Asset Management Planning

Incorporating

Asset Management Strategy (including Asset Management Policy)

Service Asset Management Plan

resourcing NEWCASTLE 2040

City of Newcastle

Asset Management Strategy

2022-2032

resourcing NEWCASTLE 2040

City of Newcastle

Welcome

Acknowledgement of Country

We all sit on Awabakal and Worimi land
'Niirun Yalawa Awabakal dha Worimi burrai'

City of Newcastle (CN) acknowledges its Local Government Area (LGA) sits within the Country of the Awabakal and Worimi peoples. We acknowledge that Country for Aboriginal peoples is an interconnected set of ancient relationships. We acknowledge the custodianship of the Awabakal and Worimi peoples and the care and stewardship they have performed in this place since time immemorial.

Always was, always will be Aboriginal land
'Wunyibu wunyibu warra wunyibu wunyibu gkuuba Aboriginal burrai'

Sustainable Development Goals

We are committed to contributing towards the achievement of the United Nations Sustainable Development Goals (SDGs). We have adopted the SDGs and New Urban Agenda as cornerstones for our planning.

In September 2015, Australia was one of 193 countries to commit to the SDGs. These goals provide a global roadmap for all countries to work towards a better world for current and future generations.

To ensure we continue to support our community's vision for a smart, liveable and sustainable global city, it is important that we apply this global framework.

These global goals are significant and will take time to achieve; however, it is important to recognise the steps we are taking to progress these goals. This is our second year reporting against the SDGs and it is our intention to continually improve our methods of reporting to help us achieve these global standards.

Contents

1 Executive Summary

Newcastle is Australia's seventh-largest city, with a resident population of 171,000 and a total land area of 187km^2 (Australian Bureau of Statistics 2020). The Newcastle Local Government Area (LGA) shares boundaries with Lake Macquarie Council to the south, Port Stephens Council to the north, and Maitland and Cessnock Councils to the west. The Traditional Custodians of the Newcastle area are the Worimi and Awabakal peoples.

City of Newcastle (CN) serves its community by providing a range of services to residents and visitors. Our services are supported by a variety of built and natural assets, information technology, fleet and plant. Each asset contributes to meeting community needs, from park benches to our large local road network. Community services rely on well-planned, well-built and well-maintained infrastructure. Our goal is to ensure sustainable community service expectations are met by providing a structured set of objectives, actions and processes aimed at improving asset management and integrated resourcing strategies.

Diagram 1: Asset Diversity

Our Asset Management Strategy (AMS) is developed in conjunction with *Newcastle 2040*. A core component of *Resourcing Newcastle 2040*, the AMS integrates with our Long-Term Financial Plan (LTFP) and Workforce Development Strategic Plan (WDSP) to sustainably deliver services to our community.

The AMS determines the nature and direction of CN's asset management, providing the link between our Asset Management Policy (AMP) and our Service Asset Management Plan (SAMP). The strategy determines how our asset portfolio will support the service delivery needs of our community, now and into the future.

Our AMS is based on service planning and best practice asset life cycle management principles. Service planning identifies the services desired by our community and explores options to deliver them in an equitable and sustainable manner. This approach ensures we understand the people, processes, resources and tools CN requires to maintain and enhance our services to the community through our substantial asset portfolio.

Our asset policy, strategy and plans are regularly updated to maintain data confidence and ensure ongoing alignment with strategic direction. Improvement plans are also included within the AMS and SAMP, detailing key actions required to ensure continuous improvement.

2 Integrated Planning and Reporting

Integrated Planning and Reporting (IP&R) legislation was introduced by the NSW State Government in 2013 and sets requirements for all councils to lead the development of long-term plans for their city, detailing community aspirations and strategic directions. The diagram below demonstrates how our AMP, AMS and SAMP fit within the IP&R framework.

Diagram 2: Asset Management Strategy context

Our AMS is developed in conjunction with *Newcastle 2040*, working to deliver its vision of Newcastle as a liveable, sustainable, inclusive global city. *Newcastle 2040* represents CN's highest level of strategic planning. All other plans developed by CN as part of the IP&R framework must reflect and support the implementation of our community strategic plan. A core component of *Resourcing Newcastle 2040*, the AMS integrates with our LTFP and WDSP to determine how our asset portfolio will support the service delivery needs of our community, now and into the future.

CN's asset planning framework comprises our AMP (see Appendix 1), AMS, SAMP and our individual operational Service Asset Plans (SAPs). The AMP defines the key principles that underpin asset management for CN. The AMS translates these principles into core objectives that guide the management of our asset portfolio to support service delivery for our community. Asset performance modelling and service alignment is detailed in our SAMP and SAPs. CN utilises SAPs to enable rational and coordinated decision-making about levels of service. Resourcing, funding and asset life cycle requirements are examined to inform our daily operations, annual budgets and long-term planning. The long-term projections within our SAPs drive and support the LTFP and WDSP.

3 Our Service Delivery

CN provides a range of services to its residents, businesses and visitors. The majority of these services depend on CN assets for delivery, including natural and built assets such as trees, roads, drains, bridges, footpaths, public buildings and recreational facilities. Effective management of these assets, including understanding levels of service, is essential to the delivery of *Newcastle 2040*'s objectives.

3.1 Community Research and Expectations

Community research and consultation contributes significantly to the development of CN's Asset Management Policy, Strategy and Plans. To determine current and desired service levels, community engagement and consultation is undertaken through:

- Community strategic planning engagement
- Service-based engagement and consultation
- Individual service-based customer experience
- Quarterly targeted surveys.

CN undertook extensive community consultation in 2021 and 2022 to develop *Newcastle 2040*. This produced four strategic themes that are used to guide our asset management and service delivery, as shown in the diagram below. Community aspirations and service needs are converted into customer and technical levels of service, which are used to measure performance.

Diagram 3: Newcastle 2040 themes

3.2 Determining Levels of Service

The AMS details how our asset portfolio supports the service delivery needs of our community. In an asset management context, level of service refers to a defined rating against which service performance can be measured. Levels of service generally relate to quality, quantity, functionality, capacity, utilisation, location, accessibility and environmental factors. They provide the link between higher-level corporate objectives, asset management objectives and more detailed technical and operational objectives.

Service levels articulate the link between providing the outcomes the community desires and the way in which CN provides the service. A higher level of service will likely cost more to deliver than a lower level of service.

CN's current average levels of service are represented using a general 1–5 star rating system, as shown in the table below. The star rating system provides a platform for comparing levels of service across different services.

Star Rating	General Standard of Key Service Attributes
★☆☆☆☆	Basic quality standard. Low community usage, limited functionality.
★★☆☆☆	Average quality standard and presentation. Moderate community usage and functionality.
★★★☆☆	Good quality standard and presentation. Medium–high community usage. Fit for purpose. Maintained and presented in good condition.
★★★★☆	Very good quality standard. High community usage, functionality and capacity. Maintained and presented in very good condition. Services LGA community and beyond.
★★★★★	Excellent quality standard. Very high community usage, functionality, and capacity. Maintained and presented in excellent condition. High profile; delivers important economic benefits and services beyond the LGA and regional community.

Table 1: Star rating system

Our levels of service are defined using customer and technical performance measures. Customer performance measures describe attributes of the service from a customer viewpoint: how the customer receives or experiences the service. Technical levels of service support customer measures and are used internally to measure the performance of the service. Individual SAPs detail assessments for each service output, which are collated to form a current average community level of service. A summary of our service star ratings can be found in our SAMP.

3.3 Demand

To ensure our asset management and service delivery is sustainable and meets the changing needs and aspirations of our community, the following demand drivers need to be considered:

- Population growth/decline
- Economic changes
- Customer expectations
- Technology and innovation initiatives

- Impact of climate change
- Drive for environmental sustainability
- Disability inclusion and access
- Changes to legislation and statutory requirements
- Urban development
- New assets from growth
- Financial sustainability.

Our SAMP aims to address these demands through a combination of managing, upgrading and disposing of existing assets; providing new assets; enhancing technology; and utilising alternative service delivery options.

4 Asset Management Planning

Asset management planning is a comprehensive process that ensures our assets are managed and maintained to deliver a sustainable service to the community. CN adopts cost-effective life cycle management with a service delivery focus. This ensures assets and their associated performance support *Newcastle 2040* objectives and meet community needs.

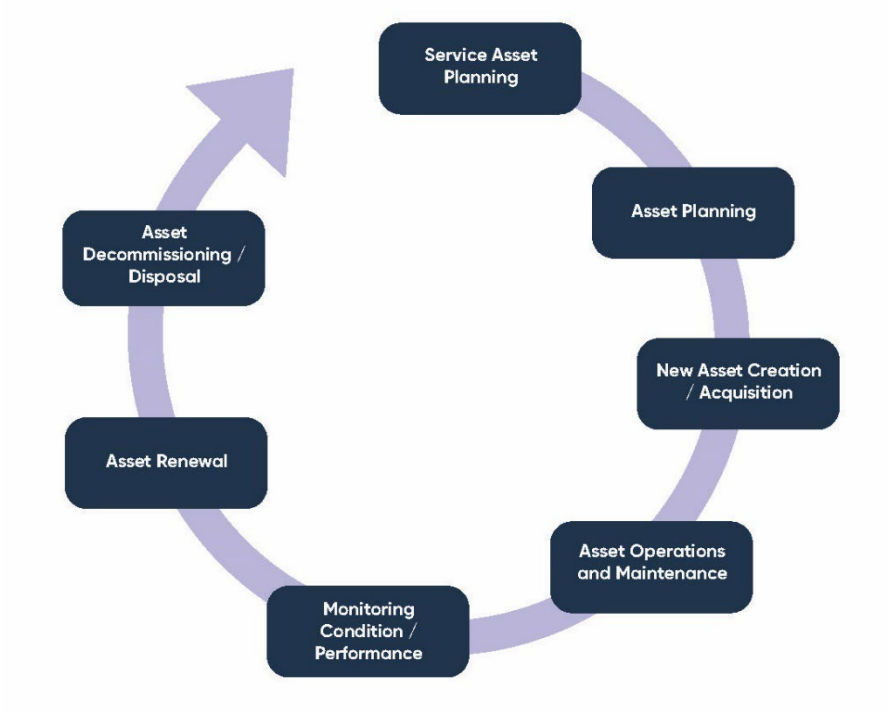

Diagram 4: Asset management planning cycle

Asset management planning seeks to manage services and assets efficiently and effectively through:

- Prioritised asset resourcing with a service delivery focus
- Adopting a whole-of-asset life cycle approach
- Data-driven and -informed decision-making
- Performance monitoring and reporting.

4.1 Asset Management Objectives

Asset management refers to the systematic, coordinated activities and practices an organisation undertakes to deliver its objectives optimally and sustainably through the cost-effective life cycle management of assets. CN's asset management goals are to proactively manage our assets from a lowest whole-of-life cost perspective in accordance with recognised industry practice while meeting agreed levels of service, and to continuously improve our asset management systems.

This strategy communicates how the principles of our AMP (see Appendix 1) will be achieved by defining key objectives for asset management across CN. These objectives are shown in the table below and are listed in the order that they appear, not by priority.

No.	Objective	How CN plans to achieve the objective	Asset Policy principles
1	Align service delivery expectations with available funding to achieve sustainable management of all required supporting assets	CN's SAPs are operational plans detailing service delivery expectations and required levels of funding to deliver the service. Our SAMP and SAPs will be reviewed periodically to reflect decisions resulting from the integrated planning process.	2
2	Identify levels of funding required to achieve a sustainable Capital Works Program and assess the implications of different funding levels on levels of service	To align sustainable service delivery expectations with available funding, CN will maintain and utilise a project management system for project proposal, prioritisation and approvals. CN will implement Strategic Asset Management software to model asset data, which will provide asset life cycle cost requirements to deliver desired service delivery expectations. CN will utilise Strategic Asset Management software to model funding versions and adjust service level expectations with available funding.	3, 4
3	Adjust resources and invest in building capacity to deliver works programs	Each SAP will continue to review the delivery of its associated works program and identify issues with resourcing delivery.	2
4	Ensure renewal and maintenance required to minimise life cycle costs and maintain agreed level of service is fully funded and reportable	Asset modelling will provide detailed data on optimised maintenance and renewal expenditure, which will inform the LTFP and allow funding to be planned. Levels of service, capital works forecasting and maintenance plans are defined within the SAMP. Capital works program priorities renewal. Maintenance is funded to meet service levels.	2, 4
5	Use SAPs to coordinate decision-making regarding levels of service and implement relevant strategies and plans	The SAMP will forecast demand and its effects on the service and correlating assets. Assets that are no longer required will be identified through detailed development of SAPs and will follow the asset review process to enable disposal. Each SAP incorporates a risk management plan integrated with current corporate software. Periodic review of SAMP and SAPs (i.e. maturity assessment) will be undertaken. SAPs identify legislative and statutory compliance and reporting requirements.	5, 6, 7
6	Only approve new services and/or assets where the full life cycle cost of doing so has been evaluated and appropriate supporting budget allocations made	As per IP&R requirements, strategies are required to be costed. Expenditure Review Committee reviews all strategies prior to approval. Development of business cases will engage staff in whole-of-life costing for assets before a project is prioritised.	1
7	Capture and improve asset data and service information	A continuous improvement approach is taken to advance asset management practice throughout the organisation and maintain a single source of truth for asset-related information.	3
8	Align asset management activities with *Newcastle 2040*	The SAMP supports service delivery and demonstrates integration with *Newcastle 2040*.	7
9	Ensure accountability, responsibility and reporting requirements	CN is committed to understanding the services valued by the community and to providing and	1, 6

No.	Objective	How CN plans to achieve the objective	Asset Policy principles
	for assets are established, relevant, clearly communicated and implemented	maintaining assets through informed decision-making. Responsibilities for custodianship and management of assets are identified and guide our asset management system. Reporting occurs through our Annual Report, Operational Plan, Delivery Program, capital works monthly reporting and annual financial statements.	
10	Delivery of services will incorporate environmental sustainability, considering: • Emission prevention and reduction • Climate resilience • Biodiversity and Water-Sensitive Urban Design, Urban Forest expansion • Circular economy, including resource efficiency and designing out waste • Whole-of-life asset management	CN will continue to invest in public natural asset management to ensure benefits accrue for current and future generations. Through our strategic frameworks, including our environment strategy, circular economy, climate action and adaptation plans, and coastal management programs, we will: • Measure environmental performance and impact • Identify priority assets • Improve environmental sustainability. CN will implement actions to improve the quality of corporate information systems underpinning natural asset management planning and decision-making. Each SAP will continue to detail sustainable environmental measures, including consideration of: • Climate mitigation and adaptation planning requirements • Environmental risks and opportunities • Biodiversity and Water Sensitive Urban Design.	2, 4, 6

Table 2: Key objectives and actions

4.2 Environmental Sustainability

Section 8 of the *Local Government Act 1993* requires CN to 'properly manage, develop, protect, restore, enhance and conserve the environment of the area for which it is responsible in a manner which is consistent with and promotes the principles of Ecologically Sustainable Development (ESD)' and 'have regard to the long-term and cumulative effect of its decisions'. The Act also requires councils to take the principles of ESD into account. As such, CN will continue to apply systems thinking and adaptive planning in the governance of asset management objectives for all our activities.

CN is the custodian of a diverse natural asset portfolio. There is a need to protect our city's waterways, biodiversity and local blue and green corridors. Through our environmental policies, strategies and plans, CN is committed to reducing pollution, emissions and waste, as well as water and materials consumption.

CN will invest in public natural asset management to ensure benefits accrue for current and future generations. This includes funding for renewal to address the impacts of infrastructure and urban development on our natural asset portfolio. This investment delivers on our ESD objectives and builds the resilience of our infrastructure.

To integrate environmental management best practice within our SAPs, environmental sustainability measures are incorporated into the star rating system for all CN's service outputs. The measures focus on the assessment of energy efficiency and emissions reduction; water conservation; protection of biodiversity, land and water quality; recycling of waste materials; promotion of sustainable transport; and use of sustainable building materials that are incorporated into the delivery of each service project across its whole life cycle.

5 Our Assets

CN is responsible for the management of assets valued at more than $2.5 billion. These assets play an integral part in delivering the services provided by CN to serve the City. The tables below provide a summary of the replacement values of CN's built and natural assets.

Asset Class	Description	Current Replacement Cost ($,000)
Buildings	Community building's including libraries and cultural facilities, investment properties	364,587
Fleet and Plant	Light vehicles, trucks, plant, trailers	39,412
Open Spaces	Playgrounds, structures, retaining walls, park furniture	253,175
Other Assets	Equipment, smart poles, flood warning system	134,206
Stormwater	Stormwater drainage including, pits and pipes, culverts headwalls, open channels, water quality devices	273,650
Transport	Roads, footpaths, cycleways, bridges, carparks, roadside furniture	950,362
Waste Management	Waste facilities	85,442
Total		**2,100,834**

Table 3: Built asset value

Asset Class	Description	Current Estimated Value ($,000)
Bushland	Bushland, habitat trees, tracks and trails, inland cliff lines	129,907
Public trees	Street and park trees	107,233
Watercourses	Natural and constructed watercourses including vegetation	67,592
Coast	Coastline including beaches, dunes, rock platforms, clifflines	56,213
Wetlands	Natural and constructed waterbodies including fringe vegetation	45,296
Sea/River Walls	Sea and river walls	73,509
Total		**479,750**

Table 4: Natural asset value

Our assets support a wide and diverse range of services, including, but not limited to:

- Administrative services
- Community, arts and cultural facilities and programs
- Customer service
- Environmental management
- Urban water cycle management (including flood mitigation and protection)
- Strategy and innovation
- Libraries and learning
- Parks and recreation (including sporting facilities, aquatic services and natural areas)
- Development and compliance
- Traffic and transport
- Tourism and economic development
- Waste services.

5.1 Critical Assets

Critical assets are defined as those that have a high consequence of failure. They are likely to result in more significant financial, environmental and social costs in terms of impact on organisation objectives. By identifying critical assets, we can reduce risk by continually improving investigative activities, maintenance and capital expenditure plans, and direct investment.

CN does not have any critical assets as we do not provide utility networks or sewer supply. CN has high-risk assets that have a high consequence of failure, such as the Works Depot and the road network. Individual operational SAPs identify assets deemed high risk and demonstrate the methodology used to minimise potential impact on the achievement of asset management objectives.

By identifying high-risk assets, CN can target and refine investigative activities, maintenance plans and capital expenditure plans for the key areas. This information is fed into asset modelling software to target investment on high-risk assets and reduce risk.

5.2 Asset Depreciation and Useful Life

Depreciation is a method of allocating the cost of an asset over its useful life to reflect the patterns of consumption of the asset. CN has adopted the straight-line method of depreciation to reflect patterns of consumption for all non-current assets other than bulk earthworks, parcels of land and heritage collections, which are not depreciated.

CN assesses the period over which an asset or asset component is expected to be available for use when determining its expected useful life. Useful life is assessed in the context of the asset's service to CN and not its physical life.

Asset useful lives and residual values are reviewed, and adjusted if appropriate, with sufficient regularity to ensure that the pattern of consumption is accurately reflected in annual financial statements. The estimated useful lives of CN assets as shown in General Purpose Financial Statements at 30 June 2021 are set out in Table 5 below.

Asset Classification	Useful Life in Years
Office equipment	3 to 5
Furniture and fittings	2 to 25
Plant and equipment	3 to 50
Library books	3 to 100
Depreciable land improvements	25 to 50
Buildings[1]	20 to 100
Other structures[2]	3 to 200
Swimming pools	50 to 100
Other open space/recreational assets	7 to 60
Stormwater drainage	18 to 94
Roadside furniture	20
Sealed roads: surface	17 to 74
Sealed roads: pavement	114 to 119
Sealed roads: kerb and gutter	79
Unsealed roads: surface	28
Bridge: substructure, superstructure	67 to 89
Bridge: handrail, guardrail	45 to 89
Footways	28 to 49
Other infrastructure	15 to 100

Table 5: Asset Useful Life

1 100-year life is only applicable to building shell on four culturally significant buildings

[2] 200-year life is only applicable to one leading light tower

5.3 Asset Condition

To monitor asset performance and ensure service delivery, we undertake regular condition assessments across our asset portfolio. The majority of these assessments are undertaken in line with asset revaluation timeframes, i.e. five-yearly. Regular condition assessments are scheduled for:

- Buildings
- Transport including roads, parking, footpaths, cycleways and public domain elements
- Stormwater including stormwater drainage network and flood planning assets

- Plant and equipment
- Open space assets such as parks, playgrounds and pools
- Natural assets including beaches, bushland, wetlands, street and habitat trees, waterways and cliff lines, and sea/river walls.

Data from condition assessments is used to reassess the remaining useful lives and depreciation rates of our assets and ensure that the annual depreciation expense is the best reflection of each asset's remaining service potential. Each asset revaluation aims to improve the accuracy of the asset's value by using the most recently available information on construction materials, methods and use.

5.3.1 Asset Condition Profile

To sustainably manage the infrastructure of our historic coastal city, condition and asset consumption modelling informs our asset planning, optimising maintenance and renewal expenditure. As our city's infrastructure ages, the overall consumption increases across our asset profile.

Asset condition (excluding fleet, plant and equipment) is measured against an Office of Local Government five-point scale (see Table 6 below), which rates infrastructure condition from excellent to very poor.

Infrastructure Asset Condition Assessment Key		
1	Excellent/Very good	No work required
2	Good	Only minor maintenance work required
3	Satisfactory	Maintenance work required
4	Poor	Renewal required
5	Very poor	Urgent renewal/upgrading required

Table 6: Condition scale

A snapshot of condition distribution for our major asset classes is provided below.

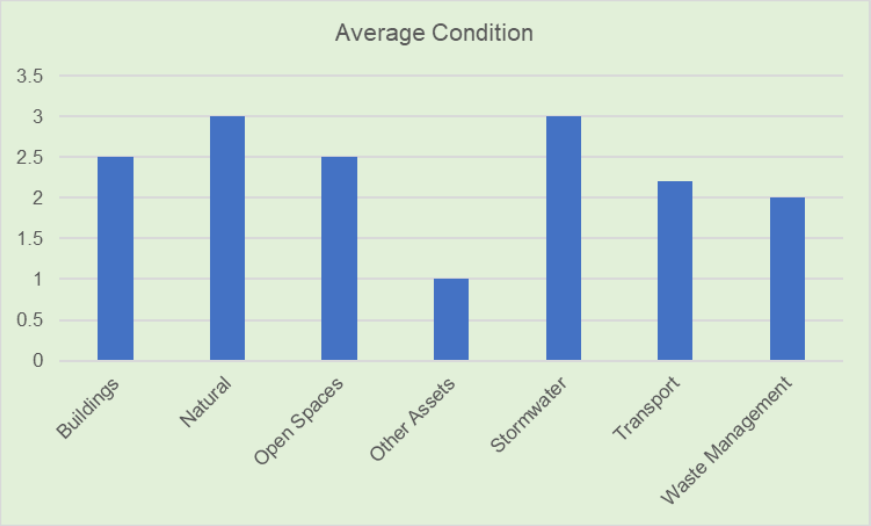

Diagram 5: Average condition profile

Detailed condition data is combined with our analysis of asset service attributes including functionality, quality, capacity and utilisation to inform our asset planning. This analysis enables CN to implement data driven asset life cycle management.

6 Asset Management System

It is important to understand how well our current asset management system supports service delivery for our community, and to identify opportunities for ongoing improvement. Our asset management system includes the IT systems used to manage assets as well as the people, processes and tools involved in service delivery. Key components include asset registers and management systems, asset condition assessments, strategic planning capabilities, predictive modelling, deterioration modelling, risk analysis and life cycle costing.

6.1 Asset Management System Confidence Rating

Confidence in CN's asset management system components has been assessed using the Confidence Rating System in Table 8. Confidence in both the financial and asset processes is assessed in each SAP. Low confidence in the asset system limits our ability to use the data for high-level business decisions and option analysis. The asset management system and SAPs provide the structure for asset performance monitoring, with each SAP outlining an action plan for improving the asset data.

Confidence Grade	Description
A	**Highly reliable** Data based on sound records, procedure, investigations and analysis, documented properly and recognised as the best method of assessment.
B	**Reliable** Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example old data, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation.
C	**Uncertain** Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data.
D	**Very uncertain** Data based on unconfirmed verbal reports and/or cursory inspection and analysis. Dataset may not be fully complete and most data is estimated or extrapolated.
E	**Unknown** None or very little data held.

Table 7: Confidence Rating System (Source: International Infrastructure Management Manual (2015) – IPWEA)

6.2 Asset Registers and Management Systems

CN has implemented an Enterprise Resource Planning (ERP) system and is currently undertaking an upgrade of the combined financial and operational asset register (Works and Assets). This register is also used to capture maintenance and capital costs against individual assets. Other operational costs are recorded in the ERP's financial module against cost centres.

CN recognises that we must continually invest in maintaining and improving asset data and knowledge to demonstrate good governance and make well-informed asset management decisions to sustainably meet community needs.

The Confidence Rating in the asset data informing the AMS and SAMP ranges between B (reliable) and C (uncertain), dependent on service. Many asset registers require improvement, including process establishment for future data capture, improved integration with the Geographical Information System (GIS), and further rollout of asset classes into Works and Assets.

Asset register and management system improvements are detailed in each individual SAP. Individual operational SAPs detail asset condition, inspection timetables and required maintenance and renewal plans. Where asset condition data is incomplete, overall condition of the asset class is extrapolated and data improvement plans are developed. Condition assessments for transport assets are undertaken more frequently in accordance with the City-Wide Maintenance Procedure.

6.3 Strategic Planning Capabilities

CN's ERP software includes a Strategic Asset Management module. This module enables us to model asset data to gain an optimised view of the life cycle costs of our assets, informing service levels, SAPs and the LTFP. The module will be implemented in alignment with ERP upgrades.

The AMS and SAMP will integrate with the LTFP to allow predictive modelling and deterioration modelling of assets. The forecast future life cycle costs demonstrated in this strategy are reflected in CN's long-term financial planning, allowing us to ascertain sustainable funding limits and make decisions on the future focus of our services.

6.4 Risk Management

CN integrates risk management into its organisation's core business planning and decision-making processes. CN's Enterprise Risk Management (ERM) Framework provides the foundation for responding to uncertainty through a structured and consistent approach.

The ERM Framework considers the internal and external context in which CN operates. A Governance and Risk (Executive) Committee provides oversight and guidance to the organisation whilst independent Audit and Risk Committee provides independent oversight.

CN's ERM Guideline incorporates the asset risk management approach outlined in standard ISO 55000:2014. This standard is the global standard for the effective management of assets. Key components of this approach include:

- Planning (concept and specification)
- Acquisition
- Operation and maintenance (operate, maintain, improve)
- Disposal.

Our risk assessment process identifies risk, the likelihood of the risk occurring, and the consequence should the risk eventuate. CN's assets are assessed during the asset management life cycle for:

- The selection of asset solutions that are not required and/or do not meet needs
- Poor specification of asset solutions
- Poor whole-of-life asset budgeting (resulting in 'financial shock')
- Poor asset life cycle management planning
- Assets not meeting prescribed specifications
- Difficulty or costliness of improving or managing the asset
- Assets incurring environmental risks.

Asset Custodians and Service Unit Managers are responsible for identifying significant risks to assets and the services they provide. The asset risk assessment includes identifying critical and high-risk assets and devising treatment to mitigate the risk. Removal of these practices may impact service delivery.

6.4.1 Resilience

The International Infrastructure Management Manual defines 'resilience' as being wider than natural disasters. It covers the capacity of public, private and civic sectors to withstand disruption, absorb disturbance, act effectively in a crisis, adapt to changing conditions (including climate change) and grow over time.

CN addresses resilience through a Business Continuity Management Framework (the Framework) and implementing measures that assist to:

- minimise the impact of incidents, disruption and emergencies
- safeguard CN's critical services and functions
- support the effective return to normal operations and enhance capability and organisational resilience.

The Framework enables CN to continue delivering critical business functions if an incident, disruption or emergency causes disruption that is beyond CN's business as usual capabilities if it is logistically feasible to do so. CN's Business Continuity Management Policy, Business Continuity Plans and Crisis and Emergency Management Plan constitute essential components of the Framework in the form of recovery from potential risk events that may significantly impact critical business activities, revenue, reputation and service delivery. The Framework was prepared in accordance with the principles outlined in AS ISO 22301:2019 *Societal security -Business continuity management systems – Requirements*.

7 Life Cycle Management

The AMP, AMS and SAMP provide a framework for a uniform approach to asset life cycle management. A unified, whole-of-organisation approach is critical to achieve best practice alignment and maximise the value of assets across their life cycle. The table below summarises key components of asset life cycle management.

Life Cycle Category	Description
Acquisition (new)	Expenditure that creates a new asset providing a service/output that did not exist before, including planning, design, construction and acquisition.
Operations	Recurrent expenditure, which is continuously required to provide a service, e.g. power, fuel, staff, plant equipment.
Maintenance	All actions necessary for retaining an asset as near as practical to an appropriate service condition, including regular ongoing day-to-day work necessary to keep assets operating.
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.
Upgrade/New	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. New: Expenditure which creates a new asset providing a service/output that did not exist beforehand, including planning, design, construction and acquisition.
Disposal	Expenditure on activities necessary to dispose of decommissioned assets.

Table 8: Asset life cycle expenditure categories. Source: Australian Infrastructure Financial Management Manual 2015

7.1 Roles and Responsibilities

Responsibility for service output delivered by CN assets is spread across our service units. Table 10 demonstrates the service units responsible for managing the delivery of service outputs and developing SAPs. Due to the alignment of CN's organisational structure, there are many services where more than one unit contributes to the overall delivery of services.

CN has adopted an Asset Custodian/Asset Manager model for the delivery of services across the LGA. An Asset Custodian is the CN Service Unit Manager responsible for the stewardship of the asset and for defining the level of service required for the asset. An Asset Manager is the CN Service Unit Manager responsible for providing ongoing advice, maintenance, renewal and support services to facilitate the service provided by the Asset Custodian.

Asset Life Cycle Management Role	Description	Responsibility
Service Unit Management	• Coordination, resource allocation, SAP implementation, project submissions • Planning for future service required, including level of service • Providing information for establishing, monitoring and reviewing level of service to assist ongoing development of SAPs • Managing assets in accordance with legislative requirements and standards	Managers of responsible Service Unit as per organisation structure
Service Planning	• Development and implementation of SAPs	Manager of:

Asset Life Cycle Management Role	Description	Responsibility
	• Providing support and guidance to Service Units in preparing SAPs and strategies • Identifying asset requirements – New/Upgrade/Renewal/Maintenance	• Community, Strategy and Innovation • Responsible Service Unit delivering the CN service
Asset Design	• Designs and specifications; adherence to and application of relevant standards and legislative requirements	Manager of: • Assets and Projects • Parks and Recreation • Property and Facilities • Information Technology • Community, Strategy and Innovation
Asset Construction	• Delivery and project management of construction programs; adherence to and application of design and required specifications; budgeting and estimating	Manager of: • Assets and Projects • Civil Construction and Maintenance • Property and Facilities • Parks and Recreation • Information Technology • Community, Strategy and Innovation
Asset Renewal Scheduling	• Planning, scheduling and reporting on asset renewal activities	Manager of: • Assets and Projects • Parks and Recreation • Property and Facilities
Asset Condition Inspections	• Scheduling and delivery of asset condition inspections	Manager of • Assets and Projects • Property and Facilities • Parks and Recreation • Depot Operations • Waste Management
Asset Maintenance and Operations	• Planning, implementing and managing reactive and proactive maintenance and operational activities • Implementing cyclic/periodic/programmed maintenance and operational programs in consultation with Assets and Projects	Manager of: • Civil Construction and Maintenance • Property and Facilities • Parks and Recreation • Assets and Projects • Depot Operations

Asset Life Cycle Management Role	Description	Responsibility
	• Approved asset-related maintenance and operation work	• Information Technology • Waste Management
Asset Disposal	• Identifying service requirements and assets no longer fit for purpose • Repurposing assets	Managers of responsible Service Unit as per organisation structure Supported by Infrastructure and Property Directorate

Table 9: Roles and responsibilities

7.2 New and Upgrade Planning

New works involve the creation or acquisition of a new service or asset. Upgrade works involve the significant enhancement of an existing service or asset. To ensure CN is well positioned to deliver new and upgraded assets for the community, it is essential to understand our collective requirements across services. New and upgrade plans are developed in consultation with Asset Custodians and Managers.

CN strategies and plans are required to provide whole-of-life costings as part of internal review and endorsement through our Expenditure Review Committee. All new and upgrade projects require forecasting and prioritisation in our project management system. Each new/upgrade asset-related project will be reflected in the relevant SAP to drive future funding in the LTFP in all asset life cycle cost categories. Delivery of new and upgrade works for our built and natural assets is undertaken through portfolio and program management.

Projected new and upgrade capital works to meet community service expectations are placing an increasing demand on CN's limited resources. Further analysis of CN's project prioritisation methodology and associated life cycle costing is being undertaken to support the sustainable delivery of our future Capital Works Programs.

7.3 Renewal Planning

Renewal refers to the restoration, rehabilitation or replacement of an asset to its original or required service capacity. To maintain existing levels of service, asset renewal should take precedent over new and upgrade expenditure. Major renewal works are funded through the Capital Works Program and are identified in individual SAPs. Renewal plans are developed in consultation with Asset Custodians and Managers as well as key stakeholders.

When determining whether an asset needs renewing, consideration is given to the following criteria:

- Condition of existing asset: can the useful life be extended and renewal be delayed?
- Risk assessments
- Changes to service levels: does the existing asset meet or fail service level requirements?
- Fitness for purpose – capacity and functionality: does the asset meet the level of service required?
- Environmental ratings
- Current rates of utilisation.

Renewal intervention points may vary between asset classes and categories. Factors such as location and fitness for purpose may also influence intervention timing.

Condition inspections are programmed to inform the development of the renewal program. All proposed capital renewal works are recorded in our project management system. Project proposals include demonstrated strategic alignment, a detailed business case, indicative cost estimate, priority rating and timeframe for delivery. Proposed renewal works are subject to resource availability and changes to community priorities.

7.3.1 Renewal Demand

Renewal demand refers to assets that have met or exceeded their nominated intervention point and potentially no longer provide the intended level of service. Many factors influence the condition and deterioration of our assets, including utilisation rates, environmental conditions, age, design and location. To ensure community levels of service are met, investment in asset renewal is essential at the appropriate intervention point. When assets exceed their intervention point, there is an increase in our level of renewal demand and maintenance.

Renewal demand is calculated by estimating the cost to bring the asset to the agreed level of service. Due to budget constraints, including increasing demands for new and upgrade work, our renewal demand is currently not being met by our financial funding. Our renewal demand will continue to increase as the city expands, as we gain more assets, and as we continue to invest in new and upgraded assets for our community.

To meet growing renewal demand challenges, we are prioritising our works programs and improving our condition data capture and asset systems. Renewal demand for each asset class is identified in individual SAPs and included in our Capital Works Program. Each SAP reviews assets that are approaching or have reached intervention points and establishes whether the asset meets current service level requirements. Investment to return assets to an agreed level of service and to maintain the remaining asset condition profile is considered in the LTFP.

7.4 Maintenance Planning

Maintenance refers to the regular day-to-day work required to ensure an asset achieves its useful life. Increasing maintenance spend will often reduce the capital investment required over the life of the asset. Examples include road resurfacing and painting of building assets. Maintenance strategies to minimise life cycle costs are incorporated in individual operational SAPs.

To achieve the lowest whole-of-life cost for our assets, a proactive approach to maintenance scheduling is required. CN is progressively moving towards such an approach that implements service level agreements and associated prioritised maintenance schedules. We have developed our City-Wide Maintenance Procedure, Service Level Agreements and preventative maintenance schedules to monitor condition and undertake scheduled servicing. To determine optimal life cycle funding, CN plans to implement a Strategic Asset Management module to enable the modelling of maintenance and renewal scenarios. The optimised life cycle funding requirements will allow funding to be scheduled in the LTFP.

7.5 Operational Planning

Operations are the regular business activities required to provide a service to the community. In asset management terms, operations can be split into two major components: the cost associated with the delivery of the service, and the cost associated with the operations of the asset that supports the delivery of the service. Operational costs are captured in the annual adopted budget and are reviewed quarterly. Any adjustments are subject to Council approval. The annual budget cycle provides opportunity to review and adjust operational budgets for service provision. Additional adjustments can take place through quarterly review. Details of CN's adopted operational plan can be found in the document *Delivering Newcastle 2040*.

7.6 Asset Disposal

Disposal is the closing, decommissioning or sale of an asset or service. Asset disposal is to be considered in all individual SAPs. In proposing the disposal of an asset, SAPs will consider:

- Current CN policy and procedures for disposal of assets
- Assets that have reached end of useful life or are nearing intervention point
- Service and asset reviews that may identify assets that are no longer fit for purpose or are under/over-utilised through analysis of the current level of service provided
- Alternative methods of delivering current and desired levels of service
- Opportunities to repurpose the asset within CN services.

8 Financial Summary

To assess the estimated life cycle costs of managing assets, it is necessary to understand the plans and expenditure involved in maintaining those assets and the services they provide. When resourcing its assets, CN considers not only the annual operating costs for maintenance and operation, but also upfront capital costs associated with procuring new assets or renewing and upgrading existing assets.

8.1 Future Capital Works

This strategy provides estimates for capital expenditure to acquire, upgrade and renew assets for a 10-year period. A summary of our 10-year capital works program is provided in section 8.2. The forecast has been modelled on LTFP funding projections, assuming CN priorities may change in alignment with community expectations. The prioritisation of capital works may result in projects being completed beyond the current ten-year time frame.

The capital works program is modelled in LTFP scenarios to ascertain sustainability levels to facilitate decision-making. To meet the challenge of competing demands, our Asset Management Improvement Plan (see Section 9) includes a range of measures to enhance CN's investment prioritisation and resource allocation.

CN resources its capital works for infrastructure assets through various funding sources generated from operating activities such as rates, developer contributions, Special Rate Variations, grants and community contributions. Where appropriate, funding may be obtained via a loan. Funding constraints and limitations are determined from the LTFP, which is updated annually. In addition, funding constraints and limitations can be driven by changes in borrowing decisions and political commitments and to ensure financial sustainability.

8.2 Forecast Estimated Service Costs

To achieve the objectives of *Newcastle 2040*, it is important to identify life cycle costs associated with delivery of our services. Our life cycle costs estimate expenditure across all asset-based services to achieve the agreed level of service. This forecast is modelled in LTFP scenarios for financial sustainability. Estimated life cycle costs are shown in the table below.

Life Cycle Category	FY 23 ($,000's)	FY 24 ($,000's)	FY 25 ($,000's)	FY 26 ($,000's)	FY 27 ($,000's)	FY 28 ($,000's)	FY 29 ($,000's)	FY 30 ($,000's)	FY 31 ($,000's)	FY 32 ($,000's)
Operational	190,233	196,320	202,603	209,086	215,777	219,876	224,054	228,311	232,649	237,069
Maintenance	28,418	29,327	30,266	31,234	32,234	32,846	33,470	34,106	34,754	35,415
Renewal	40,700	36,485	37,325	38,183	39,061	39,960	40,879	41,819	42,781	43,765
Upgrade and New	91,905	65,715	67,226	68,772	70,354	71,972	73,627	75,321	77,053	78,825
Disposal – Proposed Asset Sale	-	-	-	-	-	-	-	-	-	-
Disposal – Other	-	-	-	-	-	-	-	-	-	-
Total	**351,256**	**327,847**	**337,420**	**347,275**	**357,426**	**364,654**	**372,030**	**379,557**	**387,237**	**395,074**

Table 10: Estimated life cycle costs

9 Asset Management Improvement Plan

CN's asset management goals are twofold: to proactively manage our assets from a lowest whole-of-life cost perspective in accordance with recognised industry practice while meeting agreed levels of service and to continuously improve our asset management systems. The table below identifies focus areas to further enhance our asset management planning and practice.

Ref	Objectives[1]	Action	Responsibility	Due Date
1	Align service delivery expectations with available funding to achieve sustainable management of all required supporting assets	1.1 SAPs summarise 10-year actions. Costings are aligned with renewal and capital budgets in the LTFP (link to funding) 1.2 Development of Project Management Policy and procedures 1.3 Project prioritisation: review of current methodology 1.4 Standard asset creation and handover processes	Asset Services Program and Project Services Service Unit Managers	23/24
2	Identify levels of funding required to achieve a sustainable Capital Works Program and assess the implications of different funding levels on levels of service	2.1 Asset management system is utilised to model funding versions, adjusting service level expectations with available funding and reviewing cost of service per SAP 2.2 Implementation of Strategic Asset Management software	Assets and Projects Information Technology Service Unit Managers	Ongoing 24/25
3	Adjust resources and invest in building capacity to deliver works programs	3.1 Project prioritisation policy and procedures implemented 3.2 Capital Works Program is planned and resourced as per prioritisation procedure	Asset Services Program and Project Services Service Unit Managers	23/24
4	Ensure renewal and maintenance required to minimise life cycle costs and maintain agreed level of service is fully funded and reportable by service	4.1 Gap analysis of existing data, detailed condition reporting, and development of maintenance and renewal plans is documented in individual SAPs 4.2 Continue to mature proactive maintenance for asset classes (SAPs align to scheduled servicing, preventative maintenance schedules etc.)	Asset Services Program and Project Services Property and Facilities Service Unit Managers	Ongoing
5	Use SAPs to coordinate decision-making regarding levels of service and implementing relevant CN strategies and plans	5.1 Periodic review and update of SAPs to ensure alignment with *Newcastle 2040* and related strategies and plans	Corporate Planning and Performance Service Unit Managers	Ongoing
6	Ensure new services and/or assets are only approved where the full life cycle cost of doing so has been evaluated and appropriate supporting budget allocations made	6.1 Implement a program of training for business case development 6.2 Review and update software user guides	Asset Services Program and Project Services	23/24
7	Capture and improve asset data and service information	7.1 Asset Register and Management Systems – process establishment for future data capture, improved integration with GIS and further	Asset Services Program and Project Services	Ongoing

Ref	Objectives[1]	Action	Responsibility	Due Date
		rollout of asset classes into Works and Assets 7.2 Update Works and Assets with assets not yet migrated to corporate asset register 7.3 Program and undertake scheduled inspections on all assets	Information Technology Property and Facilities	
8	Align asset management activities with *Newcastle 2040*	8.1 Regular review and update of operational SAPs to ensure alignment with *Newcastle 2040* objectives 8.2 Internal working groups across resource planning and strategy units	Corporate Planning and Performance Service Unit Managers	Ongoing
9	Ensure accountability, responsibility and reporting requirements for assets are established, relevant, clearly communicated and implemented	9.1 Update Asset Custodian and Manager roles and responsibilities in Asset Register 9.2 Asset-related activities current in both CAMMS Risk and CAMMs Strategy	Asset Services Audit and Risk Corporate Planning and Performance Manager, Assets and Projects Service Unit Managers	22/23 Ongoing
10	Delivery of services will incorporate environmental sustainability	10.1 Each SAP continues to detail sustainable environmental measures, including climate mitigation and adaptation requirements	Asset Services Program and Project Services Innovation and Futures Service Unit Managers	Ongoing

Table 11: Asset management improvement plan

[1] *Objectives are listed in the order that they appear, not by priority*

Note: Corporate Accounting and Corporate Planning and Performance teams will have an advisory role across numerous actions

10 Strategy Review Cycle

The AMS will be reviewed annually to ensure key drivers, key strategies and asset management direction accurately reflect the current climate. This will ensure ongoing integration with *Resourcing 2040* strategies and plans. In addition, a complete review will occur every four years to ensure strategic alignment with the updating of *Newcastle 2040*.

11 Appendix

11.1 Asset Management Policy

Asset Management Policy

June 2022

resourcing NEWCASTLE 2040

City of Newcastle

Table of Contents

Part A Preliminary

1 Purpose

1.1 The purpose of the Asset Management Policy (Policy) is to outline how City of Newcastle (CN) will manage its assets throughout the asset lifecycle.

1.2 CN's Asset Management Framework comprises the following documents:

1.2.1 Asset Management Strategy (AMS),

1.2.2 Asset Management Policy (AMP) (this document),

1.2.3 Service Asset Management Plan (SAMP), and

1.2.4 Service Asset Plans (SAPs).

2 Scope

2.1 The Policy applies to all capitalised assets and related land under the control and jurisdiction of CN.

3 Principles

3.1 CN commits to the following:

3.1.1 **Accountability and transparency** - A framework for transparency and a system of accountability in asset planning and enabling informed input from all stakeholders;

3.1.2 **Sustainability** - Sustainably meeting community needs and expectations for all assets and asset infrastructure services;

3.1.3 **Continuous Improvement** - Supporting the implementation of continuous improvement practices in asset management;

3.1.4 **Levels of Service** – Providing a selection of appropriate levels of service to meet community demand;

3.1.5 **Risk Management** - The appropriate management of risk to people, service and property;

3.1.6 **Legislative Compliance** - Compliance with state and federal legislation pertaining to asset management (including Integrated Planning and Reporting);

3.1.7 **Alignment with Council strategies** – The Policy aligns with Open and Collaborative Leadership priorities outlined in the *Newcastle 2040*.

Part B Roles and Responsibilities

4 Roles, responsibilities and resources

4.1 CN Service Unit Managers (SUMs) with asset management responsibility are responsible for implementing this Policy, as well as understanding and implementing the AMS and suite of SAPs.

4.2 CN Manager, Assets and Projects is responsible for developing and reviewing the AMS.

4.3 CN SUMs are responsible for implementing, reviewing and undertaking maturity assessments related directly to SAPs within their service unit.

4.4 This Policy is required to be reviewed in line with the review of the Operational Plan and every four years following an ordinary Council Election or following substantial legislative/organisational change.

5 Organisational Commitment

5.1 This Policy aligns with CN's Resourcing Strategy, which consists of:

5.1.1 Long Term Financial Plan - Delivering the community's expectations as outlined in Newcastle 2040 and Delivering Newcastle 2040, within the context of finite economic and financial resources;

5.1.2 Workforce Development Strategic Plan - Outlining strategies and initiatives to ensure CN has the people and skills needed to achieve Delivering Newcastle 2040; and

5.1.3 Asset Management Strategy - Outlining CN's high-level long-term approach to asset management, including action plans and objectives for managing assets.

5.2 The ownership, control, accountability and reporting requirements for assets are to be established, documented, clearly communicated and implemented through CN's AMS and SAPs.

5.3 CN will revise the AMS and SAPs as community needs, demographics, economic environment, resource availability, climate and technology change over time.

Part C – Operational

6 Levels of Service

6.1 Levels of service are measurable and capture what can sustainably be delivered by CN. Levels of service are incorporated into individual SAPs and require Executive Leadership Team approval.

7 Operations, Maintenance and Renewal

7.1 CN SUMs, in conjunction with Asset Custodians, are responsible for ensuring that:

7.1.1 A routine inspection program of assets under their control takes place;

7.1.2 All works and services are procured in accordance with CN's Procurement Policy; and

7.1.3 Lifecycle costs, maintenance and renewal plans are generated from available condition data, predictive modelling (as appropriate), usage rates, available funding and the needs of the community.

7.2 CN's Asset Managers are responsible for implementing the AMS and providing support to CN's Asset Custodians through:

7.2.1 Asset management advice, including condition reporting and data maintenance; and

7.2.2 Provision of maintenance to facilitate the service where appropriate.

8 Risk Assessment and Management

8.1 Risk is identified for assets and the services they provide within each SAP. Each SAP has a risk action plan.

9 Data Management

9.1 CN maintains a corporate asset management software system that is accessible to designated CN officers.

9.2 The updating and maintenance of all asset inventory and life cycle data within the corporate asset management system is undertaken in a timely manner.

10 Financial Authorisations

10.1 All CN SUMs are responsible for the monetary commitment that will result from the implementation of this Policy and for ensuring they align with CN's Register of Financial Authorisations.

Annexure A - Definitions

For the purposes of this Policy:

Asset means a physical component of a facility, which has value, enables services to be provided, has potential value to an organisation such as land, plant, machinery, buildings etc. and has an economic life of greater than 12 months.

Asset Custodian means the CN staff member with responsibility for the stewardship of the asset and is responsible for defining the level of service required for the asset.

Asset Infrastructure Services means any service provided in the identification, management and construction of CN assets.

Asset Lifecycle means the series of stages involved in the management of an asset. It starts with the planning stages when the need for an asset is identified and continues all the way through an asset's useful life and eventual disposal.

Asset Management means 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 Management Strategy (AMS) means the high-level long-term approach to asset management, including action plans and objectives for managing the assets.

Asset Manager means the CN staff member with responsibility for providing ongoing advice, maintenance, renewal and support services to facilitate the service provided by the Asset Custodian.

City of Newcastle (CN) means Newcastle City Council.

Level of Service means the outputs or objectives an organisation or activity intends to deliver to customers.

Lifecycle Cost means the total cost of an asset throughout its life, including planning, design, construction, acquisition, operation, maintenance, and rehabilitation and disposal costs.

Maturity Assessment means the process used to understand the effectiveness of an organisation's asset management system and levels of service, as well as help comply/align with standards and regulatory requirements.

Predictive Modelling means the method of projecting the costs associated with maintenance, renewal, acquisition and disposal of assets to achieve an acceptable condition, or service level. Predictive modelling can be used to predict a required budget, or to view the distribution of a specified budget.

Service Asset Management Plan (SAMP) CN's Asset Management Plan supporting the delivery of asset-based services. The SAMP and operational SAPs detail asset performance modelling, service alignment and financial forecasting.

Service Asset Plans (SAPs) detail the requirements necessary to effectively manage the assets which exist to support service delivery. SAP's establish a framework to ensure sustainable community service expectations are met. This involves achieving a balance between delivering services to meet community needs and our ability to manage and resource the asset portfolio accordingly. …

Useful Life means the period over which an asset is expected to be available for use by an entity (in the context of its service to the entity and not to the asset's actual physical life).

Annexure B - Policy Authorisations

Function	Position Number / Title
Nil	

Document Control

Policy title	Asset Management Policy
Policy owner	Director Infrastructure and Property
Policy expert/writer	Asset Services Manager
Associated Procedure Title (if applicable)	N/A
Procedure owner (if applicable)	Manager Assets and Projects
Prepared by	Asset Services
Approved by	Council
Date approved	28/06/2022
Policy approval form reference	ECM# 7362458
Commencement Date	28/06/2022
Next revision date (date policy will be revised)	26/04/2026
Termination date	26/04/2027
Version	6 (*Newcastle 2040 CSP Revision*)
Category	Council
Keywords	Asset, asset management, infrastructure services, asset lifecycle
Details of previous versions	Version 1 April 2010 (ECM Reference 2935100) Version 2 August 2012 (ECM Reference 3438058) Version 3 June 2016 (ECM Reference 4873789) Version 4 July 2020 (ECM Reference 6525846) Version 5 April 2022 (ECM Reference 7363544)
Legislative amendments	N/A
Relevant strategic direction	Open and Collaborative Leadership
Relevant strategy	Asset Management Strategy 2018 - 2027
Relevant legislation/codes (reference specific sections)	Local Government Act 1993 (8B) Local Government (General) Regulation 2005 Local Government Amendment (Planning and Reporting) Act 2009 Integrated Planning and Reporting Guidelines for Local Government in NSW (Division of Local Government)

	Integrated Planning and Reporting Manual for local government in NSW (Division of Local Government (s3.4) International Infrastructure Management Manual Edition 5 (2015) Australian Infrastructure Financial Management Guidelines Edition 2 2015 (ISO 55000).
Other related policies/ documents/ strategies	N/A
Related forms	N/A
Required on website	Yes
Authorisations	Functions authorised under this Policy at Annexure B

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Service Asset Management Plan

2022-2032

resourcing NEWCASTLE 2040

City of Newcastle

Contents

1 Executive Summary

1.1 Purpose of the Plan

This Service Asset Management Plan (SAMP) provides a cohesive view of our service asset planning objectives, Levels of Service (LOS) and associated asset management delivery for the next 10 years. It delivers the strategic objectives identified in our Asset Management Strategy (AMS) and should be read in conjunction with CN's Asset Management Policy (AMP).

The purpose of this plan is to:

- Provide a coherent, integrated approach to managing assets for efficient and improved asset performance
- Support the implementation of our AMS and guide continuous improvement in our asset management practices
- Embed service planning principles within our asset management practices
- Be a living document – to remain accurate, reflect business activities and promote progress on identified initiatives.

Our SAMP aims to control risk around CN's asset service delivery and deliver sustainable LOS to the community. This is achieved through:

- Identifying current services, future demands and the infrastructure required to sustainably deliver our *Newcastle 2040* objectives
- Integrating SAPs and other Integrated Planning and Reporting (IP&R) resourcing strategies
- Continually improving the SAP process to provide a sustainable and affordable service delivery model
- Developing and maintaining the infrastructure necessary to provide the community with access to safe and sustainable services.

1.2 Asset Description

CN manages over $2.5 billion of built and natural assets to deliver services to the community. In addition to these assets, our services are supported by information technology, fleet and plant. Each asset contributes to meeting community needs, from park benches to our large local road network. Community services rely on well-planned, well-built and well-maintained infrastructure, which is achieved through planned asset management.

The asset classes covered in this SAMP include:

- Buildings (e.g. Art Gallery, libraries, community halls and centres)
- Natural assets (e.g. bushland, watercourses, dunes, public trees)
- Transport (e.g. roads, footpaths, cycleways, bus shelters, bridges)
- Waste management (e.g. Summerhill Waste Management Facility)
- Stormwater (e.g. pipes, pits, water quality devices)
- Fleet and plant (e.g. light vehicles, trucks, earthmovers)
- Open space (e.g. retaining walls, park fixtures, playgrounds, sporting facilities)
- Other assets (e.g. information technology and 'smart' technologies).

1.3 Asset Life Cycle Management

The objective of life cycle management is to consider the lowest long-term cost, rather than short-term savings, when making decisions. The *International Infrastructure Management Manual 2015* (IIMM) describes

the life cycle of an asset as 'the time interval that commences with the identification of the need for an asset and terminates with the decommissioning of the asset or any liabilities thereafter' The life cycle activities for this plan include the following categories:

- Requirement definition/service planning
- Asset planning
- Asset creation/acquisition
- Asset operations and maintenance
- Monitoring asset condition/performance
- Asset renewal (rehabilitation/replacement)
- Asset disposal/rationalisation.

1.4 Asset Management Practices

Asset management refers to the systematic, coordinated activities and practices an organisation undertakes to deliver its objectives optimally and sustainably through the cost-effective life cycle management of assets. It is about ensuring the necessary plans are in place so that funds and resources are available to address ageing assets and ensure they can provide ongoing delivery of services at an acceptable level.

CN models its asset management practices on the IIMM, published by the Institute of Public Works Engineering Australasia (IPWEA). The manual is a 'best practice guide' for asset management. Current CN asset management practices include:

- Community consultation
- Establishing and monitoring LOS
- Maintaining asset registers and databases
- Information systems (financial, spatial)
- Life cycle planning
- Maintenance planning
- Condition inspections
- Renewal and new/upgrade planning
- Demand management
- Risk management.

1.5 Level of Service

CN defines LOS to enable service performance to be measured. The IIMM describes LOS as 'defined service quality for an activity or service area against which service performance may be measured'. Service levels generally relate to location, functionality, quality, quantity, safety, capacity/utilisation, aesthetics, reliability and responsiveness. They provide the link between higher-level community, corporate and asset management objectives and more detailed technical and operational objectives.

LOS are defined using customer and technical performance measures. Customer LOS describe attributes of the service from a customer viewpoint: how the customer receives or experiences the service. Technical LOS support these customer measures and are used internally to measure performance of the service.

1.6 Future Demand

Demand refers to service users' needs and expectations for a service. Traditionally, demand is strongly influenced by factors such as population change, leisure trends and economic growth or decline. The following demand drivers have been forecast to influence future service provision:

- Population changes
- Future customer values and changes in technology
- Drive for environmental sustainability
- Climate change adaptation

- Disability inclusion and access
- New assets from growth
- Location
- Changes to legislation and statutory requirements
- Economic changes/tourism.

Over time, demand for our services will change, and this requires sustainable strategies and adaptive management. Demand will be addressed through a combination of managing, upgrading and disposing of existing assets; providing new assets; enhancing technology; and utilising alternative service delivery options.

1.7 Financial Summary

Financial projections for maintenance and operational costs have been completed for all infrastructure classes (see Diagram 1). Maintenance cost estimates assume the asset is maintained to provide its current LOS over its expected life. Renewal, as well as upgrade and new capital costs are funded through our current resourcing strategies. The financial projections and requirements identified within Asset Planning inform CN's Long Term Financial Plan (LTFP) and are budgeted appropriately.

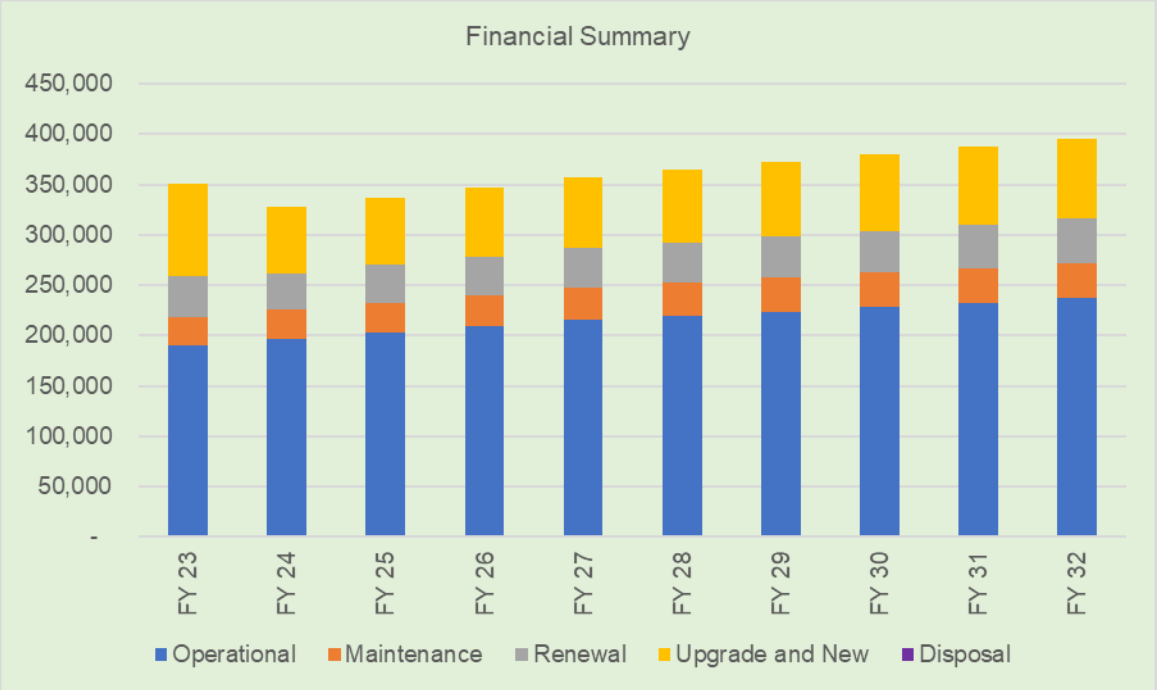


Diagram 1: Financial summary

1.8 Monitoring and Improvement Program

This SAMP includes an improvement plan (Section 9) with actions to drive improvements in asset management processes. These will support CN's commitment to the provision of sustainable long-term infrastructure-based services that meet community needs.

Our priorities for improvement include:

- Reviewing LOS in conjunction with community strategic planning and relevant strategies and plans
- Improving asset management systems, including upgrades to enhance asset data capture, monitoring and reporting
- Continuing to improve asset data
- Reviewing life cycle costs to improve cost estimates
- Further developing roles and responsibilities in service delivery and asset management
- Continuing to integrate asset planning and resourcing strategies
- Incorporating sustainable environmental measures, including climate mitigation and adaptation requirements, into service delivery and asset management.

2 Introduction

2.1 Background

CN currently manages over $2.5 billion of assets to deliver services to our residential and business communities. Our assets include roads, footpaths, buildings, drainage, waste management, parks and natural assets, as well as fleet and plant. Our goal is to apply best practice asset management through systematic, coordinated activities and practices that enable cost-effective life cycle management of our assets. Strategic, well-resourced asset planning is essential to deliver services sustainably and equitably to our community.

Our AMP, AMS and SAMP form part of CN's IP&R Framework. Our asset management planning aligns with *Newcastle 2040* themes, priorities and objectives. It informs our Operational Plan and Delivery Program, as well as supporting the management of our long-term asset renewal, new and upgrade planning, and funding requirements. A core component of *Resourcing Newcastle 2040*, this plan integrates with our LTFP and Workforce Development Strategic Plan (WDSP).

2.2 Strategic and Corporate Goals

CN's Asset Planning is driven by *Newcastle 2040*'s four key strategic directions. The specific *Newcastle 2040* themes, priorities and objectives are shown in the diagram below.

Diagram 2: Newcastle 2040 *themes, priorities and objectives*

2.3 Asset Management Objectives

CN's asset management objectives are twofold: to proactively manage our assets from a lowest whole-of-life cost perspective in accordance with recognised industry practice while meeting agreed LOS, and to continuously improve our asset management systems.

Our asset planning is driven by the 10 key asset management objectives defined in the AMS:

1) Align service delivery expectations with available funding to achieve sustainable management of all required supporting assets
2) Identify levels of funding required to achieve a sustainable Capital Works Program and assess the implications of different funding levels on LOS
3) Adjust resources and invest in building capacity to deliver works programs

4) Ensure renewal and maintenance required to minimise life cycle costs and maintain agreed level of service is fully funded and reportable

5) SAPs to coordinate decision-making regarding LOS and implement relevant strategies and plans

6) Only approve new services and/or assets where the full life cycle cost of doing so has been evaluated and appropriate supporting budget allocations made

7) Capture and improve asset data and service information

8) Align asset management activities with *Newcastle 2040*

9) Ensure accountability, responsibility and reporting requirements for assets are established, relevant, clearly communicated and implemented

10) Delivery of services will incorporate environmental sustainability.

2.4 Core and Advanced Asset Management

The IIMM (2015) identifies the following asset management approaches:

- Core asset management - a 'top-down' approach where analysis is applied at the system or network level.
- Advanced asset management - a 'bottom-up' approach, gathering information for individual assets to support the optimisation of activities and programs to meet agreed service levels.
- Mixed asset management - a blend of the 'top-down' and 'bottom-up' approaches.

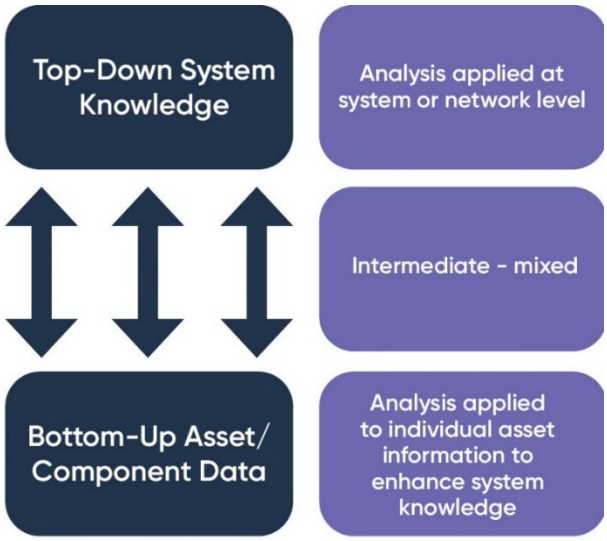


Diagram 3: Level of maturity (from IIMM)

This plan is prepared as a 'mixed' asset management plan. It is prepared to meet legislative and organisational requirements for sustainable service delivery and long-term financial planning and reporting. Future revisions of this SAMP will gather information for individual assets to support the optimisation of activities and programs to meet agreed service levels.

2.5 Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of CN's asset management include, but are not limited to:

- *Biodiversity Conservation Act 2017*
- *Coastal Management Act 2016*
- *Child Protection (Working with Children) Act 2012* and associated Child Safe Standards
- *Crown Land Management Act 2016* and *Crown Land Regulations 2017*
- *Disability Discrimination Act 1992* (Cth) and associated standards
- *Disability Inclusion Act 2014* (NSW)

- *Environmental Planning and Assessment Act 1979* and *Environmental Planning and Assessment Regulation 2000*, including a suite of State Environmental Planning Policies and Newcastle's Development Control Planning provisions
- *Government Information (Public Access) Act 2009*
- *Heritage Act 1977*
- *Local Government Act 1993* (NSW)
- *Privacy and Personal Information Protection Act 1998*
- *Protection of the Environment Operations Act 1997* and associated regulations
- *Roads Act 1993*
- *Work Health and Safety Act 2011* and *Work Health and Safety Regulation 2017*.

These legislative requirements inform and guide our service delivery to the community.

3 Levels of Service

3.1 Service Asset Planning

Service asset planning is the process of determining the services desired by our community and delivering them in a sustainable manner. Our planning:

- Identifies the needs of the community and is clear about the services provided by CN to present and future customers
- Demonstrates actions to deliver on the long-term aspirations outlined in *Newcastle 2040*
- Recognises that the management of an asset is directed at providing services to the community
- Defines measurable LOS, including, but not limited to, location, capacity, functionality, quality and quantity of assets supporting the service
- Promotes informed decision-making on service provision
- Details the financial impacts of our services, now and in the future
- Promotes and demonstrates financial sustainability and good management practice
- Applies full life cycle analysis and costing
- Ensures appropriate use and functionality of assets
- Optimises service potential (and potential decline in service)
- Defines clear responsibilities for all elements of the assets within the plan, including accountability and reporting
- Outlines an improvement program
- Forecasts a 10-year Capital Works Program (renewal, upgrade, new, disposal and maintenance planning).

The SAMP is supported by operational SAPs. These plans provide detailed technical asset information, condition assessments, service level definitions, funding requirements and an analysis of future demand specific to each service. This analysis establishes the necessary elements of the asset life cycle to support effective, sustainable service delivery.

3.2 Community Research and Expectation

Community engagement is undertaken to determine current and desired service levels through:

- Community strategic planning engagement
- Service-based engagement and consultation
- Individual service-based customer experience
- Targeted surveys.

CN consulted with the community in 2021 and early 2022 as part of the development of *Newcastle 2040*. The diagram below demonstrates the consultation process.

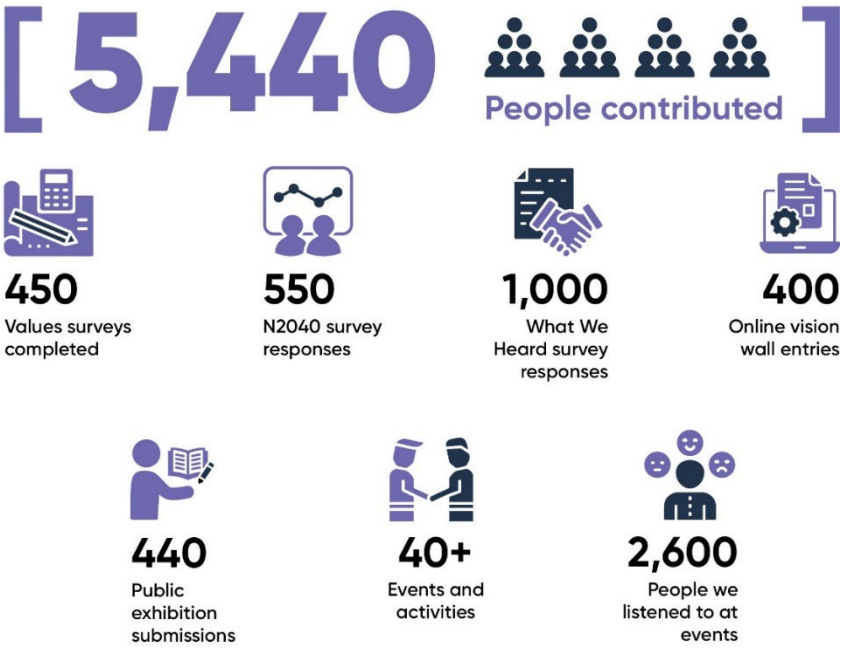


Diagram 4: Community consultation

The results of this engagement and consultation inform our LOS and can be found on our website.

In addition, CN undertakes regular community surveys to better understand how to meet community needs through service delivery, programming and projects. A 2021 Community Survey focused on understanding levels of community satisfaction around different CN services and facilities. A snapshot of the results is provided below.

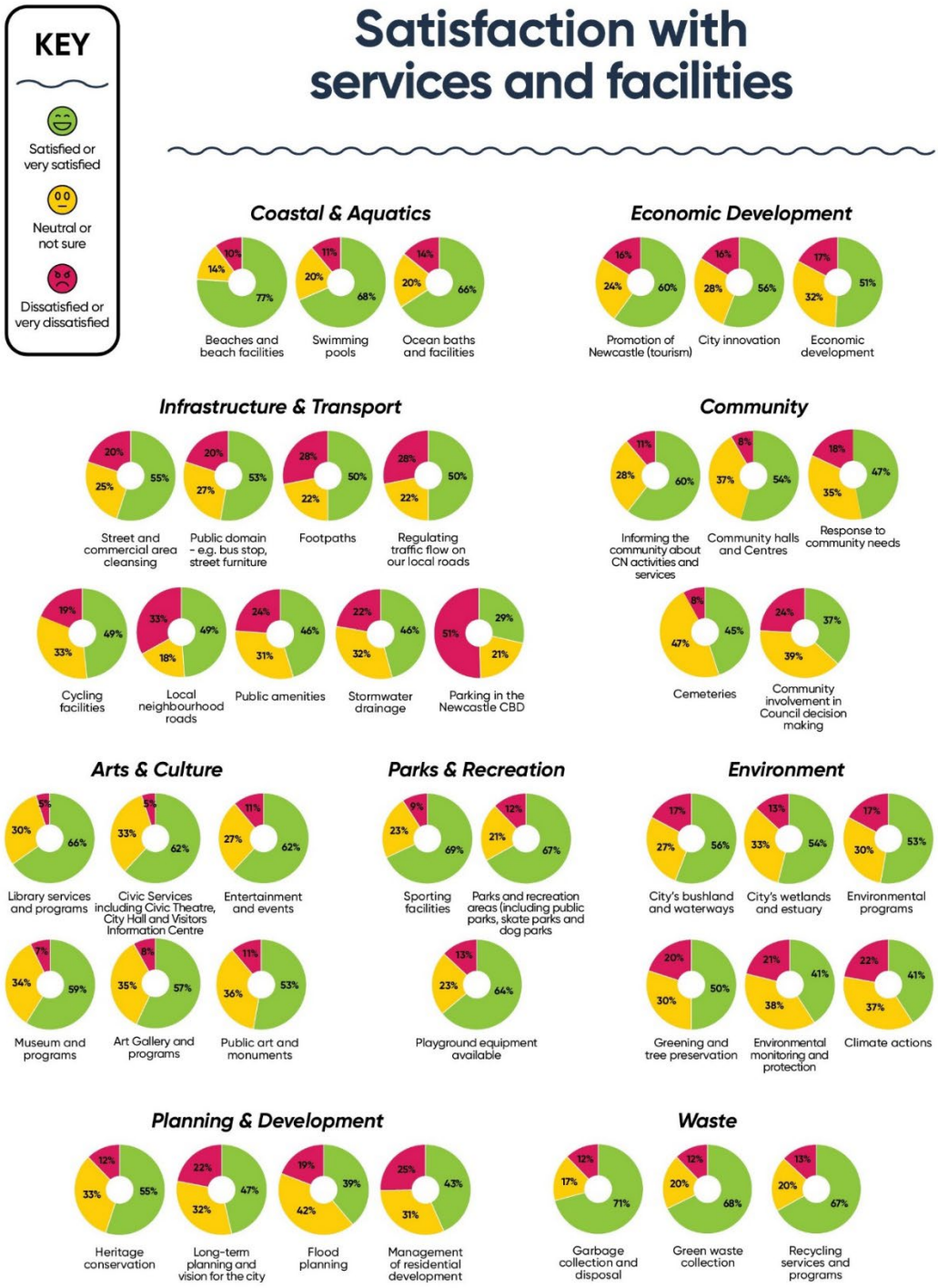


Diagram 5: Winter 2021 Community Survey summary

3.3 Levels of Service

LOS are key business drivers and influence all asset management decisions. They define the standards to which our assets and services will be delivered and provide transparency and justification for how money is spent on delivering those services. LOS provide the link between the service we deliver and the service expected by the community. They determine:

- The amount, type and standard of facilities provided, as well as their distribution
- The quality of the service from a community perspective
- The effectiveness of organisational performance.

LOS are defined to enable service performance to be measured. Service levels generally relate to location, functionality, quality, quantity, safety, capacity/utilisation, aesthetics, reliability and responsiveness. They provide the link between higher-level community, corporate and asset management objectives and more detailed technical and operational objectives.

LOS are defined using customer and technical measures. Customer LOS describe attributes of the service from a customer viewpoint: how the customer receives or experiences the service. Technical LOS support customer measures and are used internally to measure the performance of the service. LOS are reported using a 1–5 star rating assessment for each service output. These ratings are collated to form a current average LOS. The star rating system provides a universal platform for comparing LOS across different services at a corporate level. A general standard description for each star rating is provided below.

Star Rating	General Standard of Key Service Attributes	Level of Service – Description
★☆☆☆☆	Basic quality standard. Low community usage, limited functionality.	Services are important to the local neighbourhood. Maintenance is aimed at safety and security, protecting against vandalism or other damage. Scheduled inspections and maintenance programs are undertaken.
★★☆☆☆	Average quality standard and presentation. Moderate community usage and functionality.	Services provided are locally important. The asset is preserved in a satisfactory condition by regular inspection, maintenance programs and response times to meet requirements of local community.
★★★☆☆	Good quality standard and presentation. Medium–high community usage. Fit for purpose. Maintained and presented in good condition.	Services provided are locally important and regularly accessed by the wider community. The asset is in good condition. Regular inspection and maintenance programs and response times are met. Meets community expectations for service provided.
★★★★☆	Very good quality standard. High community usage, functionality and capacity. Maintained and presented in very good condition. Services LGA community and beyond.	Services that provide major contribution to the social and/or economic wellbeing of Newcastle. The assets are in good–very good condition. Good public presentation, high use and high-quality working environments are necessary; important public focus (e.g. a district park).
★★★★★	Excellent quality standard. Very high community usage, functionality and capacity. Maintained and presented in excellent condition. High profile; delivers important economic benefits and services to LGA and regional community.	Services that provide the largest contribution to the social and economic wellbeing of Newcastle. High profile, use and economic value. Important public focus. Excellent public presentation. The asset providing the service is kept in very good condition and meets requirements to deliver regional services/objectives. Facilities are of major local or regional significance (e.g. heritage and cultural facilities).

Table 1: 1–5 star ratings for LOS

LOS are measured using quantitative and qualitative data, including:

- Community engagement and customer satisfaction surveys
- Targeted customer feedback
- Analysis of customer requests
- Asset condition reporting, functionality and usage data
- Environmental performance and sustainability
- Accessibility provisions.

Using the above, CN establishes the current LOS for all its asset-based services and assigns a star rating. Some examples of performance measures determining our current LOS include:

- Cultural facilities have the capability to host desired programs and events. The facilities are used, supported and valued by diverse communities where people can express, share and discover ideas and stories through art, curated heritage collections, music and theatrical performance.

- Libraries are available to the community physically and virtually. Libraries offer adaptable spaces suitable for innovation and collaboration plus small and large events, training, exhibitions and programs.
- CN roads can carry the required vehicle loading.
- Bushland provides native plant and fauna diversity, as well as stabilising soils.
- Lifeguard facilities and patrolled beaches are available for our community.
- Parks are available for community use and a variety of low- to high-impact events.

The current LOS is compared with a desired state for the service. The desired LOS captures the balance between the current services provided, the LOS that service users expect, and the level CN can sustainably deliver. In an asset management context, desired LOS inform:

- Future operations, maintenance and renewal resourcing requirements
- Management of existing assets and the services they provide
- Decisions regarding provision of new and upgraded assets and services
- Consideration of non-asset solutions for service delivery.

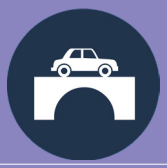
Formulated to reflect *Newcastle 2040*'s objectives, desired LOS are obtained from various sources, including community engagement and customer satisfaction surveys, residents' feedback, CN data on service requests and consultation with stakeholders. Through community engagement processes, we will endeavour to establish mechanisms whereby agreed LOS will be recognised by both CN and the community. CN will seek to establish affordable service levels for asset maintenance, renewal, upgrade or expansion.

Frequently, the desired LOS is met by current service provision; however, CN will continually review, refine and adjust LOS to ensure community satisfaction. A summary of current LOS for our asset-based services is provided in the table below.

Asset-Based Service	LOS	Service Description
Art Gallery 	★★★★☆	Newcastle Art Gallery, located in Newcastle's cultural precinct, is the city's major cultural institution for the visual arts and is responsible for the curation and preservation of its nationally significant collection. The Gallery plays a significant role in contributing to the city's social and economic vibrancy. It delivers high-quality exhibitions, public programs and events that connect to diverse audiences locally and nationally, fostering curiosity and passion for the visual arts. The Gallery is one of the only regional galleries to provide full-time staff within its public exhibition spaces. This is key to providing a high level of customer service through face-to-face communication with visitors. Staff answer questions and share expert knowledge about exhibitions and works of art, enriching each visitor's experience and engagement. Due to the current Gallery expansion, regular service has been temporarily disrupted. During this time the collection will still be available online and will be displayed on digital screens through CN's Henge initiative, which will allow the community to engage with the collection in unexpected ways at various times of the year throughout the city. Educational programs, special activations and community partnerships will also continue through the closure period.
Bushland, Watercourses and Public Trees 	★★★☆☆	Our bushland, watercourses and public trees create the green and blue corridors that weave through our city, providing the 'living' in our liveability and sustainability aspirations. Bushland, watercourses and public trees are the baseline of a desirable urban environment that enhances amenity, liveability, resilience, psychological wellbeing and sense of place – from vegetated horizon lines to natural running waterways to shaded green cycleways and footpaths. Bushland, watercourses and public trees provide a multitude of community services, including: • Ecological and habitat preservation • Scientific and educational opportunities • Recreational opportunities • Quality of life • Scenic and aesthetic amenity • Historic landscape preservation • Climate control • Air quality • Water quality • Stormwater attenuation and conveyance • Economic benefit • Direct economic return to residents.
Caravan Park 	★★★★☆	Stockton Beach Holiday Park is located on Crown land on the beachfront of Stockton Beach and operates as a commercial enterprise through a management contract. The park is currently operated by Australian Tourist Park Management and branded 'NRMA'. Current rating is to be reviewed in conjunction with coastal management planning.
Cemeteries 	★★★☆☆	Cemeteries are critical community infrastructure. Vital for remembrance and reflection, they are also a rich source of cultural and environmental heritage and provide valuable open space. CN cemeteries offer pleasant and cost-effective burial and ash memorial sites. They provide lawn and monumental sites for burial and ash interments, as well as memorial sites for the placement of ashes, including niche wall and memorial gardens. There is also provision for memorial plaques.
City Innovation and Sustainabiity 	★★★☆☆	This service aims to collaboratively create a confident, thriving and future-focused Newcastle through delivery of economic opportunities, sustainable practices and innovative initiatives. This is achieved through developing and delivering strategy, infrastructure and programming across three streams: • Innovation • Economy • Sustainability. In addition, the service pilots and delivers smart assets on behalf of other CN service units. On completion, these assets are handed over to the responsible service unit for ongoing management and service delivery.
City Hall and Venues 	★★★★☆	The Newcastle City Hall and Venues service provides: • Commercial services – live performance presentation, venue hire and hospitality • Cultural services – support of the performing arts • Civic services – civic functions related to Newcastle City Hall, Council meetings and some ceremonial and hospitality events. The service also manages functions in the Fort Scratchley Community Centre, as well as the Parade Ground and Barracks at the Fort Scratchley Historic Site.

Asset-Based Service	LOS	Service Description
Civic Theatre 	★★★☆☆	The Civic Theatre is operated as a commercial venue for hire and is primarily a provider of live performance and associated hospitality. The Theatre is also the principal provider of artform support of the performing arts. This occurs through provision of opportunities for professional development of local performing artists, programming of locally created work and a variety of creative/presentation partnerships. The Theatre's performing spaces comprise: • A 1,450-seat two-tier proscenium arch theatre (the Civic) • The Playhouse Theatre, an arena-style studio theatre seating 195 in raked seating • The Civic Theatre service regularly programs and present events in the 805 seat Concert Hall at Newcastle City Hall. The Theatre also supports civic functions related to Newcastle City Hall, Council meetings and some ceremonial and hospitality events.
Visitor Information Centre 	★★★★☆	The Visitor Information Centre offers hands-on interactive experiences, tourist information and unique souvenirs for visitors and those welcoming friends and family to the city. Conveniently located at the Civic Light Rail stop at 430 Hunter Street, the Centre is open seven days a week.
Community Centres and Halls 	★★★☆☆	Community centres and halls provide opportunities for social interaction, activities, recreation and meeting spaces for the community throughout the Newcastle LGA and surrounds. There are community halls and centres in each ward; combined, they form a network of facilities with a variety of sizes and purposes.
Coast, Estuary and Wetlands 	★★★☆☆	Our coastline is a sensitive and dynamic natural environment that is exposed to natural processes, population growth, coastal lifestyles and coastal hazards that create complex challenges. Our coast, estuary and wetlands provide a variety of services, including: • Ecosystem services – our coastal and estuarine landscapes support a complex system of interdependent ecological processes, producing biologically diverse habitats for our native species. These habitats nourish our local species and serve as important foraging and roosting grounds for many migratory species, some of which are threatened and/or endangered • Increased resilience of our beaches, estuarine and coastline infrastructure from erosive processes • Beach and coastal amenity and safety • Beach and river access for social and ecological benefit • Water quality to meet recreational and ecological purposes • Economic benefits to urban communities, fisheries, industry, tourism and recreation • Significant contribution to psychological wellbeing, including enduring connection to country • Intergenerational equity in the context of a changing climate.
Information Technology 	★★★☆☆	Our Information Technology service supports the delivery of a range of services for CN and our community, including: • Digital services • IT infrastructure and network • Technology enablement • Geospatial information services • Information and network security.
Libraries and Learning 	★★★☆☆	Newcastle Libraries provides library services to the Newcastle LGA through a network of 11 branch service points and the substantial online library. Newcastle Region Library is also responsible for systems management and the acquisition and cataloguing of resources for Dungog and Port Stephens Councils. CN also operates the Beresfield Community Children's Education Centre, which has provided over 40 years of quality care and education to the local community.

Asset-Based Service	LOS	Service Description
Museum 	★★★★☆	Newcastle Museum is a collection of multiple facilities whose primary role is to provide science education and interpretation of movable cultural heritage. Via collaboration, the service also enables other organisations to achieve similar outcomes for the community.
Property – Community Portfolio 	★★★☆☆	These CN assets are leased or licensed to community groups or organisations (generally not-for-profit) that provide services or goods that deliver benefits to the community. Our properties support the delivery of a diverse range of community services, including surf lifesaving activities, community meal provision, childcare and early learning services, and emergency response services (SES headquarters).
Property – Investment Portfolio 	★★★☆☆	These CN assets are operated to provide a financial return and/or provide for future income/profit generation.
Public Art, Monuments and Memorials 	★★☆☆☆	Newcastle is home to artists, galleries, creative enterprises, art organisations, cultural collections and a community that embraces cultural expression. This service enhances public spaces through the provision of permanent and temporary art installations, fountains, monuments and memorials.
Recreation –Aquatic Services 	★★★☆☆	Our aquatic services provide facilities and programs for the health, wellbeing and enjoyment of the community, including learn-to-swim classes and water safety education. Attracting visitors to the city as a sporting and leisure destination, the service supports recreational activities at patrolled beaches as well as inland and coastal pools. These facilities enable a range of recreational activities to be practised and enjoyed.
Recreation – Open Spaces 	★★★☆☆	CN provides a diverse range of open spaces, including parklands, reserves, recreation facilities, sportsgrounds and other public land. Our approach to managing park and recreational spaces incorporates the principles and outcomes of: • Accessibility and connectedness • Equity and opportunity • Safety and security • Sense of place and wellbeing.
Stormwater Drainage, Water Quality and Flood 	★★☆☆☆	CN provides stormwater drainage, water quality and flood planning services for the health and safety of our community and environment. This service integrates closely with the delivery of transport, public spaces and environmental management, contributing to vibrant, safe and activated public places, protected environments and a liveable built environment.
Depot Operations 	★★★☆☆	Depot Operations provide the facilities to support services CN delivers to the community. This includes the Works Depot and supporting structures, including: • Administrative buildings • Amenities buildings • Garaging and car parking for fleet and plant • Outdoor storage facilities • Records warehouse • Store warehouse and weighbridge • Vehicle fuelling facilities and washbay • Workshops – fleet and plant; building trade services; tyre shop.

Asset-Based Service	LOS	Service Description
Fleet and Plant 	★★★☆☆	This service supports CN in delivering a wide variety of services to the community, ranging from the collection of household waste to the maintenance of local roads and parks. The service consists of four work areas: workshop, tyre shop, small plant and fleet management office.
Bridges and Structures 	★★★☆☆	Bridges and structures support our transport network, enabling the movement of people and goods across our community.
Car Parking 	★★★☆☆	CN provides on-street and off-street spaces (paid and unpaid) for short-term vehicle parking. Car parking enables participation in the city's opportunities, including work, education, health, social and recreational activities.
Footpaths and Cycleways 	★★★☆☆	CN provides footpaths, shared paths and associated infrastructure (such as pedestrian refuges and kerb ramps) to facilitate the safe access and movement of pedestrians and cyclists. The service involves maintenance and renewal of existing paths and facilities and augmentation of cycling and pedestrian networks through the construction of new assets. We are aiming to build connected networks of cycling and pedestrian paths that: • Link homes with places of employment, education, shopping and recreation • Encourage walking and riding for transport and recreation • Are well-designed and able to cater for expected increase in future use • Enhance our street amenity and public domain generally.
Public Domain Elements 	★★★☆☆	These assets provide street furniture in our road reserve for the community's safety, comfort and amenity. Assets include transport stops, street lighting, street signs, guard rails, roadside fencing and line marking. The service also delivers seats, garbage bins, bike racks and advisory signs that provide comfort and amenity to public domain users. The Local Centres delivery program is also included in this service.
Roads 	★★★☆☆	This service provides safe, reliable and efficient road networks through vehicular connection and travel demand management. Newcastle's road network comprises approximately 865km of roads, of which 751km are classified as local roads, 44km as regional roads and 70km as state roads. Responsibility for transport is shared across all levels of government, with significant overlap. This service also supports the provision of cycleways through on-road facilities and incorporates local area traffic management works, delivering traffic calming of local streets through intersection realignments, horizontal and vertical deflection devices, and improved conditions for walking and cycling. Similarly, the service delivers and supports devices such as raised crossings, kerb extensions and pedestrian refuges to aid pedestrian movement and assist with calming traffic.
Waste Services 	★★★☆☆	These services include: • Kerbside collection – a three-bin system for residential properties in Newcastle, with weekly collections for residual waste and alternating fortnightly collections for recycling and green waste • Public waste and recycling bin collection – this service plays a critical role in improving environmental amenity, as well as providing residents with the opportunity to dispose of waste and recycling away from home • Household bulk waste collection. CN also operates the Summerhill Waste Management Centre, which provides recycling, resource recovery and solid waste disposal services for Newcastle residents and commercial/industrial customers.

4 Demand

Demand refers to service users' needs and expectations for a service. Demand for services will be addressed through a combination of managing, upgrading and disposing of existing assets; providing new assets; enhancing technology; and utilising alternative service delivery options. Traditionally, demand is strongly influenced by factors such as:

- Population growth/decline
- Economic changes
- Customer expectations
- Technology and innovation initiatives
- Impact of climate change
- Drive for environmental sustainability
- Disability inclusion and access
- Changes to legislation and statutory requirements
- New assets from growth/urban development.

4.1 Demand Management Plan

Demand will change over time in terms of quantity and type of service required. The following table summarises the factors that have been forecast to influence CN's future service provision.

Demand Driver	Demand Background	Predicted Impact	Management of Demand and Required Resources
Population Changes (growth/decline)	Newcastle is Australia's seventh-largest city. Over the past decade our population has increased, with significant growth in the western corridor. As of 2021 Newcastle's population was 171,307, with a forecasted growth to 202,049 by 2041. The Greater Newcastle population was 569,900 in 2016 and is forecasted to grow to 699,200 by 2041.	Increases in our population, coupled with growing numbers of people visiting our local region, create additional demand for open spaces, community facilities and transport services. Predicted impacts may include: • Upgrades to the capacity of existing assets and services • New assets to enable CN to maintain service levels • Asset maintenance and renewal demands shifting with increased usage patterns.	To meet changes in demand, planning for CN assets and services will need to enable flexibility in service delivery. Demand will be managed through evidence-based strategies that drive future modelling and resourcing. Required resources will be identified through service planning and integrated with our LTFP. Financial, asset and workforce planning undertaken as part of resourcing Newcastle 2040.
Impact of Climate Change and Adaptation	The majority of our current infrastructure was designed, built and maintained on the basis that climate conditions in the future would be similar to the past. However, Newcastle's climate is changing, as demonstrated by recent flood storm surges and increasingly warm weather. There is a growing understanding of the potential impact of climate change on our assets and of how some, such as stormwater assets, are likely to be more vulnerable than others.	Climate change is expected to increase temperatures and alter the frequency and intensity of extreme weather events such as heatwaves and flooding. This is likely to increase our infrastructure's vulnerability to natural hazard risks. Damage to one asset may impact other assets, affecting their capacity to provide services. This may impose significant economic and social costs on the community, while also increasing the costs of repairing or replacing damaged assets. Sustainable design should inform new and upgrade capital works, ensuring all opportunities are explored and implemented to improve the environmental performance of an asset and its operation. Capital works and operational programs should incorporate local suppliers and sustainable procurement.	Sound evidence-based decision-making is important in a rapidly changing environment with constant advances in technology. CN will leverage opportunities to ensure the most efficient climate-adapted assets are in place to meet the city's service needs. Studies are currently underway to gain a better understanding of these challenges and possible response strategies. All new and/or upgraded assets will be designed and built to support CN's commitment to delivering climate-adapted assets with enhanced environmental performance. Proposed capital works are included in forecasted programs.
Customer Expectations	There are increasing expectations for local, diverse and accessible services, including: Parks Walkable streets Integrated accessible transport network Blue and green corridors Resilient assets and services.	We will experience increased demand for diverse, customer-centric services that meet user needs. Community expectations relating to transparency and justification of expenditure within local governments are increasing, resulting in a greater need for evidence-based decisions. Expectation that services will continue through periods of disruption (e.g. natural disasters and public health emergencies).	Adaptive asset management and service delivery will ensure changes to usage patterns are accommodated in operational and capital budgets.

Demand Driver	Demand Background	Predicted Impact	Management of Demand and Required Resources
Technology and Innovation Initiatives	Changes in technology are occurring more rapidly than ever. Internal and external customers expect that new technologies will be made available quickly for their use. CN is increasingly shifting towards innovation, incorporating digitisation and the Internet of Things into service delivery.	Advancements in IT, as well as community knowledge and awareness, increase demand for improved and localised services. The integration of technology into service delivery allows for the collection of 'open data' on traffic movements, parking, pedestrian mobility and wayfinding throughout the city. When integrated, this data can provide insight into how the city functions and will enhance urban, transport and development evaluation, as well as safety and emergency responses.	Demand will be managed through implementation of strategies and plans, including the Smart City Strategy and the programmed delivery of smart infrastructure. Upgrade and maintenance plans are updated annually and capital/operational works programs are developed to manage demand.
Drive for Environmental Sustainability	We are responsible for the delivery of services and infrastructure for a significant proportion of the Newcastle region. There is a need to incorporate environmental sustainability into service delivery, considering: • Emission prevention and reduction • Climate resilience • Biodiversity, Water Sensitive Urban Design, Urban Forest expansion • Circular economy, including resource efficiency and designing out waste • Whole-of-life-cycle asset management.	There will be increased demand for our services to be ecologically sustainable, incorporating environmental management best practice.	To achieve our drive for environmental sustainability, our asset management will consider: • Energy efficiency and emissions reduction • Water conservation • Protection of biodiversity, land and water quality • Recycling of waste materials • Promotion of sustainable transport • Use of sustainable building materials. Through our Capital Works Program and operational plan, we will: • Continue our investment in public natural assets • Measure our environmental performance and impact • Identify priority assets • Improve the quality of corporate information systems underpinning natural asset management planning and decision-making.

Demand Driver	Demand Background	Predicted Impact	Management of Demand and Required Resources
Disability Inclusion and Access	S.12(3) of the *Disability Inclusion Act 2014* requires CN to demonstrate how we will support people with disability to access a full range of services and activities available to the community, including buildings, events, facilities, information and employment. Our Disability Inclusion Action Plan (DIAP) outlines our responsibilities, commitment and actions for creating a more inclusive community.	It is important to consider the different functions CN assets and services may need to fulfil in the future. Factors such as accessibility and the range and type of programs provided need to be considered. The trend towards an ageing population will also place a higher demand on accessible assets and services. Universal and accessibility design principles will need to be incorporated into upgrades and new capital works.	CN will upgrade existing building access over time and ensure new or upgraded buildings are compliant with the *Disability Discrimination Act*. Our actions will be guided by the DIAP and resourced via the Capital Works Program.
Changes to Legislation and Statutory Requirements	The SAMP considers local, state and federal legislation, regulations and statutory requirements that may impact on demand.	These factors often define minimum requirements for asset management service levels. There may be increased demand to retrofit assets to meet current standards and increase service levels. Changes to these assets and the effect they have on this plan will be considered during the period in which they are proposed.	Requirements will be reviewed at the time of legislative or statutory change.
New Assets from Growth/Urban Development	The NSW Department of Planning and Environment *Greater Newcastle Metropolitan Plan 2036* (GNMP) identifies catalyst areas – places of metropolitan significance that need a collaborative approach to the delivery of new jobs and homes. For CN, catalyst areas include Broadmeadow, John Hunter Hospital, Kotara, Newcastle City Centre and trading hubs at Beresfield. The GNMP recognises that good access to transport services is critical for new employment and housing opportunities to be realised, and for achieving the target of 95% of people living within 30 minutes of a strategic centre. This is in addition to the progressive development in our western corridor.	Acquiring new and/or contributed assets will commit CN to funding ongoing operations and maintenance costs. These must be identified and considered when developing future financial forecasts. These assets will increase CN's renewal and maintenance liability as they age in the longer term.	Demand will be managed through collaborative forward planning across CN service units, utilising operational and capital budgets.

Table 3: Demand Management Plan

4.2 Asset Programs to Meet Demand

New/upgraded assets required to meet demand may be acquired, donated or constructed. Additional assets are discussed in Section 6.4 and included in our Capital Works Program. Acquiring new assets will commit CN to ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered when developing forecasts of future operations, maintenance and renewal costs for inclusion in the LTFP (see Section 8).

5 Our Assets

5.1 Asset Summary

CN has a wide range of infrastructure and natural assets, captured across eight asset classes:

- Buildings
- Natural assets
- Transport
- Waste management
- Stormwater
- Fleet and plant
- Open space
- Other assets

Our assets support a wide and diverse range of services, including, but not limited to:

- Administrative services (including development applications and compliance services)
- Community, arts and cultural facilities and programs
- Customer service
- Environmental management
- Urban water cycle management (including flood mitigation and protection)
- Strategy and innovation
- Libraries and learning
- Parks and recreation (including sporting facilities, aquatic services and natural areas)
- Traffic and transport
- Tourism and economic development
- Waste services.

A summary of CN assets is shown in the table below.

Service Output	Asset Stock
Art Gallery	Art Gallery facility, including collection
Bushland, Watercourses and Public Trees	Watercourses (81km with 4,733m constructed elements); street and park trees (102,799); bushland parcels (91 parcels totalling 5.1 million m^2); tracks and trails (58km); inland cliffs (42 assets totalling 3.6km); nest boxes (106)
Caravan Park	Holiday Park
Cemeteries	Cemeteries (3)
City Innovation and Sustainability	Street lighting (smart poles, conduit, pits and pipes); sensors (environmental, building, capacity and activity); smart screens; solar shelters; smart bus stops; dynamic signage; e-bike racks; battery systems (including fleet); electric vehicle charging systems (photovoltaic); network infrastructure; electrical networks; data and data warehouse; digital platforms and portals
City Hall and Function Venues	City Hall facility, including art collection, specialist equipment and furniture; Fort Scratchley function facility
Civic Theatre	Civic Theatre facility, including Playhouse and Civic Digest, Civic Theatre storage, Civic Theatre loading shelter, specialist equipment and furniture, Wheeler Place
Coast, Estuary and Wetlands	14km coastline, including 21 coastal cliff lines (3.6km); dunes (4.5km); wetlands (65); coastal and estuary native vegetation parcels, including littoral rainforest, Themeda grasslands and EEC casuarina; 35 saltmarsh and mangroves (12km); 9 rock platforms (3.3km); rock catch barrier fencing; rock bolt anchors
Community Halls and Centres	Community facilities (19) including senior citizens' centres, halls and community centres
Information Technology	Computers; IT peripheral items; mobile devices; network devices; network storage; software; software licences
Libraries and Learning	Libraries (11), including collections; Beresfield Community Children's Education Centre
Museum	Museum facility, including collections; historic Fort Scratchley
Property – Community Portfolio	Surf clubs (6); community-leased childcare; SES headquarters; Meals on Wheels
Property – Investment Portfolio	Commercial buildings including kiosks; Shepherds Hill Cottage; solar farm
Public Art, Monuments and Memorials	Public art, fountains, monuments and memorials; heritage fort (Shepherds Hill)

Service Output	Asset Stock
Recreation – Aquatic Services	Ocean baths facilities (2); aquatic centres (5); patrolled beaches (6); lifeguard facilities (8)
Recreation – Open Spaces	Dog off-leash areas (17); outdoor exercise facilities (4); community gardens (14); recreation parks (250); sporting grounds (147); sports venues (63); grandstands (15); BMX/skate parks (13); playgrounds (134); support buildings such as clubhouses and sheds; supporting structures such as fencing, flagpoles, scoreboards, lighting, irrigation, seating, animal enclosures, shade and shelter structures, kiosks, jetties, public amenities and boat ramps
Stormwater Drainage, Water Quality and Flood Planning	Pipes (515km); culverts (187km); pits (26,889); headwalls (1,115); water quality devices including gross pollutant traps, water-sensitive urban designs and stormwater (635); quality improvement devices; flood detention basin (prescribed dam); detention basins (38); detention tank; tide gates (28); open channels (stormwater) (5.5 km); flood warning system; groundwater monitoring assets (4); rain gauges (10)
Support Services – Depot Operations	Works Depot buildings (21); Works Depot supporting structures (3)
Support Services – Fleet and Plant	Fleet and plant vehicles (525)
Transport – Bridges and Structures	Road bridges (41); pedestrian and cycle bridges (70); subways (4); tunnel (Fernleigh Track); retaining walls (road network) (184 totalling 10.4kms); mangrove pedestrian boardwalk
Transport – Carparking	Off-street carparks (120); parking meters on- and off-street (360)
Transport – Cycleways and Pathways	Constructed footpaths (900km, including 63km shared paths); 72km on-road cycleways
Transport – Public Domain Elements	Transport stops with seat (230); transport stops with shelter (140)
Transport – Roads	Local roads (865 km); state roads (70km); regional roads (44km); kerb and gutter (1,487km)
Visitor Information Centre	Visitor Information Centre
Waste Services	Waste and resource recovery centre including 11 support buildings, weighbridges, gates and fencing, internal roads

Table 4: Asset Summary

5.2 Asset Condition

To sustainably manage the infrastructure of our historic coastal city, condition and asset consumption modelling informs our asset planning, optimising maintenance and renewal expenditure. CN's corporate asset system utilises the following 1 to 5 scale:

	Infrastructure Asset Condition Assessment Key	
1	Excellent/Very good	No work required
2	Good	Only minor maintenance work required
3	Satisfactory	Maintenance work required
4	Poor	Renewal required
5	Very poor	Urgent renewal/upgrading required

Table 5: Condition scale

The table below provides a summary of CN's overall built and natural asset condition as of June 2021.

Asset Class	Asset Type	Average Condition	Year of Assessment	Next Proposed Assessment	% of Assets Rated as Satisfactory
Buildings		2.5	2018	2023	94%
Open Spaces	Barriers	2.2	2021	2026	99%
	Boating Facility	2.2	2021	2026	100%
	Cemetery	1.7	2021	2026	100%
	Feature Wall	2.0	2021	2026	100%
	Flagpole	2.3	2021	2026	96%
	Fort	4.2	2021	2026	40%
	Garden Wall	2.2	2021	2026	100%
	Inland Pool	3.1	2021	2026	76%
	Lighting	2.7	2021	2026	100%
	Monument or Memorial	3.6	2021	2026	70%
	Observation Tower	2.5	2021	2026	100%
	Ocean Baths	2.8	2021	2026	93%
	Park Furniture	2.1	2021	2026	99%
	Playground Area	2.3	2021	2026	99%
	Public Artwork	2.8	2021	2026	98%
	Retaining Wall	2.5	2021	2026	92%
	River Wall	2.8	2021	2026	67%
	Sea Wall	2.5	2021	2026	71%
	Shelter	2.7	2021	2026	78%
	Signage	2.2	2021	2026	100%
	Skateboard Facility	2.0	2021	2026	100%
	Solar Farm	2.0	2021	2026	100%
	Sporting Fixture	2.6	2021	2026	98%
	Storage	3.0	2021	2026	79%
	Waste Collection Point	1.9	2021	2026	100%
	Water Feature	3.0	2021	2026	100%
	Water Fixtures	2.0	2021	2026	100%

Asset Class	Asset Type	Average Condition	Year of Assessment	Next Proposed Assessment	% of Assets Rated as Satisfactory
Other Assets	Smart City	1.0	2021	2026	100%
Stormwater	GPT	2.7	2020	2025	98%
	Headwall	3.4	2020	2025	59%
	Stormwater Pipe	3.5	2020	2025	64%
	Stormwater Pit	3.1	2020	2025	67%
	Surface Drain	2.6	2020	2025	93%
	Tidal Control	2.2	2020	2025	96%
Transport	Bridges	2.3	2020	2025	95%
	Parking Areas	2.4	2020	2025	95%
	Pathways & Footpaths	2.1	2020	2025	99%
	Roads	2.0	2020	2025	98%
	Street Furniture	2.0	2020	2025	100%
Waste Management	Summerhill Waste Management	2.0	2021	2026	100%
Natural	River walls	3.05	2021	2026	70%
	Watercourses	3.18	2008	Ongoing	49%
	Bushland	2.08	2021	Ongoing	47%
	Public Trees	2.13	2021	Ongoing daily	78%
	Wetlands	2.9	2011	Ongoing	78%
	Seawalls	2.57	2021	2026	73%
	Dunes	4.17	2017	2023	79%*
	Coastal Clifflines	3.51	2021	2023	59%

Table 6: Built and natural assets
**Storm damage*

The following diagram represents the age of the asset base as a percentage of the asset's written down value versus its replacement value. This demonstrates the condition the overall infrastructure asset base is in, and the remaining time before the assets can longer be used to provide a service to the community unless capital investment is applied. The diagram shows that most of CN's infrastructure assets are half-consumed and moving into the second half of their life cycle (asset consumption ratio <50%). This means the requirement for asset renewal expenditure will continue to grow.

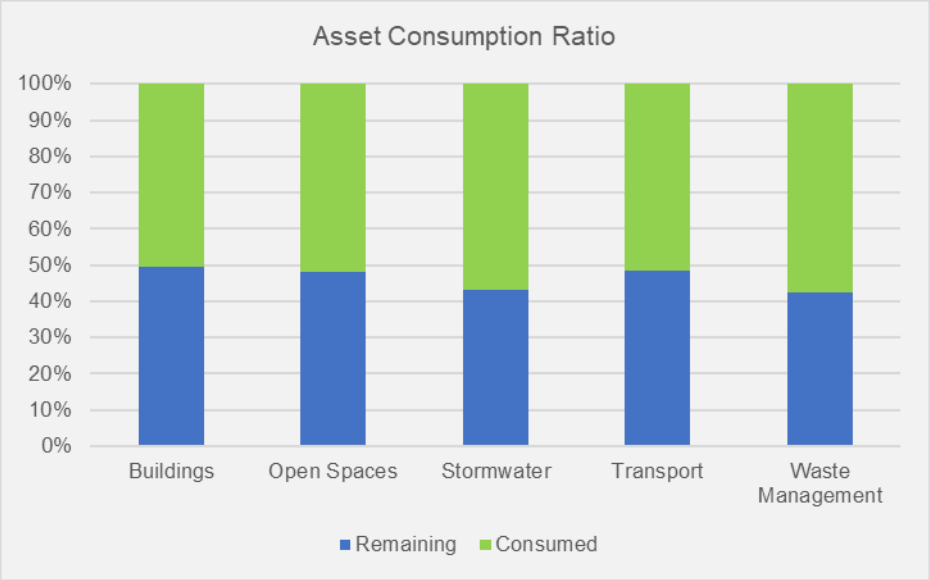


Diagram 6: Asset consumption ratio (built assets)

6 Asset Life Cycle Management

6.1 Background

The AMP, AMS and this Plan provide a framework for a uniform approach to asset life cycle management. A unified, whole-of-organisation approach is critical to achieve best practice alignment and maximise the value of assets across their life cycle. Key components of asset life cycle management as described in the *Australian Infrastructure Financial Management Manual (2015)* include:

- Operations - Recurrent expenditure, which is continuously required to provide a service, e.g. power, fuel, staff, plant equipment
- Maintenance - All actions necessary for retaining an asset as near as practical to an appropriate service condition, including regular ongoing day-to-day work necessary to keep assets operating
- 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
- 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
- New - Expenditure which creates a new asset providing a service/output that did not exist beforehand, including planning, design, construction and acquisition
- Disposal - Expenditure on activities necessary to dispose of decommissioned assets

6.2 Operations and Maintenance Plan

Operations and maintenance planning relates to the day-to-day running and upkeep of assets to deliver agreed LOS. CN's annual budget cycle provides opportunity to review and adjust operational and maintenance budgets for service provision.

To support the delivery of a wide range of services that fulfil the social, economic and environmental needs of our community, CN's assets are maintained to:

- Prevent further deterioration
- Meet statutory and technical requirements, including scheduled and reactive inspections and repairs for health, safety and security reasons
- Ensure condition is of a standard appropriate to an asset's service function and value to the community

- Minimise whole-of-life costs, including making the best use of maintenance resources.

We undertake preventative, statutory and condition-based maintenance. Maintenance arrangements are detailed in individual Service Level Agreements, the City-Wide Maintenance Procedure or Specialist Maintenance contracts. These documents outline agreed timeframes and prioritisation for maintenance to be undertaken. Effective, timely maintenance is essential to ensure service delivery and sustainable asset management. Preventative maintenance slows down asset deterioration, whereas reactive maintenance restores the serviceability of the asset. As such, the scope of maintenance includes:

- Scheduled maintenance – protects the asset to optimise its useful life, minimising the likelihood of asset failures, health and safety issues and/or disruptions to service delivery.

- Reactive maintenance – failure of an asset or its component requires immediate attention; assessment and prioritisation of reactive maintenance is undertaken.

6.2.1 Operational and Maintenance Systems

Scheduled and reactive maintenance activities are identified and managed through our Works and Assets system. Work is currently underway to include scheduled maintenance for all our assets (where required) in Works and Assets, which will help us prioritise, schedule and report on asset maintenance. This will be phased over a two-year period and will significantly improve trend data analysis, financial reliability and data confidence.

6.3 Renewal Plan

Renewal refers to the restoration, rehabilitation or replacement of an asset to its original or equivalent service capacity. When determining whether an asset needs renewing, consideration is given to the following criteria:

- Condition of existing asset: Can the useful life be extended, and renewal be delayed?
- Risk assessments
- Changes to service levels: Does the existing asset meet or fail service level requirements?
- Fitness for purpose – capacity and functionality: Does the asset meet the level of service required?
- Environmental ratings
- Current rates of utilisation.

Condition inspections are programmed to inform the development of the renewal program. All proposed capital renewal works are recorded in our project management software. Project proposals include demonstrated strategic alignment, a detailed business case, indicative cost estimate, priority rating and timeframe for delivery.

The financial projections and requirements identified within this plan inform CN's LTFP and are budgeted appropriately as part of our annual plan and budget process. The prioritisation of capital works may result in projects being completed beyond the current 10-year timeframe. Renewal programs for delivery are identified in *Delivering Newcastle 2040* and include:

Roads, bridges and footpaths

Stormwater

Fleet management

Environment

6.4 Acquisition and Upgrade Plan

The need for additional or upgraded service is identified through analysis of our strategic goals, current and desired service levels, and legislative and regulatory requirements. The need for a service drives the planning and acquisition of assets to deliver the service.

Capital upgrade and new projects will be planned to meet LOS objectives by:

- Planning and scheduling projects to deliver the defined LOS in the most efficient manner
- Reviewing capital project management activities to ensure CN is obtaining best value for resources used
- Undertaking project scoping for all capital upgrade and new projects to identify:
  - The service delivery 'gap', present risk and required timeline for delivery of the upgraded/new asset
  - The project objectives to rectify the gap, including value management for major projects
  - Options to address universal access and inclusion
  - The range of options that could address the service gap, as well as estimated capital and life cycle costs for each option
  - Management of risks associated with alternative options
- Evaluating options against criteria adopted by CN
- Selecting the best option to be included in capital upgrade/new programs.

The financial projections and requirements identified within this plan inform CN's LTFP and are budgeted appropriately as part of our annual plan and budget process. The prioritisation of capital works may result in projects being completed beyond the current 10-year timeframe. Priority projects for delivery are identified in *Delivering Newcastle 2040* and include:

Newcastle Ocean Baths upgrade

Local Centre upgrades
- Wallsend Local Centre
- Orchardtown Road, New Lambton

Foreshore Park, Newcastle all-abilities playground and water park upgrade

Expansion of Newcastle Art Gallery

6.5 Disposal Plan

Disposal is the closing, decommissioning or sale of an asset or service. Service and asset reviews may identify assets that are no longer fit for purpose or are under/over utilised. Through reviewing alternative methods of delivering a service, assets may be nominated for disposal. When considering asset disposal, LOS and alternative use of the asset by other services must be taken into account before any disposals are undertaken.

7 Risk Management

7.1 Risk Assessment

CN integrates risk management into its organisation's core business planning and decision-making processes. CN's Enterprise Risk Management (ERM) Framework provides the foundation for responding to uncertainty through a structured and consistent approach.

The ERM Framework considers the internal and external context in which CN operates. A Governance and Risk (Executive) Committee provides oversight and guidance to the organisation whilst independent Audit and Risk Committee provides independent oversight.

CN's ERM Guideline incorporates the asset risk management approach outlined in standard ISO 55000:2014. This standard is the global standard for the effective management of assets. Key components of this approach include:

- Planning (concept and specification)
- Acquisition
- Operation and maintenance (operate, maintain, improve)
- Disposal.

Our risk assessment process identifies risk, the likelihood of the risk occurring, and the consequence should the risk eventuate. CN's assets are assessed during the asset management life cycle for:

- The selection of asset solutions that are not required and/or do not meet needs
- Poor specification of asset solutions
- Poor whole-of-life asset budgeting (resulting in 'financial shock')
- Poor asset life cycle management planning
- Assets not meeting prescribed specifications
- Difficulty or costliness of improving or managing the asset
- Assets incurring environmental risks.

Asset Custodians and Service Unit Managers are responsible for identifying significant risks to assets and the services they provide. The asset risk assessment includes identifying critical and high-risk assets and devising treatment to mitigate the risk. Removal of these practices may impact service delivery.

7.2 Critical and High-Risk Assets

The risk assessment process includes identifying critical and high-risk assets and devising treatment to mitigate the risk. Critical assets are defined as those that have a high consequence of failure, resulting in a more significant financial, environmental and social costs in terms of impact on organisation objectives. By identifying critical assets, we can reduce risk by continually improving investigative activities, maintenance plans, capital expenditure plans and direct investment.

CN does not have any critical assets as we do not provide utility networks or sewer supply. CN has high-risk assets that have a high consequence of failure, such as the Works Depot and the road network. Operational SAPs identify assets deemed high risk and the methodology used to minimise potential impact on the achievement of asset management objectives. By identifying high-risk assets, CN is able to target and refine investigative activities, maintenance plans and capital expenditure plans for the critical areas.

7.3 Infrastructure Resilience Approach

The International Infrastructure Management Manual defines 'resilience' as being wider than natural disasters. It covers the capacity of public, private and civic sectors to withstand disruption, absorb disturbance, act effectively in a crisis, adapt to changing conditions (including climate change) and grow over time.

CN addresses resilience through a Business Continuity Management Framework (the Framework) and implementing measures that assist to:

- minimise the impact of incidents, disruption and emergencies
- safeguard CN's critical services and functions
- support the effective return to normal operations and enhance capability and organisational resilience.

The Framework enables CN to continue delivering critical business functions if an incident, disruption or emergency causes disruption that is beyond CN's business as usual capabilities if it is logistically feasible to do so.

CN's Business Continuity Management Policy, Business Continuity Plans and Crisis and Emergency Management Plan constitute essential components of the Framework in the form of recovery from potential risk events that may significantly impact critical business activities, revenue, reputation and service delivery. The Framework was prepared in accordance with the principles outlined in AS ISO 22301:2019 *Societal security -- Business continuity management systems – Requirements*.

8 Financial Summary

8.1 Forecast Life Cycle Costs

Life cycle asset management encompasses all practices associated with considering management strategies as part of the asset life cycle, from planning to disposal.

The estimated life cycle costs are shown in Table 7 below. Operational and maintenance expenditure is obtained from the adopted operational budgets 2021/2022 (assuming an applied 3.2% increase as per the LTFP) and the renewal, upgrade and new expenditure from the proposed Capital Works Program 2022/2023. When calculating annual new/upgrade and renewal costs, operational cost estimates are applied. These costs include salaries, employee entitlements, materials, external contractor costs, bank charges, depreciation, internal fleet charges and telecommunications.

Life Cycle Category	FY 23 ($,000's)	FY 24 ($,000's)	FY 25 ($,000's)	FY 26 ($,000's)	FY 27 ($,000's)	FY 28 ($,000's)	FY 29 ($,000's)	FY 30 ($,000's)	FY 31 ($,000's)	FY 32 ($,000's)
Operational	190,233	196,320	202,603	209,086	215,777	219,876	224,054	228,311	232,649	237,069
Maintenance	28,418	29,327	30,266	31,234	32,234	32,846	33,470	34,106	34,754	35,415
Renewal	40,700	36,485	37,325	38,183	39,061	39,960	40,879	41,819	42,781	43,765
Upgrade and New	91,905	65,715	67,226	68,772	70,354	71,972	73,627	75,321	77,053	78,825
Disposal – Proposed Asset Sale	-	-	-	-	-	-	-	-	-	-
Disposal – Other	-	-	-	-	-	-	-	-	-	-
Total	**351,256**	**327,847**	**337,420**	**347,275**	**357,426**	**364,654**	**372,030**	**379,557**	**387,237**	**395,074**

Table 7: Financial summary

Note: *These budgets are subject to individual year bids, CN strategies and funding opportunities, and are expected to fluctuate from year to year. CN reviews its new capital projects on an annual basis, with one year of works approved through the annual* Delivering Newcastle 2040.

The table below shows the assumptions (excluding income) that have been applied to future operational and maintenance cost forecasts.

	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31	FY32
Employee Benefits and Oncosts	2.5%	2.5%	2.5%	2.5%	2.5%	2%	2%	2%	2%	2%
Materials and Services	3.8%	3.8%	3.8%	3.8%	3.8%	1.8%	1.8%	1.8%	1.8%	1.8%
Blended Employee & Materials & Contracts	3.2%	3.2%	3.2%	3.2%	3.2%	1.9%	1.9%	1.9%	1.9%	1.9%

Table 8: Financial assumptions.

8.2 Funding Strategy

The funding strategy for delivery is detailed in our 10-year LTFP. Projected expenditure identified in Table 9 is to be funded from CN's operating and capital budgets, loans and reserves, as well as Commonwealth and NSW Government grants. The 10-year LTFP is a dynamic document; it is reviewed and refined on a continual basis to reflect changes in financial circumstances as accurately as possible.

The LTFP is an integral document in the IP&R Framework and demonstrates the financial impacts of providing service levels and assets to the community. The service levels and assets to be provided are identified through *Delivering Newcastle 2040* as part of the annual budget process. This process integrates the key objectives and commitments made in our suite of corporate planning documents including Newcastle 2040, AMS and SAPs, as well as the WDSP. The LTFP has been updated through the 2021/2022 annual budget process.

The diagram below demonstrates the relationship between discretionary and non-discretionary funding strategies to support asset life cycle management. CN reviews budget requirements annually to deliver sustainable services to our community.

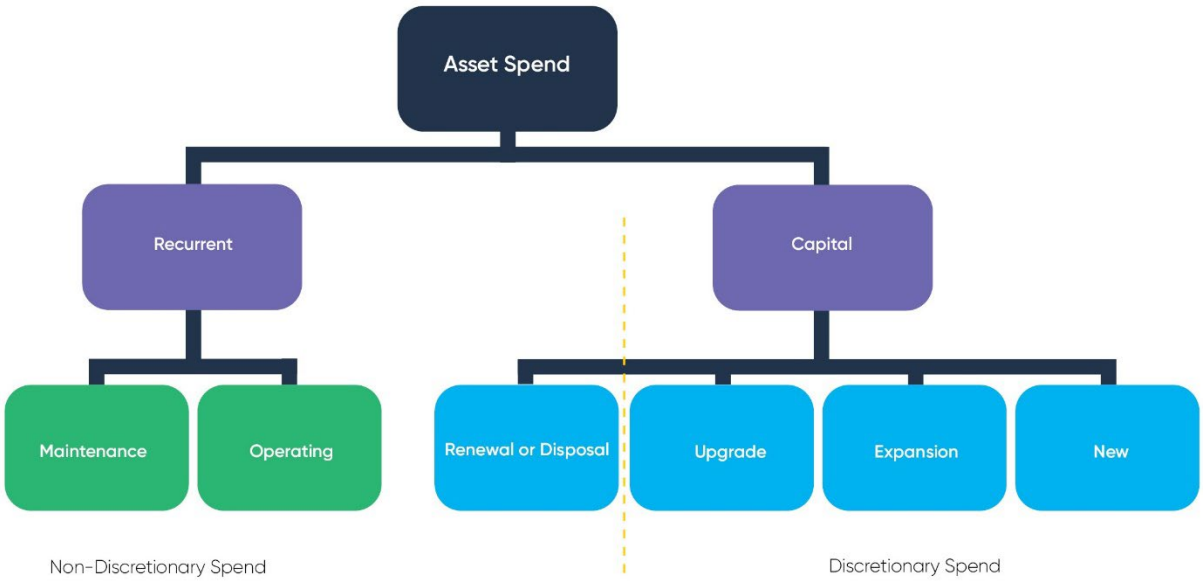


Diagram 7: Asset spending model

8.3 Valuation

Our assets represent significant financial investment and value. All financial assets covered by this SAMP are required to be revalued to Fair Value at least every five years using appropriate methodology.

Market value is used to determine the fair value of the limited number of non-specialised buildings, investment properties and the Museum and Art Gallery collections, however for the majority of infrastructure assets fair value is derived using the depreciated replacement cost method. Under this method the current replacement cost of an asset is determined, then adjusted for the current condition rating and corresponding remaining life factor.

Current replacement cost of an asset is the minimum that it would cost to replace an existing asset with a technologically modern equivalent that provides commensurate economic benefits. Unit rates for current replacement cost used in the fair value process do not capture costs for demolition/disposal, remedial works to fix assets nearby that may be negatively impacted by the asset replacement (e.g. public utility investigations), or non-capital items that are not directly attributable to the asset (e.g. traffic control).

The table below is a summary of the current replacement value of our infrastructure and other assets relating to this SAMP.

Asset Class	Current Replacement Cost ($,000)	Accumulated Depreciation ($,000)	Written Down Value ($,000)	Annual Depreciation Expense ($,000)
Buildings	364,587	178,531	186,056	8,598
Fleet	39,412	23,044	16,368	4,244
Open Spaces	253,175	130,359	122,816	5,275
Other Assets	134,206	26,501	107,705	4,784
Stormwater	273,650	155,637	118,013	2,979
Transport	950,362	489,898	460,464	19,766
Waste Management	85,442	49,229	36,213	3,263
Total	**2,100,834***	**1,053,199**	**1,047,635**	**48,909**

Table 9: Asset valuation values and depreciation

** The agreed level of service is calculated by our Finance team. It is based on the condition of assets at the time of their last Fair Value assessment adjusted for subsequent depreciation expense and considers capital work recorded against each asset using our Works and Assets work order system.*

*** Other assets include collections, equipment and furniture*

Excludes excavation works, work in progress, land and Newcastle Airport

A summary of the current replacement value of our natural assets is provided below.

Asset Description	Current Estimated Value ($,000)
Bushland[1]	129,907
Public trees[2]	107,233
Watercourses	67,592*
Coast[3]	56,213*
Wetlands	45,296
Sea/River Walls	73,509*
Total	**479,750**

Table 10: Natural assets – current replacement value (Source: Natural Asset Register)

[1] Includes bushland, habitat trees, tracks and trails and inland clifflines

[2] Public trees include street and park trees and nest boxes

[3] Includes rock catch fences and sand dune fencing

** Constructed assets included with natural asset estimated value*

9 Improvement Plan and Monitoring

9.1 Status of Asset Management Practices

CN models its asset management practices on the IIMM published by the Institute of Public Works Engineering Australasia. The manual is considered to be a 'best practice guide' for asset management.

9.1.1 The Asset Management System

The asset management system refers to both the information technology systems used to manage assets and the set of people, processes and tools involved in the delivery of services. Key components include asset registers and management systems, asset condition assessments, strategic planning capabilities, predictive modelling, deterioration modelling, risk analysis and life cycle costing. The system is supported by the relevant financial and governance policies and procedures.

Key components of our asset management system include:

- Asset management planning – AMP 2022, AMS 2022–2032, SAMP 2022–2032 and operational SAPs
- Works and Assets module, which incorporates our asset register and is also used to capture maintenance and capital costs
- Project management software, which enables identification, approval, prioritisation, delivery and monitoring of projects, and provides the ability for long-term forecasting of capital works
- CAMMS Strategy module, which brings together organisational, strategic and service planning into a common monitoring and reporting framework
- CAMMS Risk module, which allows for the identification, profiling and assessment of risks, including the management of risk mitigation actions

- Property and Rating module, our request management system, which captures, tracks, stores and accesses information regarding service requests and enquiries (internal and external)

- Procedures relating to asset management and life cycle implementation, including procurement/acquisition, maintenance, project management and disposal.

9.1.2 Asset Management Confidence Rating

Confidence in CN's asset systems, which is used as a basis for financial forecasts, has been assessed using the Confidence Rating System in Table 14. Low confidence in the asset system limits our ability to use the data for high-level business decisions and option analysis.

Confidence Grade	Description
A	**Highly reliable** Data based on sound records, procedure, investigations and analysis, documented properly and recognised as the best method of assessment.
B	**Reliable** Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example old data, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation.
C	**Uncertain** Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data.
D	**Very Uncertain** Data based on unconfirmed verbal reports and/or cursory inspection and analysis. Dataset may not be fully complete and most data is estimated or extrapolated.
E	**Unknown** None or very little data held.

Table 11: Confidence Rating System (Source: International Infrastructure Management Manual *(2015) – IPWEA)*

The confidence rating for the asset data informing the AMS and SAMP ranges between B and C dependent on the service. Our built and natural assets are mapped in a Geographic Information System (GIS). Maintenance works are captured on work orders and capital projects are captured and recorded in project management software. Condition assessments are undertaken approximately every five years. Extrapolation of data is used for forecasting renewal works in some asset classes. There is ongoing migration of data from satellite asset registers; however, many of the asset registers require improvement, including process establishment for future data capture and improved integration with the GIS.

To improve our confidence rating, the following system improvements have been identified:

- Migration of asset classes to asset register (including spatial attributes)
- Natural asset register system integration
- Scheduled maintenance against assets
- Roles and responsibilities assigned to all asset classes
- Implementation of Strategic Asset Management
- Updated and regular condition reports (including programmed renewal works).

This will enable CN to model asset data to gain an optimised view of the life cycle costs of our assets, informing service levels, operational SAPs and the LTFP. In addition, this will improve our overall confidence level for the financial data informing this plan, which is currently assessed as between a B and C (see Section 8). To increase confidence in our asset life cycle costing, key actions have been identified and are included in our asset management improvement programs.

9.2 Improvement Program

An active and effective SAMP should include continuous review and improvement of the systems, data and processes used to manage assets and services. The table below identifies areas for potential improvement to facilitate better asset management planning and practice and enhance our financial planning.

No.	Priority	Deliverables	AMS Actions	Timeline
1	Review LOS in conjunction with community strategic planning and relevant strategies and plans	Star rating review by individual service Enhanced performance monitoring and reporting	5.1, 8.1, 8.2, 9.2	Ongoing
2	Asset management system improvements, including upgrades to improve asset data capture, monitoring and reporting	Confidence in asset management system rated as 'B' Asset management dashboards developed to assist monitoring and reporting Asset register spatial alignment (GIS integration) Capability improvements enable field-based work-as-executed surveys to be completed and assigned to specific assets	2.1, 2.2, 7.1	Ongoing
3	Continue to improve asset data	Completed review of: • Asset Useful Life Expectancy and renewal intervention points • Asset handover procedures • Ongoing data migration of assets currently not held in Works and Assets	1.4, 7.1, 7.2	Ongoing
4	Continue to build integration between asset planning and resourcing strategies	The plan contributes to CN's LTFP and budget bids	1.1, 8.2	Ongoing
5	Review roles and responsibilities in service delivery and asset management	Updated operational SAPs Program of training for business case development	6.1, 6.2, 9.1	23/24
6	Review and assess strategies that include actions requiring new assets and/or changes to current LOS Capital works identified, costed and included in future forecasts	IPR strategy costing requirements achieved and sustainable capital works delivered for the community	1.1, 6.1	Ongoing
7	Review scheduled maintenance for all asset classes	Maintenance programmed and delivered through Works and Assets	4.1, 4.2, 7.3	23/24
8	Assess adequacy of operations and maintenance budgets in costing delivery of service	LOS sustainably achieved over the life of the plan	1.1, 4.2, 6.1,	23/24
9	Develop Project Management Policy and procedures	Project prioritisation methodology implemented	1.2, 1.3, 3.1, 3.2	22/23
10	Delivery of services and asset management incorporates environmental sustainability	Each operational SAP continues to detail sustainable environmental measures, including climate mitigation and adaptation requirements	10.1	Ongoing

Table 12: Improvement plan (actions are listed numerically, not in order of priority

9.3 Monitoring and Review Procedures

The SAMP has a life of 10 years and is due for complete revision and updating within six months of a newly elected Council. The monitoring and review cycle for the plan is detailed in the table below.

Plan Attribute	Required Processes	Review Cycle	Next Due
Performance Reporting	CAMMS corporate reporting (including dashboards) Report on action plan and performance measures (six-monthly and annual reporting)	Quarterly Biannually and annually	Ongoing
Current Level of Service	Assess current LOS using the 5-star rating matrix	Biennially	24/25
Desired Level of Service	Consult with community to ascertain desired LOS	Biennially	24/25
Asset Summary and Condition	Update: • Asset condition profile • Age condition profile • Asset valuations • Depreciation • List of assets currently in the backlog	In line with revaluation cycle	Ongoing
Demand Forecast	Forecast effect of future demand on service	Biennially	24/25
Forecast Life Cycle Costs	• Forecast operations, maintenance, renewal, upgrade, new and disposal expenditure • Update LTFP assumptions	Annually	Ongoing
Cost of Service	Calculate cost of service	Biennially	24/25
Cost of Service for Desired LOS	Forecast cost of service to deliver desired LOS	Biennially	24/25
Risk Management	Update Risk Management Plan (CAMMS Risk)	Annually	Ongoing

Table 13: Plan review cycle

9.4 Performance Measures

The effectiveness of this SAMP can be measured by:

- Integration of CN resourcing strategies (required forecast costs identified in this SAMP are incorporated into the LTFP and resourcing strategies)
- Improvement actions achieved and reported through service unit performance targets
- Improved accuracy in forecasted life cycle budgets, enhancing financial confidence
- Development and implementation of identified LOS
- Identified risks inform LOS attributes and are captured in our risk register
- Asset renewal funding ratio achieves organisational target (this target is often 1.0)
- Asset data confidence rating is improved (see Section 9.1.2).

10 References

Asset Management Policy August 2022

Asset Management Strategy 2022–2032

Australian Infrastructure Financial Management Manual 2015 – IPWEA

Delivering Newcastle 2040

Enterprise Risk Management Guideline 2019

General Purpose Financial Statements 2020/2021

International Infrastructure Management Manual 2015 – IPWEA

Integrated Planning and Reporting Framework 2020

Newcastle 2040

Our Budget – Delivery Program and Operational Plan 2021

Practice Note 8: LOS & Community Engagement 2014 – IPWEA

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