LTFP allocation of funding to RI Maintenance and Operating is broken down in the following table:

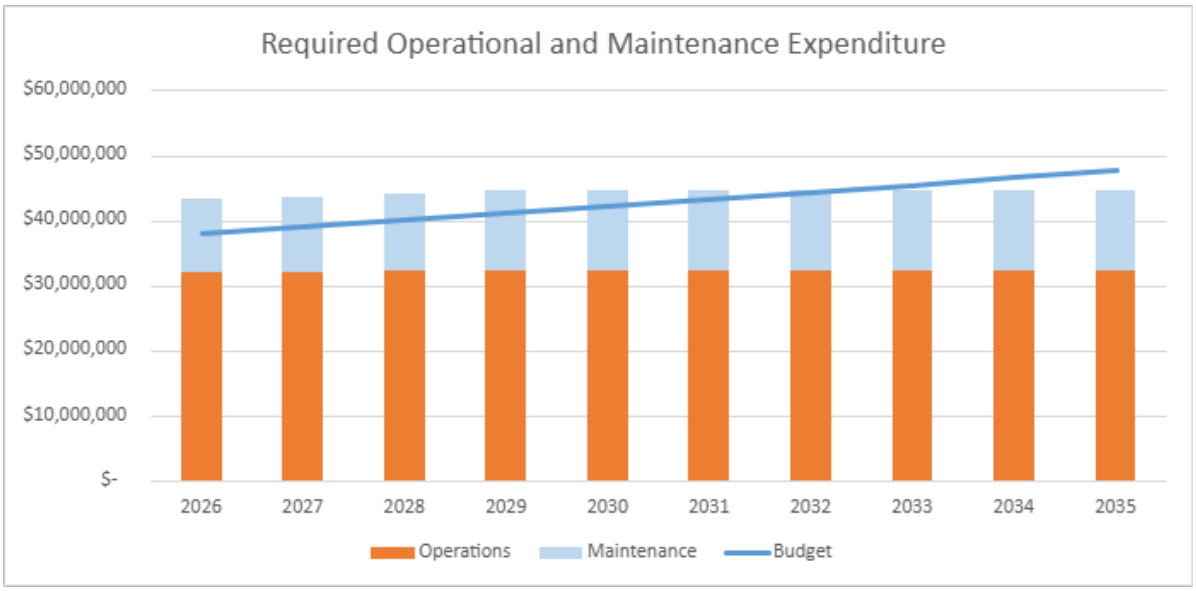
Table 30: LTFP - Maintenance and Operating Funding

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Maintenance	$6,043,356	$6,225,094	$6,397,489	$6,559,051	$6,725,139	$6,895,884	$7,071,411	$7,251,862	$7,437,372	$7,628,082
Operations	$31,999,702	$32,930,635	$33,769,652	$34,615,818	$35,483,581	$36,373,502	$37,286,140	$38,222,078	$39,181,920	$40,166,264

5.5.1 Summary of future operation and maintenance expenditure

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 15 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

Figure 15: Projected Operations and Maintenance Expenditure



Deferred maintenance, i.e., works that are identified for maintenance and unable to be funded are to be included in the risk assessment and analysis in the infrastructure risk management plan.

Maintenance is funded from the operating budget where available. This is further discussed in Section 7.

5.6 RENEWAL /REPLACEMENT PLAN

Renewal and replacement expenditure is major work which does not increase the asset's design capacity 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 upgrade or new works expenditure resulting in additional future operations and maintenance costs.

Renewal will be undertaken using 'low cost' renewal methods where practical. The aim of 'low cost' renewals is to restore the service potential or future economic benefits of the asset by renewing the assets at a less cost than actual replacement costs. Typical RI renewal works include the treatments of existing assets: -

- Road resurfacing
- Footpath restoration
- Kerb renewal
- Bridge component renewal

With infrastructure assets, the lowest total cost of ownership is achieved through developing a Renewal and Replacement Plan around the practice of replacing assets when they are at the end of the life as determined by their condition.

Budgeting for the future based on historical spending has been shown to be unreliable as it does not consider any growth areas within the municipality. Growth means an increasing asset portfolio, and this eventually results in increased asset renewal expenditure demands. While the growth has also resulted in an increasing rate base, the demand for increased expenditure lags at least a decade or two behind due to the long lives of infrastructure assets.
The lag in the need to grow the income can be challenging for both the Council and the community especially if the period of growth has passed. Hence it is vital that Council tracks the consumption of its assets and forecasts the asset renewal up to 20 years ahead.

5.6.1 Renewal Plan

Assets requiring renewal/replacement are identified from one of three methods provided in the 'Expenditure Template'.

- Method 1 uses Asset Register data to project the renewal costs using acquisition year and useful life to determine the renewal year, or
- Method 2 uses capital renewal expenditure projections from external condition modelling systems (such as Pavement Management Systems), or
- Method 3 uses a combination of average *network renewals* plus *defect repairs* in the *Renewal Plan* and *Defect Repair Plan* worksheets on the 'Expenditure template'.

Method 1 was used for this asset management plan.

It is common that the valuation registers used in Scenario 1 are not developed to a level of maturity where they are reliable for producing a realistic renewal forecast. Ideally when this asset register is sorted by remaining life from 1 to 10 years this should be consistent with the capital renewal program. For City of Parramatta Council, the refinement of the asset registers to achieve this situation should become an important part of the asset management improvement plan.

Scenario 2 is prepared using the technical estimates of what renewal is required to sustain the current levels of service, plus the known capital upgrade/new expenditures over the 10 year period. It is common that that this estimate will be beyond the current funding capacity of council.

Scenario 3 is a reflection of the actual funding available. The difference between Scenario 2 and Scenario 3 represents "what we can't do". The discussion about this "gap" will lead us into a much better informed community discussion about what are achievable and acceptable service levels, as well as giving a focus on managing risk.

5.6.2 Renewal and Replacement Strategies

City of Parramatta Council will plan capital renewal and replacement projects to meet level of service objectives and minimise infrastructure service risks by:
Planning and scheduling renewal projects to deliver the defined level of service in the most efficient manner,

- Undertaking project scoping for all capital renewal and replacement projects to identify:
    - The specific requirements of the service provider.
    - the service delivery 'deficiency', present risk and optimum time for renewal/replacement.

    - the project objectives to rectify the deficiency.
    - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency.
    - and evaluate the options against adopted evaluation criteria.
    - select the best option to be included in capital renewal programs.
- Using 'low cost' renewal methods (cost of renewal is less than replacement) wherever possible.
- Maintain a current infrastructure risk register for assets and 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 construction and renewal needs.
- Maintain a current hierarchy of critical assets and capital renewal treatments and timings required.
- Review management of capital renewal and replacement activities to ensure the best value for resources used is obtained.

Renewal ranking criteria

Asset renewal and replacement is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. roughness of a road or accessibility of facilities).[8]

It is possible to get some indication of capital renewal and replacement priorities by identifying assets or asset groups that:

- Have a high consequence of failure.
- Have high use and subsequent impact on users would be greatest.
- Have a total value represents the greatest net value.
- Have the highest average age relative to their expected lives.
- Area identified in the AMP as key cost factors.
- Have high operational or maintenance costs.
- Have replacement with a modern equivalent asset that would provide the equivalent service at a savings.[9]

Typical renewal and replacement asset priority ranking criteria:

- Public Safety – Weighting 35%
- Legislative requirement – Weighting 15%
- Asset condition - Weighting 20%
- Locality - Weighting 10%
- Joint project - Weighting 5%
- Community demand – Weighting 10%
- External partnership i.e. State Government – Weighting 5%

Renewal and replacement standards

Renewal work is carried out in accordance with the following Standards and Specifications.

- AUS SPEC Road standards.
- Australian Standards.
- Project Specific Technical Specifications (e.g. NATSPEC).
- Council Planning Regulations and DCP's.
- Other Council Policies & Objectives.

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

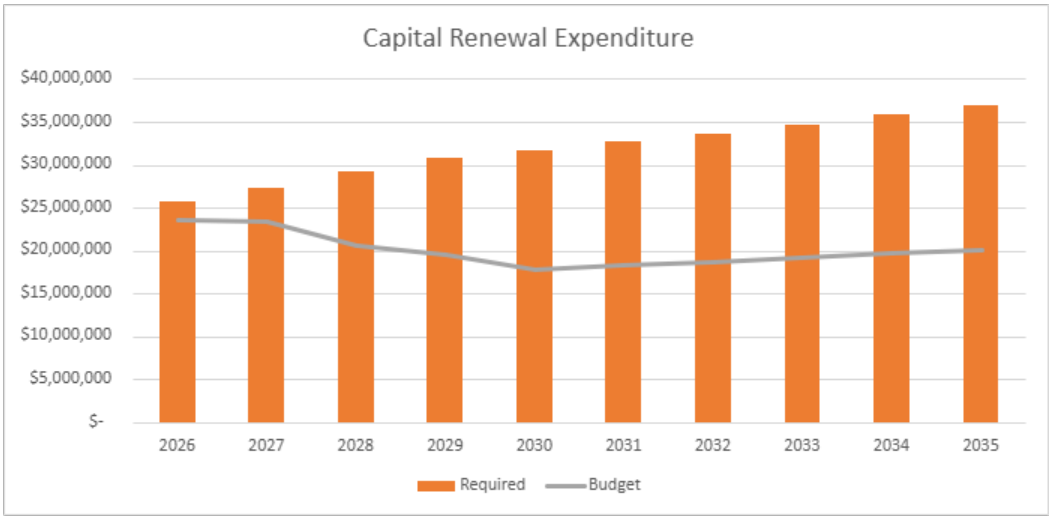
[9] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

5.6.3 Summary of future renewal and replacement expenditure

Projected future renewal and replacement expenditures are forecast to increase over time when the asset stock increases. The expenditure is required is shown in Fig 20. Note that all amounts are shown in real values.

The projected capital renewal and replacement program is shown in Appendix B.

Fig 16: Projected Capital Renewal and Replacement Expenditure



Deferred renewal and replacement, i.e. those assets identified for renewal and/or replacement and not scheduled in capital works programs are to be included in the risk analysis process in the risk management plan.

Renewals and replacement expenditure in the capital works program will be accommodated in the long term financial plan. This is further discussed in Section 7.

The renewal projection (forecast) in Scenario 1 (Using the asset/valuation register) generates a highly variable renewal profile. Whilst the long term averages and total values from this register are sound, the shorter term renewal forecast are not, and are inconsistent with the known capital renewal plans. This indicates that further refinement of the asset register is required before it is valuable as a capital renewal planning tool. This should be given a high priority in the asset management improvement plan.

5.7 CREATION/ACQUISITION/UPGRADE

New works are those works that create a new asset that did not previously exist or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost. These additional assets are considered in Section 4.4.

Council has already identified and resolved to undertake a number of upgrade or new asset projects to support existing services. These upgrade/new works are discussed in the following Sections.

5.7.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as

community requests, proposals identified by strategic plans or partnerships with others. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes.

5.7.2 Capital investment strategies

Capital upgrade and new projects will be planned to meet level of service objectives by:

- Continuing to implement Council's major projects.
- Finalising a new Developer Contributions Plan.
- Planning and scheduling capital upgrade and new projects to deliver the defined level of service in the most efficient manner.
- Undertake project scoping for all capital upgrade/new projects to identify:
    - the service delivery 'deficiency', present risk and required timeline for delivery of the upgrade/new asset.
    - the project objectives to rectify the deficiency including value management for major projects.
    - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency.
    - management of risks associated with alternative options.
    - and evaluate the options against evaluation criteria adopted by Council.
    - select the best option to be included in capital upgrade/new programs.
- Review current and required skills base and implement training and development to meet required construction and project management needs.
- Review management of capital project management activities to ensure Council is obtaining best value for resources used.

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.6.2.

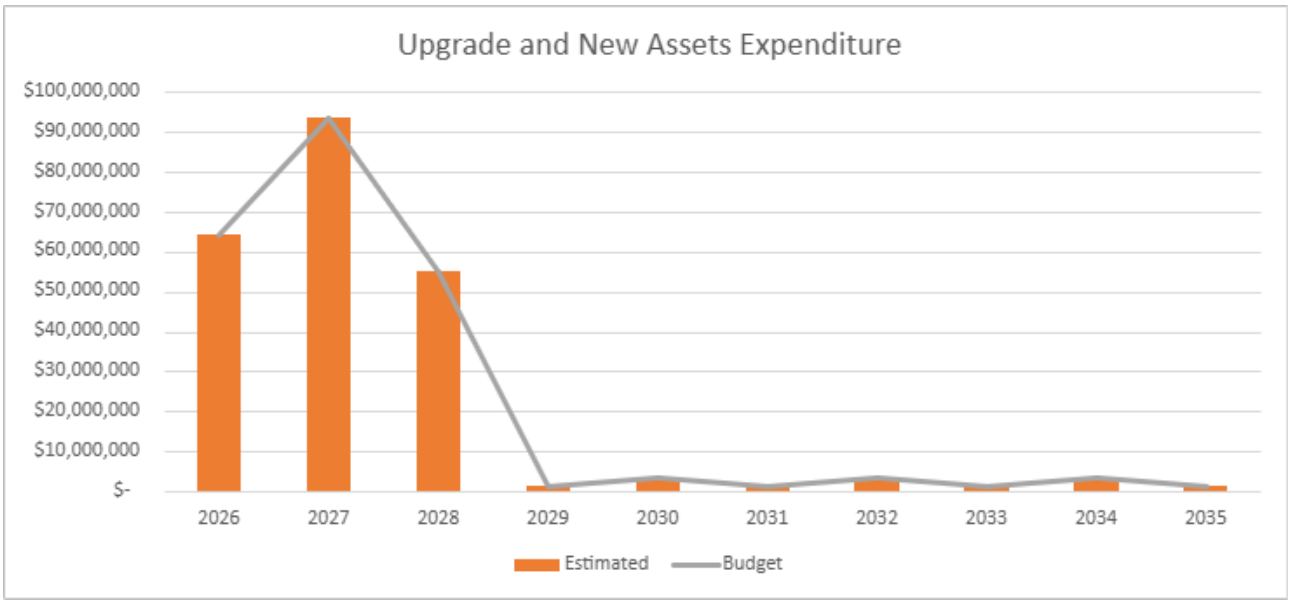
Typical capital investment for assets priority ranking criteria:

- Public Safety, situation/condition – Weighting 35%
- Legislative requirement – Weighting 15%
- Connectivity, capacity and functionality - Weighting 20%
- Locality - Weighting 10%
- Joint project - Weighting 5%
- Community demand – Weighting 10%
- External partnership i.e. State Government – Weighting 5%

5.7.3 Summary of future upgrade

Projected upgrade/new asset expenditures are summarised in Fig 17. The projected upgrade/new capital works program is shown in Appendix B. All amounts are shown in real values.

Fig 17: Projected Capital Upgrade/New Asset Expenditure



Expenditure on new assets and services in the capital works program will be accommodated in the long term financial plan. This is further discussed in Section 7.2.

5.8 DISPOSAL PLAN

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Assets have been identified for possible decommissioning and disposal together with estimated annual savings from not having to fund operations and maintenance of the assets. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any. Any costs or revenue gained from asset disposals is accommodated in the long term financial plan.

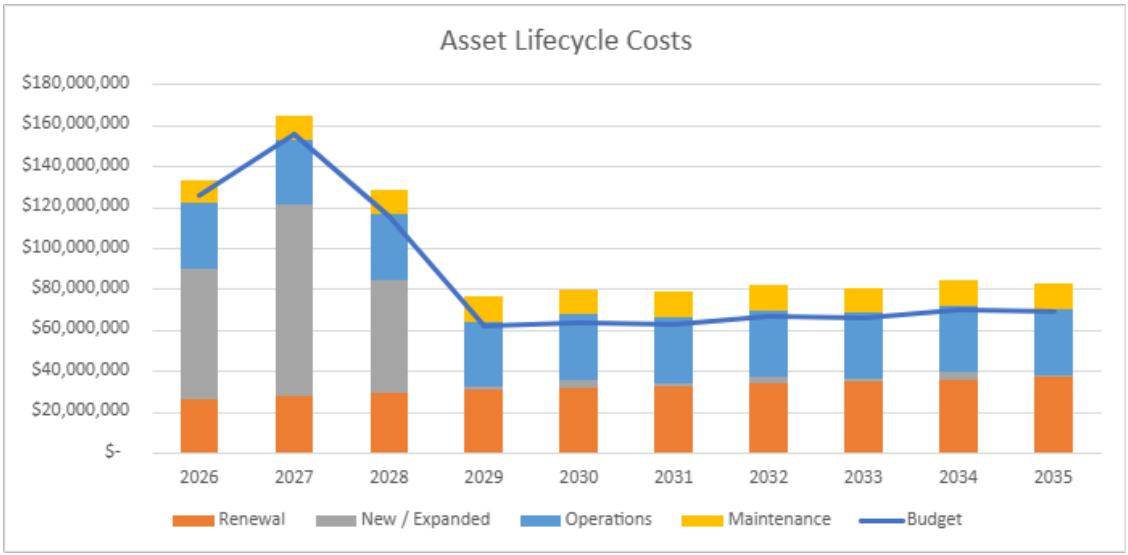
Where cash flow projections from asset disposals are not available, these will be developed in future revisions of this asset management plan.

5.9 SUMMARY OF ASSET FORECAST COSTS

The financial projections from this asset plan are shown in Figure 5.11. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

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

Figure 18: Lifecycle Summary



All figure values are shown in current day dollars. The current budget allocation for 2028 does not consider future grant funding e.g. West invest and other grants.

6.0

RISK MANAGEMENT PLAN

The purpose of infrastructure risk management is to document the results 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"[10].

An assessment of risks[11] associated with service delivery from infrastructure assets has identified critical risks that will result in loss or reduction in service from infrastructure assets or a 'financial shock'. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

6.1 CRITICAL ASSETS

Critical assets are those assets which have a high consequence of failure but not necessarily a high likelihood of failure. By identifying critical assets and critical failure modes, investigative activities, maintenance plans and capital expenditure plans can be targeted at the appropriate time.

Operations and maintenances activities may be targeted to mitigate critical assets failure and maintain service levels. These activities may include increased inspection frequency, higher maintenance intervention levels, etc. Critical assets failure modes and required operations and maintenance activities are detailed below.

At the current time City of Parramatta only identifies Regional Roads as 'critical' and does not insure any road assets. Council is currently reviewing the Enterprise Risk Management Procedure and the West Pool insurance coverage to ensure that assets that are critical are covered for known risks. Generally, the following road and related assets are regarded as 'critical';

- All bridges
- Arterial and sub-arterial roads
- Roads providing access/egress during floods
- Roads through commercial/shopping centres
- Main industrial area access roads
- Footpaths in heavily pedestrianized areas including commercial/shopping centres, outside schools and adjacent to aged person facilities
- Traffic facilities including facilities on arterial and sub-arterial roads and facilities in commercial/shopping centre and school zones
- Major retaining walls and embankments within the road reserve

[10] ISO 31000:2009, p 2

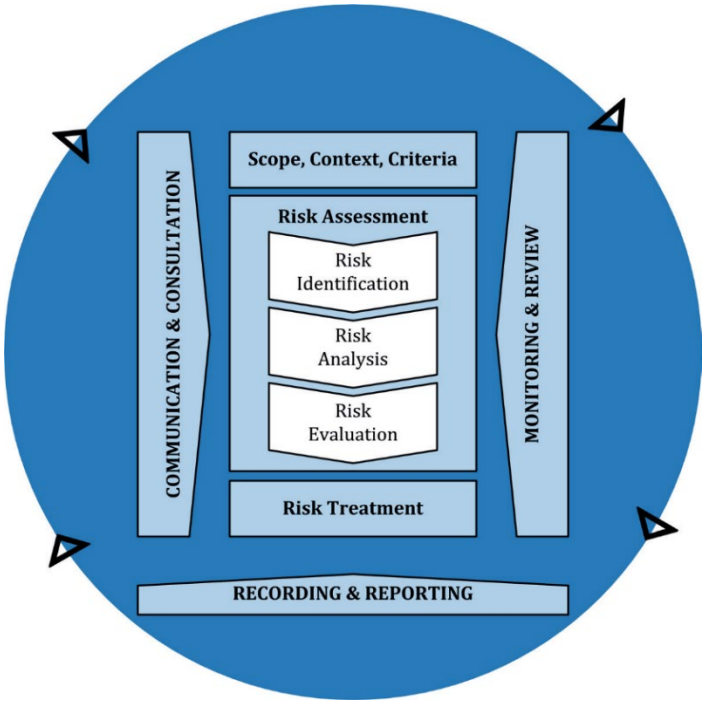
Standards and specifications - Maintenance work is carried out in accordance with the following Standards and Specifications.

- AUS SPEC Road standards
- Australian Standards
- Project Specific Technical Specifications (e.g. NATSPEC)
- Council Planning Regulations and DCP's
- Other Council Policies & Objectives

6.2 RISK ASSESSMENT

The risk management process used in this project is shown in Figure 6.1 below.
It is an analysis and problem solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.
The process is based on the fundamentals of ISO risk assessment standard ISO 31000:2018.

Fig 19 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, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

An assessment of risks[12] associated with service delivery from infrastructure assets has identified the critical risks that will result in significant loss, 'financial shock' or a reduction in service.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action), and 'High' (requiring corrective action) rating identified in the Infrastructure Risk Management Plan. The residual risk and treatment cost after the selected treatment plan is operational is shown in Table 31. These risks and costs are reported to management and Council.

The full details of Enterprise Risk Management are contained within the associated Policy and Procedures. This Asset Management Plan identifies risks, mitigations and insurance measures contained within this asset class.

To further identify and manage the risks associated with providing services from infrastructure assets Council has implemented many management practices and procedures. These include:

- Flood Protection Program (for bridges, roads, contaminated Land).
- Heat and increased extreme weather events impact on assets.
- Operating a reactive maintenance service for all assets and services.
- Monitoring condition and remaining service life of assets nearing the end of their service life.
- Renewing and upgrading assets to maintain service delivery.
- Closing and disposing of assets that are not providing the required service level.
- Acquiring or constructing new assets to provide new and improved services.
- Developing a planned maintenance system for these assets from the Operating Budget.
- Developing inspection program, prioritisation of reactive maintenance based on risk avoidance.

The key risks for roads kerb and gutters are excessive rainfall, storms and flood.

The risk to roads from excessive rainfall, storms and floods arises from excess water over the road surface and water infiltration into road pavements. If there are weak areas on a road surface (caused by vehicle damage, vibration, normal wear and tear or other factors) water will create potholes and pavement failure, allowing water to extend into the sub-surface structure. Clearly this risk is higher if a road is submerged during a flood, rather than water running across the road surface in a storm.

The key risk management strategy relating to excessive rainfall, floods and storms is sound design and construction of road pavements and surfacing; and appropriate monitoring and maintenance programs in place. Council aims to repair all road defects that meet the compulsory intervention level within 24 hours of notification, as this minimises the chance of damage to vehicles and also limits the damage created to the road's sub-surface. Information gathered in the road condition monitoring is thus an important part of the risk management strategy. Additionally good surface drainage systems are important and are installed where appropriate with road renewal.
Roads also play a key role in response to and recovery from emergency situations. If roads fail, or are impassable due to floods or fire, there can be significant impacts on local communities. The role of roads in an emergency context is an important consideration. The emergency management function of roads is part of the overall emergency risk management framework. Road levels and topography are considered when identifying evacuation routes. Markers are placed on roads that are known to be below certain flood levels so that in a flood event the depth of water over a road can be accurately judged.

Generally, roads in newly developed areas are designed and constructed clear of and above floodplain and overland flow path areas. Bridges are designed to withstand extreme storm runoff and flooding.

Table 31: Risk Rating Matrix

Risk Rating					
Likelihood	Consequences				
	Insignificant	Minor	Moderate	Major	Catastrophic
Rare	L	L	M	M	H
Unlikely	L	L	M	M	H
Possible	L	M	H	H	H
Likely	M	M	H	H	VH
Almost Certain	M	H	H	VH	VH

6.2.1 Transport Specific Risk

The overall strategies for Council to manage risks are generally to either mitigate, avoid, transfer or accept. These will be further refined in future versions of this AMP. As it is envisaged that the strategies will be linked to ISO 31000 as it provides greater detail on how to deal with risk:

- Avoiding the risk by deciding not to start or continue with the activity that gives rise to the risk.
- Accepting or increasing the risk to pursue an opportunity.
- Removing the risk source.
- Changing the likelihood.
- Changing the consequences.
- Sharing the risk with another party or parties (including contracts and risk financing).
- Retaining the risk by informed decision.

To further identify and manage the risks associated with providing services from transport assets, Council has implemented many management practices and procedures. These include:

- Land Accuracy Project.
- Heat and increased extreme weather events impact on assets.
- Operating a reactive maintenance service for all assets and services.
- Operating a planned maintenance system for key assets.
- Monitoring condition and remaining service life of assets nearing the end of their service life.
- Renewing and upgrading assets to maintain service delivery (CBD increase).
- Closing and disposing of assets that are not providing the required service level.
- Acquiring or constructing new assets to provide new and improved services.
- Inspections, prioritisation of reactive maintenance based on risk avoidance.
- Insurance policy addresses the critical assets.
- Building and Service Continuity Plans.

Council can also attempt to limit the ongoing financial risks of managing the transport assets portfolio by:

- Simplifying the financial reporting and control structures.
- Value engineering the materials they are constructed from.
- Simplification and allow for adaptability of future designs.

- Updated plant and equipment (when required) with an environmental and cost efficient focus
- Integrate Business Information Modelling (BIM) and improved operating systems in new building assets which will lead to performance efficiencies.

6.3 INFRASTRUCTURE RESILIENCE APPROACH

The resilience of our critical infrastructure is vital to our customers and the services we provide. To adapt to changing conditions and grow over time we need to understand our capacity to respond to possible disruptions and be positioned to absorb disturbance and act effectively in a crisis to ensure continuity of service.

To enhance our capacity to manage unforeseen or unexpected risk to the continuity of operations we take an infrastructure resilience approach using an 'all hazards' methodology.

The 'all-hazards' approach involves:

- An initial assessment of critical assets.
- A resilience assessment for these assets.
- Identification of related improvements or interventions

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

7.0

FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

As discussed in Section 5.4 the expenditure projection (forecast) in Scenario 1 (Using the asset/valuation register) is not consistent with the required works program or the long term financial plan and is indicative of the continuing work required to improve the asset register.

Funding Sources available for the management of RI within the AMP and Program are as follows:

1. General Revenue
3. Special Rates
4. Grants and Contributions
5. Section 7.11 and 7.12
6. Other Reserves
7. Loans (LIRS)

Council is currently reviewing, qualifying and consolidating under the Asset Strategy Unit, all of its financial data and control of funds across all building asset classes with regard to the following:

- Operations, Maintenance & Capital - Actuals, Budget, Benchmarks and Backlog
- Lifecycle Cost Analysis
- Confirming Sustainable Funding Sources
- Adopted Valuation and Depreciation amounts

The current Operational Plan under the 10 year Long Term Financial Plan (LTFP) allocates the following funding to the RI portfolio across the various programs in the Long Term Financial Plan (LTFP) within the Table below.

Table 32: City of Parramatta lifecycle budget expenditure for RI assets

Lifecycle Expenditure	2026	2027	2028
$'000	Budget	Budget	Budget
Operational	$31,999,702	$32,930,635	$33,769,652
Maintenance	$6,043,356	$6,225,094	$6,397,489
Capital renewal	$23,629,130	$23,459,863	$20,648,857
Capital upgrade and new	$64,236,446	$93,716,586	$55,000,899
Total	$125,908,634	$156,332,178	$115,816,897

*Source: LTFP 2024/25 Delivery Plan

It should be noted that Parramatta is undergoing generational change and urban growth. The projected population growth is the highest in NSW and Western Sydney. Therefore, the resource allocation of this AMP reflects considerable investment in infrastructure to be constructed in the future.

7.1 WORK CATEGORY DEFINITIONS

Operational: Operational activities keep the asset utilised but have little to no effect on condition. Typical operational activities include:

- Cleaning (High pressure)
- Street sweeping
- Utility costs
- Inspection
- Mowing grass
- Insurance
- Plant & Equipment (Heavy Machinery)

Public lighting (Electricity supply)

Maintenance: Maintenance activities are those routine works which keep assets operating to the required service levels. The fall broadly into two categories:

Planned Maintenance (Proactive) - Inspection and maintenance works planned to prevent asset failure; and

Unplanned Maintenance (Reactive) - Reactive action to correct asset faults and failures on an as required basis (i.e. emergency repairs).
Historically, expenditure on infrastructure assets has generally been considered to be Capital when the asset is being provided from new or is subject to some major change or Maintenance when the expenditure is minor during the life of the asset.

Strategic Asset Management requires more clarity about the effect any expenditure is having on an asset, especially its expected life cycle. Consequently, infrastructure asset expenditure is better classified into one of five categories. These categories are set out in Table 33 below.

Table 33: Infrastructure Work Expenditure Categories

Expenditure Type	Description	Typical Work	Effect on Lifecycle
Capital - New	Provision of a new asset.	Construction of a new infrastructure asset such as roads, traffic facilities, paths, bridges etc.	Commences the asset on its life-cycle path.
Capital - Renewal	Renews a degraded asset back to New or Near New condition.	Road resheeting, heavy patching, shape correction, replacement of footpaths, K&G etc.	Resets the asset back to the start of its life-cycle path.
Capital - Upgrade	Improves the functionality of an asset.	Replace traffic facilities to meet the current standard and guidelines such as black spot programs. Provide a safer road environment.	Resets the asset back to the start of its life-cycle path.
Capital - Expansion	Improves the capacity of an asset.	Road widening project, accommodating another lane to improve traffic flow.	Commences the expanded portion on its life-cycle path.

			Any effect on the original portion of the asset depends on any work done on that portion.
Maintenance	Minor repairs.	Heavy Patching <$20k, pothole patching, replacement of damaged section of footpath.	Keeps asset on its expected life-cycle path.

The Operational category is required to be clearly segregated from the capital and maintenance activities references above from an accounting perspective and can be defined as:

Operation	Recurring expenditure incurred from normal business operations	High pressure cleaning, street sweeping, inspection etc.	Activities which are necessary to keep the asset appropriately utilised, being running costs to service the asset

7.2 FINANCIAL SUSTAINABILITY AND PROJECTIONS

7.2.1 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 3 years / forecast renewal costs for next 3 years), and
- medium term forecast costs/proposed budget (over 10 years of the planning period).

Asset Renewal Funding Ratio

Table 34: Infrastructure Work Expenditure Categories

	2026	2027	2028
Renewals Ratio	92%	86%	71%

Asset Renewal Funding Ratio[13]

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 3 years we expect to have 83% of the funds required for the optimal renewal of assets.

Medium term – 10 year financial planning period

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 first 10 years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs over the 10 year planning period is $76,174,233 average per year.

The proposed (budget) operations, maintenance and renewal funding is $62,969,465 on average per year with shortfall of $13,204,768 per year. This indicates that 83% of the forecast costs needed to

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

provide the services documented in this AMP are accommodated in the proposed budget. Note, these calculations exclude acquired assets.

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

7.2.2. Forecasts Cost (outlays) for the long-term financial plan

Table 35 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan. Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator for the first years of the AMP and ideally over the 10 year life of the Long-Term Financial Plan.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AMP (including possibly revising the long-term financial plan).

The 'gap' will be managed by developing this AMP to provide guidance on future service levels and resources required to provide these services in consultation with the community. Forecast costs are shown in 2024-dollar values.

Table 35: Forecast Costs (Outlays) for the Long-Term Financial Plan

Year (Financial Year ending)	Acquisition	Operation	Maintenance	Renewal	Disposal
2026	$64,236,446	$31,999,702	$6,043,356	$23,629,130	$0
2027	$93,716,586	$32,930,635	$6,225,094	$23,459,863	$0
2028	$55,000,899	$33,769,652	$6,397,489	$20,648,857	$0
2029	$1,249,054	$34,615,818	$6,559,051	$19,632,578	$0
2030	$3,640,966	$35,483,581	$6,725,139	$17,857,032	$0
2031	$1,243,615	$36,373,502	$6,895,884	$18,303,082	$0
2032	$3,646,331	$37,286,140	$7,071,411	$18,760,284	$0
2033	$1,249,114	$38,222,078	$7,251,862	$19,228,916	$0
2034	$3,651,967	$39,181,920	$7,437,372	$19,709,264	$0
2035	$1,254,891	$40,166,264	$7,628,082	$20,201,621	$0

7.3 FUNDING STRATEGY

The proposed funding for assets is outlined in the Entity's budget and Llong-Term financial plan.

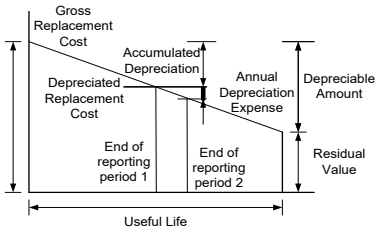
The financial strategy of the entity determines how funding will be provided, whereas the AMP communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

7.4 VALUATION FORECASTS

7.4.1 Asset valuations

The best available estimate of the value of assets included in this AMP are shown below. The assets are valued at Fair Value as at 31 January 2024.

Replacement Cost (Current/Gross)	$2,028,722,384
Depreciable Amount	$1,914,603,945
Depreciated Replacement Cost[14]	$1,459,207,289
Depreciation	$25,733,245
Non-Depreciable amount	$114,118,139



7.4.2 Valuation forecast

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

7.4.3 Key Assumption made in AMP and Risk of Changes

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:

Table 36: Key Assumptions made in AMP and Risks of Change

Key Assumptions	Risks of Change to Assumptions
Use of the existing inventory data	Low-Medium Risk
Use of existing valuations, useful lives and remaining lives determined from the condition rating	Low-Medium Risk
Use of current expenditure information as best as this can be determined	Low-Medium Risk
That the current expenditures are not resulting in a significant decline in the service levels provided in the medium term	Low-Medium Risk

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 graded A - E level scale 1-5 in accordance with Table 31

Table 37: Data Confidence Grading System

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

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

The estimated confidence level for and reliability of data used in this AMP is shown in Table 38.

Table 38: Data Confidence Assessment for Data used in AMP

Data	Confidence Assessment	Comment
Demand drivers	B Reliable	Based on Recreation & Community Facilities Needs studies undertaken
Growth projections	A Highly reliable	Based on Census data
Operations expenditures	B Reliable	Expenditure information taken directly from One Council's Finance Module, the operating expenditure and LTFP data.
Maintenance expenditures	B Reliable	Expenditure information taken directly from One Council's Finance Module, the maintenance expenditure and LTFP data.
Projected Renewal expenditures.	B Reliable	Expenditure information taken directly from One Council's Finance Module, the renewal allocation for different class of assets, and LTFP data.
Asset values	B Reliable	Based on 'Fair Value' valuations. Condition survey and valuation completed in 2024.
Asset useful lives	C Uncertain	Estimated using typical values. Further substantiation required for next revision of the AMP
Condition modelling	B Reliable	Based on condition assessments, creation dates and useful/remaining lives, further substantiation required to improve future revisions.
Network renewals	B Reliable	Based on corporate knowledge of asset and recent assessments, commitments and condition-based renewals.
Defect repairs	B Reliable	Based on a number of condition assessments. Also based on corporate knowledge of assets and recent visual assessments, further substantiation included in the next revision of the AMP
Upgrade/New expenditures	B Reliable	Based on findings/investigation, demands, commitments and grant funding. Allocation from S94, 7.11
Disposal expenditures	A Highly Reliable	Based on actual Council Resolutions

Over all data sources data confidence is assessed as medium-high confidence level for data used in the preparation of this AMP.

8.0

PLAN IMPROVEMENT AND MONITORING

8.1 STATUS OF ASSET MANAGEMENT PRACTICES

8.1.1 Accounting and financial data sources

Council's accounting and financial management system is Technology One.

All operational, maintenance and capital construction cost are recorded in this system.
Required changes to accounting financial systems arising from this AMP

- Develop reporting on expenditures, with separation of costs for operations as opposed to maintenance and improved reporting on capital expenditures as renewal or upgrade/new,
- Continued input and development of a single corporate asset register, in which financial calculations including calculation of annual depreciation can be undertaken by council.
- Linking of the customer service system/work orders to the corporate asset register to link requests to asset records,
- Improved project cost accounting to record costs against the asset component and develop valuation unit rates.

8.1.2 Asset management data sources

A. Asset registers

The key information flows into this Asset Management Plan are:

- The asset register data on size, age, value, remaining life of the network.
- The unit rates for categories of work / material.
- The adopted service levels.
- Projections of various factors affecting future demand for services.
- Correlations between maintenance and renewal, including decay models; Linkage from asset management to financial system

B. Linkage from asset management to financial system

The key information flows from this Asset Management Plan are:

- The assumed asset renewal profile and trends.
- The resulting budget, valuation and depreciation projections.
- The useful life analysis.

These will impact the Long-Term Financial Plan, Strategic Business Plan, annual budget and departmental business plans and budgets.

C. Accountabilities for asset management system and data maintenance

- Asset Strategy
- Asset Managers

Required changes to asset management system arising from this AMP

- Review of accuracy and currency of asset data,
- Continued development of a single technical asset register as the corporate asset register, in which financial calculations including calculation of annual depreciation can be undertaken by council at an individual asset component level.
- Development of a works costing and maintenance management system to improve works planning and cost recording, in particular to identify expenditure type (operations, maintenance, capital renewal and capital new/upgrade)

Improved project cost accounting to record costs against the asset component and develop valuation unit rates.

8.1.3 Improvement Plan

The asset management improvement plan generated from this asset management plan is shown in Table 39.

Table 39: Improvement Plan

Ref No.	High Level Strategic Actions	Priority	Delivery by:
1.	Establish transparent and responsible asset management processes that align with the best appropriate practice. This includes ensuring consistency across the Asset Management Strategy, Long Term Financial Plan, Technology One asset registers, levels of service for all asset classes, data collection, validation and reporting.	High	2024/25-2025-26 Ongoing
2.	Undertake Road, Kerb, Bridge, LATM and Pathway Condition Audit. Complete Bridge Level 2 Audit	High	2024/25
3.	Clearly identify all asset expenditure requirements into four categories: renewals, new, maintenance, and operational. Establish clear budgets and reporting lines for each category. Correctly differentiate between maintenance and operation expenditure for each work activity.	High	2024/25
4.	Allocate and clarify roles, resources and responsibilities for asset management. This includes establishing a good understanding of asset data, finance and budgets. Establish clear communication protocols between finance and the wider organisation.	High	2024/25
5.	Review and establish agreed levels of services in consultation with the community, outlined in the asset management plans.	Medium	2025/26
6.	Review and estimate the future lifecycle costs of all decisions relating to new service levels and new assets, donated or built.	Medium	2025/26

7.	Prioritise and plan asset renewals to meet agreed service levels based on site inspections, infrastructure priorities and community importance.	Medium	2024-26
8.	Identify and prioritise critical assets for Council and its community. Establish emergency response plans and asset ownership for critical assets.	Medium	2024/25
9.	Regular proactive inspection scheduled, data recorded and analyses in a format suitable for the preparation of both short and long-term maintenance, rehabilitation and renewal works programs.	Medium	2024/25

8.2 MONITORING AND REVIEW PROCEDURES

This asset management plan will be reviewed during annual budget planning processes and amended to show any material changes in service levels and/or resources available to provide those services as a result of budget decisions.

The AMP will be updated annually to ensure it represents the current service level, asset values, projected operations, maintenance, capital renewal and replacement, capital upgrade/new and asset disposal expenditures and projected expenditure values incorporated into the long term financial plan.

The AMP has a life of 4 years (Council election cycle) and is due for complete revision and updating within 1 year of each Council election.

8.3 PERFORMANCE MEASURES

The effectiveness of the asset management plan can be measured in the following ways:

- The degree to which the required projected expenditures identified in this asset management plan are incorporated into the long term financial plan,
- The degree to which 1-5 year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the asset management plan,
- The degree to which the existing and projected service levels and service consequences (what we cannot do), risks and residual risks are incorporated into the Strategic Plan and associated plans,
- The Asset Renewal Funding Ratio achieving the target of 1.0.

9.0

REFERENCES

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- ISO, 2014, ISO 55000:2014, Overview, principles and terminology
- ISO, 2018, ISO 31000:2018, Risk management – Guidelines
- Community Strategic Plan
- Delivery Program
- Operational Plan

10.0

APPENDICES

Appendix A	Capital Renewal and Replacement Works Program 2024/25
Appendix B	LTFP Budgeted Expenditures Accommodated in AMP
Appendix C	Glossary
Appendix D	Life Cycle Degradation Profiles
Appendix E	Abbreviations and Definition
Appendix F	Road Dashboard Reporting

Appendix A - Capital Renewal and Replacement Works Program 24/25

Footpath Construction Program - PAMP 2024-2025					
Ward	Street	From	To	Suburb	Length (m)
Rosehill	Arthur Rd	Eleanor St	Cavers Lane	Rosehill	67.7
Epping	Barombah Rd	Windemere Rd	Dunmore Rd	Epping	235
Rosehill	Bligh St	#2	#10	Silverwater	37.7
Rosehill	Burbang Cres	1 Burbang Cres	19 Burbang Cres	Rydalmere	254
Rosehill	Burbang Cres	2 Burbang Cres	32 Burbang Cres	Rydalmere	117
Rosehill	Carnarvon St	Vore St	Suttor St	Silverwater	162.6
Dundas	Charles St	45 Belmore St East	20 Prindle St	Oatlands	285
Dundas	Chudleigh St	Calder Rd	#10	Rydalmere	88.8
Dundas	Chudleigh St	#6 Chudleigh St	Yeramba Pl	Rydalmere	391.9
Rosehill	Churchill St	Carnarvon St	Derby St	Silverwater	111.7
Dundas	Clarke St	Chudleigh St	End	Rydalmere	93
Dundas	Clarke St	Pathway to Reserve	Between 14 & 9	Rydalmere	28
Epping	Cobac Ave	Skenes Ave	End	Eastwood	68
North Rocks	Dremeday St	#2	#42	Northmead	272
Epping	Duncan Pl	Boronia	# 5	Epping	90
Epping	Dunrossil Ave	Reserve Entrance	Pennant Pde	Carlingford	170
Epping	Edenlee St	#31	Mobbs Lane	Mobbs Hill	137
Rosehill	Elonera St	3A Elonera St	55 Park Rd	Rydalmere	68
North Rocks	Grasmere Ave	Caprera Rd	Caprera Rd	Northmead	505
Dundas	Holland Pl	32 Holland Pl	Opp #2 Holland Pl	Dundas	250
North Rocks	Jason Pl	Catlett Ave	Reserve at #33	North Rocks	244
North Rocks	Jean St	4 Jean St	8 Jean St	Carlingford	60
Dundas	Kerrie Rd	Gollan Ave	Gollan Ave	Oatlands	
North Rocks	Law St	3 Law St	25 Highclere Cres	North Rocks	116
Dundas	Leamington Rd	Adderton Rd	Leamington Rd	Telopea	4
North Rocks	Lynette Ave	Oakes Rd	Laneway next to #13	North Rocks	127
North Rocks	McMillan Ave	17 McMillan Ave	7 Russell Ave	Winston Hills	190
Dundas	Patterson St	20 Patterson St	50A Spurway St	Ermington	64

Epping	Romford St	Ray Rd	Barombah Rd	Epping	250
Dundas	Rope St	Adamson Ave	#11	Dundas	
North Rocks	Shirley St	#37	Post Office St	Carlingford	94.7
Rosehill	Silverwater Rd	108 Silverwater Rd	120 Silverwater Rd	Silverwater	200
Rosehill	Silverwater Rd	138 Silverwater Rd	150 Silverwater Rd	Silverwater	148
Epping	Skenes Ave	3A Skenes Ave	1A Skenes Ave	Eastwood	64
Epping	Torquil Ave	Alamein Ave	Pathway next to #3	Carlingford	52.5
North Rocks	Vickery Ave	Trigg Ave	Buckland Ave	Carlingford	295
Epping	Windermere Rd	Barombah	Tarragundi	Epping	160
North Rocks	Woodlands St	Windsor Rd	#41 (end Cul De Sac)	Baulkham Hills	185.2
Rosehill	Bannerman St	583 Victoria Rd	33 Bannerman St	Ermington	212
Dundas	Brooker Ave/Edwin St	9 Bettington Rd	19 Edwin St	Oatlands	448
Dundas	Calder Rd and Dudley St	Opp 71 Crowgey St	Opp 72 Dudley St	Rydalmere	66
Dundas	Dudley St	4 Dudley St	opp 4 Dudley St	Rydalmere	20
Rosehill	Fallon St	29 Fallon St	South St	Rydalmere	148
North Rocks	Baker St	108 Baker St	74 Baker St	Carlingford	274
Epping	Orchard Rd	28 Norwood Ave	575 North Rocks Rd	Beecroft	80
North Rocks	Yarralumla Dr	204 Bettington Rd	73 Arcadian Circuit	Carlingford	382
Epping	Barombah Rd	Dunmore Rd	#32	Epping	
Epping	Beecroft Rd	Kandy Ave	240 Beecroft Rd	Epping	350
Epping	Essex St	Brucedale Ave	Abuklea Rd	Epping	
Dundas	Gibbon St	from Shops	#79	Telopea	
Rosehill	Lansdowne St	Burnett St	Pitt St	Parramatta	464
Epping	Midson Rd	Hillcrest St	Carlingford Rd	Epping	
Dundas	Patterson St	Lawson St	Gordon St	Ermington	
Dundas	William St	Kissing Point Rd	Fitzgerald Rd	Ermington	
Dundas	Holland Pl to Rumsey Cres	32 Holland Pl	Opp #12 Rumsey Cres	Dundas	154
Dundas	Ponds Walk	Sturt Park	Sturt Park	Telopea	77
North Rocks	Lynden St			Carlingford	
North Rocks	Pinetree Av			Carlingford	
Epping	Helen St			Carlingford	
North Rocks	Goodacre St			Winston Hills	
North Rocks	Vickery Ave			Carlingford	

Rosehill	Silverwater Rd	Holker St	Ampol Service Station	Silverwater	
Rosehill	Silverwater Rd	Holker St	River St	Silverwater	
Rosehill	Silverwater Rd	River St	Blaxland St	Silverwater	

Roads Renewal Program 2024/2025				
Street Name	**From Street**	**To Street**	**Suburb**	**Treatment**
Alice Street	Alfred Street	Arthur Street	Rosehill	Pavement rehabilitation
Anderson Street	Parkes Street	Marion Street	Parramatta	Pavement rehabilitation
Anne Street	Gollan Avenue	Alanas Avenue	Oatlands	Pavement rehabilitation
Antoine Street	John Street	Nowill Street	Rydalmere	Pavement rehabilitation
Athol Place	Ferndale Avenue	Cul-De-Sac	Carlingford	Pavement rehabilitation
Bettington Road	Niblick Crescent	House Number 59	Oatlands	Pavement rehabilitation
Binalong Road	Fitzwilliam Road	Moorgate Street	Toongabbie	Pavement rehabilitation
Boundary Street	Marsden Street	Inkerman Street	Parramatta	Pavement rehabilitation
Bowden Street	Webb Street	Pennant Parade	North Parramatta	Pavement rehabilitation
Brabyn Street	Victoria Road	Mason Street	North Parramatta	Pavement rehabilitation
Brisbane Street	Good Street Exit Roundabout	Harris Street	Harris Park	Pavement rehabilitation
Brothers Street	Rumsey Crescent	Kissing Point Road	Dundas Valley	Pavement rehabilitation
Bungaree Road	Bulli Road	Illoca Place	Toongabbie	Pavement rehabilitation
Burlington Street	Kleins Road	Bevan Street	Northmead	Pavement rehabilitation
Cambridge Street	Chester Street	Surrey Street	Epping	Pavement rehabilitation
Carroline Street	House Number 18	Hawkesbury Road	Westmead	Pavement rehabilitation
Churchill Drive	Willmott Avenue	Willmott Avenue	Winston Hills	Pavement rehabilitation
Concrete Roads 2024-2025_Rosehill			Various	Pavement rehabilitation
Coverdale Street	Lees Lane	House No 9	Carlingford	Pavement rehabilitation
Cowels Lane	Kissing point Road	House Number 7A	Ermington	Pavement rehabilitation
Dalwood Place	Dryden Avenue	Cul-De-Sac	Carlingford	Pavement rehabilitation
Delaware Road	Katrina Place	Kissing Point Road	Ermington	Pavement rehabilitation
Dorahy Street	Ronald Avenue	School	Dundas	Pavement rehabilitation
Ermington Lane	Turner Street	Dead End	Ermington	Pavement rehabilitation

Fernhill Avenue	Kent Street	House Number 22	Epping	Pavement rehabilitation
Gollan Avenue	House Number 26	House Number 38	Oatlands	pavement rehabilitation
Good Street	Amos Street	House Number 14	Parramatta	Pavement rehabilitation
Grandview Street	Pemberton Lane	Victoria Road	Parramatta	Pavement rehabilitation
Greens Avenue	Tulong Avenue	Tulong Avenue	Oatlands	Pavement rehabilitation
Grose Street	Church Street	Sorrell Street	North Parramatta	Pavement rehabilitation
Harris Street	Alice Street	Weston Street	Harris Park	Pavement rehabilitation
Church Street	Campbell Street	Aird Street	Parramatta	Heavy Patching
Prince Street	Belmore Street East	Bend	Oatlands	Heavy Patching
Evans Road	Alexander Street	Cox Crescent	Dundas Valley	Heavy Patching
Mulyan Avenue	Mobbs Lane	Cul-De-Sac	Carlingford	Heavy Patching
Midson Road	Eastwood Avenue	Carlingford Road	Epping	Heavy Patching
Holker Street	Newington Road	Slough Avenue	Silverwater	Heavy Patching
Holker Street	Hill Road	Bridge	Sydney Olympic Park	Heavy Patching
Westminster Avenue	Pennant Hills Road	Sandringham Drive	Carlingford	Heavy Patching
Vickery Avenue	Moseley Street	Bevan Place	Carlingford	Heavy Patching
Post Office Street	Jenkins Road	Thallon Street	Carlingford	Heavy Patching
Thallon Street	Post Office Street	James Street	Carlingford	Heavy Patching
Shirley Street	Post Office Street	Lloyds Avenue	Carlingford	Heavy Patching
Hemsworth Avenue	Briens Road	Roslyn Avenue	Northmead	Pavement rehabilitation
High Street	Raymond Street	Junction Street	Parramatta	Pavement rehabilitation
Jenkins Road	Parkland Road	House Number 88	Carlingford	Pavement rehabilitation
Kandy Avenue	Ray Road	Treeview Place	Carlingford	Pavement rehabilitation
Lister Avenue	River Road	Bend	Ermington	pavement rehabilitation
Lomond Crescent	Selkirk Street	Rothesay Street	Winston Hills	Pavement rehabilitation
Macquarie Street	O'Connell Street	Pitt Street	Parramatta	Pavement rehabilitation
Marshall Road	Honiton Avenue West	Kenny Place	Carlingford	Pavement rehabilitation
Marshall Road	Kenny Place	Brand Street	Carlingford	Pavement rehabilitation
Milton Street	John Street	Antoine Street	Rydalmere	Pavement rehabilitation
Moffatts Drive	Evans Road	Evans Road	Telopea	Heavy Patching
Morris Street	Perry Street	Marsden Road	Carlingford	Pavement rehabilitation
Moss Street	Kleins Road	Deed Place	Northmead	Pavement rehabilitation
Myrtle Street	Pine Street	Wattle Street	Rydalmere	Pavement rehabilitation

Myrtle Street	Wattle Street	Dead End	Rydalmere	Pavement rehabilitation
North Rocks Road	Church Street	Pennant Hills Road	North Rocks	Heavy Patching
Olive Street	Darcy Road	Dead End	Wentworthville	Pavement rehabilitation
Park Parade	Pitt Street	Council's Boundary	Parramatta	Pavement rehabilitation
Parkes Street	MacArthur Street	Stevens Street	Ermington	Pavement rehabilitation
Perry Street	Chicane 1	King Street	Dundas Valley	Pavement rehabilitation
Prune Street	Apple Street	Peachtree Avenue	Old Toongabbie	Pavement rehabilitation
Raimonde Road	Maismode Place	Marook Place	Carlingford	Pavement rehabilitation
Raymond Place	Pembroke Street	Cul-De-Sac	Epping	Pavement rehabilitation
Robin Street	Alexander Parade	Wavell Avenue	Carlingford	Pavement rehabilitation
Rope Street	Adamson Avenue	Fullford Street	Dundas	Pavement rehabilitation
Sirius Street	Supply Street	Carver Place	Dundas Valley	Pavement rehabilitation
Smith Street	Epping Road	Pembroke Street	Epping	Pavement rehabilitation
Spofforth Street	Boronia Street	Gregory Street	Ermington	Pavement rehabilitation
Spurway Street	Vignes Street	House Number 108	Ermington	Pavement rehabilitation
Stanley Lane	Barton Street	Atkins Road	Ermington	Pavement rehabilitation
Stevens Street	Mitchell Street	Atkins Road	Ermington	Pavement rehabilitation
Trumper Street	Boronia Street	Saunders Road	Ermington	Pavement rehabilitation
Valley Road	House number 48	House number 28	Eastwood	Pavement rehabilitation
Watson Place	Grasmere Avenue	Cul-De-Sac	Northmead	Pavement rehabilitation
Wattle Street	Myrtle Street	Bend	Rydalmere	Pavement rehabilitation
Wentworth Avenue	Raiway Street	Cul-De-Sac	Wentworthville	Pavement rehabilitation
Weston Street	Harris Street	Good Street Entry Rab.	Rosehill	Pavement rehabilitation
Wigram Street	Hassall Street	Parkes Street	Parramatta	Pavement rehabilitation
Woodward Street	Spurway Street	Cleal Street	Ermington	Pavement rehabilitation
Wylde Street	Tintern Avenue	Dead End	Telopea	Pavement rehabilitation

Roads To Recovery 2024 - 2025				
Street Name	**From Street**	**To Street**	**Suburb**	**Treatment**
Alexander Street	McKay Street	House Number 52	Dundas Valley	Pavement rehabilitation
Asquith Avenue	Disraeli Road	Melbourne Road	Winston Hills	Pavement rehabilitation
Avenue of Americas	Fariola Street	Avenue of Asia	Newington	Pavement rehabilitation
Arcadian Circuit	Ferndale Avenue	Linley Close	Carlingford	Pavement rehabilitation
Cowells Lane	Kissing Point Road	Fitzgerald Road	Ermington	Pavement rehabilitation
Model Farms Road	Simpson Street	Folini Avenue	Winston Hills	Pavement rehabilitation
Pennant Parade	Ray Road	Alamein Avenue	Epping	Pavement rehabilitation
Lamonerie Street	Fitzwilliam Road	Barrangaroo Road	Toongabbie	Pavement rehabilitation

Kerb Renewal Program 2024/2025				
Street Name	**From Street**	**To Street**	**Suburb**	**Treatment**
Bridge Street - (St1)	Mary Parade	Mary Lane	Rydalmere	Repair of Kerb and Gutter
Antoine Street	John Street	Nowill Street	Rydalmere	Repair of Kerb and Gutter
Boundary Street	Marsden Street	Inkerman Street	Parramatta	Repair of Kerb and Gutter
Buller Street	Albert Street	Isabella Street	North Parramatta	Repair of Kerb and Gutter
Marshall Road	Honiton Ave (W)	Kenny Place	Carlingford	Repair of Kerb and Gutter
Marshall Road	Kenny Place	Brand Street	Carlingford	Repair of Kerb and Gutter
Raimonde Road	Maismode Place	Marook Place	Carlingford	Repair of Kerb and Gutter
Stevens Street	Mitchell Street	Atkins Road	Ermington	Repair of Kerb and Gutter
Tintern Ave (St1)	Pennant HIlls Road	Felton Street	Telopea	Repair of Kerb and Gutter
Valley Road stage 1	House number 48	House number 28	Eastwood	Repair of Kerb and Gutter
Wentworth Ave (St1)	Raiway Street	Cul-De-Sac	Wentworthville	Repair of Kerb and Gutter
Willoughby Street	Pennant Parade	House number 44	Epping	Repair of Kerb and Gutter
Dalwood Place	Dryden Avenue	Cul-De-Sac	Carlingford	Repair of Kerb and Gutter
Ermington Lane	Turner Street	Dead End	Ermington	Repair of Kerb and Gutter
Stanley Lane	Barton Street	Atkins Road	Ermington	Repair of Kerb and Gutter

Anne Street	Gollan Avenue	Alanas Avenue	Oatlands	Repair of Kerb and Gutter
Milton Street	John Street	Antoine Street	Rydalmere	Repair of Kerb and Gutter
Myrtle Street	Wattle Street	Dead End	Rydalmere	Repair of Kerb and Gutter
Parkes Street	MacArthur Street	Stevens Street	Ermington	Repair of Kerb and Gutter
Prune Street	Apple Street	Peachtree Avenue	Old Toongabbie	Repair of Kerb and Gutter
Robin Street	Alexander Parade	Wavell Avenue	Carlingford	Repair of Kerb and Gutter
Rope Street	Adamson Avenue	Fullford Street	Dundas	Repair of Kerb and Gutter
Spofforth Street	Boronia Street	Gregory Street	Ermington	Repair of Kerb and Gutter
Wattle Street	Myrtle Street	Bend	Rydalmere	Repair of Kerb and Gutter
Weston Street	Harris Street	Good Street	Rosehill	Repair of Kerb and Gutter
Wylde Street	Tintern Avenue	Dead End	Telopea	Repair of Kerb and Gutter
Elgin Place	Aberdeen Road	Cul-De-Sac	Winston Hills	Repair of Kerb and Gutter
Ryan Street	House No 16	House Number 22	Dundas valley	Repair of Kerb and Gutter
High Street	Raymond Street	Marion Street	Parramatta	Repair of Kerb and Gutter
Yaaran Avenue	Epping Avenue	Cul-De-Sac	Epping	Repair of Kerb and Gutter
Forrest Lane	Deakin Street	Dead End	Ermington	Construct kerb and gutter
Bowden Street	Webb Street	Pennant Parade	North Parramatta	Repair of Kerb and Gutter
Fernhill Avenue	Kent Street	House Number 22	Epping	Repair of Kerb and Gutter
Illoca Place	Bungaree Road	Bungaree Road	Toongabbie	Repair of Kerb and Gutter
Kandy Avenue	Ray Road	Treeview Place	Carlingford	Repair of Kerb and Gutter
Sirius Street	Carver Street	Supply Street	Dundas Valley	Repair of Kerb and Gutter
Lister Avenue	River Road	Bend	Ermington	Repair of Kerb and Gutter
Crimea Street	Franklin Street	Dead End	Parramatta	Repair of Kerb and Gutter
Harris Street	Alice Street	Weston Street	Rosehill	Repair of Kerb and Gutter
Gollan Avenue	House Number 26	House Number 38	Oatlands	Repair of Kerb and Gutter
Woodward Street	Spurway Street	Cleal Street	Ermington	Repair of Kerb and Gutter
Brothers Street	Rumsey Crescent	Kissing Point Road	Dundas Valley	Repair of Kerb and Gutter
Perry Street	King Street	Chicanes	Dundas Valley	Repair of Kerb and Gutter
Athol Place	Ferndale Avenue	Cul-De-Sac	Carlingford	Repair of Kerb and Gutter
Wentworth Avenue	Bungaree Road	Railway Station	Pendle Hill	Repair of Kerb and Gutter
Folini Avenue	Model Farms Road	Cul-De-Sac	Winston Hills	Repair of Kerb and Gutter
Churchill Drive	Willmott Avenue	Willmott Avenue	Winston Hills	Repair of Kerb and Gutter
Park Road	Victoria Road	Pine Street	Rydalmere	Repair of Kerb and Gutter

Isabella Street	Waugh Avenue	Buller Road	North Parramatta	Repair of Kerb and Gutter
Watson Place	Grasmere Avenue	Cul-De-Sac	Northmead	Repair of Kerb and Gutter
Derbyshire Avenue	Bungaree Road	Ballandella Road	Toongabbie	Repair of Kerb and Gutter
Binalong Road	Moorgate Street	Henson Street	Toongabbie	Repair of Kerb and Gutter
Hemsworth Avenue	Briens Road	Roslyn Street	Northmead	Repair of Kerb and Gutter
Good Street	Great Western Highway	Amos Street	Westmead	Repair of Kerb and Gutter

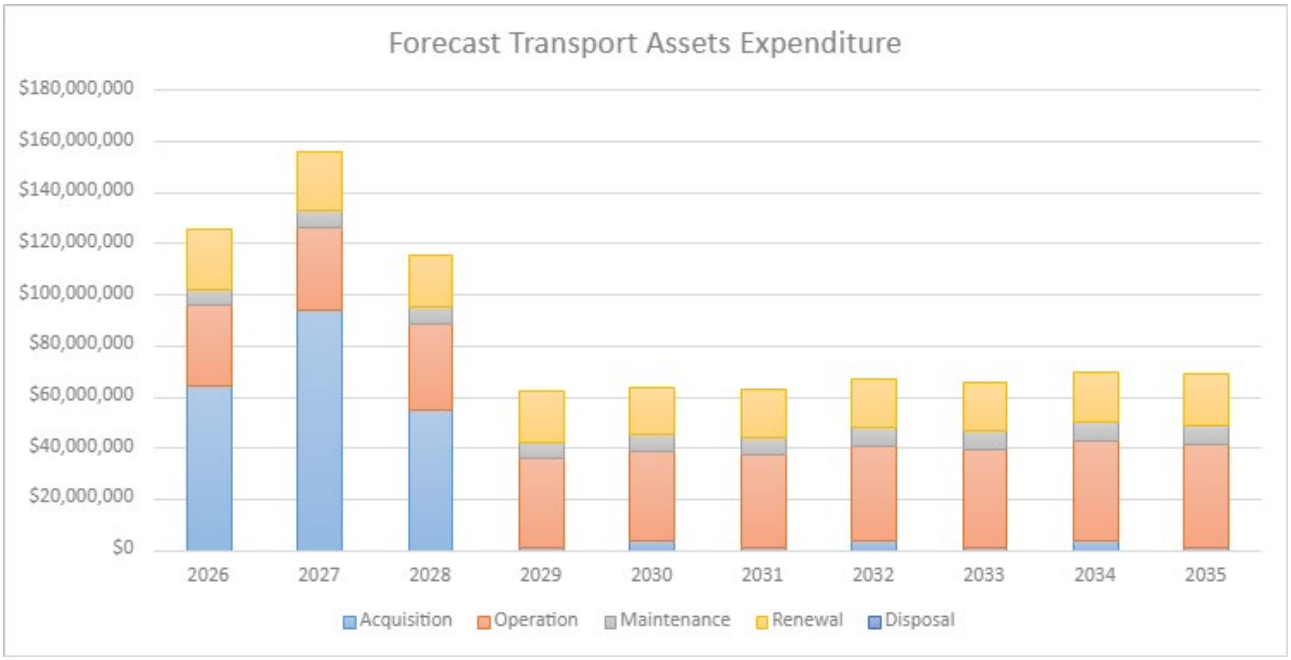
List of Bridge Maintenance Works		
No.	**Program (Parent Project)**	**Description (Scopes)**
1	CP000587 Bridge - Safety Upgrade	Barry Wilde & Charles Weir Handrail
2	CP000587 Bridge - Safety Upgrade	Baludarri Wetland Boardwalk - Joints
3	CP000587 Bridge - Safety Upgrade	Footpath repair at Ray Road Bridge
4	CP000587 Bridge - Safety Upgrade	Parramatta Escarpment Boardwalk - Repair
5	CP000587 Bridge - Safety Upgrade	Faulkner Street Timber Bridge
6	CP000587 Bridge - Safety Upgrade	Timber Bridges Temporary Planks Safety
7	CP000587 Bridge - Safety Upgrade	Moxhams Rd Bridge Maintenance (Capital)
8	CP000587 Bridge - Safety Upgrade	Upjohn Park Timber Bridge Closure
9	CP000587 Bridge - Safety Upgrade	Toongabbie Overline Bridge Fence
10	CP000587 Bridge - Safety Upgrade	Bridge Assets - Asphalt Works
11	CP000587 Bridge - Safety Upgrade	Moxhams Road Timber Bridge Maintenance
12	CP000587 Bridge - Safety Upgrade	Stewart St Stairs - Fixing loose panels
13	CP000587 Bridge - Safety Upgrade	Pedestrian/cyclist count on Bennelong Pkwy
14	CP000587 Bridge - Safety Upgrade	Bennelong Pkwy Bridge - Investigations
15	CP000587 Bridge - Safety Upgrade	Bennelong Pkwy Bridge - Joints
16	CP000587 Bridge - Safety Upgrade	Thackeray St Bridge Safety Assessment
17	CP000587 Bridge - Safety Upgrade	Thackeray St Bridge - Signs for closure
18	CP000590 Bridge - Renewal Program	Yaraan Ave Bridge - Timber Rail Repair
20	CP000590 Bridge - Renewal Program	Cowell's Lane Reserve Bridges - Timber
21	CP000590 Bridge - Renewal Program	Cornelia Rd Guardrail Repair
23	CP000590 Bridge - Renewal Program	Structural Assessment-Upjohn Park Bridge

24	CP000587 Bridge - Safety Upgrade	Monitoring Survey - Hunts Creek Culverts
25	CP000587 Bridge - Safety Upgrade	BR042 - Moxhams Road Bridge Rail Damage
26	CP000587 Bridge - Safety Upgrade	BR233 Alfred St Viewing Deck Repairs
27	CP000587 Bridge - Safety Upgrade	BR133 Skenes Avenue Reserve Boardwalk
28	CP000587 Bridge - Safety Upgrade	Bridge Assets - Asphalt Works
29	CP000587 Bridge - Safety Upgrade	Moxhams Road Timber Bridge Maintenance
30	CP000590 Bridge - Renewal Program	Upjohn Park Bridge Replacement
31	CP000590 Bridge - Renewal Program	Baludarri Wetland Boardwalk Repair
32	CP000590 Bridge - Renewal Program	Level 3 inspections for 17 bridges
33	CP000590 Bridge - Renewal Program	Thackeray St Bridge 50% Repair Costs - Sydney Water
34	CP000590 Bridge - Renewal Program	Engineering Investigations on Council's Sweepers - Loading Assessment
35	CP000590 Bridge - Renewal Program	Priority 1: Immediate Repairs on bridges based on Level 2 Condition Assessment
36	CP000590 Bridge - Renewal Program	Bridge Monitoring Costs
37	CP000590 Bridge - Renewal Program	Bridge Surface Pavement AC works

Capital Projects 2024-25	
Project Name	**Suburb**
Hunts Creek Bridge Construction – North Rocks Road, North Parramatta	North Rocks
Carlingford Road TCS at Hepburn Avenue, Carlingford	Carlingford
Ray Road and Kent Street, Epping Pedestrian Crossing	Epping
Hill Road Pedestrian Crossing at Half Street	Wentworth Point
Western Parramatta River and CBD Precinct Connections	Parramatta
Duck River Nature Trail	Silverwater
Parramatta CBD to Sydney CBD Cycleway - missing link	Lidcombe
Finlayson's Creek Regional Cycleway	Westmead
NW T-way Constitution Hill Cycleway - Stages 1 & 2	Constitution Hill
Eastern Parramatta River and CBD Precinct Connections	Ermington
Alfred Street - Stage 2A	Rosehill
George Street East Pedestrian & Cyclist Paths	Parramatta
Rydalmere Foreshore - Stage 3	Rydalmere

Bennelong Parkway Bridge Link	Sydney Olympic Park
Wigram St Permanent Cycleway, Harris Park (Design Only)	Harris Park
Alfred Street - Stage 2B	Harris Park
Civic Link Block 3	Parramatta
Phillip Street Smart Street stage 2	Parramatta
Southern Precinct - Wentworth Street and Woodhouse Lane upgrade	Parramatta
Post Parramatta Light Rail (PLR) Works	Parramatta
Barrack Lane - Shared zone and streetscape	Parramatta
Epping Town Centre Upgrade	Epping
CBD George Street - Streetscape Upgrade	Parramatta
Phillip Street Smart Street - Stage 3	Parramatta
Southern Precinct - Two-way Conversion of Valentine Avenue and Wentworth Street - Streetscape Upgrade	Parramatta

Appendix B - LTFP Budgeted Expenditures Accommodated in AMP



Appendix C - Glossary

Annual Service Cost (ASC)

1) Reporting actual cost

The annual (accrual) cost of providing a service including operations, maintenance, depreciation, finance/opportunity and disposal costs less revenue.

2) For investment analysis and budgeting

An estimate of the cost that would be tendered, per annum, if tenders were called for the supply of a service to a performance specification for a fixed term. The Annual Service Cost includes operations, maintenance, depreciation, finance/ opportunity and disposal costs, less revenue.

Asset

A resource controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity. Infrastructure assets are a sub-class of property, plant and equipment which are non-current assets with a life greater than 12 months and enable services to be provided.

Asset category

Sub-group of assets within a class hierarchy for financial reporting and management purposes.

Asset class

A group of assets having a similar nature or function in the operations of an entity, and which, for purposes of disclosure, is shown as a single item without supplementary disclosure.

Asset condition assessment

The process of continuous or periodic inspection, assessment, measurement and interpretation of the resultant data to indicate the condition of a specific asset so as to determine the need for some preventative or remedial action.

Asset hierarchy

A framework for segmenting an asset base into appropriate classifications. The asset hierarchy can be based on asset function or asset type or a combination of the two.

Asset management (AM)

The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner.

Asset renewal funding ratio (ARFR)

The ratio of the net present value of asset renewal funding accommodated over a 10-year period in a long term financial plan relative to the net present value of projected capital renewal expenditures identified in an asset management plan for the same period [AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9].

Average annual asset consumption (AAAC)*

The amount of the asset base consumed during a reporting period (generally a year). This may be calculated by dividing the depreciable amount by the useful life (or total future economic benefits/service potential) and totalled for each and every asset OR by dividing the carrying amount (depreciated replacement cost) by the remaining useful life (or remaining future economic benefits/service potential) and totalled for each and every asset in an asset category or class.

Borrowings

A borrowing or loan is a contractual obligation of the borrowing entity to deliver cash or another financial asset to the lending entity over a specified period of time or at a specified point in time, to cover both the initial capital provided and the cost of the interest incurred for providing this capital. A borrowing or loan provides the means for the borrowing entity to finance outlays (typically physical assets) when it has insufficient funds of its own to do so, and for the lending entity to make a financial return, normally in the

form of interest revenue, on the funding provided.

Capital expenditure

Relatively large (material) expenditure, which has benefits, expected to last for more than 12 months. Capital expenditure includes renewal, expansion and upgrade. Where capital projects involve a combination of renewal, expansion and/or upgrade expenditures, the total project cost needs to be allocated accordingly.

Capital expenditure - expansion

Expenditure that extends the capacity of an existing asset to provide benefits, at the same standard as is currently enjoyed by existing beneficiaries, to a new group of users. It is discretionary expenditure, which increases future operations and maintenance costs, because it increases the asset base, but may be associated with additional revenue from the new user group, e.g. extending a drainage or road network, the provision of an oval or park in a new suburb for new residents.

Capital expenditure - new

Expenditure which creates a new asset providing a new service/output that did not exist beforehand. As it increases service potential it may impact revenue and will increase future operations and maintenance expenditure.

Capital expenditure - renewal

Expenditure on an existing asset or on replacing an existing asset, which returns the service capability of the asset up to that which it had originally. It is periodically required expenditure, relatively large (material) in value compared with the value of the components or sub-components of the asset being renewed. As it reinstates existing service potential, it generally has no impact on revenue but may reduce future operations and maintenance expenditure if completed at the optimum time, e.g. resurfacing or resheeting a material part of a road network, replacing a material section of a drainage network with pipes of the same capacity, resurfacing an oval.

Capital expenditure - upgrade

Expenditure, which enhances an existing asset to provide a higher level of service or expenditure that will increase the life of the asset beyond that which it had originally. Upgrade expenditure is discretionary and often does not result in additional revenue unless direct user charges apply. It will increase operations and maintenance expenditure in the future because of the increase in the asset base, e.g. widening the sealed area of an existing road, replacing drainage pipes with pipes of a greater capacity, enlarging a grandstand at a sporting facility.

Capital funding

Funding to pay for capital expenditure.

Capital grants

Revenue received generally tied to the specific projects or purposes, which are often for upgrade and/or expansion or new investment proposals.

Capital investment expenditure

Relatively large (material) expenditure, which has benefits, expected to last for more than 12 months (See capital expenditure definition)

Capitalisation threshold

The value of expenditure on non-current assets above which the expenditure is recorded as capital expenditure and below which the expenditure is charged as an expense in the year of acquisition.

Carrying amount

The amount at which an asset is recognised in the balance sheet after deducting any accumulated depreciation / amortisation and accumulated impairment losses.

Component

Specific parts of an asset having independent physical or functional identity and having specific attributes such as different life expectancy, maintenance regimes, risk or criticality.

Core asset management

Asset management which relies primarily on the use of an asset register, maintenance management systems, top-down condition assessment, simple risk assessment and defined levels of service, in order to establish alternative

treatment options and a long-term cash flow projection.

Cost of an asset

The amount of cash or cash equivalents paid, or the fair value of the consideration given to acquire an asset at the time of its acquisition or construction, including any costs necessary to place the asset into service. This includes one-off design and project management costs.

Critical assets

Those assets that are likely to result in a more significant financial, environment and social cost in terms of impact on organisational objectives.

Deferred maintenance

The shortfall in rehabilitation work undertaken relative to that required to maintain the service potential of an asset.

Depreciable amount

The cost of an asset, or other amount substituted for its cost, less its residual value.

Depreciated replacement cost (DRC)

The gross replacement cost (GRC) of an asset less, where applicable, accumulated depreciation calculated on the basis of such cost to reflect the already consumed or expired future economic benefits of the asset.

Depreciation / amortisation

The systematic allocation of the depreciable amount (service potential) of an asset over its useful life.

Economic life

See useful life definition.

Expenditure

The spending of money on goods and services. Expenditure includes recurrent and capital outlays.

Expenses

Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or increases in liabilities that result in decreases in equity, other than those relating to distributions to equity participants.

Fair value

The amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties, in an arm's length transaction.

Financing gap

A financing gap exists whenever an entity has insufficient capacity to finance asset renewal and other expenditure necessary to be able to appropriately maintain the range and level of services its existing asset stock was originally designed and intended to deliver. The service capability of the existing asset stock should be determined assuming no additional operating revenue, productivity improvements, or net financial liabilities above levels currently planned or projected. A current financing gap means service levels have already or are currently falling. A projected financing gap if not addressed will result in a future diminution of existing service levels.

Gross replacement cost (GRC)

The cost the entity would incur to acquire the asset on the reporting date. The cost is measured by reference to the lowest cost at which the gross future economic benefits could be obtained in the normal course of business or the minimum it would cost, to replace the existing asset with a technologically modern equivalent new asset (not a second hand one) with the same economic benefits (gross service potential) allowing for any differences in the quantity and quality of output and in operating costs.

Heritage asset

An asset with historic, artistic, scientific, technological, geographical or environmental qualities that is held and maintained principally for its contribution to knowledge and culture, and this purpose is central to the objectives of the entity holding it.

Impairment Loss

The amount by which the carrying amount of an asset exceeds its recoverable amount.

Infrastructure assets

Physical assets that contribute to meeting the needs for access to major economic and social facilities and services, e.g. roads, drainage, footpaths and cycle ways. These are typically large, interconnected networks or portfolios of composite assets. The components of these assets may be separately maintained, renewed or replaced individually so that the required level and standard of service from the network of assets is continuously sustained. Generally, the components and hence the assets have long lives. They are fixed in place and are often have no separate market value.

Key performance indicator

A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or other target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.

Level of service

The parameters or combination of parameters that reflect social, political, economic and environmental outcomes that the organisation delivers.

Levels of service statements describe the outputs or objectives an organisation or activity intends to deliver to customers.

Life Cycle

The cycle of activities that an asset (or facility) goes through while it remains an identity as a particular asset i.e. from planning and design to decommissioning or disposal.

Life Cycle Cost (LCC)

Total LCC The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs.

Average LCC The life cycle cost is average cost to provide the service over the longest asset life cycle. It comprises average operations, maintenance expenditure plus asset consumption expense, represented by depreciation expense projected over 10 years. The Life Cycle Cost does not indicate the funds required to provide the service in a particular year.

Life Cycle Expenditure (LCE)

The Life Cycle Expenditure (LCE) is the average operations, maintenance and capital renewal expenditure accommodated in the long term financial plan over 10 years. Life Cycle Expenditure may be compared to average Life Cycle Cost to give an initial indicator of affordability of projected service levels when considered with asset age profiles.

Maintenance

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, e.g. road patching but excluding rehabilitation or renewal. It is operating expenditure required to ensure that the asset reaches its expected useful life.

Maintenance may be classified as:

- Planned maintenance

Falls into three categories:

a) Periodic – necessary to ensure the reliability or to sustain the design life of an asset.

b) Predictive – condition monitoring activities used to predict failure.

c) Preventive – maintenance that can be initiated without routine or continuous checking and is not condition based.

- Reactive maintenance

Unplanned repair work that is carried out in response to service requests and management/ supervisory directions.

- Specific maintenance

Maintenance work to repair components or replace sub-components that needs to be identified as a specific maintenance item in the maintenance budget.

- Unplanned maintenance

Corrective work required in the short-term to restore an asset to working condition so it can continue to deliver the required service or to maintain its level of security and integrity.

Maintenance expenditure *

Recurrent expenditure, which is periodically or regularly required as part of the anticipated schedule of works required to ensure that the asset achieves its useful life and provides the required level of service. It is expenditure, which was anticipated in determining the asset's useful life.

Materiality

The notion of materiality guides the margin of error acceptable, the degree of precision required, and the extent of the disclosure required when preparing general purpose financial reports. Information is material if its omission, misstatement or non-disclosure has the potential, individually or collectively, to influence the economic decisions of users taken on the basis of the financial report or affect the discharge of accountability by the management or governing body of the entity.

Modern equivalent asset

Assets that replicate what is in existence with the most cost-effective asset performing the same level of service. It is the most cost efficient, currently available asset which will provide the same stream of services as the existing asset is capable of producing. It allows for technological changes and improvements and efficiencies in production and installation techniques. The modern equivalent asset is evidenced by renewal strategies in asset management plans and financing in a long-term financial plan covering at least 10 years.

*Net present value (NPV)

The value of the cash flows associated with an asset, liability, activity or event calculated using a discount rate to reflect the time value of money. It is the net amount of discounted total cash inflows after deducting the value of the discounted total cash outflows arising from e.g. the continued use and subsequent disposal of the asset after deducting the value of the discounted total cash outflows.

Non-revenue generating investments

Investments for the provision of goods and services to sustain or improve services to the community that are not expected to generate any savings or revenue, e.g. parks and playgrounds, footpaths, roads and bridges, libraries, etc.

Operations

Regular activities to provide services such as public health, safety and amenity, e.g. street sweeping, grass mowing and street lighting.

Operating expenditure

Recurrent expenditure, which is continuously required to provide a service. In common use the term typically includes, e.g. power, fuel, staff, plant equipment, on-costs and overheads but excludes maintenance and depreciation. Maintenance and depreciation are on the other hand included in operating expenses.

Operating expense

The gross outflow of economic benefits, being cash and non-cash items, during the period arising in the course of ordinary activities of an entity when those outflows result in decreases in equity, other than decreases relating to distributions to equity participants.

Operating expenses

Recurrent expenses continuously required to provide a service, including power, fuel, staff, plant equipment, maintenance, depreciation, on-costs and overheads.

Operations, maintenance and renewal financing ratio

Ratio of estimated budget to projected expenditure for operations, maintenance and renewal of assets over a defined time (e.g. 5, 10 and 15 years).

Operations, maintenance and renewal gap

Difference between budgeted expenditures in a long term financial plan (or estimated future budgets in absence of a long term financial plan) and projected expenditures for operations, maintenance and renewal of assets to

achieve/maintain specified service levels, totalled over a defined time (e.g. 5, 10 and 15 years).

Pavement management system (PMS)

A systematic process for measuring and predicting the condition of road pavements and wearing surfaces over time and recommending corrective actions.

PMS Score

A measure of condition of a road segment determined from a Pavement Management System.

Rate of annual asset consumption *

The ratio of annual asset consumption relative to the depreciable amount of the assets. It measures the amount of the consumable parts of assets that are consumed in a period (depreciation) expressed as a percentage of the depreciable amount.

Rate of annual asset renewal *

The ratio of asset renewal and replacement expenditure relative to depreciable amount for a period. It measures whether assets are being replaced at the rate they are wearing out with capital renewal expenditure expressed as a percentage of depreciable amount (capital renewal expenditure/DA).

Rate of annual asset upgrade/new *

A measure of the rate at which assets are being upgraded and expanded per annum with capital upgrade/new expenditure expressed as a percentage of depreciable amount (capital upgrade/expansion expenditure/DA).

Recoverable amount

The higher of an asset's fair value, less costs to sell and its value in use.

Recurrent expenditure

Relatively small (immaterial) expenditure or that which has benefits expected to last less than 12 months. Recurrent expenditure includes operations and maintenance expenditure.

Recurrent funding

Funding to pay for recurrent expenditure.

Rehabilitation

See capital expenditure - renewal.

Remaining useful life

The time remaining until an asset ceases to provide the required service level or economic usefulness. Age plus remaining useful life provides an estimate of useful life.

Renewal

See capital expenditure - renewal.

Residual value

The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life. Residual value reflects consideration receivable from an asset at the end of its useful life to the entity and accordingly would not include cost savings from the re-use of in-situ materials.

Revenue generating investments

Investments for the provision of goods and services to sustain or improve services to the community that are expected to generate some savings or revenue to offset operating costs, e.g. public halls and theatres, childcare facilities, sporting and recreation facilities, tourist information facilities, etc.

Risk management

The application of a formal process to the range of possible values relating to key factors associated with a risk in order to determine the resultant ranges of outcomes and their probability of occurrence.

Section or segment

A self-contained part or piece of an infrastructure asset.

Service potential

The total future service capacity of an asset. It is normally determined by reference to the operating capacity and economic life of an asset. A measure of service potential is used in the not-for-profit sector/public sector to value assets, particularly those not producing a cash flow.

Service potential remaining

A measure of the future economic benefits remaining in assets. It may be expressed in dollar values (Fair Value) or as a percentage of total anticipated future economic benefits. It is also a measure of the percentage of the asset's potential to provide services that are still available for use in providing services (Depreciated Replacement Cost/Depreciable Amount).

Strategic Asset Management Plan

A plan that documents and specifies how the organizational objectives are to be converted into AM objectives, the approach for developing AM Plans and the role of the AM system in supporting the achievement of AM objectives.

Strategic Plan

A plan containing the long-term goals and strategies of an organisation. Strategic plans have a strong external focus, cover major portions of the organisation and identify major targets, actions and resource allocations relating to the long-term survival, value and growth of the organisation.

Sub-component

Smaller individual parts that make up a component part.

Useful life

Either:

(a) the period over which an asset is expected to be available for use by an entity, or

(b) the number of production or similar units expected to be obtained from the asset by the entity.

It is estimated or expected time between placing the asset into service and removing it from service, or the estimated period of time over which the future economic benefits embodied in a depreciable asset, are expected to be consumed by the entity.

Valuation

The process of determining the worth of an asset or liability. Assessed asset value which may depend on the purpose for which the valuation is required, i.e. replacement value for determining maintenance levels, market value for lifecycle costing and optimised deprival value for tariff setting.

Value in Use

The present value of future cash flows expected to be derived from an asset or cash generating unit. It is deemed to be depreciated replacement cost (DRC) for those assets whose future economic benefits are not primarily dependent on the asset's ability to generate net cash inflows, where the entity would, if deprived of the asset, replace its remaining future economic benefits.

Source: IPWEA, IIMM & AIFMM 2015, Glossary

Additional and modified glossary items shown *

Appendix D - Life Cycle Degradation Profiles

Maintenance response is based on site judgement using the condition and risk associated with the defect and to the extent of the current budget.

Council has selected the following four degradation profiles to simulate the progressive deterioration of the various civil assets.

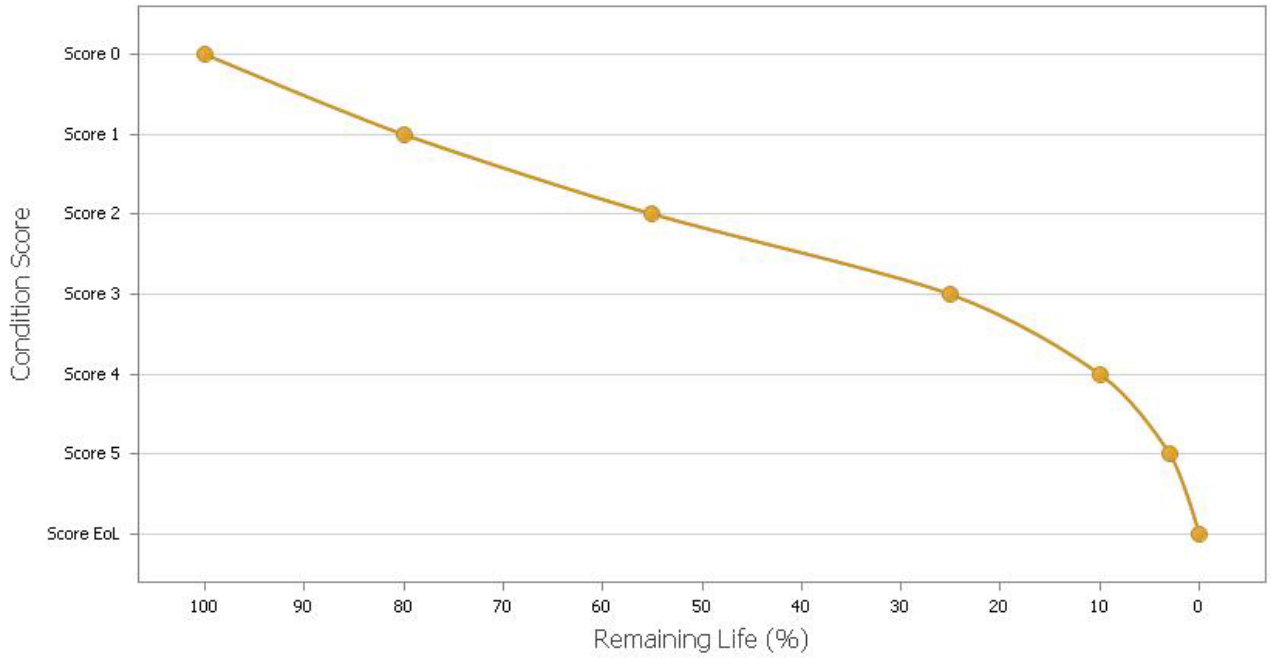


FIGURE 1 SIMULATION CURVE REPRESENTING OVERALL DETERIORATION OF INFRASTRUCTURE ASSET

Appendix E - Abbreviations & Definition

Explanation of definitions and acronyms used in this plan.

Term/Acronym	Definition
AASB	Australian Accounting Standards Board
AM Strategy	Asset Management Strategy
AMSC	Asset Management Steering Committee
Backlog	The quantum of assets that meet the levels of service reflected in the modelling rule base and hence due for a capital treatment, however, funding is not enough to treat these assets. The current hypothetical cost of recouping this backlog (i.e PDAMP funding required to bring every asset in condition state 5, Very Poor, back to a condition state 1, being Very Good) by immediate capital renewal
CIS	Community Infrastructure Strategy 2018-2038
CSP	City of Parramatta Council Community Strategic Plan 2018-2038
Condition or Service State	The service state involves the use of a single integer between 1 and 5 to describe the ability of the asset in question to fulfill its function; where 1 is very good and 5 is very poor
ICT	Information and Communication Technology
IIMM	International Infrastructure Management Manual
ISO55000	55000 Series, International Suite of Asset Management Standards
LTFP	Long-Term Financial Plan (10 year)
Average Annual Lifecycle Cost	Total cost lifecycle scenario strategy. Calculation; Total Capital Cost over 10 Years + Total Maintenance & Operational Cost over 10 Years – Backlog Movement Over 10 Years.
Non-current assets	Physical and intangible infrastructure assets, including information and communication technology (ICT) assets, controlled by the organisation
RI AMP	Road Infrastructure Asset Management Plan
SAM	Strategic Asset Management