Wollongong City Council

Our Asset Plan
2025-2035

Supporting Our Resourcing Strategy

wollongong
city of innovation

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Acknowledgement of Country

We acknowledge the Traditional Custodians of the land on which our city is built, Dharawal Country. We recognise and appreciate their deep connection to this land, waters, and the greater community. We pay respect to Elders past, present and those emerging and extend our respect to all Aboriginal and Torres Strait Islander people who call this city home. We recognise Aboriginal and Torres Strait Islander people as the first people to live in the area. We respect their living cultures and recognise the positive contribution their voices, traditions and histories make to the city.

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Our Wollongong Our Future 2035 Community Strategic Plan

Our Wollongong Our Future 2035 represents the highest level of strategic planning undertaken by Council. The Community Strategic Plan is a shared community vision to inform action over a 10-year horizon. It identifies the following Vision and Goals as determined by our community:

Wollongong is Sustainable Connected Vibrant Inclusive

We are a sustainable and climate resilient city

We have well planned, connected, and liveable places

We foster a diverse economy, and we value innovation, culture, and creativity

We have a healthy, respectful, and inclusive community

Council's Delivery Program and Operational Plan responds to the community's vision and goals and outlines the services and projects that Council has capacity to deliver. The Resourcing Strategy outlines the finances, assets, workforce, and information management technology required to achieve the Program and Plan.

This document, *Our Asset Plan 2025-2035* is a key component of the Resourcing Strategy. It provides a summary of the assets that we manage on behalf of the community, what service levels we provide, the future demand, how we intend to manage assets over their lifecycle, and the projected costs.

Our Values and Purpose

We are committed to being a local government of excellence that enhances our city's quality of life and environment through effective leadership, community involvement and commitment to service. As a purpose-led, values driven organisation our values are part of everything we do every day and provide the foundation of our organisational culture and guide how we deliver the strategies and actions.

Enabling daily work that encourages collaboration, innovation, interdependence, belonging and inclusion

Living the values in everyday work through behaviours and interactions

Supporting and enabling people to deliver on the promise of an Extraordinary Wollongong

OUR VALUES IN ACTION

SUSTAINABLE
use our community's resources responsibly

RESPECT
inclusive and considerate

COURAGE
challenge the norm to be better

INTEGRITY
honest and reliable

ONE TEAM
together we deliver excellent service

Executive Summary

1 Executive Summary

The community have set a vision for Wollongong, and identified four goals that will help us achieve that vision. This asset plan forms part of our supporting document structure that outlines how we will achieve the goals that the community have set through the services we provide, and the assets required to deliver the services. The purpose of this asset plan is to outline why we provide assets, what assets we provide and how we manage them over the long-term.

Our Asset Plan 2025-2035 is a strategic level document that includes a policy, strategy, and individual plans for all assets under Council control, including road and transport; stormwater and floodplain; open space and recreation; buildings and facilities; plant, fleet and equipment; library collection and resources; information management and technology; and artwork, antiquities, and memorial collections. The plan groups assets by type to ensure that we have a comprehensive and systematic approach to managing similar assets, regardless of location or service supported.

We used the results of our community satisfaction survey to inform us about our performance and the priorities of the community relating to services and facilities. We also look at a range of internal and external operating drivers to develop levels of service for each group of assets.

Future demand is linked to the forecast population growth in Wollongong, with densification in existing suburbs and growth through land development in the West Dapto precinct. Population growth creates opportunities and challenges for our services and the assets required to support services.

Sustainable asset management requires a lifecycle approach that starts from the initial planning and inception of an asset, through the design and delivery phase, the operate and maintain phase, through to the decommissioning and disposal of the asset. Decisions and actions throughout the lifecycle of the asset can have significant impact on the cost to provide function and serviceable assets. We need to ensure we maintain this long-term view as part of our considerations in asset planning. It is particularly important when considering new and expanded assets and reviewing asset renewal requirements.

With over $7 Billion in community assets, and annual depreciation expenses expected to exceed $88M / year by 2025/26, a plan on how we manage over the full asset lifecycle is essential for financial sustainability. The ability to renew assets when they require it and continue to fund new and expanded service provisions will create challenges into the future. We have experienced the impacts of the challenging global economy over the last few years, which have increased service delivery costs. This is a major driver for reviewing practices around lifecycle management.

This plan outlines the key risks and threats to assets including resilience to climate hazards, the lifecycle actions and key responsibilities across the organisation involved in managing assets. The plan provides focus for the key strategic matters that need to be considered and managed. This strategic document will be supported by more granular operational plans over time for specific roles and functions in the lifecycle management of assets.

To ensure we maintain our journey of increasing our asset management maturity, an improvement plan has been provided as part of this plan. It outlines the discoveries and opportunities identified from the investigation and research undertaken. The actions are allocated to a responsible role within the organisation to review an indicative timeframe.

It is intended that this plan becomes a living document and is updated regularly as improvements are implemented and resolutions are made that impact the basis of estimates in the plan.

2   Strategic Context

2.1   What is an asset?

The Australian Accounting Standards Board describes an asset as: "a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity."

Assets are items controlled by Council that we use to support and deliver services. This includes items such as roads, buildings, stormwater infrastructure, pools, library books and many other groups as outlined in Section 12 of this plan. This plan focusses on financial assets as we have a legal obligation to account for these types of assets. Financial assets typically have a life of over one-year, have a minimum value of $5,000-10,000 (depending on the asset type), and the value can be reliably measured.

Council also controls many non-financial assets that provide an important role in meeting our community strategic objectives. Non-financial assets are typically short life, low financial value, and/or don't have a tangible and reliable method of determining the economic benefits. This plan includes limited reference to activities required to manage non-financial assets. This is primarily in the open spaces section of the plan where we undertake maintenance on natural assets. Natural assets typically do not have a financial value placed against them due to the complexity of reliably valuing these assets. This does not mean that natural assets are not valued – they are key to meeting our community vision and goals.

2.2   Wollongong is a City of Innovation

The vision and goals of our community drive our services and actions. To be a City of Innovation, we need to ensure that our supporting documents, including this asset management plan are aligned to the vision and goals.

Community Vision

On Dharawal Country, from the mountains to the sea, we value and respect each other, our places, past, and future. We will be a sustainable, connected, vibrant, and innovative city, with a diverse economy.

Community Goals

Wollongong is Sustainable Connected Vibrant Inclusive

We are a sustainable and climate resilient city

We have well planned, connected, and liveable places

We foster a diverse economy, and we value innovation, culture, and creativity

We have a healthy, respectful, and inclusive community

With an area extending over 50km from Helensburgh and Lilyvale in the North to Haywards Bay and Marshall Mount and Windang in the South, and a population estimate of over 219,000 people (at 30 June

Strategic Context

2023), we enjoy a diverse natural and built environment for living, learning, creating, and connecting as a community.

As a local government, Council provides a range of services to achieve the vision and goals of the community. Our responsibility is to work with the community to plan for the current and future generations of Wollongong in a sustainable way. This to ensure intergenerational equity, so that the community of Wollongong can experience the benefits of the environment, a secure economy and vibrant city that is accessible with a community that is healthy and connected.

2.3 Infrastructure to Support Service Delivery

Council's Delivery Program and Operational Plan responds to the community's vision and goals and outlines the services and projects that Council has capacity to deliver. It is a result of rigorous planning and prioritisation and aims to provide the best valuable services to the community. The Resourcing Strategy outlines the finances, assets, workforce, and information management technology that will be used to achieve the Program and Plan. Council's 33 Services form the foundation of the Delivery Program and Operational Plan. Council's Services are presented under their best fit goal. These services are described in the Delivery Program and Operational Plan.

We are a sustainable and climate resilient city	We have well planned, connected, and liveable places	We foster a diverse economy, and we value innovation, culture, and creativity	We have a healthy, respectful, and inclusive community

Community Strategic Plan

Resourcing Strategy

Delivery Program and Operational Plan
delivered through Council Services

Environmental Services	Development Assessment	Arts and Culture	Aged and Disability Services
Natural Area Management	Emergency Management	City Centre Management	Aquatic Services
Botanic Gardens and Annexes	Land Use Planning	Engagement, Communications and Events	Community Facilities
Floodplain Management and Stormwater Services	Memorial Gardens and Cemeteries	Economic Development	Community Programs
Waste Management	Property Services	Tourist Parks	Corporate Strategy
	Regulatory Compliance		Integrated Customer Service
	Transport Services		Leisure Centres
			Libraries
			Parks and Sports fields
			Public Health and Safety
			Youth Services

Support Services
Employee Services, Financial Services, Governance & Administration, Infrastructure Strategy & Support, Information Management & Technology

Strategic Context

Some of the asset categories that support services include:

- Roads and bridges
- Information management and technology
- Pathways
- Buildings
- Office equipment
- Library collection

- Stormwater
- Open space and playgrounds
- Artworks
- Pools
- Plant, fleet and equipment
- Waste management

Below is a summary of the services and assets provided by Council that help us achieve the goals in the Community Strategic Plan:

Goal 1	We are a sustainable and climate resilient city		
Service	Infrastructure Asset Relationship	Assets Utilised
Botanic Garden & Annexes	• Manage and promote the conservation, education, recreation, and aesthetic values of the main 30-hectare site in Keiraville, including the maintenance of the Gleniffer Brae and grounds, and the three natural area annexes of Mt Keira, Puckey's Estate and Korrongulla Wetland. • Maintain, renew and provision of supporting infrastructure at Botanic Gardens and annexes including car parking, pathways, bridges, drainage, buildings, vehicles, etc.	• Buildings • Open space • Footpaths • Stormwater • Plant and fleet
Environmental Services	• Monitoring of emissions and resource usage associated with operating assets. • Providing guidance and strategic direction on future environmental impacts. • Working with the community to determine service levels for environmental impacts associated with infrastructure. • Provide guidance and strategic direction on materials used in the built environment. • Prepare and coordinate implementation of environmental strategies including Climate change mitigation and adaptation plans, Costal Management Programs • Plan for predicted increases in sea level and frequency and severity of extreme weather due to climate change.	• ICT Assets • Office Equipment and Furniture • Buildings • Stormwater • Infrastructure • Fleet
Floodplain Management and Stormwater Services	• Develop and implement programs for flood and stormwater assets new, renewal, maintenance, and upgrade; including pipes and culverts; pits; open channels and public waterways; stormwater quality improvement devices; detention basins; and flood mitigation measures.	• Stormwater • Open Space • Land • Office and other assets

Strategic Context

	• Develop and implement floodplain risk management plans. • Implement flood and stormwater related actions of Council's strategic documents. • Inspect stormwater infrastructure and undertake priority maintenance or upgrade works to maximise public safety.	• Plant and fleet (maintenance)
Natural Area Management	• Coordinate natural area restoration works at priority sites. • Continue implementation of priority actions from the Dune Management Strategy	• ICT Assets • Office Equipment and Furniture • Open Space • Buildings • Fleet
Waste Management	• Domestic waste collection, recycling, on-call household clean-up and organics collection. • Public bin and litter collection and cleaning of public toilet facilities. • Operation of Wollongong Waste and Resource Recovery Park at Kembla Grange. • landfill and resource recovery assets • landfill compactor and other plant • side arm and rear loader trucks • public litter bins • Provision of residential collection bins • prepare and coordinate implementation of Waste and Resource Recovery Strategy	• Plant and fleet • Buildings and facilities • Open Space • Land • Roads

Goal 2 | We have well planned, connected, and liveable places		
Service	Infrastructure Asset Relationship	Assets Utilised
Development Assessment	Assessment and determination of planning matters relating to infrastructure.	• ICT Assets • Office Equipment and Furniture • Buildings • Fleet
Emergency Management	• Provide and maintain buildings with facilities for amenities, training, storage and garaging for the local Rural Fire Service brigades and State Emergency Service units. • Maintain vehicles, equipment for the local RFS brigades and SES units.	• Buildings and facilities • Plant and Fleet • Roads (fire trails) • Information management and technology

Strategic Context

	• Provide mechanical support in relation to RFS fleet maintenance and undertake maintenance to emergency facilities. • Provide operational response to support emergency combat agencies during incidents and emergencies. • Contribute to the ongoing maintenance of the two Illawarra Emergency Operations Centres (Wollongong and Albion Park). • Fire trail management and maintenance. • Management of asset protection zones and vegetation buffers for Council assets. • Plan for predicted increases in frequency and severity of extreme weather due to climate change.	
Land Use Planning	• Prepare Local Environmental Plans and Development Control Plans. • Prepare Plans of Management for community and Crown lands. • Develop town and village plans to enhance the public domain. • Plan and manage the West Dapto Urban Release Area and carry out partnerships to facilitate the infrastructure and facilities required to support the growing community. • Prepare and implement Development Contributions Plans and Planning Agreements.	• ICT Assets • Office Equipment and Furniture • Buildings • Infrastructure • Fleet
Memorial Gardens and Cemeteries	• Provide memorial, burial, and funeral service facilities at six sites across the Local Government Area. • Maintenance of the Memorial Gardens and cemeteries. • The provision of funeral service facilities, burial, and memorial sites.	• Land • Open space • Roads • Plant and fleet
Property Services	• This service manages over 450 leases and licenses on behalf of Council and includes the management, development, maintenance, and disposal of Council owned property to meet Council's statutory requirements and contribute to the expansion of Council's revenue base. • Leases and licenses also ensure the effective management and coordination of community and business use of Council's public spaces, buildings and facilities Identify property-based investment opportunities. • Review, update and deliver Property Strategy. • Manage Council's commercial property portfolio including purchases, sales, and leasing.	• Buildings • ICT Assets • Office Equipment and Furniture
Regulatory Compliance	• Council's role as the local impounding authority in educating, managing, and implementing animal	• Buildings

		ICT Assets • Office Equipment and Furniture • Fleet
	registration and identification (microchipping) and provision of animal pound service. • Monitoring, investigation, and enforcement services related to unauthorised and non-compliant development, environmental protection, swimming pool barriers, air/water and noise pollution, illegal dumping investigation, and abandoned vehicles / articles.	
Transport Services	• Provide the delivery, management, and advocacy of transport infrastructure. • Road Safety, Traffic and Transport Planning • Roads and Bridges • Footpaths, Cycleways and Transport Nodes • Car Parks and Boat Ramps • Transport facilities including Street Lighting • Street Sweeping	• Roads • Footpaths • Shared paths • Cycleways • Transport facilities • Car parks • Bus shelters and seats • End of trip facilities

Goal 3 | We foster a diverse economy, and we value innovation, culture, and creativity

Service	Infrastructure Asset Relationship	Assets Utilised
Arts and Cultural	• Manage the Creative Wollongong Studio's, providing workspaces for Wollongong based artists, alongside programming opportunities in the nearby Arts Precinct that supports revitalisation and employment for artists. • Facilitate the Lower Town Hall as a creative space.	• Buildings • Open space • Artwork and monuments
City Centre Management	• Manage the operations of the City Centre, including day-to-day management, security, CCTV operations, graffiti removal, events and activation opportunities and marketing. • Civil, amenities, and grounds maintenance and Crown Street Mall access - including vehicle permits	• Transport • Open Space • Plant and fleet • Artwork and monuments
Economic Development	• Responsible for Economic Development strategy that informs infrastructure actions to support local business and investment.	• ICT Assets • Office Equipment and Furniture
Engagement, Communications-ns and Events	• Provision of design, printery, and sign shop. • Support communications and engagement on infrastructure projects. • Support for community events.	• Buildings • Open space • Plant and fleet • Office and other assets
Tourist Parks	• Provide holiday accommodation for tourists through the provision of accommodation such as cabins, powered sites, unpowered sites, and annual sites.	• Buildings • Open space • Transport

Strategic Context

• Maintenance of internal roads; landscape; and playgrounds	

Goal 4 | We have a healthy, respectful, and inclusive community		
Service	Infrastructure Asset Relationship	Assets Utilised
Aged & Disability Services	• Provision of assets (fit out, mobility devices, etc) to support aged and disability services. • Direct provision of Community Transport Services to people aged over 65 years, or who are transport disadvantaged to maintain access to essential services and participation in community life. • Upgrade of accessibility of existing assets.	• Buildings • Fleet • Office and other assets
Aquatic Services	• Provide affordable and equitable access to beach and pool recreational services. • Provision of facilities for beach patrols (vehicles, beach equipment, towers, buildings, etc). • Foreshore waste collection and beach cleaning • Monitor and implement appropriate responses to ensure improved mobility, surveillance, surf education and emergency response. • Operate and maintain two heated swimming pools at Dapto and Corrimal. • Operate and maintain six public swimming pools located at Helensburgh, Thirroul, Western Suburbs (Unanderra), Continental Baths (Wollongong), Port Kembla and Berkeley. • Maintain nine ocean rock pools situated at Coalcliff, Wombarra, Coledale, Austinmer, Bulli, Woonona, Bellambi, Towradgi, and Wollongong Gentleman's pool.	• Buildings • Pools • Open space • Plant and equipment
Community Facilities	• This service manages and operates 56 Council-owned community facilities across the Wollongong Local Government Area. This includes Neighbourhood Centres, Senior Citizens Centres, Childcare Centres, Libraries, Community Centres and Community Halls. • Provide support for not-for-profit groups via the provision of access to community assets. • Maintain, improve, and reinvest in community facilities to better meet the needs of community groups, including compliance and improved sustainability.	• Buildings • ICT Assets • Office Equipment and Furniture
Community Programs	• Involve children in Council's planning and decision-making processes. • Deliver projects and activities which aim to reduce crime and increase the perception of safety in the community (Graffiti removal). • Provide internal advice on access, planning and community safety.	• ICT Assets • Office Equipment and Furniture

Strategic Context

Corporate Strategy	• Coordinate Council's Integrated Planning and Reporting including the development of Community Strategic Plan, Delivery Program and Operational Plan. • Oversee Service Reviews to improve customer service and optimise service delivery. • Provide strategic analysis and project management support as required. • Report on Council's key performance measures.	• ICT Assets • Office Equipment and Furniture
Integrated Customer Service	• Support for community expectations relating to levels of service	• Office and other assets
Leisure Centres	• Operate efficient, well managed businesses providing a return to Council at Beaton Park and Lakeside Leisure Centres which provide a range of health and fitness opportunities to the community.	• Buildings • Office Equipment and Furniture
Libraries	• The service is delivered from seven libraries and 10 street libraries across the city, and through the Home Library Service, and a range of online services. • Provision of library space and resources	• Buildings • Library resources • ICT Assets • Office Equipment and Furniture
Parks & Sport fields	• Operate 530 parks and reserves, 193 playing fields across 85 sports grounds, 7 outdoor fitness stations, 9 turf wickets, 156 playgrounds and Russell Vale Golf Course. • Provision of safe playground equipment in appropriate locations based on equity and inclusion. • The Russell Vale Golf course includes maintenance and operation of the 18-hole public golf course. • Undertake high priority funded works, as per Council's adopted Landscape Masterplans. • Develop and implement the Landscape Masterplans • Implement recommendations of the Public Toilets Strategy 2019-2029 to improve accessibility. • Manage the multi-use criterium cycle track at Lindsay Maynes Park, Unanderra	• Open space • Plant and fleet
Public Health & Safety	• Provision of assets to support Public Health and Safety services including vehicles, IM&T, CCTV, office space	• ICT Assets • Office Equipment and Furniture
Youth Services	• Youth Services provides a program of recreation, cultural and education activities to meet the needs of young people aged 12 - 24 at Wollongong Youth Centre and across the Wollongong Local Government Area. • Provision of assets to support youth services	• Buildings • ICT Assets • Office Equipment and Furniture

3   Purpose of the Plan

3.1   Why we do it

Our Wollongong Our Future 2035 outlines the community's vision and goals for the future of Wollongong. We deliver on this vision through the provision of 33 services. Each service requires assets to help facilitate and deliver these services.

The community has contributed over $7 Billion into a diverse range of assets to support these services. Over the life of the 4-year delivery program, we are looking at investing $539M into capital works in addition to $246M into operations and maintenance expenses on infrastructure. As an organisation, we need to apply a systematic approach to manage this portfolio of infrastructure assets to make sure that we provide these assets in a safe, sustainable, and efficient way.

1000km roads	600km foothpaths and cycleways	685 km stormwater pipes	764 Buildings
85 Sports Grounds	156 Playgrounds	9 + 9 swimming and ocean pools	

3.2   Asset Management – The What

Our approach to managing assets is described in this plan. It outlines a range of actions to help guide sustainable decision making to reduce the asset life cycle cost over the long-term. This plan outlines:

- the assets provided for the community's use;
- the levels of service on how we plan to maintain and provide these assets over a ten-year period;
- the anticipated future demand and how that impacts asset provision;
- a review the lifecycle management of assets and the costs to not only build and replace, but also to operate and maintain them;
- a review of the financial implications and forecasts with providing and operating assets; and
- how we will approach, monitor and review our performance managing assets.

3.3   Asset Management – The How

This plan is prepared by Council with a range of source information and local practice to inform the content. We utilise an enterprise asset management system to store data relating to approximately 182,000 assets. The system helps decision making with data and tools for analysis, but it is input from the community that shapes the recommendations and decisions on asset management. We recognise the importance of the partnership between community, elected councillors, council officers, government, and industry partners in asset management.

Purpose of the Plan

Our team at Council is committed to being a local government of excellence that enhances our city's quality of life and environment through effective leadership, community involvement and commitment to service. Our values drive actions through:

Enabling daily work that encourages collaboration, innovation, interdependence, belonging and inclusion	Living the values in everyday work through behaviours and interactions	Supporting and enabling people to deliver on the promise of an Extraordinary Wollongong

OUR VALUES IN ACTION

SUSTAINABLE
use our community's resources responsibly

RESPECT
inclusive and considerate

COURAGE
challenge the norm to be better

INTEGRITY
honest and reliable

ONE TEAM
together we deliver excellent service

Our Asset Plan includes an asset management policy, strategy and asset plans into one comprehensive document. The plans summarise each class of assets under Council's control.

Our Asset Plan

Asset Management Policy → Asset Management Strategy → Asset Plans

The Asset Management Policy is attached at Appendix A. It outlines the broad framework for undertaking asset management in a structured and coordinated way, aligned with Community Strategic Plan. It outlines why and how asset management will be undertaken; gives clear direction for asset management defining the key principles that underpin asset management for that council; and promotes sustainability to protect the needs of future generations.

The strategy outlines our approach to achieving the vision and principles of the policy. The Asset Strategy is included as a key element of the Council's Resourcing Strategy 2035. The strategy summarises the current situation; identifies where we want to be; and reviews sustainability and resilience of our assets. The strategy identifies the alignment to the direction set by Community Strategic Plan, and gaps solutions that address the issues through the improvement plan. The strategy identifies assets that are critical to the council's operations. Documents and demonstrates an integrated approach to planning and coordination of asset management across the various asset groups.

The asset plans are grouped in Section 12 Asset Management Plans, and cover all the assets under council's control. We identify the asset service standards, and actions and resources required to provide a

Purpose of the Plan

defined level of service in the most cost-effective way. For each class of asset, a long-term projection of asset maintenance, rehabilitation, renewal and replacement, including life cycle costs is provided. The investment forecasts are aligned with our Resource Strategy.

3.4 Legislative Context

The New South Wales *Local Government Act 1993* (the Act), provides principles for councils to carry out their functions in a way that facilitates local communities that are strong, healthy, and prosperous under the following categories:

- Exercise of functions generally
- Decision-making
- Community participation
- Sound financial management
- Integrated planning and reporting

The Act requires councils to have a long-term strategy (called its resourcing strategy) for the provision of resources to perform its functions. The resourcing strategy outlines how council will resource its strategic priorities, and includes 3 inter-related elements:

1. Long-Term Financial Planning
2. Workforce Management Planning
3. Asset Management Planning.

The statutory requirements for planning are mandated within the Integrated Planning and Reporting Guidelines issued by the Office of Local Government issued under section 406 of the Act.

Accurate data and a robust planning process is required to ensure that assets are managed and accounted for in an efficient and sustainable way on behalf of the Wollongong community. The key objective of asset management planning is to provide the required level of service for the community in accordance with the Our Wollongong Our Future 2035 in a cost-effective manner. Levels of service are key business drivers for asset planning, along with technical requirements that ensure financial and operational sustainability.

Our Asset Plan accounts and plans for all existing assets under control of Wollongong City Council, any new asset solutions generated through business proposals and listed in the Delivery Program, and assets contributed as part of development. This plan comprises an Asset Management Policy, Strategy and Plan (covering each asset class).

The document is a forward focussed plan spanning a 10-year horizon and includes:

- a Policy position of Council.
- the identification of assets that are critical to the council's operations including a risk management strategy for these assets.
- specific actions required to improve the council's asset management maturity and capability, projected resource requirements and timeframes.
- plans and service standards for all assets.
- long term projections for asset maintenance, rehabilitation and replacement including forecast costs to inform the long-term financial plan.

Assets enable the delivery of a range of important services to the community. A key issue facing local governments throughout Australia is the management of ageing assets in need of replacement while community needs and expectations are changing.

Purpose of the Plan

Infrastructure assets such as roads, stormwater drains, bridges, and public buildings present unique challenges because their performance and longevity can be difficult to determine, and planning needs to consider the peaks and troughs in expenditure to replace or upgrade these assets.

The construction and/or acquisition of new assets to support new or enhanced services presents challenges in funding the ongoing operating and maintenance costs necessary over the full lifecycle of the asset.

Council's Asset Management Policy, Strategy and Plans integrate to outline Council's approach to asset management for the safe, effective, and efficient management of assets, to support sustainable delivery of services now and into the future.

A Strategic Asset Management Planning Framework has been developed as part of this document to guide asset management across all parts of Council and create a clear picture of interrelationships and importance of services planning for defining asset requirements to support service delivery.

Where specific legislation applies, a list of relevant Commonwealth and State legislation for managing assets is provided within each asset plan.

4 Asset Management Plan Approach

Effective asset management requires a combination of people, data, processes, and systems. These four pillars provide the foundations on which we build our asset management policy, strategy, and plan.

The asset plan provides guidance on the recommended actions for assets across their lifecycle, from planning; delivery; operation and maintenance; to the end-of-life stage for assets. The plan is closely linked to supporting documents to identify levels of service and future demand for services, land use changes and related assets. We review risk management and critical service functions. Financial projections and scenarios are explored, which provides information for our long-term financial plan. We also review the implications on workforce resourcing to keep the overall system operating. Finally, we identify opportunities throughout the preparation of this document that we believe will improve our performance and long-term sustainability in managing assets and prepare an action plan.

This plan provides a consolidated view of all assets under Council's ownership or control. Whilst there are discrete differences in the way assets are managed, the following sections are provided for each group of assets in the asset management plan:

1. Profile
2. Strategic priorities
3. Asset snapshot
4. Future demand
5. Roles and responsibilities
6. Performance
7. Future investments
8. Improvement program

Recognising that there are approximately 180,000 assets under Council control, the plan for each group of assets is a summary for the group. It is intended as a strategic level document and not intended as specific asset management plans for each individual asset. For larger, more complex, or higher risk assets, an individual plan may be justified and prepared to support operational and maintenance plans.

Background information on several key principles and inputs for asset management are provided in the following sections.

4.1 Asset Management Practices

The key roles and responsibilities are detailed in the asset management policy, and further details provided within each asset plan.

Stakeholders with an interest in Council's asset management practices include users (community, business, clients, customers, visitors); regulators; service providers; utility providers; public transport operators; emergency services; and other Government Agencies.

Council commissioned TechnologyOne – OneCouncil in 2020 as the Enterprise Asset Management system. We are continuing the introduction and expansion of modules to assist with the management of assets as our maturity and capability grows. We continue to work on implementing the roadmap for the system and are currently progressing with the development of the Project Lifecycle Management, Strategic Asset Management, Rapid Defect Assessment, Field App and Work Management Modules. Preparation of this plan utilised the asset register and asset book from the system. Recent configuration of the test point

Asset Management Plan Approach

functionality has seen the import of extensive road surface and pavement condition information against each road.

The following table 4.1 outlines the application that supports our core asset management functions:

Table 4.1 – Information Systems

Information/Data	System
Customer Requests	TechnologyOne – OneCouncil
Financial/Accounting	TechnologyOne – OneCouncil
Records Management	TechnologyOne – OneCouncil
Mapping (GIS)	ESRI and IntraMaps
Asset Register	TechnologyOne – OneCouncil
Works Management	TechnologyOne – OneCouncil

Asset planning requires data to enable analysis to inform decisions. We have used the most up-to-date information to prepare this plan. A data confidence rating has been completed for each of the major infrastructure classes which is summarised in the Data Confidence section. As the plan to improve data confidence progresses, the confidence in the outputs of asset planning will improve. Observations on data confidence and areas for improvement will be noted in each asset class as part of the improvement plan.

Monitoring and review of asset management practices is a key business process. The asset management improvement plans that forms part of this document provide a road map for continuous improvement. The Asset Management Steering Committee is an internal working group with cross-functional representation responsible for monitoring and evaluating the progress of improvement actions set out in Council's Asset Management Plan.

4.2 Asset Lifecycle

4.2.1   Why?

Council provides a wide variety of services to the community and these services are supported with networks of assets. The community invests a significant amount of funding for the construction and maintenance of assets every year. It is important that we look for ways to be sustainable and to ensure that assets remain safe, fit-for-purpose and functional over the period it is in service. For many long-life assets, the on-going costs of keeping the asset in service far exceeds the initial upfront cost of providing it. Throughout the life of an asset there are many decision points that affect service and cost. These decision points over the life of the asset is called the lifecycle.

4.2.2   What?

The asset lifecycle describes the period from the decision to provide an asset to the point at which the asset reaches the end of its service and the stages in between. Whilst lifecycles may vary slightly between types of assets, there are five broad stages as shown in Figure 4.2.2 below.

Asset Management Plan Approach

Figure 4.2.2 – Asset Lifecycle
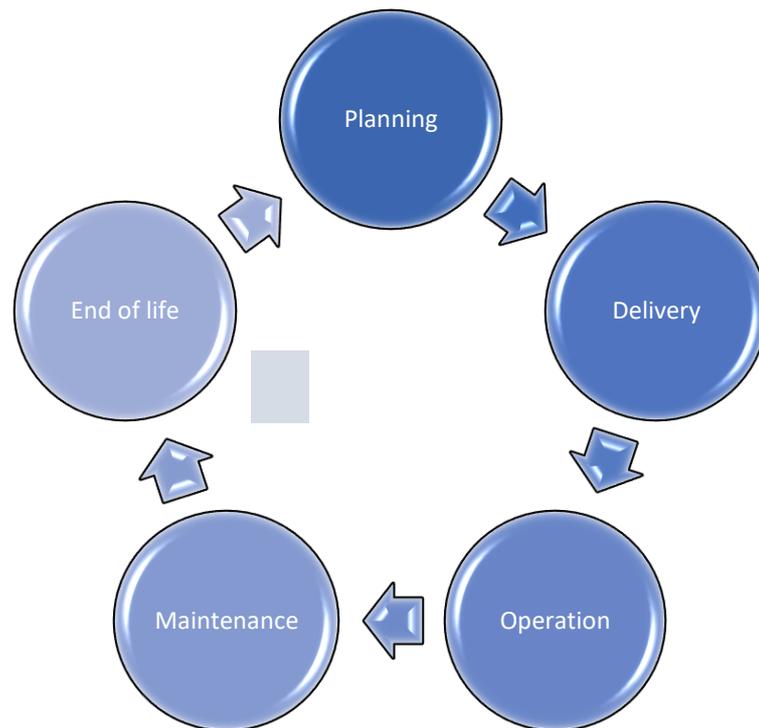
1. Planning describes the tasks associated with investigating the required asset solution to support the service and includes:

   o Master planning
   o Feasibility and business plan
   o Concept development
   o Project scoping
   o Functional assessment and condition monitoring
   o Renewal, expansion or repurpose

2. Delivery includes the processes of bringing the asset into service such as:

   o Site investigations - survey, geotechnical,
   o Design development
   o Approvals - statutory
   o Construction/procurement

3. Operation – Once an asset is delivered, it moves into the operation phase. These are the activities to keep the asset in operation to provide the service, including:

   o Staffing of facility
   o Utility costs
   o Cleaning
   o Pest control
   o Street sweeping
   o Security

- o   IT Support
- o   Waste management
- o   Insurance
- o   Compliance (certification costs)

4. Maintenance – the maintenance stage commences upon completion of the delivery stage. This describes actions to keep the asset in an acceptable condition and increase the likelihood of the asset achieving the expected useful service life, such as:

- o   Repairing potholes in roads
- o   Footpath repairs
- o   Protective surface coatings
- o   Servicing
- o   Gutter cleaning
- o   Airconditioning filter cleaning and servicing
- o   Replacement of a pressure pump

5. End of Life

- o   Demolition and disposal
- o   Sale of asset – e.g. vehicles
- o   Make-good costs once the asset is removed.

Most long-life assets will require renewal at some point in the lifecycle. Some assets will be expanded to provide additional capacity or repurposed to provide an alternate service. At this point the asset moves from renewal to also including an upgrade with appropriate business case approval stages undertaken.

The lifecycle will end at the *End-of-Life* stage where the decision is made to retire an asset and not replace it. Alternatively, the asset lifecycle is continuous where the decision is made to renew an asset.

4.2.3   How?

At each stage of the lifecycle, there are specific considerations relating to resources, risks, challenges, processes, approvals, and legislative compliance. Stakeholders and impacts may vary throughout the lifecycle stages. For these reasons, the lifecycle of assets forms a key consideration of asset management planning, particularly when considering providing new and expanded services, supported with additional assets.

Historically, focus has been placed on the financial impacts of the upfront capital cost of providing new infrastructure, whilst not fully understanding lifecycle costs. We recognise that the provision of new infrastructure creates an ongoing liability to operate, maintain, renew, and decommission the asset.

The costs associated with an asset across the lifecycle will form part of the financial projections in this asset management plan and will provide direct inputs for the Long-term Financial plan. The lifecycle projections will also be used to inform the workforce management plan and impacts on the people required to provide the service and asset. This is particularly important for growth in infrastructure portfolios to support growth in the community in areas like West Dapto. We will model forecast growth and supporting infrastructure in this plan. With Council's commitment to climate change mitigation, decommissioning assets will become a significant stage in the decision-making process to understand the embodied carbon impacts during the lifecycle of the asset.

Asset Management Plan Approach

4.3 Useful Life Estimates

4.3.1   Why?

Assets will continue to provide service for a finite period with the period being influenced by several factors associated with the physical asset; service need and customer expectations; obsolescence and changes in technology; cost of service; and external influences.

4.3.2   What?

The term *useful life* describes the time that the asset is expected to be available to support the service at the agreed service level. The useful life is not necessarily how long the asset will last before it breaks. It is a measure of the most appropriate time to either renew, retire, or dispose of the asset based on the factors previously mentioned. In the case of building structures, the useful life is generally forecast over a long period of 60 years, however in the case of light vehicle fleet it may be five-years or distance travelled.

4.3.3   How?

In assessing the useful life of assets, considerations may include:

- Physical condition looking at defects, deterioration, and age of the asset.
- Cost to operate and maintain – as assets deteriorate and age, costs generally increase to keep it in service.
- Efficiency and energy consumption – changes in technology can provide benefits in reduction of energy use through greater efficiency. Targets for emission reductions may reduce the useful life of high energy usage assets.
- Risk Management – consequence of the asset not being available for service, and whether the asset continues to provide the service safely.
- Legislative Compliance – changes in legislation may require modifications to an asset or introduce redundancy. An example is the requirement to install thermostatic mixing valves to reduce the risk of scalding from hot water taps introduced a capital cost and an annual compliance check.
- Functionality and Utilisation – this is a measure of whether the service is still required to be provided in the way the asset supports, or if there is a change in service demand.
- Capacity - in some instances the asset may reach capacity and will no longer be able to provide service, and example of this is a landfill cell.
- Damage – this can be a result of damage suffered in service through service users or external influence such as accidental damage (e.g., car accident), vandalism, and impacts from natural events.

Each year we undertake a review of assets in service to consider whether there are factors that may impact the current assessment of the remaining useful life. This is part of the annual review of fair value, and it may result in adjustments to extend or reduce the useful life. An example of an extension to the useful life occurs after an inspection of a building roof reveals that it is not deteriorating at the rate forecast, and the life is extended. Alternatively, we may find that a reduction in useful life occurs where storms have damaged a roof or stormwater structure.

Our general approach to managing useful life of infrastructure assets is to keep the asset in service for the longest period that is financially sustainable while delivering the agreed service to the community. We will

Asset Management Plan Approach

monitor that the service continues to meet service demands, legislative requirements, fit for purpose and safe.

Forecasting the useful life of long-life assets can be challenging as we may not have experienced the end-of-life period for some asset types. Looking at the design life is an indicator, but actual useful life may be significantly longer. As an example, concrete pipes may have a design life of 50 years, however they may continue to provide service for 80-plus years. Assets with a long useful life profile include footpaths, road pavements and stormwater, that may have an estimated useful life of 80 plus years. We monitor condition for signs of deterioration to test and evaluate the remaining useful life.

The age profile enables us to understand performance and predict when we will need to intervene with planned maintenance and renewal works. With long-life assets with a service life of over 40 years, we plan at network level initially and then refine to program level and project level as the intervention period gets closer. We use available information relating to actual works performed, current condition assessments, and age to forecast planned maintenance and renewal works.

4.4 Age of Assets

Understanding the age profile of assets helps us determine and predict the remaining useful life of assets over the long-term. It is critical to know the commission date of an asset to understand the actual age and/or the period it has been in service.

The discipline and systems for managing assets has evolved and improved over many years. The record quality to determine commission dates over the past 60 plus years is variable and where reliable information is not readily available, we have used a range of available historic data to estimate commission dates, including:

- Age of subdivision
- Material and construction type
- Historic aerial images
- Information on similar type of asset

To manage the risk of variable commission dates, we use samples of data that have been verified for accuracy to undertake detailed analysis. This approach improves the accuracy of the forecasts at a network level and provides greater reliability of intervention dates. We continue to monitor individual assets through condition inspections to enable specific adjustments over time.

4.5 Future Demand

4.5.1 Wollongong Local Strategic Planning Statement 2020 and draft Local Strategic Planning Statement 2025

The draft Local Strategic Planning Statement (LSPS) 2025 is currently out on exhibition until 7 May 2025. Pending Council endorsement of the LSPS 2025, Our Asset Management Plan 2035 will be updated to reflect the revised population forecasts and impacts. The endorsed LSPS 2020 has been utilised in this document.

Future demand in asset planning refers to known and forecast changes to the current level of utilisation of services provided by Council. As an organisation that exists to provide services to our community, the single biggest factor that impacts demand is change in population.

Asset Management Plan Approach

The population of Wollongong is forecast to grow by approximately 55,000 persons over a 20-year period. The Wollongong Local Strategic Planning Statement 2020 (LSPS) provides a 20-year vision for land use planning for the City of Wollongong. The LSPS is an important document for setting a roadmap for dealing with population increase in the face of the following challenges:

- Employment opportunities;
- Climate Change Resilience and meeting the Emissions Reduction Target;
- Housing the additional 55,000 people in appropriate locations;
- Creating great places;
- Supporting the population with culture, recreation, and social activities;
- Enabling infrastructure and transport – both within Wollongong, and to the adjoining regions; and
- Protecting the environment, which is also the backdrop and the attraction of the area.

As a high-level strategic document, the LSPS is intended to demonstrate how the future growth and change will be managed and guided to link to the community vision and goals for Wollongong in the community strategic plan.

The LSPS references several supporting documents and identifies the actions that will help support and manage the future demand associated with the increase in population. The review of utilisation and capacity of assets and the planning for acquisitions is informed by the LSPS vision. The current LSPS is being reviewed based on updated forecasts and planning information.

4.5.2   Wollongong Housing Strategy 2023

The LSPS is supported by the Wollongong Housing Strategy 2023. This strategy outlines the plan for how and where housing for the population growth is planned to be accommodated. This provides guidance on the locations where increased demand for services will need to be considered and managed. It provides an insight into where we need to plan for changes in transport infrastructure including pedestrian and cycling links supporting infrastructure for public transport; upgrades to the road network; access to open space and recreation assets; and social infrastructure to provide access to libraries, community centres and social activities. Each of these services are supported by specific supporting documents that reference the LSPS and Housing Strategy to inform the location of planned population growth.

4.5.3   Supporting Documents

There are other demand drivers beyond growth in population that are likely to change the will impact services and assets, including:

- Changes in demographics;
- Commercial and industrial mix and type;
- Changes in and access to technology;
- Working patterns and location (hybrid working);
- Global, National and State economic position;
- Legislative changes;
- Climate and environmental changes;
- Policy position.

Asset Management Plan Approach

Future demand for assets is driven by the service and people they support. The impact of these demand drivers on the services provided by Council is assessed in the supporting documents for the relevant service. This information feeds into the impacts on related assets in this plan.

4.6 Levels of Service

Levels of service relate to performance targets that Council sets to manage assets that support service delivery. We typically group levels of service into customer and technical levels of service.

Community levels of service are generally defined in terms of quality, function, safety, responsiveness, and capacity/ utilisation. Services planning is proposed to be further developed to include community levels of service and asset requirements to support service delivery. Performance related to customer levels of service is typically measured using biennial community survey results, utilisation statistics and condition/function data where available.

Technical Levels of Service describes how we aim to manage the asset so that it remains in service and available for use. These levels of service are more aligned to operational and maintenance activities and typically describe the actions we implement so that assets are safe and fit for purpose.

Technical levels of service are defined in terms of intervention levels and standards for lifecycle activities (i.e., operations, maintenance, renewal, acquisition, and disposal). These technical levels of service are used to establish and measure the performance of Council's lifecycle activities and delivery programs.

A summary of levels of service are provided within each asset plan.

4.7 Performance

Performance is a measurement of how well we can meet the expected levels of service. We look at three key factors – condition, functionality, and capacity.

- Condition is an indicator of technical level of service.
- Functionality and capacity are based upon customer levels of service.

Within each asset plan we provide a summary of the ratings and description of how we measure the factors.

Performance indicates how well we can achieve the targets set for the levels of service. In some instances, in may indicate where service plans have been optimistic and not aligned to our ability to fund the desirable level of service.

Roles and Responsibilities

5 Roles and Responsibilities

Role	Responsibility	Who
Wollongong Community	• Elect Councillors to represent and make decisions on behalf of the community (residents). • Utilise assets responsibly. • Participate in community engagement opportunities relating to assets. • Set the vision for Wollongong through the Community Strategic Plan.	Resident, Business, & Community Stakeholders
Asset Custodian	• Set guiding principles for the Asset Management Policy. • Act as custodians for community assets by ensuring that their decisions represent and reflect the needs of the wider community. • Adopt Council's Resourcing Strategy including the Asset Management Policy, Strategy and Plan. • Delegate authority to the General Manager to undertake required responsibilities. • Provide sufficient resources to maintain community assets to agreed levels of service as outlined in this Policy.	Lord Mayor, Deputy Lord Mayor, and Councillors
Executive Asset Governance	• Championing asset management. • Foster and support a multi-disciplinary asset management steering committee. • Enable appropriate management arrangements, ownership, control, accountability, and reporting requirements. • Review and monitor asset performance and asset management improvement actions. • Delegate authority and accountability for implementation of this policy. • Ensure alignment of the asset management policy with other policies and business processes of Council. • Oversee compliance with Council's legal obligations.	General Manager and Executive Management Committee
Asset Management Steering Committee	• Oversight of major decisions and direction of Strategic Asset Management practice within Council. • Monitor and review the implementation of Council's Asset Management System. • Monitor and evaluate the progress of improvement actions set out in Council's Asset Management Plan.	Cross-functional group of Council officers
Service Management	• Develop and regularly review Service Plans which identify community levels of service and the associated asset requirements necessary to support service. • Assess non-asset solutions to support service delivery. • Monitor utilisation and identify opportunities for asset consolidation. • Explore opportunities to share assets and co-locate services for more efficient utilisation.	Refer to Service Plans in the Delivery Program for Service Managers

Roles and Responsibilities

	• Identify new/expansion works for assets to support service delivery. Develop a business proposal to seek approval and funding. • Identify asset related impacts of statutory requirements relating to service delivery. • Ensure service plans is aligned with adopted strategies • Consider land use planning strategies and plans when assessing service demand, growth, density, land use and future needs assessment. • Work with the Asset Managers to specify requirements for the delivery of works in asset management plans.	
Project Delivery	• Ensure alignment of design solution to project objectives and requirements. • Ensure designs achieve objectives in adopted strategies • Safe and sustainable delivery of projects identified and assigned in Council's Infrastructure Delivery Program to quality standards. • Consideration of asset management principles in the design and delivery phase of the project delivery. • Commissioning and handover of appropriate assets and related data.	Refer to asset management plans
Asset Management	• Develop and apply Council's strategic asset management framework. • Lead development, monitoring and review of the Asset Management Policy, Strategy and Plans and supporting procedures. • Develop, implement, monitor, and report on a continuous asset management improvement plan. • Lead technical asset management practices. • Develop the Infrastructure Delivery Program linked to the supporting document roadmap. • Collect and regularly review condition data to support asset management planning. • Resource and administer the Enterprise Asset Management System and related tools to support decision making, accountability and improvement. • Identify asset related impacts of statutory requirements relating to provision and operation of the asset. • Monitor and report on asset management performance. • Develop and maintain whole of life costings.	Refer to asset management plans
Maintenance and Operation Management	• Develop and implement a system to manage effective and efficient maintenance practices. • Apply the asset management principles in the delivery of maintenance services. • Provide technical advice and support to Service and Asset Managers. • Identify asset related impacts of statutory requirements relating to maintenance and operating service delivery.	Refer to asset management plans
Information Technology	• Develop and maintain roadmap for Enterprise Asset Management (EAM) system.	Chief Digital and

Roles and Responsibilities

Asset Management	• Embed and optimise enterprise resource platform. • Review and enhance EAM business applications. • Implement EAM Information Technology governance. • Improve Information Technology Asset Management.	Information Officer
Responsible Accounting Officer	• Lead long-term financial planning and collaborate to ensure integration with asset management plans. • Lead the preparation of financial statements on assets. • Champion asset accounting policy and procedures to align with the requirements of the Australian Accounting Standards. • Establish and monitor appropriate accounting controls to provide assurance over accounting records relevant to asset management	Chief Financial Officer

6   Related Policy and Procedures

The main policy and procedure documents that guide and influence asset management planning are listed below:

- Asset Accounting Policy
- Financial Sustainability Policy
- Risk Management Framework
- Management of Community Halls, Community Centres, Senior Citizens Centres and Neighbourhood Centres
- Wollongong City-Wide Development Contributions Plan
- West Dapto Development Contributions Plan

Asset specific policies and supporting documents are listed with each asset plan.

7   Definitions

The following table summarises key definitions important in asset management.

Term	Definition
Asset	All non-financial assets recognised by the Council in accordance with the Australian Accounting Standards Board's Accounting Standards and Council's asset accounting policy. Includes infrastructure, property, plant and equipment, Artwork and antiquity collections, library collections, and ICT systems.
Asset Management	Systematic and coordinated activities and practices of an organisation to deliver on its objectives through cost-effective lifecycle management of assets.
Asset Management Framework	Outlines the structure and relationships between the various asset management system elements, such as the Asset Management Policy, Asset Management Strategy, Asset Management Plans, Asset Management Information System and asset management roles and responsibilities.
Asset Management Strategy	A high-level strategic plan that gives effect to this Policy
Asset Management Plan	Documented information that specifies the activities, resources or timescales required for an individual asset or grouping of assets, to achieve the organisation's asset management objectives.
Critical Assets	Assets essential to community safety, service delivery, or economic stability
Capital Expenditure	Expenditure above the thresholds as stipulated in the Asset Accounting Policy whereby the value of a non-current asset must be capitalised for each infrastructure asset class managed by Wollongong City Council. Works include Renewal; Expansion (or additions); Upgrade; and/or New assets.
Renewal Works	Expenditure on an existing asset or on replacing an existing asset that returns the service capability of the asset to its original capability. May include the replacement with a modern equivalent asset – e.g. replacing the roof on a building with similar roofing materials.
Upgrade works	Expenditure that enhances an existing asset to provide a higher level of service or extends the life beyond that which it had originally. This includes expenditure

Asset Management Plan |

Definitions

	provision of a replacement asset at a higher level of service, that part of the cost that relates to upgrade
Expansion Works	Expenditure that extends the capacity of an existing asset to provide benefits to new users at the same standard as is provided to existing beneficiaries.
New asset	A new asset that provides service that does not currently exist. This should not be confused with the provision of a new asset that replaces an existing asset, such as replacing a section of stormwater pipe. This is considered a renewal as there was an asset providing the service previously
Maintenance	Work that is required to ensure the asset achieves the expected useful life and remains in an acceptable condition for use. It includes proactive and preventative maintenance, programmed servicing, repairs, and minor replacements.
Operating Expenditure	Operating expenditure includes works and services to keep an asset available and functional for use. It include inspections, certification, compliance, registration, utility costs (energy, water, communications), fuel, mowing, cleaning, and similar services.
Required maintenance and operational works	A range of activities and costs that are considered necessary to keep the asset in a condition that it is fit, safe and functional for use and meet the levels of service specified for the asset.
Sustainability	The practice of meeting current needs without compromising future generations' ability to meet their own needs.
Service	Activity as defined in the Delivery Program and undertaken to meet the needs of the community or the administrative support.
Level of Service	Defines the asset performance targets in relation to reliability, quality, quantity, responsiveness, safety, capacity, environmental impact, acceptability, accessibility and cost.
Lifecycle	The time from initiation of planning for the asset through to the decommissioning and disposal of the asset and all stages in between.
Lifecycle Costing	A method to evaluate the total cost of ownership of an asset over its entire lifespan
Whole of Life Cost	The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation, and disposal costs

8 Asset snapshot

As of 30 June 2024, our Wollongong community had an asset portfolio with a gross replacement value of $7B. Infrastructure, Plant & Fleet, and Office and Other Assets constitute $6B with the remaining $1B comprises land, work in progress and remediation estimate for landfill sites. Approximately 99% of the $6B asset value is Infrastructure, with the remaining 1% split evenly between Plant & Fleet, Office and other assets as shown in figure 8(a). A summary of the relative asset class values is provided in figure 8(b).

Figure 8(a) – Total Asset Percentage by Value

ASSET VALUES
TOTAL VALUE OF $6.0BN AT 30 JUNE 2024

Infrastructure
99.0%

Plant and Fleet
0.8%

Office and Other Assets
0.2%
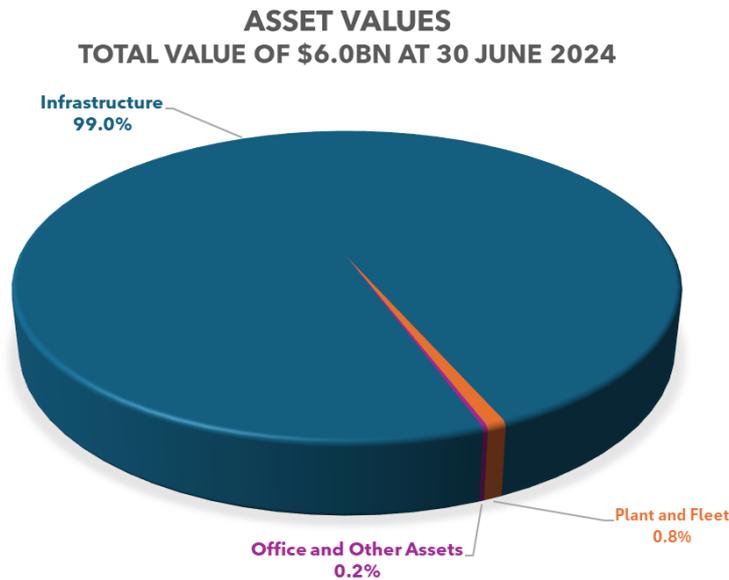
Figure 8(b) – Infrastructure Asset Classes by Percentage and Value

INSTRASTRUCTURE ASSETS ($M)
TOTAL VALUE OF $5,937M AT 30 JUNE 2024

Stormwater Drainage $1,832 30.9%

Roads $2,189 36.9%

Other Structures $21 0.4%

Swimming Pools $52 0.9%

Buildings $962 16.2%

Tip Assets $18 0.3%

Footpaths $423 7.1%

Bridges $169 2.8%

Other Open space / Recreational assets $271 4.6%
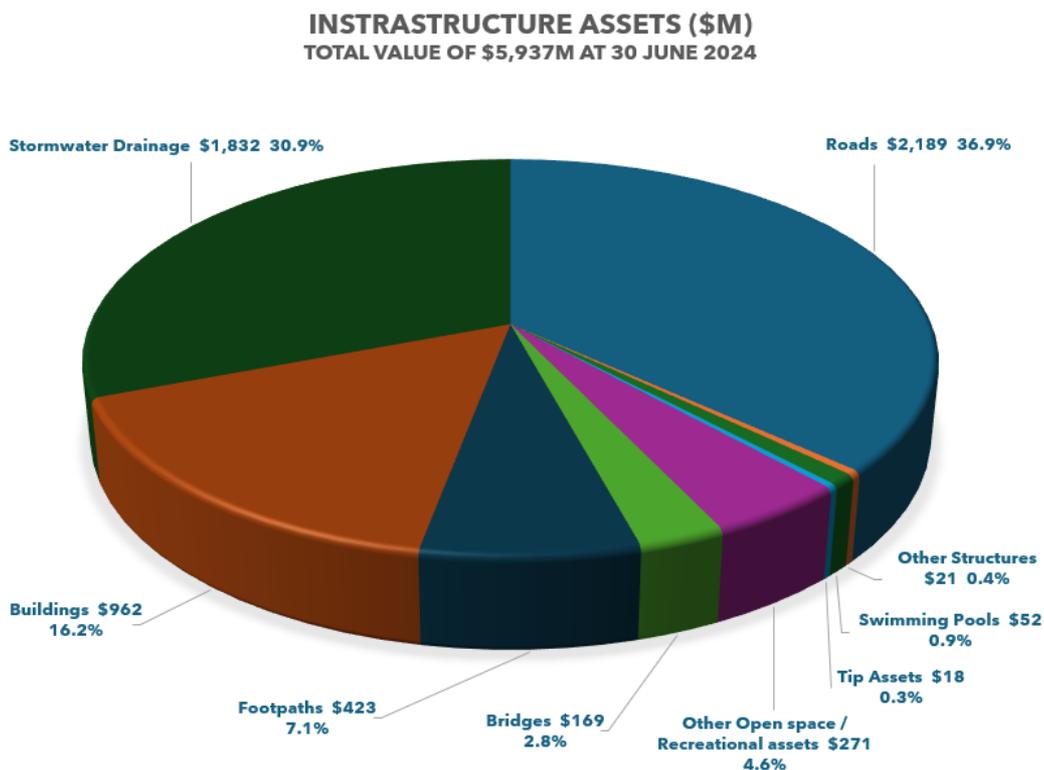
Asset snapshot

Over the 2021, 2022 and 2023 financial years, our asset portfolio has grown by an average of 1.9% per annum. The information in table 8(c) below on Infrastructure, Property, Plant and Equipment values is reported as part of the Annual Financial Statements under Section C, Financial position at statement C1-8.

Table 8(c) - Infrastructure, Property, Plant and Equipment values (at 30 June 2024)

Asset Class	Last full reval.	Gross replace cost	Accumulated Depreciation and impairment	Net carrying amount	Annual Dep. 2025 Budget
Capital work in progress	N/A*	88,503	0	88,503	N/A
Plant, fleet and Equipment	N/A*	48,486	-28,950	19,536	4,095
Office equipment	N/A*	13,065	-10,319	2,746	1,078
Furniture and fittings	N/A*	3,257	-2,332	925	285
Land					
Operational land	2019	367,911	0	367,911	N/A
Community land	2022	365,135	-760	364,375	N/A
Crown land	2022	120,906	0	120,906	N/A
Land under roads (post 30/06/2008)	2024	3,562	0	3,562	N/A
Infrastructure				0	
Buildings (non-specialised)	2024	429,019	-190,938	238,081	12,009
Buildings (specialised)	2024	533,215	-254,278	278,937	10,315
Other structures	2019	21,358	-6,003	15,355	961
Roads	2022	2,188,536	-1,214,770	973,766	29,181
Bridges	2022	169,139	-55,334	113,805	1,793
Footpaths	2022	423,100	-197,542	225,558	3,341
Stormwater drainage	2022	1,832,317	-843,399	988,918	9,218
Swimming Pools	2021	52,247	-37,683	14,564	752
Other open space / recreational assets	2021	270,698	-104,614	166,084	10,800
Other assets				0	
Heritage collections	N/A*	16,622	0	16,622	N/A
Library books	N/A*	10,012	-5,009	5,003	1,331
Other	2021	59,561	-16,744	42,817	2,943
Tip assets	2024	17,587	-9,410	8177	199
Total Infrastructure, Property, Plant and Equipment		**7,034,236**	**-2,978,085**	**4,056,151**	**88,301**

*These asset classes are not subject to full class revaluation and are recognised at cost value

Asset snapshot

8.1 Maintenance of Assets

An important indicator of sustainability is our ability to invest and complete the required maintenance to prevent the early decline of assets. The two parts of this indicator are directly linked to the long-term financial plan and the workforce plan. Firstly, is a measure of our ability and financial capacity to invest in the required maintenance for an asset. Secondly, is whether we have the right people and processes in place to undertake and deliver the required maintenance works.

We use an estimate of required maintenance as an input into lifecycle costing for assets, together with the capital costs, planned renewals, and operational costs. Maintenance is described as an activity required to keep the asset in service and to ensure it reaches the predicted useful life. It includes replacement of general wear and tear items, pothole patching, localised footpath repairs, etc. Maintenance does not extend the useful life of the asset beyond the previously predicted useful life – that would be considered rehabilitation/renewal works.

8.1.1   Required Maintenance and Operational Cost Forecast

Forecasting maintenance requirements is best derived from a program of proactive maintenance activities and estimate of reactive maintenance requests per asset class based on a history of requests. The proactive program and reactive work can be costed using a schedule of rates. Schedule of rates can be derived from historic actual costs for similar activities and contract rates. We are currently developing several proactive maintenance programs for a range of assets to help refine the required maintenance. We are also refining our work order structure to better determine cost of various activities to better inform estimates. In the interim, we generate a forecast of required maintenance investment based on a percentage of gross replacement cost.

To establish an appropriate percentage of gross replacement cost to invest in maintenance, we have reviewed our average actual expenditure and included the results from the community survey, where relevant.

Table 8.1.2 below summarises the percentage of gross replacement cost that we will adopt as the investment targets for maintenance of asset classes, and a description of the maintenance and operational activities that are included in the estimate:

Table 8.1.2 – Required Maintenance and Operating Costs by Asset Category

Asset Categories	Adopted Required Maintenance for lifecycle costing	Comment – and example costs and activities
Maintenance and operational activity costs applicable to all asset classes include cleaning, minor repairs, asset inspections, associated stores, wages, and salaries of staff undertaking operation and maintenance, associated staff training, legal costs, printing and stationery, insurance costs, litter and dumped rubbish removal, and waste costs.		
Buildings	2%	We are developing a schedule of proactive maintenance activities for different building types to inform a more accurate maintenance forecast. In the interim, we will look to maintain a consistent average.
		The forecast maintenance will be based on a 2% of gross replacement cost buildings.
		Painting (minor), air conditioning, changing light fixtures, furniture repair, pest control, drain clearing, water and energy charges, elevator servicing, water and sewer charges, signage, security costs, mowing, waterproofing, fire

Asset snapshot

		protection servicing, parking, goods delivery, phone servicing, IT servicing.
Other Structures	0.65%	Other structure are primarily picnic and bus shelters. Out community survey suggest it may be an area that we are over-servicing. The form of construction is typically powder-coated, and factory painted materials with minimal maintenance requirements. Operational activities such as cleaning will form a major component of the cost. We will take the opportunity to monitor the impacts of reducing expenditure on this group of assets to increase focus in other areas.
Roads (seal and base only)	0.88%	We have commissioned innovative technology to proactively monitor the condition of the road surface using artificial intelligence (AI). Cameras fitted to service tucks record images of the road network and AI software identifies defects. We anticipate an initial increase in our recorded defects moving from reactive to proactive approach. This will require additional funding to action maintenance work. We will also break down roads to allocate the percentage or replacement cost against the maintainable components (excluding earthworks and subbase). We exclude sub-base as it is unlikely to be subject of maintenance treatments. It is more likely to undertake patching of the base course layer. Activities include pothole repair, crack sealing, heavy patching (where the useful life remains unchanged), street lighting energy and operating costs, pavement markings, guideposts, vegetation control, mowing, roadside slashing, table drain clearing, grading unsealed surfaces, traffic control, signage (individual placement), utility works.
Bridges	0.5%	We have completed a detailed condition assessment of bridges and are currently developing a proactive maintenance schedule. There is currently a backlog of maintenance activities that requires our forecast to be slightly above the expected investment.
Footpaths	0.78%	We are scheduling a complete review of the footpath network in the next 18 months. This information will enable us to understand the overall condition and defects within footpaths. Based on the results of the community survey, additional focus is required on footpath maintenance. As a result, we are recommending that we maintain our average required maintenance at 0.78%.
Other Road Assets	0.6%	Other road assets include transport facilities, guardrails, etc. These assets have previously been reported under roads.
Kerb and gutter	0.44%	These assets have previously been reported under roads. An estimate of required maintenance has been identified that reflects the percentage of the kerb and gutter network in condition 4.
Street Furniture	0.1%	Includes items such as fencing, benches and seats, bollards, etc. These assets have previously been grouped under roads. We recognise that grouping under the major class of road is likely to overstate the maintenance requirements of these types of assets.

Asset snapshot

		These assets are typically shorter-lived assets than road pavements and are constructed of materials that are low maintenance.
Car Parks	0.5%	Car parks have previously been included under the major class of roads.
Stormwater Drainage	0.42%	Increased focus is required on stormwater maintenance to ensure our network is functioning efficiently. It is recommended to maintain our average required maintenance at 0.42%. CCTV, pipe blockage cleaning and associated disposal costs, pipe repair, tree root removal, repair pits and lids, clear/repair gross pollutant traps (GPTs), rain garden soil cleaning, rain garden plants, flood control device maintenance, traffic control, management of new connections.
Swimming Pools / Other Recreation		Refer below
Swimming Pools	5.33%	Swimming pools are classified according the OLG guidelines and include the pool shell only (not including buildings, plant, fleet and equipment, car parks etc. that are associated with the swimming pool complex). We have previously recorded swimming pools as a consolidated group with other recreation assets. We are currently developing a proactive maintenance schedule for pools. The OLG guideline for swimming pool maintenance includes Water cleaning costs, chemicals, membrane, and tile repair, repairing pool devices, repairing gym equipment, repairing shade structures, kiosk operations, advertising signs, and all building asset class example costs and activities.
Other Recreation	8%	We have previously recorded open space as a consolidated group with other recreation assets. Mowing, signage, pest control, play/sports equipment repair, path, repair, lighting energy and operating costs, tree maintenance, garden plants, gardening, line marking, fence painting and repair, events management, furniture repairs, water feature servicing, footbridges repair. For associated kiosks, grandstands, and amenities, refer to the 'Buildings' asset class; for associated drains, refer to the 'Stormwater drainage' asset class; for associated carparks, refer to the 'Roads' asset class.
Foreshore	0.74%	This category is described in the OLG guideline as Other Infrastructure Assets. The adopted percentage mirrors Other Infrastructure Assets.
Other Infrastructure Assets	0.74%	Levee bank maintenance, jetty maintenance, waste facility maintenance, rock/sea walls

The forecast for required maintenance will be adjusted to account for increases associated with planned acquisitions, and additions to assets, and decrements associated with planned decommissioning and disposals.

Asset snapshot

8.2 Data Confidence

A range of information is collected and stored in Council's asset management system to support asset management planning. Further information is covered in several individual asset management plans. It is important to understand the reliability of the data that underpins many of the assumptions and modelling in the plans. A confidence grading rating has been applied using the model as outlined in Table 8.2(a) below:

Table 8.2(a): Data Confidence Grading System

Confidence Grade	Description
Very High	Data based on sound records, procedures, investigations, and analysis, documented properly, and agreed as the best method of assessment. Dataset is complete and estimated to be accurate ± 2%. Observed condition rating and remaining useful life assessment completed within 5 years on over 70% of the network. Comprehensive revaluation completed within 2 years and inventory high or very high
High	Data based on sound records, procedures, investigations, and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate ± 10%. Observed condition rating and remaining useful life assessment completed within 5 years on 50-70% of the network. Revaluation completed within 3 years
Medium	Data based on sound records, procedures, investigations, and analysis which is incomplete or unsupported, or extrapolated from a limited sample. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated ± 25%. Observed condition rating and remaining useful life assessment completed within 5 years on 30-50% of the network. Comprehensive revaluation completed over 3 years ago.
Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy ± 40%. Observed condition rating and remaining useful life assessment completed within 5 years on 10-30% of the network. Comprehensive revaluation completed over 3 years ago and inventory is medium of lower.
Very Low	No or very little data held. Observed condition rating and remaining useful life assessment completed within 5 years on less than 10% of network.

Asset snapshot

Table 8.2(b) identifies the confidence levels associated with each asset class.

Table 8 . 2 (b): Asset Information Confidence Grading Matrix

Asset Class	Inventory	Age	Remaining Useful Life	Gross Replacement Cost	Condition	Validation method
Artwork	High	High	High	Very high	Medium	Visual verification and stock take complete 2024
Plant, fleet and Equipment	Medium	High	High	High	High	Stock take
Buildings	Very high	Medium	High	Very high	High	Desktop review of land parcels, followed by visual inspection of each asset. Completed in 2024.
Stormwater	Medium	Medium	Medium	High	Low	The inventory has been generated based on historic information, flood study data and visual verification. Condition inspection of underground assets is undertaken by camera inspection of samples of the network due to cost constraints.
Marine structures	Low	Low	Low	Low	Low	This category of assets is included in the improvement plan to reclassify assets and develop a plan.
Playgrounds	High	High	Medium	Medium	Low	Annual visual inspection
Open space	Low	Low	Low	Medium	Low	Open space assets are planned for revaluation within 2 years. Data validation will be undertaken in conjunction with the revaluation.
Pools	Medium	High	Low	Low	Medium	Pool assets are planned for revaluation within 2 years. Data validation will be undertaken in conjunction with the revaluation. Inventory is rated as medium as the assets are currently consolidated per site rather than

Asset snapshot

Asset Class	Inventory	Age	Remaining Useful Life	Gross Replacement Cost	Condition	Validation method
						identified per component.
Bridges	Very high	High	High	High	High	Level 2 inspection completed of network in 2021.
Transport facilities	High	High	Low	High	Low	Visual and desktop verification completed.
Street furniture, bus shelters and guardrails	High	High	High	High	Very high	Bus shelter and guardrails visual verification completed. Street furniture on-going.
Roads	Very High	Medium	High	High	Very high	Full network assessment undertaken, video capture and machine rated condition.
Pathways	High	High	High	High	Medium	Full network inspection scheduled within an 18-month period
Library resources	High	High	High	High	High	Stock monitored through collection system.
Information management and technology	Medium	Medium	Medium	High	Medium	Asset register and connected devices monitored electronically.
Other assets						To be defined
Non-Depreciable **Assets (Land)**	High	N/A	N/A	High	N/A	Land information register

We will continually improve our information to achieve a minimum standard of Medium across asset classes and criterion.

Asset snapshot

8.3 Age of Assets - Summary

The age of assets is illustrated below in Figure 6.3a using construction and/or acquisition dates. Assumptions have been made in many cases for assets constructed or acquired prior to 2000. These assumptions generally apply to transport and stormwater assets and are reflected with peaks in 1950, 1955, 1960, 1964, 1965 and 1970. The assets constructed pre-1950 are largely buildings.

Figure 8.3a shows the identified/assumed year of construction or acquisition for infrastructure assets by gross replacement cost for the asset groupings shown. A significant proportion (approximately 48%) of our assets are more than 50 years old. Many of these assets are high cost/long-life assets (transport and stormwater infrastructure) that have expected lives of around 80-100+ years.

Figure 8.3a: Asset Age Profile
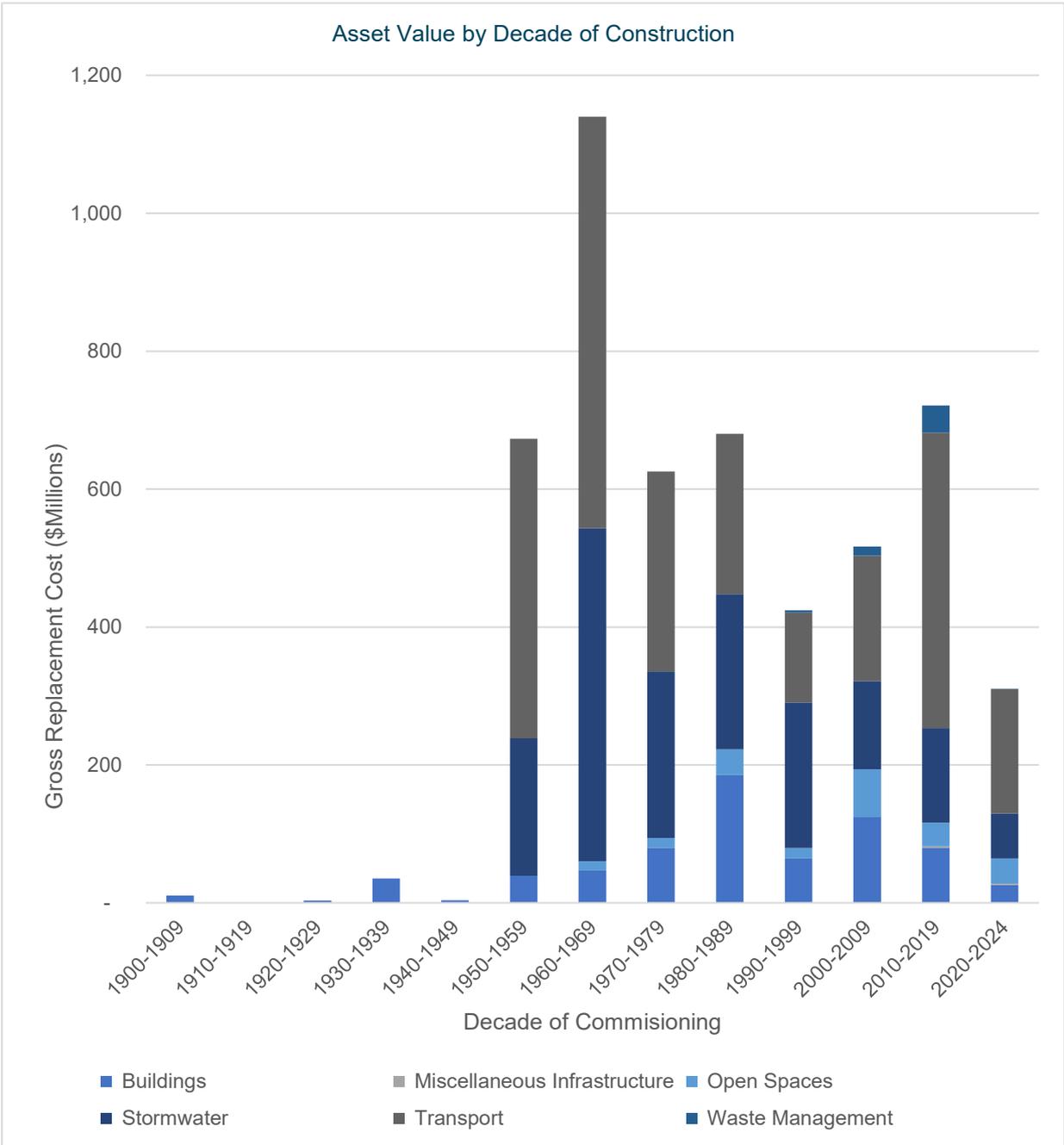
Asset snapshot

The expected lives for some key assets are shown in Table 8.3b. We have not yet reached the end of life for many of our long-life asset networks. The life expectancy has been derived based on the material and form of construction, observation of similar infrastructure types in operation in other locations (nationally and globally), industry guides and design life criteria. As we approach end of life, or we find examples of similar infrastructure in operation elsewhere with differing lives, we will revise our estimates on expected life. Our intention is to extract the longest possible service life from our infrastructure whilst managing risk and functionality. We will continue to monitor for innovation and technology and work with industry on developments that enable us to achieve this objective.

Table 8.3b: Assumed Asset Expected Lives

	Asset Class	Asset Type	Expected Life
	Transport	Road Surfaces	20-40 years
		Road pavements	80 years
		Footpaths/Cycle way	40-80 years
		Bridges (concrete)	80-100 years
	Stormwater	Pipes	80-235 years
		Culverts	115 years
		Pits	115 years
	Buildings	Structure	45-90 years
		Electrical, Hydraulic, Fire, Fit Out, etc.	20-30 years
		Shelters	18 years
	Recreation	Playgrounds	10-20 years
		Skateparks	50 years
		Sports courts	60 years
		Pool shells	50-80 years

Asset snapshot

8.4 Asset Condition

The condition of Council's assets is generally measured using a 1 – 5 grading system as detailed below in Table 8.4. It is important that a consistent approach is used in reporting asset performance to enable effective decision making.

Table 8.4 – Condition Grades

Condition Grade	Description
1	Excellent Condition: Only planned maintenance required
2	Very Good: Minor maintenance required & planned maintenance
3	Good: Significant maintenance required
4	Average: Significant renewal/upgrade required
5	Poor: Limited remaining useful life (0-10%)

Our preferred methodology for condition rating is based on physical observation and/or technical measurement using specialised equipment of the asset and rating against a defined template. Where this has not been undertaken, condition is derived from the remaining useful life or percentage of life consumed. Whilst this is an acceptable estimate, observed condition is a more reliable indicator of condition for assets.

We use observed condition for our road seal and pavement assets. Road condition inspections involve a comprehensive visual inspection and machine rating for several ride quality factors. This information is obtained at regular frequencies, preferably no more than four-yearly intervals. This enables us to calibrate our assessment of remaining useful life as we can monitor the change in condition over time. The information is used to predict the most appropriate time to undertake works prior to the road falling below and acceptable condition.

Our bridges have all been comprehensively inspected and condition rated. This was most recently completed in 2020/21. We undertake inspections of select bridges following major storm events where there are observations of significant overtopping of the deck or impacts from storm debris.

Our building portfolio has been subject of a complete inspection program incorporating all buildings in 2024. Each building has been rated on a scale of one-to-five and a forecast of remaining useful life. In addition, we have undertaken more detailed assessments for our more complex and higher valued buildings to inform plans.

Most of the stormwater assets are located underground and not readily accessible for visual observation. We have implemented a program of inspections on our pipe network that involves the use of remote operated vehicles with cameras to inspect the inside of the pipe. The images enable us to observe the condition based on the condition of joints, displacement between pipe sections, cracking, scour and intrusions into the pipe. Our program of inspections has been primarily led by locations with observed condition related issues, such as subsidence above a pipeline and indications of blockage. This provides information about a sample of the pipe network.

We have actions in place to undertake a comprehensive visual assessment of our pathway networks within the next 18 months. We have observed condition information on approximately one-third of the network.

Asset snapshot

The condition of open space assets is largely interpolated based on age and an assessment of remaining useful life. Routine inspections are undertaken on all playgrounds for maintenance defects. A program to inspect all light poles in open space is ongoing. A review of open space assets is scheduled within the next two-years.

A review of the condition of our pools will be undertaken in conjunction with a review of Our *The Future of our Pools Strategy 2014-2024,* which is scheduled to commence within the next two-years.

Along with risk and other asset specific information, condition is used to inform decision making and prioritise maintenance and the replacement of assets. The overall condition of our assets is shown below in Figure 8.4:

Figure 8.4 Condition of Assets – By Gross Replacement Cost

Condition Rating	1	2	3	4	5
■ Waste Management	39,058,127	9,694,774	86,845	2,176,376	5,464,051
■ Transport	476,418,007	511,196,189	880,321,379	429,203,747	176,751,897
■ Stormwater	409,091,387	503,575,097	662,242,760	103,917,681	11,726,509
■ Open Spaces	51,929,070	16,546,818	57,345,580	46,827,702	47,058,563
■ Miscellaneous Infrastructure	2,785,486	595,452	167,328		65,137
■ Buildings	155,549,669	215,406,402	180,346,000	135,234,157	14,142,178

Condition

Asset snapshot

Many assets have a relatively long service life, and we expect to have profile that shows a range of conditions across the network. The consequence of failure and impact on service delivery for different asset types will drive our strategy for intervention and renewal. We plan interventions and renewals at an optimal time for assets that have a higher impact on service delivery, such as roads, stormwater, and buildings. This means that we generally plan to renew when these assets are in condition 4, and prior to declining to condition 5.

Where an asset group has a low consequence at failure, and/or the anticipated service down-time is low, we may adopt a run to fail management plan. This enables us to gain the maximum life economic value out of the investment and still provide an acceptable level of service to the customer.

We report on the condition of infrastructure assets as part of our annual financial statements. The report follows the Office of Local Government requirements and shows assets per condition score as a percentage of gross replacement cost. This provides an indication on the investment in renewals and our ability to maintain the network in an acceptable overall condition.

It is not realistic for all assets to be in kept in as new condition. However, we expect to see most assets in condition 1-3 with smaller percentages in condition 4 and 5. A trend of increasing percentage of condition 4 and 5 within an asset group suggests that an increase in renewal expenditure is required.

To monitor our performance, we will develop a desirable distribution of condition profile per asset class. We will then be able to measure the current percentage against the target. This distribution will form part of the technical levels of service and performance monitoring for each asset class. This work will be progressively implemented as our understanding of observed condition of assets develops.

Climate change and natural disasters can impact the condition of assets. One event can result in the rapid deterioration of and in some cases, failure of assets. In these instances, we typically consider options for improvements to improve the resilience of infrastructure networks to future events.

9   Levels of Service

Levels of service are a set of criteria that outlines social, environmental, economic and governance outcomes and targets that we aim to deliver in managing assets. Each asset plan includes a Performance section that outlines information relating to levels of Service. We typically group levels of service into Customer Levels of Service and Technical Levels of Service (LoS). Customer LoS relate to outcomes, objectives and measures of customer interactions with the asset. Technical LoS are more related to the direct actions, activities, and compliance requirements that can inform operational, maintenance and capital investment plans.

The LoS covered by this plan are directly related to asset management actions. LoS related to direct services are typically addressed in supporting documents and service plans. Supporting documents may identify increased or changes to LoS that impact on the current and future provision of assets. Until such time as asset related LoS in supporting documents are funded, they remain aspirational.

LoS are impacted by internal and external operating drivers. Internal operating drivers relate to factors that council has greater control or influence. These represent policy, strategy and operating frameworks that direct our response. External operating drivers are influences which impact the way we operate that are outside of our direct control. The main internal and external operating drivers that impact the level of service for assets are outlined below in Sections 9.1 and 9.2.

9.1   Internal operating drivers

There are several internal drivers that impact our asset planning and levels of service. Our internal policy, strategy and operating frameworks influence our response and drive the directions of our actions in asset planning. Some drivers present opportunities to achieve a vision, others identify vulnerabilities that need to be managed. Some drivers have greater influence on specific asset groupings, and other are overarching in our approach. The following section provides a summary of these internal operating drivers and the relationship to asset planning.

9.1.1   Integrated planning and reporting

The Integrated Planning and Reporting (IP&R) framework is a legislative requirement for Local Government in NSW. The IP&R Framework is provided at Figure 7.1.2 below, The Office of Local Government publish guidelines and essential requirements that we need to satisfy. It provides an opportunity for us to use the planning framework to identify the community's long-term vision, and our plan for how we achieve the aspirations through an integrated approach to planning. It provides a path for ensuring we align the many actions across the 33 services to achieve a common vision.

Asset planning is an essential part of the resourcing strategy to describe the assets that support our services to achieve the community's vision. We use the integrated planning and reporting framework to demonstrate how we approach our strategic planning and the supporting documents that inform and guide decision making. We demonstrate the strategic link to our CSP Goals and services in each asset plan.

Levels of Service

Figure 9.1.1 – Integrated Planning and Reporting Framework

9.1.2   Community Satisfaction

Community is at the centre of our services, and it is important to understand how our assets can support these services. We conduct Community Satisfaction Surveys to monitor Council's performance in service delivery, identify priority areas and evaluate our customer services, organisational skills, and communication. The most recent survey was undertaken in 2023, and the information was compared to results from 2010; 2012; 2014; 2017; 2019; and 2021. The results of the survey are published on Council's website in the *Wollongong City Council Community Satisfaction Survey – November 2023 Research Report*.

The objectives of the community satisfaction Survey process are to:

- Measure the importance of, and satisfaction with, services and facilities provided by Council.
- Compare levels of satisfaction for Council's services and facilities with similar councils.
- Assist Council in identifying service priorities for the community.
- Evaluate Council's customer services and communication.

Levels of Service

The survey covers 19 facilities and 31 services provided by Council identifying both importance and satisfaction on a 5-point scale. Our community survey provides information relating to quality, function, and utilisation of a range of facilities and services.

A summary from the Satisfaction Survey relating to facilities is provided below in Figure 9.1.2a.

Figure 9.1.2a – Community Satisfaction with Community Facilities

Q2 Please rate your satisfaction with each facility you usually use using a 1 to 5 scale where 1 means 'not at all satisfied' and 5 means 'very satisfied'. [Note: Some small results not displayed]
Base: Facility users (n=133 to n=587)

Facility	Can't say	Not satisfied (1-2)	Neutral (3)	Satisfied (4-5)	Score
Patrolled beaches	3%	6%		90%	4.52
Botanic Garden	6%	5%		88%	4.60
Libraries	9%	2%	11%	78%	4.37
Parks, open spaces and sports fields for passive recreation purpose	2%	5%	17%	77%	4.06
Illawarra Performing Arts Centre and Town Hall	15%	2%	10%	73%	4.29
Parks, open spaces and sports fields for active sport or recreation activities	3%	7%	18%	72%	3.98
Tidal rock pools	11%	2%	15%	72%	4.24
Public swimming pools (free entry)	13%	4%	13%	70%	4.13
Community centre at Thirroul, Corrimal or Dapto	23%		10%	66%	4.29
Dog off leash beach and/or park	8%	6%	21%	65%	4.05
Children's playgrounds	9%	8%	20%	63%	3.86
Council heated pools	19%	5%	14%	62%	4.05
Cycle ways (including pop up cycle ways)	7%	12%	20%	60%	3.76
Wollongong Art Gallery	24%	4%	13%	59%	4.14
Shared use paths	1%	12%	30%	57%	3.65
Leisure centres (Beaton Park and Lakeside)	19%	6%	20%	55%	3.89
Russell Vale Golf Course (The Vale)	29%	2%	14%	55%	4.16
Community hall/centre	19%	3%	27%	51%	3.90
Footpaths	1%	23%	35%	42%	3.32

Closely related to community facilities is the results of the community feedback on direct services provided by Council. The results of the community satisfaction with these 18 services are provided below in Figure 9.1.2b. The results provide an indication of satisfaction with some of the operational services provided by assets, such as public bin collection; street cleaning; graffiti removal; hours of operation of public toilets; cleanliness of bus shelters and public toilets. The results also provide information on satisfaction with maintenance activities including maintenance of footpaths, cycleways, and shared paths; maintenance of bus shelters; maintenance of local roads; and maintenance of public toilets. The result also provides

Levels of Service

indicators of community satisfaction with asset planning in the areas of the availability of footpaths, cycleways, and shared paths; and provision of parking.

Figure 9.1.2b – Community Satisfaction of Direct Services

Q8 Please rate your satisfaction with the following Council services using a 1 to 5 scale where 1 means 'not at all satisfied' and 5 means 'very satisfied'.

Base: All respondents (n=605)

Legend: ■ Can't say ■ Not satisfied (1-2) ■ Neutral (3) ■ Satisfied (4-5)

Service	Rating
Domestic waste collection service (i.e. red bin)	4.43
Recycling waste collection service	4.33
Green waste, including the food organics collection service (FOGO)	4.42
Public bin collection	3.99
Availability of footpaths, cycle ways and shared use paths	3.55
Waste disposal depot facilities	3.80
Street cleaning	3.59
Maintenance of footpaths, cycle ways and shared use paths	3.30
Graffiti prevention and removal	3.41
Regulation of traffic flow in local area	3.11
Customer Service Centre	3.86
The hours Council public toilets are open	3.62
Maintenance and cleanliness of bus shelters	3.51
Compliance and regulation of parking	3.12
Regulation of traffic flow in city centre	2.96
Maintenance of local roads	2.80
Maintenance and cleanliness of public toilets	3.01
Provision of parking in high demand areas (city centre, foreshore)	2.46

The results at the 2023 survey indicates our effectiveness in maintaining satisfaction and responding to areas that the community feel we need to improve our focus. The trends over time using the results from seven community surveys are summarised below in Table 9.1.2c:

Levels of Service

Table 9.1.2c – Facility and Direct Service Customer Satisfaction Trends

FACILITIES	2010	2012	2014	2017	2019	2021	2023	SIGNIFICANT CHANGE SINCE 2021
Botanic Garden	4.4	4.6	4.5	4.4	4.6	4.7	4.6	⬇
Patrolled beaches	4.2	4.6	4.7	4.5	4.5	4.5	4.5	⬌
Libraries	-	-	-	-	-	4.4	4.4	⬌
Tidal rock pools	-	3.9	4.1	4.1	4.1	4.2	4.2	⬌
Thirroul, Corrimal or Dapto community centre	-	-	-	-	-	4.2	4.3	⬌
Illawarra Performing Arts Centre and Town Hall	4.1	4.2	4.3	4.4	4.4	4.2	4.3	⬌
Wollongong Art Gallery	3.9	4.0	4.2	4.2	4.1	4.2	4.1	⬌
Russell Vale Golf Course (The Vale)	3.9	4.1	4.4	4.1	4.2	4.2	4.2	⬌
Passive recreation at parks, open spaces, and sports fields	-	4.2	4.3	4.1	4.2	4.1	4.1	⬌
Public swimming pools (free entry)	3.8	4.2	4.5	4.1	4.2	4.1	4.1	⬌
Council heated pools	-	4.2	4.2	4.0	4.1	4.1	4.1	⬌
Leisure centres (Beaton Park and Lakeside)	4.0	4.2	4.3	3.9	4.2	4.1	3.9	⬇
Active sport or recreation activities at parks, open spaces, and sports fields	-	4.1	4.2	4.1	4.2	4.1	4.0	⬌
Playgrounds	-	4.1	4.1	3.9	3.9	3.9	3.9	⬌
Cycleways (including pop-up cycleways)	-	-	-	-	-	3.8	3.8	⬌
Community hall/centre	3.7	4.0	4.2	4.0	4.0	3.8	3.9	⬌
Shared use paths	-	-	-	-	-	3.8	3.7	⬌
Footpaths	-	-	-	-	-	3.5	3.3	⬇
Green waste, including food organics collection service (FOGO)	-	-	-	-	-	4.5	4.4	⬌
Domestic waste collection (red bin)	4.1	4.2	4.2	4.0	4.1	4.4	4.4	⬌
Recycling waste collection service	-	-	-	-	-	4.3	4.3	⬌
Waste disposal depot facilities	3.4	3.4	3.4	3.6	3.7	4.0	3.8	⬌

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FACILITIES	2010	2012	2014	2017	2019	2021	2023	SIGNIFICANT CHANGE SINCE 2021
Public bin collection	-	-	-	-	-	3.9	4.0	⇔
Customer Service Centre	3.5	3.6	3.8	3.7	3.9	3.9	3.9	⇔
Street cleaning	3.3	3.3	3.4	3.2	3.7	3.7	3.6	⇔
The hours Council public toilets are open	-	-	-	3.1	3.5	3.7	3.6	⇔
Availability of footpaths, cycleways, and shared use paths	-	-	-	-	-	3.7	3.6	⇔
Maintenance and cleanliness of bus shelters	3.0	3.2	3.3	3.0	3.5	3.6	3.6	⇔
Graffiti prevention and removal	3.0	3.1	3.3	3.2	3.4	3.6	3.4	⇔
Maintenance of footpaths, cycleways and shared paths	-	-	-	-	-	3.4	3.3	⇔
Regulation of traffic flow in local area	3.2	3.2	3.3	3.2	3.1	3.3	3.1	⬇
Compliance and regulation of parking	-	-	-	-	-	3.2	3.1	⇔
Regulation of traffic flow in city centre	3.0	3.2	3.1	3.1	3.2	3.2	3.0	⬇
Maintenance of local roads	2.8	2.8	3.1	2.7	3.1	3.2	2.8	⬇
Maintenance and cleanliness of public toilets	2.5	2.6	2.9	2.8	3.1	3.1	3.0	⇔
Provision of parking in high demand areas (city centre, foreshore)	-	-	-	-	-	2.5	2.5	⇔

The results of the survey are evaluated using a quadrant analysis. A quadrant analysis identifies facility and service strengths and priorities based on the relationship between individual facilities/ services and overall satisfaction.

- High importance and high satisfaction represent current service strengths are *Strengths to Maintain*. These have an important impact on creating overall satisfaction with Wollongong City Council and their performance is above average.

- High importance but low satisfaction denotes services where satisfaction can be improved and are identified as *Priorities for Council*. These are services/facilities which have an important impact on creating overall satisfaction but are performing below average.

- Lower importance and high satisfaction represent *Opportunities* to review the service provided. Improvement in the performance of these services/facilities will not have a large, significant impact on overall satisfaction with Council.

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- Lower importance and relatively lower satisfaction represent lower priority service dimensions and are *Second Order Issues*. Improvement in the performance of these services/facilities will not have a large, significant impact on overall satisfaction with Council.

Results of the community survey are a consideration each of Council's asset management plans with the quadrant analysis shown in Table 9.1.2d. Information on overall satisfaction is used to assess performance against identified community levels of service.

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Table 9.1.2d – Quadrant Analysis of Asset Related Council Facilities and Direct Services

Priorities for Council	Strengths to Maintain
• Playgrounds • Cycleways (including pop-up cycleways) • Shared paths • Footpaths • Maintenance of footpaths, cycle, and shared paths • Service for people with disability • Management and preservation of our heritage • Regulation of traffic flow in the local area • Regulation of traffic flow in the city centre • Maintenance of local roads • Provision of parking in high demand areas	• Libraries • Parks, open spaces, and sport fields • Dog off-leash beach and/or park • Council heated pools • Domestic waste collection service • Recycling waste collection service • Library services • Availability of footpaths, cycleways, and shared use paths
Second Order Issues	**Opportunities**
• Community hall/centre • Leisure centres • Graffiti prevention and removal • Maintenance and cleanliness of public toilets	• Botanic gardens • Patrolled beaches • Community centre at Thirroul, Corrimal, and Dapto • IPAC and Town Hall • Tidal rock pools • Russell Vale golf course • Wollongong art gallery • Public swimming pools • Green waste including FOGO • Public bin collection • Customer service centre • Waste disposal at depot facilities • Hours of public toilet operation • Street cleaning • Maintenance and cleanliness of bus shelters.

These results provide an indication of the services and facilities that have high importance and customer expectations are not being met. It also provides opportunities where we have high satisfaction and relatively low importance.

From an asset planning perspective, playgrounds, pathways, road maintenance, traffic and parking need to be reviewed. Similar grouping of assets appears in the Residents' wish list section of the survey – with the top four issues including roads and traffic; parking; parks, green spaces, sporting fields, playgrounds; and footpaths.

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9.1.3   Financial Policies

Asset management is closely linked to the financial performance of the organisation. Reporting on asset management is part of our financial statements with requirements linked to the Australian Accounting Standards Board Standards which set the main requirements, objective, and application. Our internal asset accounting policy and related procedures detail how we apply the standards to the management of assets. The policy provides guidance on asset recognition and derecognition; asset class structure; valuation and depreciation; capitalisation and impairments. The policy provides guidance on capitalisation thresholds for each group of assets, and examples of activities considered as operating expenditure, maintenance and repair, capital renewal, capital upgrade, additions, and new assets.

There are other financial policies and procedures that impact investment strategies for asset planning. This includes how Council generates revenue and applies for grants, and the allocation of funds including restricted reserve funds.

Council recognises the financial risks involved in delivering a wide range of services, programs, and capital projects. Council has a cautious appetite for variation in financial performance if long-term financial sustainability is not threatened. This position requires asset planning that considers financial implications over a long-term.

We have included financial performance levels of service with the larger valued asset classes.

9.1.4   Risk Management Framework

Risk Management is an essential component of Council's governance framework that supports the achievement of Council's goals and objectives. Effective risk management increases the probability of successful outcomes whist protecting the reputation and sustainability of Council.

Our community is at the centre of everything we do. The community's priorities and aspirations for the future as well as their wellbeing form the basis of our Community Strategic Plan. The needs of our community are front of mind in the development of our risk appetite as we balance the achieving of the goals set by our community with the risks inherent in the environments in which we deliver those outcomes.

Council's risk management approach comprises the following key elements: Risk Management Framework; Risk Appetite; Risk Management Plan; and Risk Management Policies and Procedures. This framework is consistent with the accepted Australian Risk Management Standard (AS ISO 31000:2018 Risk Management).

Council's Risk Management Framework aims to effectively identify and manage risk across the organisation. The framework sets the requirements and responsibilities for staff and emphasises that the management of risk and risk reporting is everyone's responsibility to have appropriate controls in place and ensure the effectiveness of these controls.

Risk Appetite Statement for *Strategic Asset Management* is as follows:

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Context	Risk Appetite Rating	Risk Tolerance Levels	
		Council will tolerate	**Council will not tolerate**
Council is committed to continuous improvement to provide excellent infrastructure services that provide benefits to our community. *Council is open to taking moderate levels of risk to enhance our city's assets and infrastructure.*	**Open -** Willing to consider all potential options and chose the one most likely to result in successful delivery, whilst also providing an acceptable level of reward and value for money	• Moderate financial and reputational impacts arising from the implementation of new of innovative technologies. • Moderate impacts leading to short term disruption to community due to implementation of construction procedures which provide value for money provided community has been informed. • Moderate short-term financial impact on capital costs of projects where there are demonstrated long term sustainable gains. • Moderate impacts to infrastructure due to implementation of new technology, innovation initiatives or projects. • Unforeseen interruptions of up to 2 days to critical infrastructure from uncontrollable events where Council responds and communicates promptly to impacted stakeholders. • Minor unforeseen and unavoidable cost variations in capital projects within the established contingency allocated to each project. • Accepting increased levels of contract risk on certain projects if significant cost efficiencies can be achieved as a result.	• Failure of third-party contractors to provide services within budget and agreed timeframes. • Non-completion of a significant portion of new or renewal infrastructure projects beyond financial year (or scheduled completion period if project runs across multiple years). • Significant delays to projects that are considered within Council control. • Asset failure significantly earlier than the projected lifespan of the asset • Failure to administer and manage contracts appropriately. • Significant foreseeable variations in contract price due to aspects of the project within the control of Council. • Failure to escalate critical infrastructure damage or issue within 2 hours. • Failure to develop plans to respond to a disruption and ensure continuity of operational infrastructure. • Activities that result in reasonably foreseeable and preventable fatalities, harm, serious injuries or illnesses to our Community, Customers, Councillors or Employees.

The identification of critical assets is required to implement our Strategic Asset Management risk appetite statement. Critical assets are discussed in Section 9.1.5 of this plan.

A review of the strategic asset management risks was undertaken in 2023. We reviewed Infrastructure Australia's *A National Study of Infrastructure Risk October 2021* to identify issues that are relevant to types of infrastructure and risks to our organisation. An assessment of risk, and the controls that we put in place to manage the risk was then undertaken. A summary of the assessment is provided in Table 7.1.4 below:

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Table 9.1.4 – Strategic Asset Management Risk Summary

No.	NATURE OF RISK *People; Property & Financial; Environment; and/or Reputation*	IDENTIFIED RISKS *What can go wrong?*	CONTROLS *Who / What / When / Where / How*	EVALUATED RISKS - RESIDUAL *Post controls*		
				Severity	Likelihood	Level of Risk
1	Property & Financial (Economic) Environment (Environment) Reputation (Governance)	Impact of climate change and natural hazards on assets, as well as requirements to later future design for these issues	Local Consequence Management guides. Floodplain Risk Management Studies and Plans Climate change mitigation plan Illawarra escarpment management plan Climate change adaptation plan Environmental sustainability plan	Major	Possible	H12
2	Property & Financial (Economic) Reputation (Governance)	Economic and Market Capacity issues impact on resourcing and management of assets (Labour and contractor shortages, cost pressures, insurance pressures)	Attraction and retention policy Workforce management strategy Procurement Framework Specialist procurement staff, cost estimators etc Economic Development Strategy Incentives for local suppliers in procurement practices Insurance Review to identify uninsurable risks	Moderate	Possible	M9
3	Property & Financial (Economic) Reputation (Governance)	Delays or errors in project planning and approval process significantly impact on project delivery	QS reviews and benchmarking of costs Performance reporting from Capital program Updating cost escalation Early review of DA/SEPP infrastructure provisions Infrastructure Delivery Program	Moderate	Possible	M9

Levels of Service

No.	NATURE OF RISK	IDENTIFIED RISKS	CONTROLS	EVALUATED RISKS - RESIDUAL		
	People; Property & Financial; Environment; and/or Reputation	What can go wrong?	Who / What / When / Where / How	Post controls		
				Severity	Likelihood	Level of Risk
			Pre-lodgement review and for Development Approvals			
			Project Management cost reporting			(orange)
4	Property & Financial (Economic) Environment (Environment) Reputation (Governance)	Poorly managed or inefficient construction or delivery of assets	Resourced specialised Project Delivery Division	Minor	Unlikely	L4
			Project Management cost reporting			
			Interaction and partnering with third parties early in projects (public utilities, lessees etc)			
			Management and identification of ground issues that may impact projects (site analysis, geotech, aboriginal heritage, waste classification)			
			Design and Contract Delivery in accordance with ISO9001 certified process			
			Identification of utility relocation requirements (expensed separately to capital)			
5	Property & Financial (Economic) Reputation (Governance)	Failure to provide fit for purpose, functional and compliant assets (leading to impact on services to community)	Embed service level agreements	Minor	Unlikely	L4
			Community Strategic Plan process			
			Infrastructure Delivery Program			
			Asset Management Schedule			
			Development Contribution Plans			
			Resourcing strategic document (scope, design, deliver)			
			Fire Safety Certification Program			
			Project Life Cycle costing			

Levels of Service

No.	NATURE OF RISK	IDENTIFIED RISKS	CONTROLS	EVALUATED RISKS - RESIDUAL		
	People; Property & Financial; Environment; and/or Reputation	*What can go wrong?*	*Who / What / When / Where / How*	*Post controls*		
				Severity	**Likelihood**	**Level of Risk**
			Asset Management Policy			
6	Property & Financial (Economic) Reputation (Governance)	Asset management plans not aligned with master plans and strategic documents (complexity, inconsistency)	Increase involvement of key stakeholders	Moderate	Possible	M9
			Implement hold points for planning needs (timing, affordability, lifecycle funding, etc.)			
			Strategic Forward Planning of Asset acquisition, disposal, and construction			
			Master plans and strategic documents to be costed and a funding strategy prepared			
7	Property & Financial (Economic) Reputation (Governance)	Failure to manage the risk of infrastructure and asset failure	Asset renewal programs	Moderate	Unlikely	M6
			Programmed Infrastructure inspection and maintenance			
			Budgeting for asset maintenance			
			AI road surface scanning technology			
			Ensure adequate asset insurance is in place for the replacement of insurable assets in the event of loss or damage			
			Specialist staff with knowledge of high-risk assets (stormwater, flooding, bridges, geotechnical)			
			Robust schedule of proactive maintenance			
			Investigate alternate design/fabrication of infrastructure at high risk of damage by surrounding environment			

As a result of the assessment, Strategic Asset Management remains a moderate risk to the organisation. We have included levels of service for risk management with several asset classes.

Asset Management Plan |

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9.1.5   Critical Assets

The criticality of assets is a measure of the consequence or impact of a service interruption or loss. We use the following principles when reviewing criticality:

People, property and financial, environment & reputation

Services delivered to people

Supported by an asset function

Impacted by asset failure

This people at the forefront of the approach – we apply our enterprise risk framework to review the risk of service interruption, look at each service individually, identify the assets associated with the service.

9.1.5.1 Security of Infrastructure Act 2018

The Security of Infrastructure Act 2018 (SoCA) provides a framework for managing risks relating to eleven Australian economic sectors. The SoCA defines the critical infrastructure assets for each of the eleven sectors. The Australian Government's Department of Home Affairs produced the Critical Infrastructure Asset Class Definition Guidance through its Cyber and Infrastructure Security Centre, that is used to assist with identification of critical assets under the SoCA.

The Critical Infrastructure Asset Class Definition Guidance was applied to determine if Council has ownership or control of critical infrastructure as defined under the SoCA.

It was determined that Council is not in control of any critical assets in accordance with the SoCA.

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9.1.5.2 Critical Services and Assets

Council has identified 33 services provided to the community to help achieve the objectives of the Community Strategic Plan (CSP). Each of these services are listed in the Delivery Program showing the linkage to a CSP Goal, with a description of

- Why we provide the service,
- What we provide under as part of the service,
- How we deliver the service, and
- other supporting information about the service.

We analysed each of the 33 services and the associated delivery streams to determine service criticality. In determining the criticality of services, we assessed the consequence or impact of the service interruption or loss for a period of up to 2 days using the enterprise risk management framework.

For services that were identified as critical, we identify the assets required to support the delivery of the service. These assets are then defined as critical assets. A summary is provided in Table 9.1.5.2 below:

Table 9.1.5.2 – Critical Assets

Service	Delivery Stream	Criticality	Critical Assets
Emergency Management	Plant and equipment. Buildings	Ability to respond to emergency events. Sufficient facilities to operate the required service.	Emergency management plant and equipment. Emergency management facilities
Natural Area Management	Asset Protection Zone (Bushfire) Management	Maintain adequate buffer from bushfire hazards.	Fire trails. Asset protection zones
Stormwater Services	Floodplain Management	Dam safety	Prescribed dams
Waste Management	Domestic Waste Collection Service	Public health	Waste collection plant and equipment
	Wollongong Waste & Resource Recovery Park		Waste facility assets
Aquatic Services	Lifeguard Services	Ability to respond in a timely manner with the required resources	Rescue and recovery plant, fleet and equipment. First aid equipment
Transport Services	Roads and Bridges	Provide connection for adjoining critical services. Provide access for critical transportation corridors	Old Princes Highway (as identified in the Local Emergency Management plan). Other roads to be identified as an improvement action
Employee Services	Work Health and Safety	Statutory compliance and mandatory SafeWork notifications	Information Management and Technology resources

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Service	Delivery Stream	Criticality	Critical Assets
Governance and Administration	Council Meetings and Councillor Support	Council meeting	Information Management and Technology resources
Information Management and Technology	Cyber Security	Active cyber security measures	Information Management and Technology resources
Information Management and Technology	Technology Support Services	Maintaining access to critical systems	Information Management and Technology resources

9.1.5.3 Local Emergency Management Planning

The Illawarra Local Emergency Management plan identifies the following major transport routes in the Wollongong Local Government Area as shown in Table 9.1.5.3 below:

Table 9.1.5.3 - Major Road Transport Routes and Key Bridges

Road Name	TfNSW No.	Classification	Direction	Linking
M1 Princes Motorway	M1	Freeway (State)	North/South	Illawarra with Sydney and to the Victorian border
Princes Highway	HW1	State	North/South	Entire EM Area
Old Princes Highway	**MR678**	**Regional (council)**	**North/South**	**Waterfall to Bulli Tops**
Appin Road	MR177	State	East/West	Mt Ousley Road to Hume Highway
Picton Road	MR95	State	East/West	Mt Ousley Road to Hume Highway
Bulli Pass	HW1	State	East/West	Northern Suburbs of Wollongong LGA to F6
Mt Ousley Road	MR513	State	North/South	Central Suburbs of Wollongong LGA to M1
Lawrence Hargrave Drive	MR185	State*	North/South	Northern Suburbs of Wollongong LGA to Princes Highway
Memorial Drive	B65	State	North/South	Northern suburbs of Wollongong between North Wollongong and Bulli
Five Islands Road	MR295	State	North/South	Wollongong LGA to southern suburbs
Springhill Road	MR581	State	East/West	M1 to port of Port Kembla
Seacliff Bridge	-	State	North/South	Connecting Lawrence Hargrave Drive between Coalcliff and Clifton.
Windang Bridge	-	State	North/South	Linking Wollongong LGA with Shellharbour LGA

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*An agreement is in place for shared responsibility between Council and Transport for NSW (TfNSW) for parts of the carriageway. Under the arrangement, TfNSW has responsibility for the travelling lanes.

Council is a major stakeholder in the road network throughout the Wollongong Local Government Area. It is noted however that all roads and bridges listed in table 9.1.5.3 excepting Old Princes Highway, are under the care and control of the NSW Government and do not form part of this asset management plan. Old Princes Highway between Waterfall and Bulli Tops is classified as a Regional road under Council's control.

9.1.5.4 Rail Network

The railway networks, including the main north-south commuter and freight line, Wollongong to Moss Vale, and service lines for mine and manufacturing industries are not under the care and control of Wollongong City Council. The assets associated with these networks are not included in this asset management plan.

There are network interface agreements with the operators of the rail networks with Council as the operator of the adjoining road networks. These agreements articulate the roles and responsibilities of the respective parties. These agreements are do not form part of this plan, other than any operational, maintenance, or capital costs associated with managing the interface locations as required.

9.1.5.5 Heliports and Airports

The Wollongong Heliport is located at the corner of Port Kembla and, Springhill Roads. The Heliport is located on Council operational land and operated under a commercial agreement. The management arrangements for the maintenance and replacement of infrastructure associated with the facility is outlined as part of the lease. The road directly accessing the heliport is under the care and control of the State of NSW and does not form part of this asset management plan.

There is no airport located within the Wollongong Local Government Area.

9.1.5.6 Ports and Harbours

The Port of Port Kembla is a major Port for NSW. It is not designated as Critical in the Security of Infrastructure Act 2018; however, it is recognised in the Illawarra Local Emergency Management Plan due to its role in transferring significant freight handling.

Wollongong Harbour is also recognised for its role in supporting fishing, tourism, and recreational boating.

Neither the Port of Port Kembla, nor Wollongong Harbour are under the care and control of Wollongong City Council. As a result, these locations and associated assets are not included in this asset management plan.

9.1.6   Infrastructure Resilience

Resilience of infrastructure refers to the ability of assets to withstand shocks and stresses and recover from incidents. A resilient network of assets requires resilience in the built asset, the service operation, and the within the community. The focus of resilience in the context of this asset management plan will focus on the resilience planned, designed, and built into assets. The resilience of the organisation to provide services and the community's role are covered in a separate resilience plan.

Improving the resilience of built assets requires the following key stages:

- Determining the exposure of the asset to natural and other shocks.
- Assess the consequence and impacts of service disruption to service customers.

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- Develop actions to improve resilience of key assets that support services with high consequence of disruption.

The natural and non-natural hazard exposure categories for the City of Wollongong are identified through the Local Emergency Management Committee (LEMC). The LEMC reviewed a total of 43 hazards and refined the list to 24 as part of the Local Emergency Risk Assessment 2023. The *rating priority* is undertaken based on a need for a multiagency (more than one combat agency) response to an event. These hazards are summarised below in Table 9.1.6:

Table 9.1.6 – Natural and Other Hazard Exposure and Risk Rating

Risk Rating	Hazard Name	Residual Risk Rating	Rating priority
1	Severe Storm	Major/Likely	Extreme
2	Fire – Bush/Grass	Major/Likely	Extreme
3	Heatwave	Major/Likely	Extreme
4	Flood – Lake and Flash	Major/Likely	Extreme
5	Pandemic and Communicable Disease Outbreaks	Major/Likely	Extreme
6	Infrastructure Failure – Power	Major/Possible	Extreme
7	Counter Terrorism	Major/Possible	Extreme
8	Biosecurity (Animals, Aquatic & Plants)	Catastrophic/Unlikely	Extreme
9	Landslip/Mudflow/Rockfall	Moderate/Likely	High
10	Fire – Non-Residential	Moderate/Likely	High
11	Fire – Residential	Moderate/Likely	High
12	Transport Accident – Rail	Moderate/Possible	High
13	Transport Accident – Road	Moderate/Possible	High
14	Infrastructure Failure – Telecommunications	Moderate/Possible	High
15	Major Structural Collapse	Major/Rare	High
16	Aeronautical	Major/Rare	High
17	Infrastructure Failure – Water	Major/Rare	High
18	Earthquake	Major/Rare	High
19	Tsunami – Land inundation threat	Major/Rare	High
20	Maritime Event and Environmental Impact	Major/Unlikely	High
21	Dam Failure	Moderate/Low	Moderate
22	Hazardous Materials	Moderate/Unlikely	Moderate
23	Mine Accident	Minor/Possible	Moderate
24	Coastal Erosion	Minor/Low	Rare*

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* We note that coastal erosion is occurring along locations of the foreshore throughout our Local Government area. The rating priority relates to coastal erosion events that are likely to require an emergency response from multiple combat agencies.

9.1.7   Climate Strategy

Climate change is highlighted as a key challenge for our future in the Community Strategic Plan. The *Sustainable Wollongong: A Climate Healthy City Strategy* outlines Council's commitment to environmental sustainability for both Council operations and our community and identifies pathways to create a sustainable, greener, healthier, cooler, and more liveable City.

We recognise the urgent need to respond to the impacts of Climate Change and have aligned with the principles of the Paris Climate Agreement through our partnerships with the Global Covenant of Mayors for Climate and Energy and the Cities Power Partnership. Council's Climate Change Mitigation Plan 2023-30 is a whole of community approach to reducing emissions in Wollongong. Council's Net Zero Wollongong Climate Change Mitigation Plan 2023-30 identified how Council as an organisation will lead by example through making commitments to emission reduction principles into core business and operations. Recognising the linkage with asset management planning is part of this commitment.

There are three operational areas with asset linkage to emission reductions measures:

- Waste management
- Buildings and facilities
- Transport (fleet, plant and equipment)

The actions from the Net Zero Wollongong Climate Change Mitigation Plan 2023-30 (LE2, LE3, LE5 to LE9) will be included in future demand and investment projections in the relevant asset classes.

Through the Climate Change Adaptation Plan we recognise the key climate hazards associated with:

- Heat
- Flooding
- Bushfire
- Storms
- Drought
- Sea-level rise

The Climate Change Adaptation Plan assesses the risks at a local level, identifies strategies and actions to facilitate a pathway for adaptation. The actions relating to assets are shown below in Table 9.1.7

Table 9.1.7 – Asset Related Climate Change Priority Actions

Priority Actions		
Hazard	**Action**	**Asset Management Relationship**
Heat	Further investigation of heat in the Wollongong area to understand this issue further and develop appropriate heat management strategies including city design, shade, construction materials and cooling infrastructure.	Urban Greening Strategy. Integrate strategies relating to public infrastructure.

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Priority Actions		
Hazard	**Action**	**Asset Management Relationship**
	Assess the suitability of Council facilities to be utilised for respite centres on hot days. This may include provisions for adequate water and food, power supply and appropriate landscaping to provide shade.	Any identified upgrade requirements to be included in future investments in buildings and facilities. Identified facilities may require specific management plans. Improvements to passive heat control of the facility in addition to conditioned air will improve performance and reliability of the respite location.
	Plan for the potential cost impacts of overlapping or more frequent heat events.	Include estimated increased operational costs to cool building and facilities. Improve thermal efficiency of high-priority and high-energy use locations.
	In partnership with Land Management Agencies and other Botanic Gardens, develop translocation programs for threatened Illawarra flora susceptible to mean temperature increase.	Actions will be dependent on the outcomes of the investigation to determine whether there are asset related actions to support the program.
Flooding	Continue managing flood risk through floodplain risk management plans, incorporating climate predictions.	Priority infrastructure actions from floodplain risk management plans are included in this plan.
	Continue and monitor maintenance schedules to reduce the risk of drainage network blockages.	Levels of service relating to the criticality of the drainage network form part of this plan.
	Ensure new developments consider climate change projections including rainfall intensity and sea level rise.	Appropriate planning and controls for private development have an indirect impact on the trunk stormwater network.
	Undertake community education to increase awareness of the dangers of floodwaters and precautions to minimize risks to people and property.	Criticality assessment and risk management associated with stormwater infrastructure. Implement Creek Care program.
Bushfire	Review Council's response to manage air pollution for Council buildings and facilities.	Identified issues may require modifications to buildings and facilities.
	Review bushfire risk and emergency management plans for Council operational or leased buildings.	Potential for operational works for maintenance of asset protection zones around the building.
	Proactively maintain fire trails and other bushfire related infrastructure to be fire ready e.g., hazard reduction.	Fire trails are listed as a type of road. Inspections and maintenance of Council fire trails are scheduled.
Storms	Prepare and implement an Open Coast Coastal Management Program.	Implementation of infrastructure actions will be included in forecast expenditure

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Priority Actions		
Hazard	**Action**	**Asset Management Relationship**
	Identify the Council's business continuity plans (BCPs) and review and update as required to address increase the likelihood of storm and extreme weather events.	BCPs may identify critical services and associated assets. Any critical assets are listed in the asset management plan, and appropriate management plans developed.
Drought	Council will review the water efficiency of its operations including detecting leaks in water supply (for Council managed section of water network).	The review may identify the need for capital work. The outcomes of the work should decrease operational costs associated with water usage; however the option will need to be assessed for any other associated changes in costs (e.g**.,** Maintenance of water harvesting systems such as filters, pumps, flush systems, etc**.)**
	Council to consider rainwater, sewerage mining/ recycling and stormwater harvesting and usage, to support irrigation for sports fields.	The out**come** of review may result in implementation of capital works and adjustment to maintenance and operational costs.
Sea-level rise	Prepare and implement an Open Coast Coastal Management Program.	Implementation of infrastructure actions will be included in forecast expenditure
	Recovery plans from emergencies are to be developed in partnership with communities and other relevant service providers.	Recovery plans typically result in unscheduled maintenance activities. Some recovery actions are part funded through State agencies for major events. An allowance will be included in estimates based on a review of prior years' activities.
	Identify the Council's business continuity plans (BCPs) and review and update as required to address increase the likelihood of storm and extreme weather events.	BCPs may identify critical services and associated assets. Any critical assets are listed in the asset management plan, and appropriate management plans developed.
Note only actions with a direct impact on assets have been included above from the Climate Change Adaptation Plan. Flora is not recognised as a non-current asset and is not part of this asset management plan. Actions may be included in an operational plan outside the scope of this asset management plan.		

9.1.8   Information Management and Technology Strategy

Our Resourcing Strategy includes our Information Management and Technology Strategy. This strategy recognises the criticality of effective information and communication technology that supports and enables business functions across the organisation.

Information Systems are critical to supporting the four pillars of asset management (people, data, processes and systems), and as a result, Council has invested in this area over the last several years. We are continuing to implement an enterprise asset management system and improve our process to support the way we manage assets. We have moved to cloud-based platforms, increased our ability in IM&T mobility,

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trialled and implemented Artificial Intelligence for defect identification, trialled smart city technology, and continuing to develop data analytics. This work improves the efficiency of our operations which in turn, improves the level of service we can provide to the community.

Long-term asset management planning requires data to inform decision making throughout the life cycle of assets. This data is used to model whole of life costs for existing and proposed assets, to forecast intervention points for renewals, prepare programs of work based on differing funding models, manage risk over large asset portfolios, and to prioritise works. We use that enterprise asset management system to host and assist with analysing data. Together with people and processes, we use the data and system to ensure we have good governance to support effective decision making.

9.1.9 Workforce Strategy

Our Resourcing Strategy includes our Workforce Strategy. People are critical to delivering on multiple actions across the lifecycle of assets. The Workforce strategy articulates our strategy and plan for resourcing the people required to deliver on the actions in the Delivery Program and achieving the vision of the Community Strategic Plan.

9.1.10 Procurement and Supply Strategy

The management of our asset portfolio is supported by multiple contracts for goods and services. We have a Sustainable Procurement Policy that provides guidance to the Council and employees to allow consistency and control over Procurement activities and demonstrate accountability to the community in relation to procurement activities. The policy establishes principles relating to responsible financial management and value for money; ethical principles; risk management; sustainability; social procurement; improving local economic capacity; and thresholds and methodology. This policy framework mandates how we procure as an organisation.

At times, the economics of supply and demand can create challenges to obtaining competitive pricing for asset related goods and services. We undertake reviews to assess the outcomes of all procurement practice and asses the risk of proceeding to ensure we are meeting the asset management principles and procurement principles.

9.2 External operating drivers

External operating drivers influence the way we operate that are outside of our direct control. They may include changes in the operating environment, such as economic, legislative, environment, social and technological impacts. A summary of the drivers that are anticipated to or continue to influence the way in which we deliver services and the assets that support them are summarised below.

9.2.1 Reconciliation

We acknowledge and respect the ancient, ongoing connection Aboriginal and Torres Strait Islander people of Dharawal Country have to these lands and waters. Our aim is to strengthen and build relationships that are meaningful and long lasting and show our respect for the important contributions Aboriginal and Torres Strait Islander peoples and their communities make to our city.

Council has embedded our Reconciliation Action Plan (RAP) into the way we do business. As part of our commitments, we respect and continue to increase our understanding of Aboriginal and Torres Strait Islander people's special places and sites of significance. This commitment is particularly important in asset

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planning. We facilitate an Aboriginal reference group and provide updates on Council projects and engage on matters of importance to local Aboriginal and Torres Strait Islander communities.

We continue to review the processes associated with implementing the asset management plan to align with the commitments in the RAP.

9.2.2   Climate change

Climate change was formally recognised globally at the 1992 United Nations Conference on Environment and Development in Rio de Janeiro. In 2015, a global commitment by countries was agreed at the 21st Conference of the Parties in Paris. The Paris Agreement includes a global commitment to limit global temperature rise to below 2°C above pre-industrial levels and pursue efforts to limit the rise to 1.5 degrees and a commitment to achieve net-zero emissions, globally, by the second half of the century. The Sustainable Development Goals is a global strategy agreed by the United Nations General Assembly and contains 17 goals for 2015-2030 including the following goals directly relevant to climate change mitigation and adaptation (United Nations, 2020), refer to Figure 9.2.1 below.

Figure 9.2.1: Sustainable Development Goals directly relevant

In 2019, Council resolved that we are in a state of climate emergency that requires urgent action by all levels of government. Council has set a target of net zero emissions by 2050 for the City of Wollongong. Council also recognised the significance of its own contribution to the City's emissions and the need to demonstrate leadership and so set a target of net zero emissions by 2030 for its own operations. Council has developed a Climate Change Mitigation Plan which describes actions on our journey towards net zero emissions. Several actions from the plan influence our planning for assets.

9.2.3   Legislative obligations

Council operates in a heavily regulated environment. At the forefront is the Local Government Act 1993, that provides the legal framework for the systems of local government, the responsibility and authority, community engagement roles; and accountability for sustainability and effectiveness.

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A range of other legislation that influence our planning for assets is provided at each asset plan. The legislative obligations may include a specified role of local government under various Acts and Regulations or create compliance requirements. In some instances, Council may have dual roles under legislation as an authority/regulator and as a customer to which the legislation applies.

As part of our governance arrangements, we monitor changes in legislation and keep a register of legislative framework relevant to our services.

9.2.4   Economy

The second goal of Our Wollongong our Future 2032 is *We have an innovative and sustainable economy*. We recognise the importance of our role as an organisation in supporting, fostering, and growing local economic development. This is articulated through our Economic Development Strategy.

We have seen the impacts of the Global and National economy on asset planning over the last few years during and post the COVID-19 pandemic. Whilst several markets are returning to pre-pandemic levels, other sectors have likely changed for good. We have experienced significant price increases to deliver assets, and difficulty obtaining materials and goods.

We maintain an active presence as part of local and regional economic development. Our Economic Development Strategy identified several critical transport projects/initiatives for the future economic success of the region. These include:

- Wollongong to Greater Sydney connections – Parramatta and Western Sydney airport.
- South West Illawarra Rail Line (SWIRL).
- South Coast rail line upgrades – duplication of the South Coast rail line.
- Mount Ousley interchange and widening.
- Picton Road upgrade.
- F6 Extension.

These initiatives fall within the responsibility of the NSW Government to consider, and as a result there are no specific actions relating to these infrastructure projects in this asset plan.

9.2.5   Population growth

For many years, the increase in population of Wollongong was ahead of the growth in Regional NSW. The trend began to change in 2017 and was below the Regional NSW until 2022. However there has been a turnaround, with 2023 showing strong growth as shown in Figure 9.2.5.

The long-term forecasts show significant population growth in Wollongong. This is impacted by several external factors, including affordability of housing, access to employment, access to services, transport, and social networks. Population growth continues to influence our planning for assets and is informed by our Local Strategic Planning Statement and development contributions plans.

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Figure 9.2.5 – Change in Resident Population
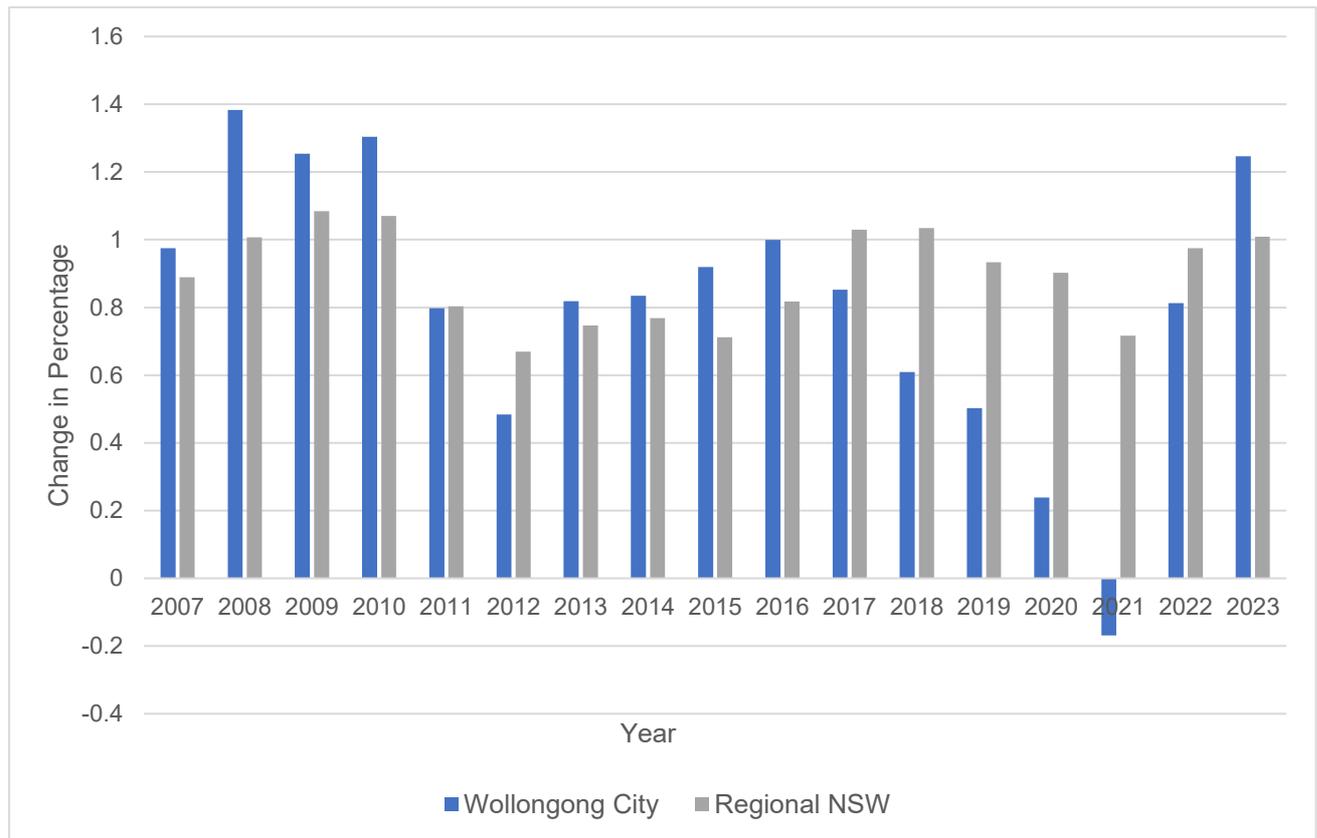
9.2.6 Demographic change

Wollongong embraces the diversity of our community with population continuing to grow and change. It is predicted, based on current trends and population projections that, by 2036 there will be:

- more people aged 70 years and above.
- an increase in the number of couples without children.
- a small increase in the proportion of people living alone.
- a continued slowing of the birth rate.
- a decline in the number of group households.

The demographic changes will influence the service needs and related assets that council provides.

9.2.7 Waste and recycling

We operate the Wollongong Waste and Resource Recovery Park (Whytes Gully) at Kembla Grange. The site includes a Community Recycling Centre (house recyclables, problem waste); small vehicle transfer station; mixed waste and garden organics; and a landfill.

In 2010, the United Nations Executive Director, Anna Tibaijuka stated:

> "Regardless of the context, managing solid waste is one of biggest challenges of the urban areas of all sizes, from mega-cities to the small towns and large villages, which are home to most humankind. It is almost always in the top five of the most challenging problems for city managers."

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Council adopted the Wollongong Waste and Resource Recovery Strategy 2034 in August 2024 with relevant actions.

The main influence is the volume and type of waste and recycling generated by the community. The landfill site is a major generator of emissions and has a significant impact on our ability to achieve net zero targets.

Waste and recycling have an impact our asset planning for the Whytes Gully facility, and the generation of waste as part of our management of assets.

9.2.8   Technology

Changes and advancement in technology can reshape the way in which we deliver services, manage assets, gather information, and interact with the community. Our Information Technology roadmap is part of the internal drivers that sets our plan over the next four years. Complementing and informing the roadmap are the opportunities created in the external market as technology develops. We continue to review the potential application of technology to create efficiency, improve customer service, manage cyber risk and security of information, provide access to new areas of service, and enhance employee experience. We have developed partnerships with Shellharbour, Kiama, and Shoalhaven Councils; University of Wollongong and Lendlease to explore smart technology to improve water management through building and testing data analytics.

Advancements may change the way we use technology. We are using drones to capture images for publications; however, drones have a much broader application to be considered. They can provide improvements in the way that we monitor foreshore areas, complete inspections of difficult to reach and hazardous locations (bridge soffit, roof tops, dense bush areas, open drains, and large culverts etc), complete topographic survey, completed thermal imaging for leakage detection, and many other applications.

We are already leveraging artificial intelligence to monitor the condition of our road and footpath network and identify surface defects. We have mounted cameras in garbage trucks to capture images of the road surface as they drive the network. The images are reviewed with applications that utilise machine learning algorithms (like facial recognition) to identify defects in the road and automatically issue instructions for repairs with priority based on road classification, size, and severity. We are looking to apply the technology to other asset types.

10 Asset Infrastructure Performance Indicators

Assets are intended to provide service over their useful service life and in most cases, we aim to maximise the useful service life balancing service outcomes, risk management and cost.

Measuring the financial performance of infrastructure assets is crucial for effective management, maintenance, and long-term decision-making. The importance of capturing and tracking infrastructure assets performance can be seen from several perspectives:

1. Accurate measurement of infrastructure assets enables correct valuation, which is essential for financial reporting, budgeting, and decision-making
2. Measuring whole of life costs assists in evaluating investment effectiveness and sustainability
3. Assists in prioritising proactive maintenance activities, ensuring optimal asset performance
4. Accurate measurement of infrastructure assets enables effective utilisation, reducing waste and optimising resources
5. Informs capital planning, ensuring alignment with organisational goals and objectives
6. Enables evaluation of sustainability performance, supporting environmental and social responsibility initiatives.

Council use several indicators in relation to infrastructure asset management and includes asset classes identified in the report on infrastructure assets only. Performance against identified indicators will be assessed at least annually.

The indicators are described in more detail below:

10.1 Indicator 1 – Long-term Asset Renewal Funding Ratio

$$\frac{\text{Funds Available for Renewals}}{\text{Annualised Asset Renewal Cost}}$$

Target: 1:1 or 100%

This measure provides information about the longer-term average cost requirement for renewals that removes cyclical peaks and troughs. It is important that future costs are considered early to avoid renewal cost shocks in future periods.

10.2 Indicator 2 – Asset Management Replacement Funding Ratio

$$\frac{\text{Assets Due for Replacement}}{\text{Funds Available for Replacement}}$$

Target: 1:1 or 100%

This measure informs us of an increase in carried forward backlog. It assesses whether the capital program is managing asset replacement in a timely manner. Assets not renewed in the current period will form part of the following year's backlog.

Asset Infrastructure Performance Indicators

10.3 Indicator 3 – New & Enhanced Asset Lifecycle Ratio

Annualised Asset Lifecycle Cost of New & Enhanced Assets

Annualised Asset Lifecycle Budget for New & Enhanced Assets

Target: 1:1 or 100%

This measure informs operational performance of assets capitalised in the current year against allocated asset operational growth funding for the same period.

10.4 Indicator 4 – Scheduled Maintenance Performance Ratio

Scheduled Maintenance

Budgeted Maintenance

Target: greater than 80%

This ratio measures performance of scheduled maintenance. Managing scheduled maintenance at 80% of total maintenance spend can reduce upfront costs by avoiding investments in preventive programs.

10.5 Indicator 5 – Maintenance Backlog Ratio

Value of Scheduled Maintenance not Completed

Budgeted Maintenance – Scheduled Maintenance

Target: <1

This measure tracks any maintenance backlogs over time and is assessed at asset class level.

10.6 Indicator 6 – Renewal backlog Ratio

Required Renewals

Written Down Value

Target: <2%

This measure tracks any renewal backlogs over time and is assessed at asset class level. That is the value of the required renewals that fell due in prior years that have not been completed.

Asset Infrastructure Performance Indicators

10.7 Estimated Required Maintenance

This ratio compares actual versus required annual asset maintenance. The methodology for determining the required maintenance has been variable in prior years. To improve the reliability of this indicator, we need to work on establishing proactive maintenance programs and service levels across the range of asset classes. This will enable a more accurate estimate of the required maintenance for assets. For this plan, we have used an estimate of required maintenance based on the percentage of the gross replacement cost. We have benchmarked against similar councils to ensure our estimated required annual maintenance is reasonable. The forecast estimates using the benchmarked rates are provided in Table 10.7 below:

Table 10.7 – Estimated Required Maintenance

Asset type	Required Maintenance % of GRC	Required Maintenance $	Actual Maintenance 2022-23	Total required maintenance over useful life	Total maintenance as a % of GRC
Buildings		**19,219,320**	**12,236,000**	**-**	
Building Structure	2%			576,643,884	125%
IPS Building Components	2%			216,097,352	91%
Open Spaces		**17,551,913**	**19,175,000**	**-**	
Open Space Areas	8.00%			3,408,812	136%
Open Space Areas Land Formation	8.00%			3,448,383	120%
Open Space Infrastructure			**-**		**-**
Beach Access	8.00%			2,683,265	280%
Lighting	8.00%			10,649,729	174%
Memorials	8.00%			900,119	400%
Minor Infrastructure (signs, gates, fences etc)	8.00%			38,687,556	173%
Outdoor Exercise	8.00%			696,699	89%
Outdoor Furniture	0.10%			259,651	2%
Playground	8.00%	1,543,923		30,613,567	143%
Pool Specific	5.33%	1,907,908		168,869,818	221%
Shelters	0.65%		136,000	2,863,035	23%
Skate Park	8.00%			9,724,700	279%
Sports Areas and Equipment	8.00%			94,722,144	364%
Utilities	8.00%			87,537,144	272%
Stormwater	**0.42%**	**7,207,309**	**3,330,000**	**665,635,082**	**39%**
Transport			**-**		**-**
Bridges	0.50%	845,695	1,413,000	55,607,060	37%
Car Parks	0.50%			15,990,199	33%

Asset Infrastructure Performance Indicators

Asset type	Required Maintenance % of GRC	Required Maintenance $	Actual Maintenance 2022-23	Total required maintenance over useful life	Total maintenance as a % of GRC
Pathways	0.78%	3,300,180	5,472,000	242,712,876	62%
Retaining Walls	0.60%			24,195,486	38%
Roads		-	**18,285,000**	-	
Street furniture, bus shelters	0.65%	251,229	136,000	790,075	14%
Guardrails	0.60%			4,868,046	31%
Road Segment & Car Parks		8,043,879		-	
Kerb and Gutter	0.44%			158,368,314	35%
Road Base	0.88%			263,889,201	67%
Road Earthworks	0.00%			-	0%
Road Seal	0.88%			79,788,789	37%
Road Subbase	0.00%			-	
Street Furniture	0.10%			561,176	3%
Transport facilities	0.60%	765,667		43,605,055	44%
Grand Total		60,637,023	**60,183,000**	**2,803,817,217**	

The data shows that we have the capacity to invest and complete the required infrastructure maintenance as the actual expenditure in 2023-24 was almost equal to the estimate. There are some variations in specific asset groups between the estimated required maintenance and the actual expenditure. It is not recommended to alter budget allocations to reflect the estimated required maintenance at this point but rather focus on the improvement action of developing and preparing cost estimates for proactive activities and adjust the percentage based with more accurate estimates.

11 Our Asset Investment Plan

The following pages outline the proposed financial investments for assets over the 10-year period from 2025/26 to 2034/35. The summary shows the plan for investment into the renewal, upgrade, expansion of assets; for the provision of new assets; and for works to deliver the West Dapto Development Contributions plan. The information is grouped and summarised from each of the asset plans in Section 12.

It is important that Council maintains a focus on renewal of assets to ensure the long-term sustainability of the asset provision. The capital expense type table demonstrates that much of the investment into assets is for renewal and upgrade of assets.

Asset proposals that look to increase service levels (that is upgrades, expansion and new assets), typically need to be supported with a business proposal. The business proposal will review the whole of life costs to ensure that the cost to operate and maintain the asset over the service life is recognised and accounted for in decision making. New assets that form part of the developer contributions plans have already been through an analysis of cost in preparation of the plans and won't require business proposals. Minor upgrades that are initiated due to legislative or accessibility compliance will not require business proposals, however a significant investment (i.e. 50% or more of the asset value), needs to be further considered.

Our Improvement Plan actions in this Asset Management Plan will improve the accuracy of our forecasts and enable us to better understand the levels of investment required.

We also need to ensure that we plan to provide the infrastructure required to support services for the growing population. The information relating to the provision of new asset has been broken down to new assets, and West Dapto Development Contribution Plan. As the community grows in West Dapto, this plan provides the necessary infrastructure for the community to thrive. Over the 10-year timeframe, there is a plan to invest just over $280M into infrastructure for West Dapto, in addition to investments planned by the NSW Government on any State Roads. Based on current forecasts for development, it is anticipated that the following 10-year period between 2036 and 2045 will see a significant increase in demand for infrastructure delivery in West Dapto. This is likely to create challenges in delivery of the scale of works required without planning the required resources in advance. A recommended action has been included in the Improvement plan to review this issue as part of the next Workforce Plan.

Note that all investment amounts in this section and throughout the plan are as at 30 June 2024 dollars (unless otherwise stated) and not indexed. Values will need to be adjusted for inflation in future years and escalation applied at the same rate as the long-term financial plan.

Our Asset Investment Plan

11.1 Capital Investment

The following table summarises the annual capital investment per asset plan and grouped by non-infrastructure and infrastructure assets.

Capital Investment											
Item	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**	**2029-30**	**2030-31**	**2031-32**	**2032-33**	**2033-34**	**2034-35**
Non-infrastructure assets											
Plant and Equipment	7,995,000	4,617,920	4,795,414	4,226,500	7,144,433	5,871,000	5,945,900	5,722,602	6,101,144	6,201,678	6,305,228
Library collection and resources	1,373,749	1,403,749	1,437,663	1,467,854	1,503,100	1,467,135	1,501,672	1,537,038	1,573,252	1,610,335	1,647,419
Information management and technology	1,340,000	1,400,000	900,000	1,050,000	933,000	1,307,954	1,307,954	1,307,954	1,307,954	1,307,954	1,307,954
Artworks, Antiquities and Memorials	103,500	106,600	109,800	113,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Land	250,000	250,000	-	-	-	120,000	120,000	120,000	120,000	120,000	120,000
Subtotal	**11,062,249**	**7,778,269**	**7,242,877**	**6,857,354**	**9,680,533**	**8,866,089**	**8,975,526**	**8,787,594**	**9,202,350**	**9,339,967**	**9,480,601**
Infrastructure											
Roads	26,047,000	45,725,000	51,940,000	39,256,900	35,584,375	61,836,000	64,295,000	70,240,000	59,775,000	62,922,000	53,589,000
Bridges	895,000	3,435,000	3,010,000	3,400,000	1,625,000	2,825,000	980,000	527,000	502,000	580,000	5,625,000
Transport facilities	3,248,000	3,020,435	3,805,000	1,659,907	700,000	1,500,000	1,550,000	1,565,000	1,600,000	1,525,000	1,600,000
Street furniture, bus shelters, and guardrail	93,000	535,000	435,000	625,000	625,000	475,000	425,000	1,150,000	375,000	1,150,000	325,000
Pathways	9,505,000	6,358,900	11,814,941	11,100,000	9,150,000	9,850,000	9,850,000	9,850,000	9,850,000	9,850,000	9,850,000
Stormwater and floodplain management	9,942,000	9,211,000	5,030,000	6,400,000	7,200,000	5,575,000	5,575,000	5,575,000	5,575,000	5,575,000	5,575,000

Our Asset Investment Plan

Capital Investment											
Item	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**	**2029-30**	**2030-31**	**2031-32**	**2032-33**	**2033-34**	**2034-35**
Playgrounds	1,057,000	1,195,000	1,450,000	1,450,000	1,450,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Open spaces	8,735,000	5,005,000	9,545,600	1,981,668	1,920,000	1,957,000	1,439,000	1,486,000	1,534,000	1,595,000	2,908,000
Pool structures	1,350,000	5,500,000	-	500,000	6,010,000	2,892,500	2,907,600	2,923,022	2,938,815	2,959,029	2,979,850
Buildings	15,430,000	41,865,000	47,805,000	43,120,000	14,120,000	15,837,800	15,758,900	15,667,569	15,692,830	15,692,830	15,692,830
Waste	12,975,000	5,610,000	6,990,000	12,185,000	23,970,000	15,900,663	9,602,737	9,541,556	459,525	176,292	20,188,614
Subtotal	**89,277,000**	**127,460,335**	**141,825,541**	**121,678,475**	**102,354,375**	**120,148,963**	**113,883,237**	**120,025,147**	**99,802,170**	**103,525,151**	**119,833,294**
Non-project allocations	5,655,863	4,176,802	4,923,044	6,449,440	12,791,223	13,472,613	19,455,356	23,736,775	25,506,066	29,268,675	30,166,367
Total	**105,995,112**	**139,415,406**	**153,991,462**	**134,985,269**	**124,826,131**	**142,487,665**	**142,314,119**	**152,549,516**	**134,510,586**	**142,133,793**	**159,480,262**

Our Asset Investment Plan

11.2 Capital Expense Type

The following table provide a consolidated summary of the total investment per year into renewal, upgrade, expansion, and new works on assets. It is a total combined view of both non-infrastructure and infrastructure assets.

Capital Expense Type	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Renewal works	51,535,787	61,750,707	41,327,228	45,384,076	57,594,908	54,228,389	52,086,026	52,179,185	51,944,995	52,961,826	59,061,281
Upgrade works	13,074,962	14,901,897	32,266,249	23,566,846	16,600,000	18,875,663	12,177,737	12,116,556	2,934,525	2,651,292	22,663,614
Expansion works	9,879,500	42,062,000	55,460,000	36,630,000	350,000	36,259,800	38,227,000	42,983,000	34,611,000	37,128,600	29,612,200
New acquisition works	25,849,000	16,524,000	20,014,941	22,954,907	37,490,000	19,251,200	19,968,000	21,134,000	19,114,000	19,723,400	17,576,800
Voluntary Purchase Scheme	-	-	-	-	-	400,000	400,000	400,000	400,000	400,000	400,000
Non-Project Allocation	5,655,863	4,176,802	4,923,044	6,449,440	12,791,223	13,472,613	19,455,356	23,736,775	25,506,066	29,268,675	30,166,367
Totals	105,995,112	139,415,406	153,991,462	134,985,269	124,826,131	142,487,665	142,314,119	152,549,516	134,510,586	142,133,793	159,480,262

Our Asset Investment Plan

11.3 Renewal Works

We plan to spend an average of $52M per year on renewal and refurbishment of existing assets. Roads, being the largest valued asset class, has a significant annual renewal investment. Each asset plan provides greater details on renewals. Opportunities will be investigated to decrease the investment in some asset groups where alternate treatments will extend the useful life of the asset and/or more efficient and cost-effective maintenance and renewal treatments are identified.

Renewal Works Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Plant, fleet & equipment	6,795,750	4,617,920	4,795,414	4,226,500	7,144,433	5,871,000	5,945,900	5,722,602	6,101,144	6,201,678	6,305,228
Library collection and resources	1,167,687	1,193,187	1,222,014	1,247,676	1,503,100	1,467,135	1,501,672	1,537,038	1,573,252	1,610,335	1,647,419
Information management and technology	1,107,850	1,258,000	800,000	950,000	883,000	1,307,954	1,307,954	1,307,954	1,307,954	1,307,954	1,307,954
Artworks, antiquities and memorials	103,500	106,600	109,800	113,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Subtotal	**9,174,787**	**7,175,707**	**6,927,228**	**6,537,176**	**9,630,533**	**8,746,089**	**8,855,526**	**8,667,594**	**9,082,350**	**9,219,967**	**9,360,601**
Infrastructure											
Roads	20,127,000	23,905,000	17,255,000	15,311,900	14,204,375	17,230,000	17,230,000	17,230,000	17,230,000	17,230,000	17,230,000
Bridges	895,000	3,305,000	1,640,000	1,400,000	600,000	2,800,000	730,000	300,000	202,000	300,000	5,625,000
Transport facilities	40,000	-	-	-	-	675,000	725,000	740,000	775,000	700,000	775,000
Street furniture, bus shelters, and guardrail	40,000	245,000	30,000	250,000	250,000	50,000	-	725,000	50,000	825,000	50,000
Pathways	3,395,000	2,315,000	2,685,000	5,950,000	4,300,000	4,300,000	4,300,000	4,300,000	4,300,000	4,300,000	4,300,000
Stormwater	5,342,000	6,030,000	4,035,000	2,900,000	3,020,000	1,040,000	1,040,000	1,040,000	1,040,000	1,040,000	1,040,000
Playgrounds	1,057,000	1,195,000	1,450,000	1,450,000	1,450,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000
Open spaces	580,000	1,470,000	470,000	990,000	960,000	1,357,000	1,239,000	1,286,000	1,334,000	1,395,000	2,708,000
Pool structures	1,000,000	5,500,000	-	500,000	6,010,000	2,892,500	2,907,600	2,923,022	2,938,815	2,959,029	2,979,850
Buildings	9,560,000	10,350,000	6,335,000	9,520,000	11,320,000	13,837,800	13,758,900	13,667,569	13,692,830	13,692,830	13,692,830
Waste	325,000	260,000	500,000	575,000	5,850,000	-	-	-	-	-	-
Subtotal	**42,361,000**	**54,575,000**	**34,400,000**	**38,846,900**	**47,964,375**	**45,482,300**	**43,230,500**	**43,511,591**	**42,862,645**	**43,741,859**	**49,700,680**
Totals	**51,535,787**	**61,750,707**	**41,327,228**	**45,384,076**	**57,594,908**	**54,228,389**	**52,086,026**	**52,179,185**	**51,944,995**	**52,961,826**	**59,061,281**

Our Asset Investment Plan

11.4 Estimated Required Renewals as a Percentage of Planned Renewals

Depreciation was previously used by Council as an indicator for annual investment in the renewal of assets, but an improved method is proposed in this Plan to monitor if the renewals required are funded and completed as they fall due. Many long-life assets have many years until reaching their useful life and do not yet require expenditure on renewal. For each of the infrastructure asset classes we have estimated the required renewals per year based on the forecast useful life of the asset. With many infrastructure assets having a long life (over 30 years), and the construction patterns following historic growth across our Local Government Area, the estimated annual renewal requirements fluctuate significantly from year to year. The annual estimated renewal requirement will increase as long-life assets near the end of the useful life.

We anticipate some renewals resulting from early degradation of assets due to external factors. This occurs when the asset is not able to reach the expected service life due to damage from actions such as storms, vehicle impact, overloading and other external factors. The requirement for this type of investment is specific to the asset class and based on observations over time. For non-infrastructure assets we estimate the required renewal equivalent to the annual depreciation as these assets typically depreciate at a similar rate to the consumption of service life.

As an indicator of sustainable asset management, we look at whether we can resource the estimated renewal requirements as and when they fall due. To measure this, we look at the planned investment into renewal and upgrade works as a percentage of the total estimated required renewal investment. The target is >100%. The total estimated required renewal investment is equal to the gross replacement value of the assets forecast to reach 100% of the useful life in the year, plus an estimate of early degradation, and the annual depreciation value for non-infrastructure assets.

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Estimated Renewal Requirement	53,382,597	53,164,214	55,979,731	55,319,080	48,067,232	55,230,329	46,523,188	48,793,205	53,282,839	43,229,781	61,254,743
Planned Renewal and upgrade	64,610,749	76,652,604	73,593,477	68,950,922	74,194,908	73,104,052	64,263,763	64,295,741	54,879,520	55,613,118	81,724,895
Percentage	121%	144%	131%	125%	154%	132%	138%	132%	103%	129%	133%

The average investment is 130% of the forecast required renewals which includes contingency for scope and unexpected asset failures.

We will move towards reporting on the proposed indicators 1 and 2 as outlined in Sections 10.1 and 10.2 respectively.

Our Asset Investment Plan

11.5 Upgrade

Upgrade works enhances an existing asset to provide a higher level of service or extends the life beyond that which it had originally. Upgrades are included in calculations for renewal investments as the works effective renewal an existing asset to a higher standard. Below is a summary of the planned upgrades.

Upgrade Works - Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Plant, fleet and equipment	1,199,250	-	-	-	-	-	-	-	-	-	-
Library collection and resources	206,062	210,562	215,649	220,178	-	-	-	-	-	-	-
Information management and technology	187,650	100,000	50,000	50,000	-	-	-	-	-	-	-
Artworks, antiquities and memorials	-	-	-	-	-	-	-	-	-	-	-
Subtotal	**1,592,962**	**310,562**	**265,649**	**270,178**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Infrastructure											
Roads	-	170,000	3,185,000	2,895,000	1,080,000	-	-	-	-	-	-
Bridges	-	130,000	1,370,000	2,000,000	1,000,000	-	-	-	-	-	-
Transport facilities	1,870,000	1,199,435	2,095,000	-	-	-	-	-	-	-	-
Street furniture, bus shelters, and guardrail	20,000	40,000	50,000	300,000	300,000	175,000	175,000	175,000	75,000	75,000	75,000
Pathways	512,000	486,900	5,800,000	1,020,000	2,500,000	-	-	-	-	-	-
Stormwater and floodplain management	2,830,000	980,000	565,000	1,700,000	1,530,000	-	-	-	-	-	-
Playgrounds	-	-	-	-	-	200,000	200,000	200,000	200,000	200,000	200,000
Open spaces	5,160,000	570,000	535,600	551,668	520,000	600,000	200,000	200,000	200,000	200,000	200,000
Pool structures	350,000	-	-	-	-	-	-	-	-	-	-
Buildings	615,000	10,715,000	12,310,000	3,570,000	2,050,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Waste	125,000	300,000	6,090,000	11,260,000	7,620,000	15,900,663	9,602,737	9,541,556	459,525	176,292	20,188,614
Subtotal	**11,482,000**	**14,591,335**	**32,000,600**	**23,296,668**	**16,600,000**	**18,875,663**	**12,177,737**	**12,116,556**	**2,934,525**	**2,651,292**	**22,663,614**
Totals	**13,074,962**	**14,901,897**	**32,266,249**	**23,566,846**	**16,600,000**	**18,875,663**	**12,177,737**	**12,116,556**	**2,934,525**	**2,651,292**	**22,663,614**

Our Asset Investment Plan

11.6 Expansion and New works

Expansion and new works provide additional service capacity over and above what already exists. There are ever increasing demands for pathways as the community desire for alternative transport to cars to get around our suburbs, and for supporting healthy and active lifestyles grows. Investment into the stormwater and floodplain network will see implementation of priority projects from floodplain risk management plans. The investment into buildings will see the progress and delivery of planned works at the Southern Suburbs library and community hub.

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Plant, fleet & Equip.	-	-	-	-	-	-	-	-	-	-	-
Library collection	-	-	-	-	-	-	-	-	-	-	-
IMT	44,500	42,000	50,000	50,000	50,000	-	-	-	-	-	-
Artworks, Antiquities and Memorials	-	-	-	-	-	-	-	-	-	-	-
Land	250,000	250,000	-	-	-	120,000	120,000	120,000	120,000	120,000	120,000
Subtotal (exc land)	**294,500**	**42,000**	**50,000**	**50,000**	**50,000**	**-**	**-**	**-**	**-**	**-**	**-**
Infrastructure											
Roads	5,920,000	21,650,000	31,500,000	21,050,000	20,300,000	44,606,000	47,065,000	53,010,000	42,545,000	45,692,000	36,359,000
Bridges	-	-	-	-	25,000	25,000	250,000	227,000	300,000	280,000	-
Transport facilities	1,338,000	1,821,000	1,710,000	1,659,907	700,000	825,000	825,000	825,000	825,000	825,000	825,000
Street furniture, bus shelters, and guardrail	33,000	250,000	355,000	75,000	75,000	250,000	250,000	250,000	250,000	250,000	200,000
Pathways	5,598,000	3,557,000	3,329,941	4,130,000	2,350,000	5,550,000	5,550,000	5,550,000	5,550,000	5,550,000	5,550,000
Stormwater and floodplain management	1,770,000	2,201,000	430,000	1,800,000	2,650,000	4,135,000	4,135,000	4,135,000	4,135,000	4,135,000	4,135,000
Playgrounds	-	-	-	-	-	-	-	-	-	-	-
Open spaces	2,995,000	2,965,000	8,540,000	440,000	440,000	-	-	-	-	-	-
Pool structures	-	-	-	-	-	-	-	-	-	-	-
Buildings	5,255,000	20,800,000	29,160,000	30,030,000	750,000	-	-	-	-	-	-
Subtotal	12,525,000	5,050,000	400,000	350,000	10,500,000	-	-	-	-	-	-
Totals	**35,434,000**	**58,294,000**	**75,424,941**	**59,534,907**	**37,790,000**	**55,391,000**	**58,075,000**	**63,997,000**	**53,605,000**	**56,732,000**	**47,069,000**

Our Asset Investment Plan

11.7 West Dapto Works

The plan includes investment of over $110million into delivering works from the West Dapto Development Contribution Plan over the 2025/25-2028/29 years to support the growing community. The plan includes infrastructure additional infrastructure for managing flood risk, transport projects to help the community move in and around the neighbourhood, and open space and recreation assets for active outdoor living. Whilst buildings do not form part of the essential works items that can be funded through the contribution plan, there are plans to provide social infrastructure in the form of community facilities. These facilities will require an alternate funding strategy. However, we are continuing with plans to acquire the required land to provide the community facilities utilising funding from development contributions. The works are classified as new, and expansion works and then categorised by the asset type. The Infrastructure Delivery Program identifies the works in West Dapto by Delivery Stream. Additional work is required to review the timing of implementation of works identified in the West Dapto Development Contribution Plan, including forecast development rate and financial model to ensure the required resources and funding will be available to deliver the works.

Our Asset Investment Plan

11.8 Infrastructure Delivery Program

A key deliverable from Council's annual planning cycle is the development of the 4-year Infrastructure Delivery Program. Through this process, Council reviews the needs of our community as well as the services Council provides, then prioritises the projects that can be delivered to help facilitate these services based on the resources available. The 2025-26 – 2028-29 Infrastructure Delivery Program, as summarised below identifies investments in over 429 projects; all of which contribute to building an extraordinary Wollongong. Refer to the published IDP on Council's website for further details on specific projects across the 4-years.

Asset Category	2025/26	2026/27	2027/28	2028/29	Total Budget over 4 yrs
Artwork, antiquities and memorials	106,600	109,800	113,000	100,000	429,400
Bridges	3,435,000	3,010,000	3,400,000	1,625,000	11,470,000
Buildings	41,865,000	47,805,000	43,120,000	14,120,000	146,910,000
Information management & technology	1,400,000	900,000	1,050,000	933,000	4,283,000
Land	250,000	-	-	-	250,000
Library resources	1,403,749	1,437,663	1,467,854	1,503,100	5,812,366
Open space	5,005,000	9,545,600	1,981,668	1,920,000	18,452,268
Pathways	6,358,900	11,814,941	11,100,000	9,150,000	38,423,841
Plant and Equipment	4,617,920	4,795,414	4,226,500	7,144,433	20,784,267
Playgrounds	1,195,000	1,450,000	1,450,000	1,450,000	5,545,000
Pools	5,500,000	-	500,000	6,010,000	12,010,000
Roads	45,725,000	51,940,000	39,256,900	35,584,375	172,506,275
Stormwater and Floodplain Management	9,211,000	5,030,000	6,400,000	7,200,000	27,841,000
Street furniture, bus shelters and guardrails	535,000	435,000	625,000	625,000	2,220,000
Traffic facilities	3,020,435	3,805,000	1,659,907	700,000	9,185,342
Waste	5,610,000	6,990,000	12,185,000	23,970,000	48,755,000
Infrastructure Strategy & Support	4,176,802	4,923,044	6,449,440	12,791,223	28,340,509
Grand Total	**139,415,406**	**153,991,462**	**134,985,269**	**124,826,131**	**553,218,268**

12 Asset Management Plans

This section of the plan provides a summary of information relating to specific groups of assets. Each section follows a similar format which provides an overview the following sections:

Summary of the asset group – general background information about the group of assets covered in the respective asset plan.

Profile - linkage to our community strategic plan goal and service that the asset group supports.

Strategic Priorities – outlines the supporting documents that are aligned to the service that provide supporting information for planning the asset group. This section also provides a summary of the future impacts on the service as it relates to assets. Some plans include details on the provision of assets for the group.

Asset Snapshot – this section provides a summary of the asset register details for the group. Information on the valuation of the asset group, a summary table of the asset financials, and details of the components and attributes of the assets. The table on the financials generally includes information about the quantum of the asset, the average useful life of the asset, carrying value, annual depreciation and current asset cost. The asset snapshot also includes information on the risks and criticality of the asset, operations and maintenance summary and depreciation and degradation approach.

Future Demand – this section outlines the major changes that are likely to impact demands on the service supported by this asset group. A summary is provided on demand drivers, demand forecast, impact on assets, demand management plan, and asset programs to manage demand.

Roles and Responsibilities – Accountability for implementing actions is key to the success of asset management. Each plan includes a list of roles and responsibilities to help ensure key actions are allocated to the appropriate officers.

Performance – We monitor the performance of the asset and our actions to keep the asset in service. The way that we monitor, and measure performance varies according to the type of asset. We leverage the community satisfaction survey for information on satisfaction and utilisation of some of our services and facilities to understand the performance of the asset. This is an area that we need to develop capacity to better understand how assets and actions are achieving outcomes.

Future Investments – This section of the plan summarises the plans for acquisition and upgrade, renewals, decommissioning and disposal plans for the asset group. A summary table showing the 10-year forecast for depreciation; required maintenance and operational costs to keep the asset group in service; the capital investment toward renewal, upgrade, expansion, and new works on the asset group, and an estimate of the required renewals based on the current asset data. A 10-year outlook on projects is also provided.

Improvement Plan – improving our asset management maturity will ensure that we continue a path of sustainability and extract value out of asset investment decisions. In developing this plan, we considered opportunities to improve in each asset grouping. Where observations were made that are applicable across all asset groups, we listed these recommendations in section 11 – Improvement Plan. Each improvement plan includes a brief description of the issue and allocates a responsibility for acting on the recommendations and a suggested timeframe for actioning. It will be the responsibility of the actioning officer to review the recommendations and report on status and outcome of the review in future versions of the asset management plan.

Asset Management Plans

12.1 Roads

Roads are part of our Transport service that includes the design, delivery, management, and advocacy of transport infrastructure. The service aims to provide a transport network that is safe, efficient, equitable, effective, and sustainable. The service supports the community through creating the provision of transport access for residential, business, recreation, leisure, and tourism activities.

Roads comprise the largest value of the infrastructure assets that Council manages on behalf of the community. The roads asset group includes road pavements, kerb, and guttering, retaining walls and car parks. We manage approximately 8.7 million square metres of road pavement (equivalent to about 1,174 soccer fields) over 1,186km, 1,850km of kerb and gutter and 480,000 square metres of car park pavement.

12.1.1 Profile

Community Strategic Plan Goal: Goal 2: We have well planned, connected, and liveable places

Service: Transport Services

The Roads and Bridges service delivery stream provides the community with a network of roads that are safe, functional, and support efficient and multi modal transport services. Roads are primarily guided by Council's Integrated Transport Strategy supporting document.

12.1.2 Strategic priorities

Transport services are guided and informed by the following strategic supporting documents:

- Draft Wollongong Integrated Transport Strategy (ITS)
- Wollongong Cycling Strategy 2030
- Wollongong City Centre Access and Movement Strategy 2013
- Keiraville Gwynneville Access and Movement Strategy 2020
- West Dapto Contributions Plan
- Wollongong City-Wide Development Contributions Plan

The draft Wollongong Integrated Transport Strategy identifies the following key strategic framework and priorities:

Vision - Wollongong is a liveable and green city where everyone has viable transport choices that provide connected journeys through Country that are safe, reliable, and accessible.

Guiding Principles:

- Connecting to Country and Place.
- Sustainability-focused.
- Multi-modal transport options for all.
- Integrated land use and transport decisions.
- Work with the community for change.
- Comfortable and convenient active travel

Asset Management Plans

Goals – the strategy identifies a range of actions linked to achieving the following six goals:

Goal 1 | Competitive Public Transport
Goal 2 | Everyday needs within 15 minutes
Goal 3 | A connection to Country and sense of place
Goal 4 | Increased use of active modes
Goal 5 | All ages and abilities can get around with ease
Goal 6 | Sustainable transport options

The West Dapto Contribution Plan includes a total of 29 road projects, including upgrades to 17 existing roads and 12 new roads to support the growth in the area. The 17 existing roads have been assessed as not meeting the expected capacity and serviceability needs of the forecast population.

Table 10.1.2 summarises the actions from the Integrated Transport Strategy and the West Dapto Contributions Plan with a relationship to roads and an assessment of the direct impact:

Table 12.1.2 – Supporting Document Actions

Supporting Document	Action	Resource Impact
Integrated Transport Strategy - ITS-03	Design and implement on-road measures to prioritise public transport such as dedicated bus traffic light signalling, queue jumps and bus lanes on key transport corridors.	Implementing the actions will require allocation of funding towards the initiatives. Noting that signalised intersections are under the care and control of Transport for NSW, however funding upgrades on local roads will need to be resourced by Council.
Integrated Transport Strategy - ITS-49	Seek State and Federal funding for the Northcliffe Drive Extension to the M1	The extension of Northcliffe Drive is identified in the West Dapto Contributions Plan (Item TR18). Concept to be prepared to enable funding application.
Integrated Transport Strategy - ITS-53	Develop a freight and services plan for the Wollongong LGA	The freight services plan may identify roads that require upgrade to cater for additional loading.
West Dapto Vision and Contribution Plan	A total of 29 road projects to meet the transport needs of the growing population.	The capital cost of most proposed road projects is funded through development contributions. The exceptions include Yallah Road, Marshall Mount Road, and the Marshall Mount Town Centre Bypass, which are 75.76%, 44.28% and 22.66% respectively funded through development contributions. The ongoing costs for operations, maintenance and renewal will be funded through general funds. The timing of works may be impacted by collection of contributions, and provision of road upgrades may precede the forecast income to fund the operational and maintenance costs of the assets.
West Dapto Vision and Contribution Plan	There are five principles in the Vision relating to the road network.	The design of upgraded and new roads should address the five principles of: 1. Supporting land use patterns 2. A safe, connected and legible road network for all users 3. Design roads to complement the environment 4. Quality infrastructure

		5. Road network to support sustainable transport outcomes

12.1.2.1 Future Impacts

The following future impacts were identified in the delivery stream report for Transport relating to road and car park infrastructure. The strategic response as it relates to roads assets, and the consequences of not funding the impact is summarised in Table 12.1.2.1 below.

Table 12.1.2.1 – Future Impacts and Strategic Response

Future Impacts	Strategic Response	Consequences of Not Funding
Continued urban expansion, including West Dapto has an increased need for new roads and bridges. Continued funding of the renewal gap for the City's ageing road network.	The West Dapto vision and contribution plan articulate the strategy for provision and funding of road infrastructure to support urban expansion. Council routinely reviews the contribution plan to review assumptions, costs, and forecasts. The addition of new road infrastructure increases the annual depreciation expense and ongoing maintenance and renewal requirements. These expenses are not able to be funded by development contributions.	Serviceability of existing roads are likely to suffer where they are not designed to carry the expected traffic volumes. Lack of new roads will reduce the accessibility of the area.
Adapting to changes in availability / pricing of materials (bitumen and concrete).	Design of roads to review appropriate materials for the location, including lifecycle costs.	Potential for increased lifecycle cost of road infrastructure.
State changes in transport planning / policy, moving to 15% public transport for Wollongong city centre from 7-8% currently (adopted State Plan target).	Changes in the public transport network will need to be reviewed to determine impact on road pavements located on the route. Accelerated deterioration and requirement for strengthening is likely on roads not designed for increased bus movements.	Consequences are unknown at this point and difficult to forecast. Roads not designed for increased loading of buses will deteriorate at a faster rate and require early intervention for renewal and upgrade. Council will continue to be an active stakeholder in NSW Government local public transport planning to identify impacts.
Increasing requirements of the Disability Discrimination Act.	Accessibility audit to be undertaken as part of centre plans and public transport nodes. Audit may identify localised changes to road levels to improve accessibility.	Inability to provide equitable and inclusive access for people with mobility challenges.
Investigation of options for park and ride facilities may result in growth in this service moving forward. Management of changing parking demand within Wollongong CBD.	The park and ride options study may identify the need for additional parking areas, or revision of existing parking areas. The outcomes will inform future asset plans for the road asset group.	The consequence of not funding the study may result in increased traffic within the city centre, increasing congestion and travel times.

Asset Management Plans

Future Impacts	Strategic Response	Consequences of Not Funding
Disruptive technology, ridesharing, and driverless cars.	This includes innovation and changes to the existing transport network that creates a new market and replace an existing product. Some examples include car share, ride sourcing, multi-model transport, micro-mobility, driverless vehicles.	Supporting the growth of disruptive technology may help support movement away from single vehicle trips. It may also impact the planning and delivery of car parking in certain locations.
Street sweeping - Increased demand with increased population and tourism. Increased demand with the increase supply of assets and infrastructure such as additional usage of high-profile tourist facilities, cycle paths, additional roads with West Dapto expansion.	The increased demand may require a review of the current service standard for street sweeping to ensure frequency is aligned to areas with higher litter generation. The plan identifies the additional required maintenance and operational expenditure associated with additions to the road network.	Not funding the estimated required maintenance and operational costs associated with additions to the road network will impact the existing service standard.

12.1.2.2   Future Demand

The Local Strategic Planning Statement identifies the likely changes to our community in the future and the implications of population context. These implications will create changes in demand that influences our planning associated with road infrastructure as part of the enabling infrastructure and transport, as summarised below in Table 12.1.2.2:

Table 12.1.2.2 – Future Demands and Asset Response

Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
Population growth -	Wollongong LGA growth by 55,000. During the next 20 years, several of Areas will evolve from 'sub district' sized populations of less than 30,000 people to areas hosting 'district' level populations of more than 30,000 people.	Areas of growth require new road and bridge networks to support development. Some existing road and bridge infrastructure require upgrade to support the changes.	The main area of growth in Wollongong is situated in West Dapto. The West Dapto vision and development contributions plan outline the bridges required to support the growth and the funding contributions from development towards the recommended infrastructure.	The West Dapto contribution plan identifies the infrastructure and funding required to meet the demand. This plan integrates the contributions plan forecasts.
Increased Residential Density	Increased residential density in some of the district hubs within the LGA.	Increased density may create additional demand and capacity issues for existing bridge infrastructure.	The draft Integrated Transport Strategy provides a strategic framework for traffic management across Wollongong.	Any identified need to upgrade capacity of bridge infrastructure is included in the new and upgrade plan.

Asset Management Plans

12.1.2.3   Road Provision and Management Arrangements

The responsibility for management and provision of roads across our area (and generally across NSW), is through legislative and administrative arrangements between Transport for NSW and Councils. There are three main categories of road: State, Regional and Local. Under the arrangements, roads classified as State roads are administered and funded by Transport for NSW.

Regional and Local roads are administered, managed, and funded by Council. We plan and carry our operational, maintenance, renewal, and expansion activities for regional and local roads. Council does not maintain or construct State Roads.

Regional roads provide an intermediate function between State roads and the local road network. They typically carry large volumes of traffic or provide strategically significant connections. Due to the importance of these roads to the transport network, the NSW Government provide supplementary funding towards the management of regional roads. Transport for NSW is required to maintain a schedule of classified roads and the network of regional roads in our area includes sections of Old Princes Highway and Princes Highway, Towradgi Road, Pioneer Road and Squires Way, Throsby Drive, Denison Street, Gladstone Avenue, Bridge Street, and Northcliffe Drive.

Local roads are funded and managed by Council. We received financial assistance grants for the management of these roads, primarily supported by the Australian Government, through the Federal Assistance Grant for local roads component and the Roads to Recovery program.

Most of the road network managed by Council are local roads. We use a road hierarchy classification to assist in assessing the risk and criticality profile associated with each asset. The hierarchy assigned to each local road asset is associated with the current and expected traffic volumes and vehicle type (percentage of heavy vehicle). A summary of the hierarchy and the respective percentage of our local road network is provided below:

- Sub-arterial – 5% (includes Regional Roads)
- Major collector – 12%
- Minor collector – 18%
- Major local – 20%
- Minor local – 44%
- Fire trails

The hierarchy is used to establish and apply service standards for the management of the road. It informs our operational planning for traffic and transport, and maintenance and renewal intervention and response times.

12.1.3   Asset Snapshot

Asset Register – Assets

Financial Reporting Group: Roads

Last comprehensive revaluation: 2022

Valuation Information: – Road infrastructure assets are recognised using the cost method, which equates to the current replacement cost of a modern equivalent asset. The cost to replace the asset (gross replacement cost) is to equal the amount that a market participant buyer of that asset would pay to acquire it.

Asset Management Plans

Fair Value Hierarchy - the general valuation approach to determine the fair value of the road infrastructure inventory is to determine a unit rate based on square metres or an appropriate unit supported by market evidence (Level 2 input). Further to this other input such as asset condition and useful life require a significant level of professional judgement and can impact significantly on the fair value. As such the level of valuation input for these assets was considered level 3.

Asset Classification (L4)	Count of Asset	Average of Useful Life (Years)	Sum of Current Asset Cost	Sum of Current Annual Depreciation as at 30 June 2024	Sum of Carrying Value
Car Parks					
Boat Ramp	16	67	3,824,697	45,400	1,214,778
Kerb and Gutter	229	79	10,688,584	133,563	6,626,067
Road Base	351	78	25,115,642	328,565	15,308,452
Road Earthworks	329	N/A*	8,992,542	-	8,992,542
Road Seal	322	44	13,179,422	333,195	7,399,552
Road SubBase	17	66	1,075,438	20,411	1,028,323
Retaining Walls	289	59	78,834,058	1,392,581	58,010,719
Roads					
Kerb and Gutter	11,250	80	476,505,738	5,951,244	165,101,349
Road Base	6,461	75	416,221,475	5,769,979	170,270,627
Road Earthworks	5,862	N/A* (40)#	132,603,384	87,003	131,904,727
Road Seal	6,659	41	228,241,543	6,641,094	92,732,471
Road SubBase	6,072	76	640,782,218	8,717,627	221,623,916
			2,036,064,740	**29,420,662**	**880,213,524**

* Earthworks are typically treated as non-depreciable assets.

four road assets at Whytes Gully have been recognised as having a life associated with the life of the cell. These assets have an expected useful life of 40 years and are depreciated. At the end of the cell life, the haul roads will no longer be in service.

12.1.3.1   Components and attributes

Roads are recognised at component level depending on the complexity of the structure, including:

- Earthworks – this comprises the original excavation or shaping of the land to provide a formation for the road. It prepares the natural ground or subgrade for the road to be built on. Most of our earthworks are recognised as non-depreciable asset as we do not expect to replace the formation of the earthworks.

- Sub-base – provides stiffness to distribute traffic loads on to the subgrade (natural ground). It provides a working platform for the construction and may provide a either drainage of the base course or waterproofing on the subgrade depending on the soil conditions.

- Base – the base course provides stiffness to support the seal and resist movement and deformation. This is the depth of pavement that carries and spreads majority of the wheel load onto the sub-base and subgrade below. The depth and type of material is designed to carry the forecast traffic and be compatible with the geotechnical conditions. Most of our roads use a compacted gravel.

Asset Management Plans

- Seal (surface) – this layer provides a waterproofing for the base course to protect it from deteriorating. The seal also provides a friction later to improve road safety. The primary type of seal in our area is asphaltic concrete (AC), and to a lesser extent, sprayed seal, and concrete.

Our roads are broken into segments to enable us to plan and manage the asset effectively. We are currently undertaking a review of the road segments to validate and confirm the spatial and dimensional characteristics against the asset register. This activity will ensure our data is accurate to improve the reliability of our planning.

Kerb and guttering is recognised as a single component asset. We follow the same principles of segmenting the kerb and gutter network, with the segments directly aligned to roads.

Car parks assets at broken into multiple components, using a combination of the same road components of earthworks, sub-base, base, and seal; in addition to kerb and guttering. We currently recognise boat ramps as a car park asset. It is recommended that the classification be reviewed to align boat ramps with other marine structures (wharves, jetties, seawalls, etc) as they share similar coastal hazards and legislative provisions. Car parks associated with the boat ramp should remain in the car park classification.

12.1.3.2   Risks and criticality

Critical services are defined as those which have a high consequence of failure causing significant loss or reduction of service to the community as outlined in Section 7.1.5. A review of the Transport Service identified that it is a critical service. The roads identified as critical are derived from the major transport routes in the local emergency management plan. The only road under Council control is Old Princes Highway from the Wollongong City Council boundary south of Waterfall through to Bulli Tops. Council does share some operational function on Lawrence Hargraves Drive in terms of footpaths and parking lanes in some areas. However, Transport for NSW remains the Roads Authority for the road.

Whilst not defined as Critical in accordance with the definitions in Section 7.1.5, there are roads that provide access to essential services and other facilities that have a high consequence if the road is not in service. These locations are recommended to be identified as part of the improvement program, and the appropriate criticality rating associated with the asset attributes. This will influence the service planning for these roads.

12.1.3.3   Operation and maintenance requirements

Routine inspections are part of our operational requirements for roads and include:

- Level 1 inspections – primary function of this inspection is to identify defects. We are transitioning this to camera-based inspections. We expect every road to be traversed by the camera between 1-26 times per year.
- Level 2 inspections – network visual condition assessment on a 4-yearly basis.
- Level 3 inspections – network camera and laser profile on road pavements on a maximum 5-year basis. More frequent monitoring enables improved calibration of the modelling for treatments and is recommended on a 2-3 yearly interval.
- Routine and minor maintenance as required based on Level 1 inspections.

With the improvements in technology for camera-based inspection and condition monitoring, we expect changes to our current inspection routine. We will continue to work with industry experts to explore the ability to apply the technology to other network assets such as kerb and guttering, transport facilities, guardrails, street signs and line marking. The camera-based defect monitoring will be assessed to determine if the data is able to supplement Level 3 inspections.

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Roads require routine maintenance actions, including those listed below, to ensure they remain serviceable and meet the expected useful life:

- routine inspections
- removal of vegetation and debris
- surface repairs
- street sweeping
- spill containment
- load limit signage

Other road related operational and maintenance activities on roads such as works relating to guardrails, transport facilities, road signs and line marking are addressed in other sections of the asset plan.

12.1.3.4   Depreciation and degradation curves

Road assets and component use a straight-line depreciation. Road pavements typically follow a s-curve degradation profile however our current planning is largely based around a straight-line degradation profile. As we develop expertise in strategic asset modelling within the asset management system, we will transition to a more appropriate degradation profile to enable us to plan the most cost effect timing for treatment interventions.

12.1.4   Roles and responsibilities

Service Manager: Manager Infrastructure Strategy and Planning

Role	Lifecycle	Function	Responsibility	Activities
Service Management	Planning	Service Planning	Manager Infrastructure Strategy and Planning	Ensure service linkage to CSP Define service needs Determine service hierarchy Analyse capacity and demand Summarise service-related legislative requirements Establish customer levels of service Determine asset requirements for service delivery
	Operation	Service Operations	Manager Infrastructure Strategy and Planning	Act as customer liaison for service Provide website information and communications Initiate notifications for service interruptions Undertake functional assessment Monitor and manage service and asset utilisation
	Delivery and End of Life	Asset Acquisitions and Disposals	Manager Infrastructure Strategy and Planning	Develop plan for acquisitions and disposals of assets aligned to service plan and demand forecast Engage with stakeholder on acquisition and disposal plan Arrange relocation or transition of service

Asset Management Plans

Role	Lifecycle	Function	Responsibility	Activities
				Arrange establishment or termination of agreements (utilities)
Asset management	Planning	Asset Planning	Manager Infrastructure Strategy and Planning	Complete condition and performance assessment Assess asset related legislative requirements Coordinate scope preparation Asset review Renewal planning
		Asset Data	Manager Infrastructure Strategy and Planning	Administration of asset register Updates for capital improvements Initiate asset disposal system process Prepare asset management plan Coordinate asset reporting data
		Asset Financials	Manager Infrastructure Strategy and Planning	Revaluation Unit rates Estimates Monitor expenditure
Project Delivery	Delivery	Project Sponsor	Director Infrastructure + Works	Approval of project plan Oversee business proposal Capital expenditure review (OLG)
		Asset Concept	Manager Infrastructure Strategy and Planning	Define the problem/need Options assessment Feasibility Lifecycle costing Funding strategy Business case/proposal
		Program Management	Manager Project Delivery	Oversee project as part of program Responsible for managing overall program costs, risks, progress
		Asset Design	Manager Project Delivery	Ensure design solutions align with strategy Options analysis Concepts Design development Cost estimating Complete safety in design report Approvals process
		Asset Delivery	Manager Project Delivery Manager City Works	Cost estimate Value engineering Procurement strategy Contract management Procurement Project management Project commissioning and handover

Asset Management Plans

Role	Lifecycle	Function	Responsibility	Activities
Maintenance and Operation Management	Maintenance	Asset Maintenance	Manager City Works	Complete maintenance inspections Work management triage and scheduling Establish maintenance procedures Undertake maintenance works
	Operation	Asset Operations	Manager City Works	Street sweeping Removal of debris Road spill response
			Manager Development Assessment and Certification	Road occupancy applications Road Naming Subdivision certificates
			Manager Infrastructure Strategy and Planning	Heavy vehicle access permits Local Traffic Committee referrals

12.1.5   Performance

We monitor the performance of our road assets by condition (actual physical and technical state of the asset), capacity and customer satisfaction. The condition of road pavements is comprehensively monitored on a regular basis. We utilise a combination of visual condition information and laser measured surface data to determine a pavement and surface condition of our roads. Some of the factors analysed include:

- Patching
- Surface defects
- Stripping
- Ravelling
- Edge breaks
- Cracking
- Pavement defects
- Roughness

We weight the factors against severity and analyse according to the road classification to determine when we will need to intervene with treatments. It is recommended that the condition monitoring continue a regular basis at no longer than 5-year intervals.

An overview of the condition of road assets by gross replacement value is provided in Figure 10.1.6 below.

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Figure 12.1.6 – Condition by Gross Replacement Value

	1	2	3	4	5
■ Roads	345,645,227	347,243,297	755,223,611	324,049,872	26,696,597
■ Car Parks	33,452,838	11,901,038	8,938,303	1,232,193	1,353,388

Gross Replacement Cost ($Millions) — Condition
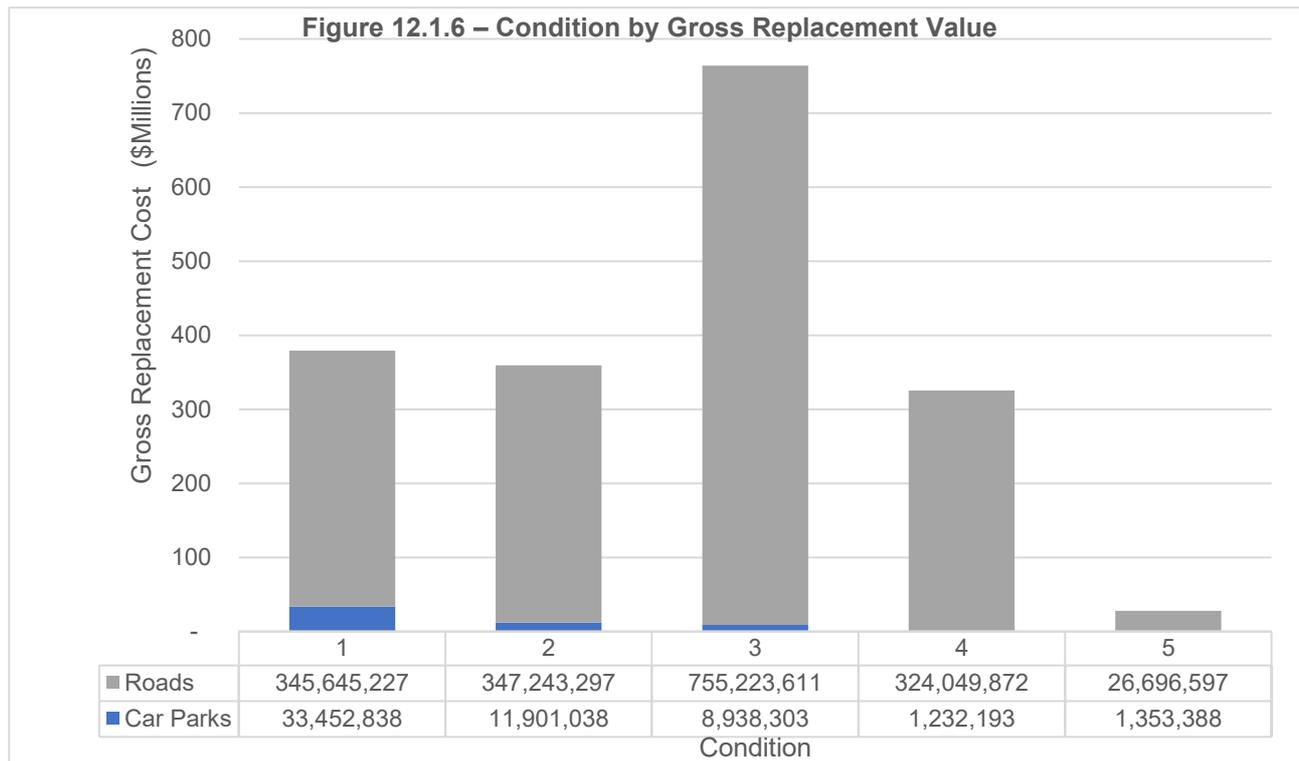
Capacity of the road network is monitored through our traffic and transport planning function. The team review functional assessments of travel times and classification of roads.

12.1.5.1   Community Satisfaction Survey

Council's most recent Community Satisfaction Survey includes results relating to roads as part of the Direct Services. Utilisation of direct services is not measured as part of the survey. The summary below details the community satisfaction with three direct services relating to roads:

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Direct Services	2010	2012	2014	2017	2019	2021	2023	Significant Change Since 2021
Street cleaning	3.3	3.3	3.4	3.2	3.7	3.7	3.6	⇔
Maintenance of local roads	2.8	2.8	3.1	2.7	3.1	3.2	2.8	⬇
Provision of parking in high demand areas (city centre, foreshore)	-	-	-	-	-	2.5	2.5	⇔

Street cleaning and provision of parking have remained consistent, the community satisfaction on local roads has decreased since 2021. It is noted that an extended period of wet weather resulted in accelerated deterioration of the surface of some local roads. It is also noted that the condition of State Roads under the care and control of Transport for NSW may influence the view of some survey responders.

12.1.5.2   Criteria for levels of service

Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
Customer Levels of Service				
Safety	Assets are safe for use	Number of claims alleging injury or damage associated with condition of an asset	Asset condition not found to have contributed to injury or damage.	
Function	Roads are fit for purpose	No restrictions that unreasonably limits usability of road assets	Number of requests for exemption from restriction	
Serviceability	Roads are available for use	Percentage of roads in serviceable condition.	No "closed" road assets, except those identified for decommissioning or temporary (e.g., works, flooding, etc)	
Satisfaction	The community is satisfied with the services provided by Council supported by this asset group	Community survey Direct Services – Internal Benchmark for Street cleaning	No significant decrease in average satisfaction results to previous survey	The average across seven surveys is 2.9, and the rating for 2023 is consistent at 2.8. However, there was a decrease from the 2021 result of 3.2 which is considered a significant decrease ☹
		Community survey Direct Services – Internal Benchmark for Maintenance of local roads	No significant decrease in average satisfaction results to previous survey	

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Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
		Community survey Direct Services – Internal Benchmark for Provision of parking in high demand areas (city centre, foreshore)	No significant decrease in average satisfaction results to previous survey	
Residents' Wish List	The community do not see this asset group or associated service as an area of focus for council over the next 4-years	Community survey internal benchmark – "In your view what are the three key areas you think Council should focus on over the next four years?"	Less than 10% increase on previous percentage	Roads and traffic as a group increased from 35% to 41% between 2021 and 2023. This is a 17% increase ☹
Technical Levels of Service				
Condition Inspection	Level 1 condition assessment	Annual	75% compliance	😊
	Level 2 condition assessment	4-yearly	75% compliance	
	Level 3 condition assessment	Maximum 5-yearly interval	100% compliance	
Load limit signage	Visual inspection	Annual inspection	100% compliance	
Event damage	Level 1 inspection	Within 2 weeks of incident	100% compliance	Target met 😊
Cost	Implementation of efficient and cost-effective maintenance programs	Maintenance costs attributed to work orders	Assets with high maintenance costs identified for major maintenance program or renewal.	
Risk	Assets are maintained within a tolerable risk profile.	Risk assessment of road infrastructure to be undertaken.	All assets managed in accordance with the infrastructure risk appetite statement	😊
Performance	Asset management actions and funding allocation supports long-term sustainability	Percentage of identified renewals funded		
		Percentage of planned renewals completed		
		Percentage of identified proactive maintenance works completed		

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12.1.5.3   Roads Resilience

The natural and non-natural hazard exposure categories for the City of Wollongong are identified through the Local Emergency Management Committee. The hazards identified as part of the Local Emergency Risk Management Study, that may impact road infrastructure are summarised in Table 12.1.5.3 below:

Table 12.1.5.3 – Hazards Exposure - Roads

Risk Rating	Hazard Name	Rating priority	Residual Risk Rating	
1	Severe Storm	**Extreme**	Major/ Likely	Severe storm with accompanying lightning, hail, damaging winds, and/or rain that causes severe damage and/or localised flooding (includes tornado and waterspout) and coastal erosion. This hazard may impact roads through temporary closures due to flooding, deposited debris, sustained damage from uplifted trees, loss of support and wash out from erosion.
2	Fire – Bush/Grass	**Extreme**	Major/ Likely	Major fires in areas of bush or grasslands. The impact on roads includes temporary closures due to poor visibility, fallen trees, fire impacted roadside assets (signage, guardrail), and damaged road seal for heat.
4	Flood – Lake and Flash	**Extreme**	Major/ Likely	Heavy rainfall causes excessive localised flooding with minimal warning time. This hazard may impact roads through temporary closures due to flooding, deposited debris, sustained damage from uplifted trees, loss of support and wash out from erosion.
6	Infrastructure Failure – Power	**Extreme**	Major/ Possible	Power failure may impact street lighting
9	Landslip/ Mudflow/ Rockfall	**High**	Moderate/ Likely	Landslip/mudflow/rockfall resulting in localised or widespread damage. Landslip can cause instability and closure of the road. These impacts can create medium-to-long-term closures whilst support is reinstated. Mudflow and rockfall are typically associated with short-term closures to effect removal of debris. May result in the need for stabilisation of adjoining areas.
12	Transport Accident – Rail	**High**	Moderate/ Possible	A major rail accident on the Illawarra line, particularly on the steep descent through the Illawarra Escarpment down to Wollongong (including the viaduct/tunnels), resulting in a number of fatalities, injuries and/or damage to properties along the rail corridor, restriction to supply routes and/or protracted loss of access to or from the area; possible environmental damage. Impacts to the road network due to closure of the railway and diversion of rail passenger transport to the road network. Emergency access may require localised closures.
13	Transport Accident – Road	**High**	Moderate/ Possible	A major vehicle accident that disrupts one or more major transport routes that can result in risk of people trapped in traffic jams, restrict supply routes and/or protracted loss of access to or from the area. Impacts to localised area due to closures and traffic diversions. An accident may result in the need to contain and clean spills, and/or damage to the road surface.

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Risk Rating	Hazard Name	Rating priority	Residual Risk Rating	
15	Major Structural Collapse	**High**	Major/ Rare	Failure of a major structure with or without warning owing to structural failure or because of external/internal events or other hazards/incidents. Incidents are likely to require road closures. Structure failure may cause instability or loss of support to the road.
17	Infrastructure Failure – Water	**High**	Major/ Rare	Major failure of essential utility for unreasonable periods of time because of a natural or human-caused occurrence (>24 hours). Uncontrolled release of water from mains is likely to result in direct damage and washout of road pavements.
18	Earthquake	**High**	Major/ Rare	Earthquake of significant strength (> Magnitude 7) that results in localised or widespread damage. The extent of damage can vary widely from minor cracking to major sinkholes and failures.
19	Tsunami – Land inundation threat	**High**	Major/Rare	A tsunami wave of magnitude that presents a risk to land and marine elements. This hazard may impact roads through temporary closures due to inundation, deposited debris, sustained damage from uplifted trees, loss of support, major wash out.
22	Hazardous Materials	**Moderate**	Moderate/ Unlikely	Release of hazardous material resulting in the closure of the road, and potential damage to the asset.
24	Coastal Erosion	**Rare**	Minor/ Low	Damage to road assets resulting from significant coastal erosion.

The local emergency management plan covers the preparedness and response plans for the events listed above. Post incident, Council will instigate the appropriate inspection program to review any roads impacted by the event.

Resilience ratings for some individual Council roads will be higher than the overall ratings above. These will need to be assessed and managed according to risk. As an example, the access road to Bellambi Boat Ramp is impacted by coastal erosion and needs to be monitored following coastal storm events.

12.1.5.4   Climate Hazards

The key climate hazards identified through the Climate Change Adaptation Plan (CCAP) as most relevant to roads are flooding, bushfires, storms, and sea-level rise. A summary of the actions from the CCAP and relation to roads is provided in Table 12.1.5.4 below.

Table 12.1.5.4 – Climate Hazards - Roads

Priority Actions		
Hazard	**Climate Change Adaptation Plan Action**	**Road Infrastructure Actions**
Flooding	Continue managing flood risk through floodplain risk management plans, incorporating climate predictions.	Review floodplain risk management study and plans for recommended work items on roads. Identify flood evacuation routes for risk management plans.
	Continue and monitor maintenance schedules to reduce the risk of drainage network blockages.	Road drainage to be inspected in accordance with agreed levels of service to identify blockages. Levels of service to be based on

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Priority Actions		
Hazard	**Climate Change Adaptation Plan Action**	**Road Infrastructure Actions**
		the criticality of the drainage network.
	Undertake community education to increase awareness of the dangers of floodwaters and precautions to minimise risks to people and property.	Education to increase awareness of driving through flooded roads.
Bushfire	Proactively maintain fire trails and other bushfire related infrastructure to be fire ready e.g., hazard reduction.	Fire trails are listed as a type of road. Inspections and maintenance of Council fire trails are scheduled. Also monitor evacuation routes during times emergency management. Check for damage to road infrastructure following bushfires.
Storms	Prepare and implement an Open Coast Coastal Management Program.	Implementation of infrastructure actions will be included in forecast expenditure.
	Identify Council's business continuity plans (BCPs) and review and updated as required to address increase the likelihood of storm and extreme weather events.	BCPs may identify critical services and associated assets. Any changes to critical assets will be listed in revisions of the asset management plan, and appropriate management plans developed.
Sea-level rise	Prepare and implement an Open Coast Coastal Management Program.	Implementation of infrastructure actions will be included in forecast expenditure. The current Wollongong Coastal Zone Management Plan 2017 (CZMP) identifies roads and car parks with current medium risk, with some locations expected to increase in risk to high by 2050. The CZMP will be placed by the Coastal Management Program soon.
	Recovery plans from emergencies are to be developed in partnership with communities and other relevant service providers.	Recovery plans typically result in unscheduled maintenance activities. Some recovery actions are part funded through State agencies for major events.

12.1.5.5   Coastal Zone Management Plan

The Wollongong Coastal Zone Management Plan 2017 (CZMP) reviewed the vulnerability of the roadways and parking to storm erosion and sea-level rise induced foreshore recession. The CZMP notes that sections of the road network are positioned near the coast. Lawrence Hargraves Drive is a major access road for north-south connections, with sections in Austinmer most at risk. It is noted that Lawrence Hargraves Drive is a State Road under care and control of Transport for NSW, with a management agreement in place for some limited actions for Council. In addition, there are local roads and car parks that remain under threat along the coastline, as summarised in Table 12.1.5.5 below:

Table 12.1.5.5 – Coastal Roads at Threat

Location and Asset	Risk Now	Risk at 2050	Risk at 2100
Sharky: Austinmer Boat Harbour car park	Medium	Medium	High
Little Austinmer and Austinmer: Lawrence Hargraves Drive	Medium	High	Extreme
Little Austinmer and Austinmer: Local roads and car park	Medium	Medium	High
Sandon Point: Local roads – Trinity Row, Ursula Street, Alroy Street	Medium	Medium	High
Woonona: Local Roads – Kurraba Rd, Beach Dr, Liamina Av, Robertson Rd, Dorrigo Av	Medium	Medium	High
Bellambi Beach: Local Roads – access road to Bellambi boat harbour	Medium	High	Extreme
Towradgi: Local Roads – Marine Pd (north end of beach)	Low	Medium	Medium

Investigation is recommended to identify long-term management options to manage the impacts from sea-level rise and storms at these locations. Where feasible, planning for retreat and relocation should be considered, and where insufficient land is available, costal erosion works considered.

12.1.5.6   Resilient Treatments

Roads are resilient to a range of impacts from external factors, however common causes of accelerated deterioration are moisture ingress into pavements and overloading. Pavements are typically designed to remain relatively dry. Water can reduce the strength of the pavement and its ability to resist deflection under loads. Materials with higher silt and clay content are most impacted by excess moisture. We have also seen an increase in deterioration of some road pavement basecourses because of sustained saturation. Long periods of wet weather may allow excess groundwater to permeate into the subgrade, sub-base, and base layers. This weakens the pavement and may activate clay soils, resulting in pavement failures. In locations where this type of failure has been identified, we investigate options to strengthen and increase the resilience of the pavement to future moisture related damage. This may include addition of longitudinal subsoil drainage, moisture resistant binder, or introduction of drainage layers within the pavement.

Storm events over the last few years have identified other roads vulnerable to damage from storm-induced erosion. Erosion in creeks and open channels adjoining roads has resulted in destabilisation of the banks and loss of support for the roadway. Reinstatement works include stabilisation works to reduce the risk of ongoing damage in affected locations. A list of roads that have sustained damage is to be compiled to monitor for future damage following storm events.

Roads are designed to carry specific traffic volumes and expected heavy vehicle loading. Changes in road usage and loading can accelerate the deterioration of both the surface and the pavement layers. Isolated impacts may occur where point loads have increased on roads from the introduction of a traffic calming measure. Our road pavement designs for renewal and rehabilitation factor in changes in use and loading to ensure the replacement road is more resilient to the changed traffic environment. The design of traffic calming devices should include the identification of increased point wheel loads introduced through defined turning paths (e.g. at roundabouts and chicanes), and or increased braking loads (e.g. raised crossings, threshold and speedhump treatments). Traffic calming treatments should include a review of the road pavement to ensure the design is able to withstand the increased loading.

Wollongong City Council has invested in resourcing a geotechnical laboratory and internal experts to sample road pavements and prepare appropriate resilient pavement designs to reduce whole of life costs.

12.1.5.7   Maintenance Treatments

Road assets are comprised of both medium and long-life assets that provide a high level of service to the community. The seal on roads is expected to have a life of between 20 and 35 years, and the base and sub-base pavement layers below having an 80-plus useful life.

Maintaining the surface is an important action to maximise the life of the underlying pavement layers. Excessive water ingress into the pavement layers can rapidly deteriorate the pavement. We have all seen how quickly a pothole can grow during a few days of rain. As a vehicle travels over a road, the wheel causes compression in the pavement. Water is not able to compress under the loading, so when the pavement is saturated with water, the wheel load forces the water out under pressure, and it results in surface blowout or damage to deeper layers.

Most roads in our area are sealed with asphaltic concrete (AC). The material is one of the most common surface materials of roads in heavily populated areas due to serviceability and durability. For many years we have followed a proactive maintenance program of applying a sprayed seal to the surface of AC. This action in primarily to maintain the waterproofing properties of the surface to protect the pavement below. Ultraviolet radiation from the sun degrades the binder in AC and reduces the flexibility of the seal, leading to cracks and deterioration of the waterproofing qualities. The application of a sprayed seal has been used when the AC reaches the 20-year life and a second application of a sprayed seal after an additional 10 years. This preventative maintenance treatment has been effective in achieving a 40-year life for the seal.

Whilst the treatment has brought benefit in extending the life of pavements, it is noted that sprayed seals have different serviceability to AC. There are risks during the application of the treatment of tracking bitumen on wheels to adjoining surfaces (e.g. driveways), excess loose stones, bitumen spray onto vehicles from tyres, and customer complaints due to not meeting ride quality expectations and impact to private property The applied surface may induce higher tyre noise than an AC surface, and localised defects will typically be reflected through the sprayed seal finish as the treatment does not provide shape correction of the underlying surface.

Whilst there are also risks during the application of AC, the likelihood of tracking bitumen bleed on wheels, or loose stone is significantly lower. Austroads note in the Guide to Pavement Technology, that "AC has greater resistance to trafficking effects, a higher durability and provides a smoother riding surface… Both asphalt and concrete can contribute to the structural strength of the pavement structure whereas a sprayed seal surfacing has no structural contribution."

The life-cycle cost and benefits of applying sprayed seals at years 20 and 30 to the seal have been compared to an alternative of re-sheeting the road. Analysis demonstrates that delaying intervention periods will result in a reduced lifecycle cost, whilst continuing to provide adequate waterproofing of the basecourse.

12.1.5.8   Proactive Maintenance Planning

We have been developing innovative technology to improve our ability and capacity to monitor the road network for defects. In 2022/23 we piloted the application of Artificial Intelligence (AI) technology using dash-mounted mobile phones fitted to waste collection trucks to record video of the road. The technology uses algorithms to interpret the image to identify defects in the road, such as potholes, subsidence, and cracking. When a defect is identified, the system creates a prioritised record based on size, severity, and location. Defects that meet the intervention level are issued for works.

The road AI approach utilises emerging technology and we have been developing and testing the integration for reliability. Our testing confirmed an acceptable level of reliability, and we are now taking steps to implement the system. This requires some updates to our current processes and development of existing

systems to accommodate the changed approach. As we continue to use the technology, we are learning potential capabilities of the technology for application to other road related assets, such as road signs, footpaths, and kerb and gutter. We are also testing the ability to monitor the rate of progression of minor defects over time until they require work to be done.

The use of this technology will see a progressive shift from a predominately reactive road maintenance program to a proactive scheduled maintenance program. The majority of the current road maintenance defect repairs are driven by customer feedback. With proactive monitoring, we expect to see a reduction in the number of requests from the community for defect repairs.

To complement the current work being developed as part of the AI project, it is recommended that a risk-based approach be implemented to managing a range of other road defects. Developing a guideline and system for identification and management of defects in road assets will improve the quality and ensure that hazards are managed based on priority. The Institute of Public Works Engineers have developed *A risk-based approach to managing road defects* for local government, that outlines an inspection intervals, defect and prescribed actions, and trigger levels for maintenance and repair related to respective road classification. Developing this approach will improve allocation of resources and lifecycle costing for future asset planning.

12.1.5.9   Legislative Requirements

- Road Transport Act 2013

- Environmental Planning & Assessment Act 1979

- Protection of the Environment Operations Act 1997

- Catchment Management Authorities Act 2003

- Fisheries Management Act 1994

- Threatened Species Conservation Act 1995

- Native Vegetation Act 2003

- Noxious Weeds Act 1993

- Civil Liability Act 2002

12.1.6   Future Investments

12.1.6.1   New and Upgrade Plans

Table 12.1.6.1(a) includes upgrade of existing and new roads that are listed in the West Dapto Development Contributions Plan. The roads were identified as part of the demand analysis for transport associated with the population growth. The timing of works is driven by the rate of development, with the contribution plan providing indicative timing. The data and references are compiled using the following tables from the West Dapto Development Contribution Plan: 11, 12 and Schedule 3. The table includes roads that are anticipated beyond the 10-year life of the plan; however, they are included for completeness.

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Table 12.1.6.1(a) – West Dapto Roads

Ref.	Infrastructure Item	Road Sections	Indicative Timing	Road Cost (pavement plus on-cost)
Existing Roads				
TR01	West Dapto Road	WD1 to WD17	2020/21 - 2030/31	$32,228,469
TR02	West Dapto Road Rail Crossing	WDR1	2010/11 – 2031/32	$539,963
TR03	Sheaffes Road	SH1 to SH3	2021/22 - 2025/26	$10,101,771
TR04	Paynes Road	P1 to P4	2026/27 - 2030/31	$5,318,184
TR05	Smiths Lane	N/A	Completed – 15/16	
TR06	Wongawilli Road	W1, W2, W3	2018/19 - 2020/21	$3,557,076
TR07	Darkes Road	D1 to D6	2027/28 - 2031/32	$10,115,657
TR08	Shone Avenue	S1 to S5	2012/13 – 2026/27	$12,131,008
TR09	Bong Bong Road rail crossing	N/A	2045/46 - 2050/51	
TR10	Bong Bong Road	BB1 to BB8	2035/36 - 2040/41	$5,117,504
TR11	Reddalls Road	R1	2027/28 - 2031/32	$3,401,971
TR12	Wyllie Road	WY1	2031/32 - 2035/36	$3,332,544
TR13	Cleveland Road	C1 to C12	2013/14 - 2031/32	$30,828,605
TR14	Avondale Road	A1 to A6	2040/41 – 2050/51	$22,737,664
TR15	Huntley Road	H1 to H3	2035/36 - 2040/41	$7,734,277
TR16	Yallah Road	Y1 to Y4	2031/32 - 2035/36	$18,872,901
TR17	Marshall Mount Road	MM1 to MM6	2031/32 - 2055/56	$46,109,958
New Roads				
TR18	Northcliffe Drive extension - east	NR1 to NR12, R2, R3	2031/32 - 2035/36	$30,310,411
TR19	Northcliffe Drive extension - west	NR13 to NR19	2025/26 - 2034/35	$7,735,163
TR20	Iredell Road	NR20	2025/26 - 2029/30	$3,587,299
TR21	Brooks Reach to Cleveland (east)	N/A	2025/26 – 2030/31	
TR22	Fairwater Drive	F1 to F3	Completed - 12/13	
TR23	Fowlers Road Extension	NR21 to NR25	2016/17 - 2022/23	$27,228,269
TR24	Eastern Link Road (Bong Bong Road to Fowlers Road)	NR26, NR27	2046/47 - 2050/51	$4,423,448
TR25	Western Ring Road - Shone Avenue to Yallah Road	NR28 to NR44	2021/22 - 2050/51	$54,041,234
TR26	Brooks Reach to Huntley Link	NR45 to NR49	2035/36 - 2055/56	$14,856,407
TR27	Eastern Link Road (Fairwater Drive to Avondale Road)	NR50 to NR53	2046/47 - 2050/51	$10,647,594
TR28	Eastern spine road - Western Ring Road to Huntley Road	NR54, NR55	2046/47 - 2050/51	$10,725,884
TR29	Marshall Mount Town Centre Bypass (Marshall Mount Road to Yallah Road)	NR56 to NR58	2035/36 - 2040/41	$16,278,499

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For each $1M invested into new roads, the required annual maintenance and operational expenditure increases by $8,800 and annual renewal expense increases by $17,000.

The total value of roads proposed under the West Dapto Development contribution plan is $407M. This is estimated to increase the annual required investment into maintenance by $1.2M and renewals by $5.4M as shown in Table 12.1.6.1(b) below:

Table 12.1.6.1(b)

Road component	Component % of road cost	Component cost ($)	Annualised Renewal Requirement ($)	Required annual maintenance ($)
Kerb and Gutter	25%	101,828,919	1,272,735	448,047
Road Base	22%	89,636,233	1,183,007	788,798
Road Earthworks	7%	28,372,331	-	
Road Seal	12%	49,281,865	1,183,879	10,418
Road SubBase	34%	138,032,652	1,818,490	
Total		**407,152,000**	**5,458,111**	**1,247,264**

12.1.6.2   Decommissioning and Disposal Planning

Where we identify roads that are not required to meet a required level of service, we may look at decommissioning roads. Unforeseen decommissioning may result from impacts of natural disaster.

Disposal of unmade roads may also occur where the land is not required to provide a transport function.

We will investigate decommissioning of roads where council has acquired properties through the voluntary purchase scheme to mitigate flood risk. In some locations, the road is no longer required to provide vehicle access to adjoining properties. This creates an opportunity to remove the road pavement and associated infrastructure to reduce ongoing liability for renewal and maintenance.

12.1.6.3   Renewal Works

With the proposed change of applying the sprayed seal at the 10 plus 10-year intervals to a resheet option, we will need to adjust our financial treatment of the work. The current sprayed seal treatment is considered a maintenance activity – that is an activity that enables the asset (the underlying AC seal) to achieve its expected service life. The resheeting at the 40-year period is a renewal treatment (replacement with a modern equivalent asset).

By changing our approach to resheeting at the appropriate time, the activity is treated as a renewal. This will require an adjustment and realignment of budgets to reflect the change.

Our intention with road pavements is to extend the useful life of the components to the optimal renewal period that balances the longest service life against serviceability. In most cases, a run-to-fail scenario is not the preferred model as the serviceability of the road will be impacted. In practice, that may be observed as compounding surface defects, deformation and subsidence, loss of seal, and/or leachate from the base course visible at the surface.

Based on the current information relating to condition and forecast useful life, the following graph at Figure 12.1.7.3 provides an indication of the timing and cost to renew road assets over the next 10-years. The average annual investment per year over the 10-year period is $10.95M. Note that this excludes sub-base as the useful life of this asset group needs to be reviewed. Analysis revealed that sub-base was triggering

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renewal prior to the base on several roads. Including sub-base increases the annual renewal requirement by approximately $19M per year, which is overstating the actual required works. It is expected that some roads may require renewal of sub-base. We are planning to invest in the order of $14.6M per year over the 10-year period of the plan.

Figure 12.1.7.3 - Forecast Road Renewal Requirements
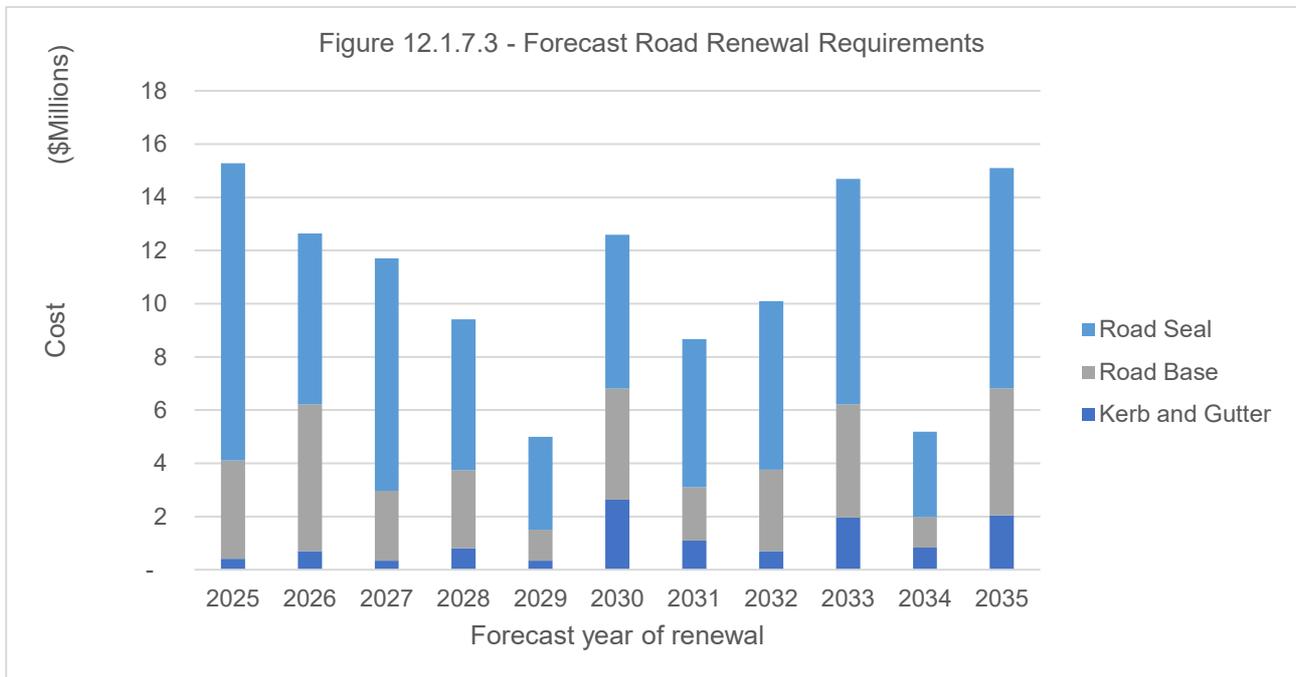
Further analysis of treatments specified over recent years is recommended to determine the most appropriate treatment of base and sub-base renewals. Our preferred method of treatment of base and sub-base is to improve the capacity of the existing material. Known as pavement stabilisation, this can be achieved through the addition of typically cement, lime, polymer, or bitumen foam to strengthen the existing granular material. Only in circumstances where the original road pavement is unable to be strengthened do we seek to remove the full depth and replace the material.

Where stabilisation is unlikely to be required to the full depth of the base, we may have a shorter life component (part to be stabilised) and a longer life component. To enable the assessment to be complete, geotechnical data on sampled base depths and treatments is required. This review is likely to result in an increase in useful life of base and sub-base assets and reduce annual depreciation expense.

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12.1.6.4   Future investment plan – Roads

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Depreciation	27,416,163	27,554,948	27,840,024	27,936,419	27,945,336	27,975,661	28,134,104	28,267,499	28,440,562	28,555,645	28,607,529
Required maintenance and operational works	8,043,879	8,094,379	8,255,919	8,313,559	8,318,115	8,335,472	8,429,438	8,508,426	8,611,133	8,679,172	8,709,420
Operating expenditure	**35,460,042**	**35,649,327**	**36,095,943**	**36,249,978**	**36,263,451**	**36,311,133**	**36,563,542**	**36,775,925**	**37,051,695**	**37,234,817**	**37,316,949**
Renewal works	-	-	-	-	-	-	-	-	-	-	-
Roads	16,292,000	23,905,000	17,255,000	15,311,900	14,204,375	15,360,000	15,360,000	15,360,000	15,360,000	15,360,000	15,360,000
Car Parks	715,000	-	-	-	-	870,000	870,000	870,000	870,000	870,000	870,000
Retaining Walls	3,120,000	-	-	-	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Upgrade works	-	170,000	3,185,000	2,895,000	1,080,000	-	-	-	-	-	-
Car Parks	**-**	-	-	-	-	-	-	-	-	-	-
Expansion	5,500,000	21,150,000	28,150,000	20,500,000	300,000	35,524,800	37,492,000	42,248,000	33,876,000	36,393,600	28,927,200
New Work	-	500,000	3,350,000	550,000	20,000,000	-	-	-	-	-	-
Roads	-	-	-	-	-	8,881,200	9,373,000	10,562,000	8,469,000	9,098,400	7,231,800
Car Parks	420,000	-	-	-	-	200,000	200,000	200,000	200,000	200,000	200,000
Capital expenditure	**26,047,000**	**45,725,000**	**51,940,000**	**39,256,900**	**35,584,375**	**61,836,000**	**64,295,000**	**70,240,000**	**59,775,000**	**62,922,000**	**53,589,000**
Totals	**61,507,042**	**81,374,327**	**88,035,943**	**75,506,878**	**71,847,826**	**98,147,133**	**100,858,542**	**107,015,925**	**96,826,695**	**100,156,817**	**90,905,949**
Estimated Required Renewals	16,206,551	13,408,985	12,414,688	9,989,685	5,303,662	13,359,306	9,202,784	10,715,136	15,584,329	5,509,222	16,018,648
Planned renewal as a % of estimated required	**124%**	**174%**	**176%**	**182%**	**288%**	**129%**	**187%**	**161%**	**111%**	**313%**	**108%**

12.1.7   Road Infrastructure Improvement Program

The following opportunities have been identified through the preparation of this asset management plan that will assist in improving future asset management planning outcomes:

Item	Issue	Description	Responsible	Timing
1.1	Segmentation	Review the current road segments to align intersections and mapping with the asset register	MISP	2026
1.2	Hierarchy	Undertake a validation exercise of the road hierarchy associated with roads to confirm accuracy.	MISP	2027
1.3	Useful life review	It is recommended that a change in approach to applying a sprayed seal at 10+10-year intervals be transitioned to a resheeting option be undertaken for non-rural roads. This will require an adjustment to remaining useful life and budgets to align changed approach.	MISP	2026
1.4	Climate Hazards	Identify roads that have been impacted by storm induced erosion and monitor following storm events	MISP	2026
1.5	Decommission	Investigate the potential for road closures in areas of voluntary purchase scheme acquisitions.	MISP, MCO+P	2025
1.6	Proactive Maintenance	Continue development of the defect management system, including activities, prioritisation methodology, target response times, and work order's structure. Consider utilising the IPWEA *A risk-based approach to managing road defects*	MISP, MCW, MOSES	2026
1.7	Boat ramps	Consider realigning boat ramps with marine structures due to the similar legislative and hazard profile.	MISP	2027
1.8	Criticality rating	In addition to the critical road assets identified by the Local Emergency Management Committee, identify roads that provide direct access to emergency services and other critical services to determine the appropriate criticality rating.	MISP	2026
1.9	Review base and sub-base renewal treatments	Review the treatment type and depth of renewal of base and sub-base to determine if it is appropriate to recognise a short life and long-life component. Provide an estimate of the network where the base and sub-base have been replaced to full depth as part of the review.	MISP	2026
1.10	Prioritisation model	Develop a template prioritisation model for roads including a range of factors and constraints relating to levels of service, climate hazards, resilience, treatments, etc	MISP	2028
1.11	Review DCP	Review the current DCP controls and objectives, and associated development conditions of consent to ensure required transport infrastructure aligns with future renewal and maintenance capacity	MISP	2026
1.12	Standard Road Infrastructure	To support efficient design and continuous infrastructure improvements standard designs are to be prepared for all road infrastructure.	MISP	2027

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12.2 Bridges

Bridges includes a group of structures that provide an elevated platform above the ground surface designed to span natural and constructed obstacles such as watercourses, wetlands, ravines, roads, and railways. Council is responsible for bridges located across Wollongong that support a transport function for the movement of people, services, and utilities. We typically own bridges that support pedestrian, bicycle, and road vehicle transport. Council does not control bridges that support movement by the rail network; however, we do have some responsibility relating to road and pedestrian bridges that cross the rail corridor as managed under a specific interface agreement with the rail operators.

Utility networks may be supported by Council transport bridges to connect utilities (electricity, water and sewer, gas, and communications) across obstacles. Bridges that solely support these utilities, with no connection for the movement of people are typically owned and managed by the responsible utility provider.

The bridges group of assets includes a range of structures primarily to support movement of people and utilities including pedestrian and cycle bridges; ornamental bridges, road bridges; large culverts, boardwalks; viewing platforms; fishing platforms; and jetties.

The following bridges are not included as part of this asset management plan:

- Bridges owned by other organisations such as Transport for NSW (road and rail); utility providers; private rail operators.
- Bridges that are an integral part of a playground unit – these are considered under the playground section of the asset management plan.
- Bridges within a building, such as skywalk, gangways and similar. These will form part of the building asset management plan.
- Weighbridges – the primary purpose of these assets is to weigh vehicles, not for spanning obstacles. Weighbridges are considered part of the plant and fleet asset register.

12.2.1   Profile

Community Strategic Plan Goal: Goal 2: We have well planned, connected, and liveable places

Service: Transport Services

The Roads and Bridges service delivery stream provides the community with a network of bridges that are safe, functional, and support efficient and multi modal transport services. It is primarily guided by Council's Integrated Transport Strategy supporting document.

12.2.2   Strategic priorities

Transport services are guided and informed by the following strategic supporting documents:

- Draft Wollongong Integrated Transport Strategy (ITS)
- City of Wollongong Pedestrian Plan 2017-2021
- Wollongong Cycling Strategy 2030
- Wollongong City Centre Access and Movement Strategy 2013
- Keiraville Gwynneville Access and Movement Strategy 2020
- West Dapto Contributions Plan

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- Wollongong City-Wide Development Contributions Plan

The draft Wollongong Integrated Transport Strategy identifies the following key strategic framework and priorities:

Vision - Wollongong is a liveable and green city where everyone has viable transport choices that provide connected journeys through Country that are safe, reliable, and accessible.

Guiding Principles:

- Connecting to Country and Place.
- Sustainability-focused.
- Multi-modal transport options for all.
- Integrated land use and transport decisions.
- Work with the community for change.
- Comfortable and convenient active travel

Goals – the strategy identifies a range of actions linked to achieving the following six goals:

Goal 1 | Competitive Public Transport
Goal 2 | Everyday needs within 15 minutes
Goal 3 | A connection to Country and sense of place
Goal 4 | Increased use of active modes
Goal 5 | All ages and abilities can get around with ease
Goal 6 | Sustainable transport options

The West Dapto Contribution Plan includes A total of 65 bridges (over watercourses), six rail crossings to support the road network, in addition to five bridges associated with shared paths.

Table 12.2.2 summarises the actions from the draft Integrated Transport Strategy and the West Dapto Contributions Plan with a relationship to bridges and an assessment of the direct impact:

Table 12.2.2 – Supporting Document Actions

Supporting Document	Action	Resource Impact
Integrated Transport Strategy	Assess and upgrade bridges along M1 to support oversize and overweight loads to and from the Port of Port Kembla to stop detouring.	The M1 and supporting infrastructure are State Government assets. The investigation, planning and implementation costs rest with the NSW Government. The impact on Council is operational costs to participate as a stakeholder in any review.
West Dapto Vision and Contribution Plan	A total of 65 bridges (over watercourses) and 6 rail crossings to support the road network.	The capital cost of most proposed bridges is funded through development contributions. The exceptions include Yallah Road, Marshall Mount Road, and the Marshall Mount Town Centre Bypass, which are 75.76%, 44.28% and 22.66% respectively funded through development contributions. The ongoing costs for operations, maintenance and renewal will be funded through general funds.

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West Dapto Vision and Contribution Plan	Five shared use path bridges that will provide whole of release area connectivity. Note, a sixth pedestrian bridge included in the West Dapto Vision 2018 is shown as PB6 at Figure 9. This bridge is not currently included in Schedule 3 but may be included in the future.	The capital cost of the proposed bridges is funded through development contributions. The ongoing costs for operations, maintenance and renewal will be funded through general funds.

12.2.2.1   Future Impacts

The following future impacts were identified in the delivery stream report for Transport relating to bridge infrastructure, the strategic response, and the consequences of not funding the impact is summarised below in Table 12.2.2.1:

Table 12.2.2.1 – Future Impact and Strategic Response

Future Impacts	Strategic Response	Consequences of Not Funding
Continued urban expansion, including West Dapto has increased need for new roads and bridges. Continued funding of the renewal gap for the City's ageing road network.	The West Dapto vision and contribution plan articulate the strategy for provision and funding of bridge infrastructure to support urban expansion. Council routinely reviews the contribution plan to review assumptions, costs, and forecasts.	Functional access not available for the residential growth area during flood events. Safety risk at level crossings prevail. Congestion impacts remain during storm events and level crossing priority on the rail network.
Adapting to changes in availability / pricing of materials (bitumen and concrete).	Design of new structures to review appropriate materials for the location, including lifecycle costs.	Potential for increased lifecycle cost of bridge infrastructure.
State changes in transport planning / policy, moving to 15% public transport (adopted State Plan target) for Wollongong city centre from 7-8% currently.	Changes in the public transport network will need to be reviewed to determine impact on any bridge structure located on the route. Suitability of the bridge will need to be determined and adequacy for bus movements assessed.	Consequences are unknown at this point and difficult to forecast. The action may not have any impact on bridge assets or could result in a requirement to upgrade an asset. Council will continue to be an active stakeholder in NSW Government local public transport planning to identify impacts.
Increasing requirements of the Disability Discrimination Act.	Accessibility audit to be undertaken for bridge assets. A plan to be prepared address	Inability to provide equitable and inclusive access for people with mobility challenges.

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12.2.2.2   Future Demand

Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
Increasing demand for street lighting	Areas of redevelopment are creating increased desire for pedestrian connections via routes that have little or no lighting.	Additional service provision demand beyond the immediate area of development.	Proactive review of staging plans and forecast lighting requirements required.	Street lighting program for expansion of the network.
Change in hierarchy of roads	As areas redevelop and traffic volumes increase, road hierarchy needs to be reassessed.	Higher order roads will increase demand for road signage and transport facilities to maintain efficient and safe road environment and potentially higher lighting levels.	Road hierarchy planned as part of West Dapto land release areas.	Part of the West Dapto Developer Contributions Plan for changes to the road network
Increased support for active transport and micro-mobility	Demand and supply of e-bikes and e-scooter trial in Wollongong	Dedicated lanes, traffic separators and safe crossing facility demand.	Review as part of the recommendations from the Wollongong Integrated Transport Strategy	To be developed
Improved quality of road signage	The development of technology towards vehicle road sign recognition increases the reliance on legible road signs.	Road sign locations and condition needs to be better understood.	New approach using vehicle mounted cameras to record inventory and update condition. Also identifies missing signs as the technology compares images to determine if there was a sign in place previously.	Trial of road sign artificial intelligence to collect inventory and monitor condition.
Accessibility	Demand for upgrade of existing assets to meet current access standards.	Replacement or modification of transport facilities.	Prioritisation of locations based on utilisation.	Upgrade program to be developed.
Increased demand for lower speed environments around schools and village and town centres	Through safe systems planning and approach lower speeds require road environments which support a lower speed rather than relying on signage only.	Additional traffic facilities required.	Standardise options for a 30km/h and 40km/h speed zone environment	Upgrade program to be developed.

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12.2.2.3   Bridge Provision

Bridges are considered as part of the transport facilities intended for wide community use daily with provision for a variety of activities. Road bridges share the traffic classification with the connecting road as a utilisation hierarchy. This hierarchy bridges assists in assessing the risk profile associated with each structure. Foot bridges, jetties and pontoons, boardwalks and ornamental bridges are generally considered or similar importance, with risk assessment informing relative priority. There are no bridges currently identified as heritage items.

12.2.3   Asset Snapshot

Asset Register – Assets

Financial Reporting Group: Bridges

Last comprehensive revaluation: 2022

Valuation Information: – Bridge infrastructure assets are recognised using the cost method, which equates to the current replacement cost of a modern equivalent asset. The cost to replace the asset (gross replacement cost) is to equal the amount that a market participant buyer of that asset would pay to acquire it.

Fair Value Hierarchy - the general valuation approach to determine the fair value of the bridge infrastructure inventory is to determine a unit rate based on square metres or an appropriate unit supported by market evidence (Level 2 input). Further inputs such as asset condition and useful life require a significant level of professional judgement and can impact significantly on the fair value. As such the level of valuation input for these assets was considered level 3.

Table 12.2.3 – Bridge Asset Summary

Asset Classification L3	Count of Asset	Average of Useful Life (Years)	Sum of Current Asset Cost	Sum of Current Annual Depreciation as at 30 June 2024	Sum of Carrying Value
Handrails	75	76	1,001,497	12,778	736,576
Substructure	67	80	71,898,988	892,326	48,092,848
Superstructure	197	69	96,730,971	1,442,025	65,433,210
			169,631,456	**2,347,129**	**114,262,634**

12.2.3.1   Components and attributes

Bridges are recognised at component level depending on the complexity of the structure, including:

- Substructure
- Superstructure
- Bridge structure
- Handrails
- Cathodic Protection

The road and footpath surface across the span of the bridge is considered as part of the respective asset management plans. Bridge structures and cathodic protection assets are currently valued under superstructure; however it is intended to review componentisation as part of the improvement program.

12.2.3.2   Risks and criticality

Critical services are defined as those which have a high consequence of failure causing significant loss or reduction of service to the community as outlined in Section 7.1.5. A review of the Transport Service identified that it is a critical service. The roads identified as critical are derived from the major transport routes in the local emergency management plan. The only road under Council control is Old Princes Highway from the Wollongong City Council boundary south of Waterfall through to Bulli Tops. This section of road does not have any defined bridges under Council control.

12.2.3.3   Operation and maintenance requirements

Routine inspections are part of our operational requirements for bridges and include:

- Level 1 inspections bi-annually (alternative years).
- Level 2 inspections on a 4-yearly basis
- Level 3 inspections on as required basis (identified in Level 2 inspections).
- Routine and minor maintenance as required based on Level 1 inspections.
- Corrosion protection system inspection and certification.

Routine operations and maintenance activities cover all works in relation to the bridge structures that are required to be undertaken on a regular basis, for the ongoing operation of the structure. Actions include those listed below, to ensure bridges remain serviceable and meet the expected useful life:

- routine inspections
- expansion joints
- removal of vegetation and debris
- waterproofing
- safety railing
- reflectors
- timber bridge maintenance
- repainting
- load limit signage and heavy vehicle route monitoring and approval
- cathodic protection

12.2.3.4   Depreciation and degradation curves

Bridge assets and component use a straight-line depreciation and a straight-line degradation profile.

12.2.4   Future Demand

The Local Strategic Planning Statement identifies the likely changes to our community in the future and the implications of population context. These implications will create changes in demand that influences our planning associated with bridge infrastructure as part of the enabling infrastructure and transport, as summarised in Table 12.2.4 below:

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Table 12.2.4 – Future Demand Impact on Bridges

Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
Population growth -	Wollongong LGA growth by 55,000. During the next 20 years, several of Areas will evolve from 'sub district' sized populations of less than 30,000 people to areas hosting 'district' level populations of more than 30,000 people.	Areas of growth require new road and bridge networks to support development. Some existing road and bridge infrastructure require upgrade to support the changes.	The main area of growth in Wollongong is situated in West Dapto. The West Dapto vision and development contributions plan outline the bridges required to support the growth and the funding contributions from development towards the recommended infrastructure.	The West Dapto contribution plan identifies the infrastructure and funding required to meet the demand. This plan integrates the contributions plan forecasts.
Increased Residential Density	Increased residential density in some of the district hubs within the LGA.	Increased density may create additional demand and capacity issues for existing bridge infrastructure.	The draft Integrated Transport Strategy provides a strategic framework for traffic management across Wollongong.	Any identified need to upgrade capacity of bridge infrastructure is included in the new and upgrade plan.
Transport Planning changes	Increased mode shift to active and public transport modes	Increase use of public transport and active transport modes will require bridges with additional provision and load requirements.	The State Regional Transport Plan and Council Integrated Transport Plan identify mode shift targets.	Develop standards and hierarchy for bridge design to meet mode shift targets.

12.2.5   Roles and responsibilities

Service Manager: Manager Infrastructure Strategy and Planning

Role	Lifecycle	Function	Responsibility	Activities
Service Management	Planning	Service Planning	Manager Infrastructure Strategy and Planning	Ensure service linkage to CSP Define service needs Determine service hierarchy Analyse capacity and demand Summarise service-related legislative requirements Establish customer levels of service Determine asset requirements for service delivery
	Operation	Service Operations	Manager Infrastructure Strategy and Planning	Act as customer liaison for service Provide website information and communications

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Role	Lifecycle	Function	Responsibility	Activities
				Initiate notifications for service interruptions
				Undertake functional assessment
				Monitor and manage service and asset utilisation
	Planning & End of Life	Asset Acquisitions and Disposals	Manager Infrastructure Strategy and Planning	Develop plan for acquisitions and disposals of assets aligned to service plan and demand forecast
				Engage with stakeholder on acquisition and disposal plan
				Arrange relocation or transition of service
				Arrange establishment or termination of agreements (utilities)
Asset management	Planning	Asset Planning	Manager Infrastructure Strategy and Planning	Complete condition and performance assessment
				Assess asset related legislative requirements
				Coordinate scope preparation
				Asset review
				Renewal planning
		Asset Data	Manager Infrastructure Strategy and Planning	Administration of asset register
				Updates for capital improvements
				Initiate asset disposal system process
				Prepare asset management plan
				Coordinate asset reporting data
		Asset Financials	Manager Infrastructure Strategy and Planning	Revaluation
				Unit rates
				Estimates
				Monitor expenditure
Project Delivery	Delivery	Project Sponsor	Director Infrastructure + Works	Approval of project plan
				Oversee business proposal
				Capital expenditure review (OLG)
		Asset Concept	Manager Infrastructure Strategy and Planning	Define the problem/need
				Options assessment
				Feasibility
				Lifecycle costing
				Funding strategy
				Business case/proposal/project plan development
		Program Management	Manager Infrastructure Strategy and Planning	Oversee project as part of program
				Responsible for managing overall program costs, risks, progress
				Development of asset scopes
		Asset Design	Manager Project Delivery	Ensure design solutions align with strategy
				Options analysis
				Concepts

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Role	Lifecycle	Function	Responsibility	Activities
				Design development Cost estimating Complete safety in design report Approvals process
		Asset Delivery	Manager Project Delivery	Cost estimate Value engineering Procurement strategy Contract management Procurement Project management Oversee project commissioning and handover
Maintenance and Operation Management	Maintenance	Asset Maintenance	Manager City Works	Complete maintenance inspections Work management triage and scheduling Establish maintenance procedures Undertake maintenance works
	Operation	Asset Operations	Manager Infrastructure Strategy and Planning	Cathodic protection Naming

12.2.6   Performance

We monitor the performance of our bridge assets by condition – the actual physical and technical state of the asset, and customer satisfaction. Table 12.2.6 below provides a summary of the number of assets per category in condition 1 to 5, with condition 1 being excellent and 5 with several defects and renewal required.

Table 12.2.6 - Count of Bridge Assets in Condition 1-5
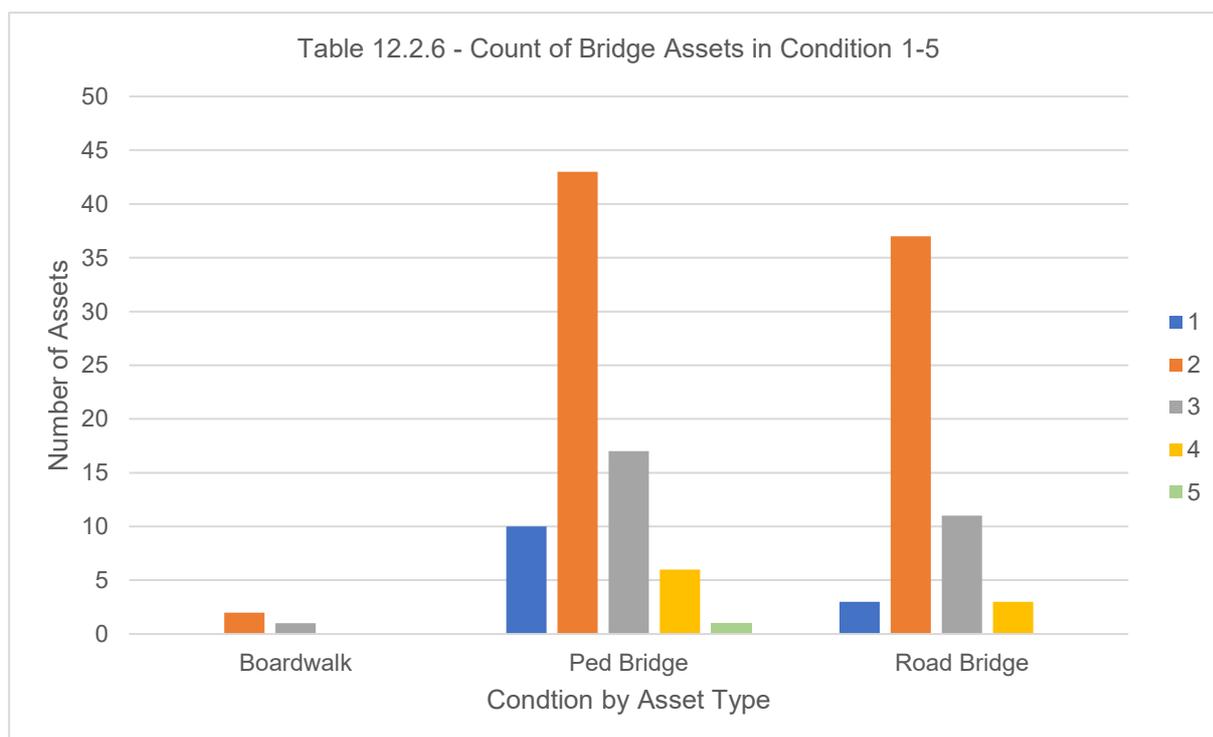
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12.2.6.1 Community Satisfaction Survey

Council's most recent Community Satisfaction Survey does not specifically identify bridges as part of the facility or direct service questions. Bridges form part of the road and/or pathway network, so we use the results relating to road and pathway maintenance for an indication of community satisfaction. The results of the community survey as reported in section 7 indicate that road and footpath maintenance are an area of focus for council.

12.2.6.2 Criteria for levels of service

Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
Customer Levels of Service				
Safety	Bridges are safe for use	Number of claims alleging injury or damage associated with condition of a bridge	Bridge condition not found to have contributed to injury or damage.	
Function	Bridges are fit for purpose	No restrictions that unreasonably limits usability of the bridge	Number of requests for exemption from restriction	
Serviceability	Bridges are available for use	Number of bridges in serviceable condition.	No "closed" bridges, except those identified for decommissioning	
Utilisation	Assets are being utilised by the community	Community survey		Utilisation of Bridge facilities is not included in the community survey
Satisfaction	The community is satisfied with the services provided by Council supported by this asset group	Community survey Direct Services – Internal Benchmark for Maintenance of local roads	No significant decrease in average satisfaction results to previous survey	The average across seven surveys is 2.9, and the rating for 2023 is consistent at 2.8. However there was a decrease from the 2021 result of 3.2 which is considered a significant decrease ☹
Residents' Wish List	The community do not see this asset group or associated service as an area of focus for council over the next 4-years	Community survey internal benchmark – "In your view what are the three key areas you think Council should focus on over the next four years?"	Less than 10% increase on previous percentage	Roads and traffic as a group increased from 35% to 41% between 2021 and 2023. This is a 17% increase ☹
Technical Levels of Service				

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Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
Corrosion Protection Systems	Inspection, testing and reporting	6-monthly inspections	100% compliance	Target achieved 😊
	Annual certificate of compliance	Annual test and submission of certificate	100% compliance	Target achieved 😊
	Interference testing	Within 7 years of previous test	100% compliance	6-7 years 😊
Condition Inspection	Level 1 condition assessment	Bi-Annual	75% compliance	😊
	Level 2 condition assessment	4-yearly	75% compliance	
	Level 3 condition assessment	As required if identified in a level 1 or 2 inspection. Completed within 6 months.	100% compliance	
Expansion joint	Clean and inspect elastomeric joints	As required	75% compliance	
Load limit signage	Visual inspection	Annual inspection	100% compliance	
Waterproofing	Inspect with resurfacing works	As required	Waterproofing adequate to prevent accelerated deterioration	No known defects 😊
Debris – substructure	Inspect and remove	With level 1 inspection and reactive	All significant debris removed	
Vegetation	Road bridge – deck and substructure	Lack of vegetation growing from deck or interfering with substructure of bridge	Removal with level 1 condition or within 4 weeks of report	Unknown 😐
Event damage	Level 1 inspection	Within 2 weeks of incident	100% compliance	Target met 😊
Cost	Implementation of efficient and cost-effective maintenance programs	Maintenance costs attributed to work orders	Bridges with high maintenance costs identified for major maintenance program or renewal.	
Risk	Bridges are maintained within a tolerable risk profile.	Risk assessment of bridges to be undertaken.	All bridges managed in accordance with the infrastructure risk appetite statement	😊
Performance	Asset management actions and funding allocation supports long-term sustainability	Percentage of identified renewals funded		
		Percentage of planned renewals completed		

Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
		Percentage of identified proactive maintenance works completed		

12.2.6.3   Bridge Resilience

The natural and non-natural hazard exposure categories for the City of Wollongong are identified through the Local Emergency Management Committee. The hazards identified as part of the Local Emergency Risk Management Study, that may impact bridge infrastructure are summarised in Table 12.62.6.3 below:

Table 12.2.6.3 – Bridge Hazard Rating

Hazard	Risk Description	Likelihood	Consequence	Risk
Fire (Bush/Grass)	Major fires in areas of bush or grasslands.	Likely	Major	Extreme
Flood (Flash)	Heavy rainfall causes excessive localised flooding with minimal warning time.	Likely	Major	Extreme
Severe Storm/Storm Surge	Severe storm with accompanying lightning, hail, damaging winds, and/or rain that causes severe damage and/or localised flooding (includes tornado and waterspout) and coastal erosion.	Likely	Major	Extreme
Major Structural Collapse	Failure of a major culvert or bridge structure with or without warning owing to structural failure or because of external/internal events or other hazards/incidents.	Rare	Major	High
Earthquake	Earthquake of significant strength (> Magnitude 7) that results in localised or widespread damage.	Rare	Major	High
Landslip / Mudflow / Rockfall	Landslip/mudflow/rockfall resulting in localised or widespread damage.	Likely	Moderate	High
Transport Accident (Road)	A major vehicle accident that disrupts one or more major transport routes that can result in risk to people trapped in traffic jams, restrict supply routes and/or protracted loss of access to or from the area.	Possible	Moderate	High
Transport Accident (Rail)	A major rail accident on the Illawarra line, particularly on the steep descent through the Illawarra Escarpment down to Wollongong (including the viaduct/tunnels), resulting in several fatalities, injuries and/or damage to properties along the rail corridor, restriction to supply routes and/or protracted loss of access to or from the area; possible environmental damage.	Possible	Moderate	High
Tsunami	A tsunami wave of magnitude that presents a risk to land and marine elements.	Rare	Major	High

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Hazard	Risk Description	Likelihood	Consequence	Risk
Utilities Failure*	Major failure of essential utility for unreasonable periods of time because of a natural or human-caused occurrence (>24 hours).	Rare	Major	High

*Utility connected to a bridge crossing.

The local emergency management plan covers the preparedness and response plans for the events listed above. Post incident, Council will instigate the appropriate inspection program to review any bridges impacted by the event.

12.2.6.4   Climate Hazards

The key climate hazards identified through the Climate Change Adaptation Plan (CCAP) as most relevant to bridges are flooding, bushfires, storms, and sea-level rise. All contemporary flood studies used to inform bridge design include climate risk factors associated with storm surges and sea level rise. The Australian Standards (AS 5100 Bridge Design suite) make provision for design of bridges to withstand forces associated with flooding and impact by storm debris. The standards also deal with design of the foundation and soil-supporting structures. A summary of the actions from the CCAP and relation to bridges is provided in Table 12.2.6.4 below.

Table 12.2.6.4 – Climate Hazards Impacting Bridges

Priority Actions		
Hazard	**Climate Change Adaptation Plan Action**	**Bridge Infrastructure Actions**
Flooding	Continue managing flood risk through floodplain risk management plans, incorporating climate predictions.	Review floodplain risk management study and plans for recommended work items on bridges.
	Continue and monitor maintenance schedules to reduce the risk of drainage network blockages.	Bridges to be inspected in accordance with agreed levels of service to identify blockages. Levels of service to be based on the criticality of the drainage network.
	Undertake community education to increase awareness of the dangers of floodwaters and precautions to minimise risks to people and property.	Education to include traversing bridges where the water level is approaching the soffit of the bridge.
Bushfire	Review bushfire risk and emergency management plans for Council operational or leased buildings.	Inspect post event.
Storms	Prepare and implement an Open Coast Coastal Management Program.	Implementation of infrastructure actions will be included in forecast expenditure
	Identify Council's business continuity plans (BCPs) and review and updated as required to address increase the likelihood of storm and extreme weather events.	BCPs may identify critical services and associated assets. Any changes to critical assets will be listed in revisions of the asset management plan, and appropriate management plans developed.
Sea-level rise	Prepare and implement an Open Coast Coastal Management Program.	Implementation of infrastructure actions will be included in forecast expenditure. The current Wollongong Coastal Zone Management Plan 2017 (CZMP) identifies

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Priority Actions		
Hazard	**Climate Change Adaptation Plan Action**	**Bridge Infrastructure Actions**
		Windang Bridge with an inundation risk. The NSW Government manages this bridge. The CZMP also suggests part of Lawrence Hargrave Drive (State Road) with risk and potentially elevating the road as a bridge.
	Recovery plans from emergencies are to be developed in partnership with communities and other relevant service providers.	Recovery plans typically result in unscheduled maintenance activities. Some recovery actions are part funded through State agencies for major events.

12.2.6.5   Legislative Requirements

- Electricity Supply (Corrosion Protection) Regulation 2020 (bridges corrosion protection systems).
- Holiday Parks (Long-term Casual Occupation) Act 2002
- Roads Act 1993
- Road Transport Act 2013
- Environmental Planning & Assessment Act 1979
- Catchment Management Authorities Act 2003
- Fisheries Management Act 1994
- Threatened Species Conservation Act 1995
- Native Vegetation Act 2003
- Noxious Weeds Act 1993

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12.2.7 Future Investments

12.2.7.1 New and Upgrade Plans

The following table includes new and upgraded bridges that are listed in the West Dapto Vision and Development Contributions Plan. The bridges were identified as part of the demand analysis for transport associated with the population growth, and a review of the existing transport provision and developing a proposed transport model. The timing of the works is driven by the rate of development, with the contribution plan providing indicative timing. The data and references are compiled using the following tables from the West Dapto Development Contribution Plan: 11, 13, 16, and Schedule 3. The table includes bridges that are anticipated beyond the 10-year life of the plan; however, they are included for completeness.

Road Ref	Map Ref	Road Name	Link Description	Lane	Length (m)	Width (m)	Type	Total cost including on cost	Indicative Timing
Bridges over watercourses for existing roads									
TR01	B15	West Dapto Road (2 x Mullet Creek tributaries)	Wyllie Road to Reddalls Road	2	10	14	Culvert		2020/21 - 2030/31
TR01	B16	West Dapto Road (2 x Mullet Creek tributaries)	Wyllie Road to Reddalls Road	2	10	14	Culvert		2020/21 - 2030/31
TR01	B17	West Dapto Road (between WD5-WD6)	Reddalls Road to Sheaffes Road	2	8	14	Culvert		2020/21 - 2030/31
TR01	B18	West Dapto Road (between WD6-WD7)	Reddalls Road to Sheaffes Road	2	34	14	super T over 20m upgrade	14,223,862	2020/21 - 2030/31
TR01	B19	West Dapto Road (tributary n/o Sheaffes Road)	Reddalls Road to Sheaffes Road	4	10	21	Culvert		2020/21 - 2030/31
TR01	B20	West Dapto Road (tributary n/o Darkes Road)	Sheaffes Road to Darkes Road	4	10	21	Culvert		2020/21 - 2030/31
TR01	B21	West Dapto Road (3 x Mullet Creek tributaries)	Darkes Road to Shone Avenue	2	15	14	super T over 20m upgrade		2020/21 - 2030/31

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Road Ref	Map Ref	Road Name	Link Description	Lane	Length (m)	Width (m)	Type	Total cost including on cost	Indicative Timing
TR01	B22	West Dapto Road (3 x Mullet Creek tributaries)	Darkes Road to Shone Avenue	2	10	14	Culvert		2020/21 - 2030/31
TR01	B23	West Dapto Road (3 x Mullet Creek tributaries)	Darkes Road to Shone Avenue	4	22	21	super T over 20m upgrade		2020/21 - 2030/31
TR04	B10	Paynes Road	Sheaffes Rd to Paynes Rd (North)	2	10	14	Culvert		2026/27 - 2030/31
TR04	B27	Paynes Road	Paynes Road (west of Northcliffe Drive Extension)	2	6	14	Culvert	309,714	2026/27 - 2030/31
TR06	B29	Wongawilli Road	Shone Avenue to Smiths Lane	4	6	21	Culvert	174,214	2018/19 - 2020/21
TR07	B24	Darkes Road (Mullet Creek western tributary)	West Dapto Road to Princes Hwy	2	29	14	super T over 20m upgrade		2027/28 - 2031/32
TR07	B25	Darkes Road (Mullet Creek eastern tributary)	West Dapto Road to Princes Hwy	2	12	14	Culvert	7,614,507	2027/28 - 2031/32
TR07	B26	Darkes Road (Mullet Creek eastern tributary)	West Dapto Road to Princes Hwy	4	16	21	Culvert		2027/28 - 2031/32
TR08	B30	Shone Ave (Robins northern tributary)	West Dapto Road to Bong Bong Road	2	47	14	super T over 20m upgrade		2012/13 – 2026/27
TR08	B31	Shone Ave (Robins Creek southern tributary)	West Dapto Road to Bong Bong Road	2	63	14	plank up to 20m upgrade	7,358,339	2012/13 – 2026/27
TR10	B33	Bong Bong Road	Between Horsley & Dapto	2	33	14	super T over 20m upgrade	5,086,966	2035/36 - 2040/41
TR13	B45	Cleveland Road (2 x Mullet Creek tributaries)	Princes Hwy to Daisybank Drive	2	27	14	plank up to 20m upgrade		2013/14 - 2031/32
TR13	B46	Cleveland Road (2 x Mullet Creek tributaries)	Princes Hwy to Daisybank Drive	2	20	14	super T over 20m upgrade	11,512,755	2013/14 - 2031/32
TR13	B47	Cleveland Road (2 x Mullet Creek tributaries)	NR46 to Western Ring Road	2	6	14	Culvert		2013/14 - 2031/32

Asset Management Plans

Road Ref	Map Ref	Road Name	Link Description	Lane	Length (m)	Width (m)	Type	Total cost including on cost	Indicative Timing
TR13	B48	Cleveland Road (2 x Mullet Creek tributaries)	NR46 to Western Ring Road	2	6	14	Culvert		2013/14 - 2031/32
TR13	B49	Cleveland Road (Mullet Creek tributary)	Western Ring Road to Avondale Road	2	6	14	Culvert		2013/14 - 2031/32
TR13	B50	Cleveland Road (Mullet Creek tributary)	Western Ring Road to Avondale Road	2	32	14	plank up to 20m upgrade		2013/14 - 2031/32
TR13	B51	Cleveland Road (Mullet Creek tributary)	Western Ring Road to Avondale Road	2	6	14	Culvert		2013/14 - 2031/32
TR14	B53	Avondale Road (Mullet Creek tributary)	Western Ring Road to NR49	2	10	14	plank up to 20m upgrade	3,862,002	2040/41 – 2050/51
TR14	B54	Avondale Road (Mullet Creek tributary)	Cleveland Road to Western Ring Road	2	17	14	plank up to 20m upgrade		2040/41 – 2050/51
TR16	B63	Yallah Road (3 x Duck Creek tributaries)	Marshall Mount Road to Princes Hwy	4	50	21	RMS Plank	6,314,424	2031/32 - 2035/36
TR16	B64	Yallah Road (3 x Duck Creek tributaries)	Marshall Mount Road to Princes Hwy	4	16	27	Culvert		2031/32 - 2035/36
TR17	B65	Marshall Mount Road	Yallah Road to LGA boundary	2	63	14	RMS Plank		2031/32 - 2055/56
TR17	B66	Marshall Mount Road (2 x Duck Creek tributaries)	Yallah Road to Huntley Road	2	125	14	RMS Plank	19,278,864	2031/32 - 2055/56
TR17	B67	Marshall Mount Road (2 x Duck Creek tributaries)	Yallah Road to Huntley Road	2	63	14	RMS Plank		2031/32 - 2055/56
Bridges over watercourses for new roads									
TR18	B1	Northcliffe Drive Extension	Wyllie Road to Northcliffe Drive (existing)	4	11.5	21	Culvert		2031/32 - 2035/36
TR18	B3	Northcliffe Drive Extension	Northcliffe Drive (existing) to Wyllie Road	4	19	21	Culvert	33,925,945	2031/32 - 2035/36
TR18	B4	Northcliffe Drive Extension (2 x tributaries)	Reddalls Road to Wyllie Road	4	24	21	plank up to 20m new		2031/32 - 2035/36

Asset Management Plans

Road Ref	Map Ref	Road Name	Link Description	Lane	Length (m)	Width (m)	Type	Total cost including on cost	Indicative Timing
TR18	B5	Northcliffe Drive Extension (2 x tributaries)	Reddalls Road to Wyllie Road	4	45	21	plank up to 20m new		2031/32 - 2035/36
TR18	B6	Northcliffe Drive Extension	Reddalls Road (east) to Reddalls Road (west)	4	11	21	Culvert		2031/32 - 2035/36
TR18	B7	Northcliffe Drive Extension (southern tributary)	Reddalls Road (west) to Paynes Road	4	127	21	super T over 20m new		2031/32 - 2035/36
TR18	B8	Northcliffe Drive Extension (northern tributary)	Reddalls Road (west) to Paynes Road	4	24	21	super T over 20m new		2031/32 - 2035/36
TR18	B9	Northcliffe Drive Extension (northern tributary)	Reddalls Road (west) to Paynes Road	4	45	21	super T over 20m new		2031/32 - 2035/36
TR19	B11	Northcliffe Drive Extension	Sheaffes Road to West Dapto Road	2	6	14	Culvert		2025/26 - 2034/35
TR19	B12	Northcliffe Drive Extension	Sheaffes Road to West Dapto Road (Bridge adjacent to ESA)	2	24	14	Culvert	2,903,567	2025/26 - 2034/35
TR19	B13	Northcliffe Drive Extension	Sheaffes Road to West Dapto Road	2	96	14	Culvert		2025/26 - 2034/35
TR19	B14	Northcliffe Drive Extension	Sheaffes Road to West Dapto Road	2	24	14	Culvert		2025/26 - 2034/35
TR20	B34	Iredell Road	Western Ring Road to Bong Bong Road	2	70	14	super T over 20m new	5,931,570	2025/26 - 2029/30
TR21	B41	New road (not in Plan) (Brooks Reach east)	Brooks Reach to Cleveland Road	2	100	14	super T over 20m new	8,508,620	2025/26 – 2030/31
TR23	B37	Fowlers Road Extension	Princes Hwy to Eastern Link Road	4	36	21	super T over 20m new	61,939,611	2016/17 - 2022/23
TR25	B56	Western Ring Road	Shone Avenue to Iredell Road	2	110	14	plank up to 20m new		2021/22 - 2050/51
TR25	B57	Western Ring Road	Iredell Road to Bong Bong Road	2	70	14	super T over 20m new	45,611,035	2021/22 - 2050/51
TR25	B58	Western Ring Road	Bong Bong Road to Cleveland Road (Stockland Stage 3)	2	68.4	14	super T over 20m new		2021/22 - 2050/51

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Road Ref	Map Ref	Road Name	Link Description	Lane	Length (m)	Width (m)	Type	Total cost including on cost	Indicative Timing
TR25	B59	Western Ring Road	Avondale Road to Cleveland Road	2	33	14	super T over 20m new		2021/22 - 2050/51
TR25	B60	Western Ring Road	Avondale Road to Cleveland Road	2	65	14	super T over 20m new		2021/22 - 2050/51
TR25	B61	Western Ring Road	Avondale Road to Marshall Mount Road	4	63	21	RMS Plank		2021/22 - 2050/51
TR25	B62	Western Ring Road	Avondale Road to Marshall Mount Road	5	75	21	RMS Plank		2021/22 - 2050/51
TR26	B42	Brooks Reach to Huntley Link	Brooks Reach to Cleveland Road	4	70	21	super T over 20m new		2035/36 - 2055/56
TR26	B43	Brooks Reach to Huntley Link	Cleveland Road to Avondale Road	2	25	14	plank up to 20m new	13,773,330	2035/36 - 2055/56
TR26	B44	Brooks Reach to Huntley Link	Cleveland Road to Avondale Road	2	70	14	super T over 20m new		2035/36 - 2055/56
TR27	B39	Eastern Link Road (Daisybank Drive)	Fairwater Dr to Cleveland Road	2	6	14	plank up to 20m new		2046/47 - 2050/51
TR27	B40	Eastern Link Road	Avondale Road to Cleveland Road	2	24	14	super T over 20m new	2,712,122	2046/47 - 2050/51
TR28	B55	Eastern Spine Road	Avondale Rd to Western Ring Road	2	55	14	super T over 20m new	4,679,741	2046/47 - 2050/51
TR29	B68	Marshall Mount Town Centre Bypass	Marshall Mount Road to Yallah Road	2	12	44	Culvert		2035/36 - 2040/41
TR29	B69	Marshall Mount Town Centre Bypass	Marshall Mount Road to Yallah Road	2	45	14	RMS Plank	3,709,773	2035/36 - 2040/41
Rail crossings									
TR02	BBRC	Bong Bong Road	Eastern Link Road to Station Street	2	N/A	N/A	Level crossing upgrade	-	2010/11 – 2031/32
TR07	DRC	Darkes Road	West Dapto Road to Princes Hwy	3	N/A	N/A	Level crossing upgrade	9,137,408	2027/28 - 2031/32

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Road Ref	Map Ref	Road Name	Link Description	Lane	Length (m)	Width (m)	Type	Total cost including on cost	Indicative Timing
TR09	B32	Bong Bong Road (switchback bridge over rail line)	Eastern Link Road to Station Street	2	16	14	Rail three	43,046,632	2045/46 - 2050/51
TR14	AVRC	Avondale Road	Eastern Link Road to Princes Hwy	N/A	N/A	N/A	Level crossing upgrade	3,862,002	2040/41 – 2050/51
TR15	B52	Huntley Road (rail bridge)	Princes Highway to Marshall Mount Road	4	55	21	Rail one	10,972,895	2035/36 - 2040/41
TR23	B36	Fowlers Road Extension (rail bridge)	Princes Hwy to Eastern Link Road	4	197	21	super T over 20m new	61,939,611	2016/17 - 2022/23
Transport – Active transport									
TR36	PB1 to PB5	Shared use path bridge crossings	Throughout Stages 1 - 5				5 Bridges	1,636,569	2023/24 – 2059/60

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12.2.7.2   Decommissioning and Disposal Planning

Where we identify that bridges are no longer meeting the required level of service, we may look at decommissioning the structure. Where possible, we look for alternate routes to limit the use of bridges as they are costly to construct and maintain; and have a higher level of risk due to the introduction of an elevated structure.

We are currently monitoring some boardwalk structures with advanced deterioration. It is likely that the structures will need to be decommissioned during the period of this plan. These locations will be subject of community engagement. Unforeseen decommissioning may result from impacts of natural disaster.

12.2.7.3   Renewal Works

Based on the current information relating to condition and forecast useful life, the Table 12.2.7.3 provides an indication of the timing and cost to replace bridge components over the next 10-years.

Table 12.2.7.3 - Forecase Bridge Renewal Cost
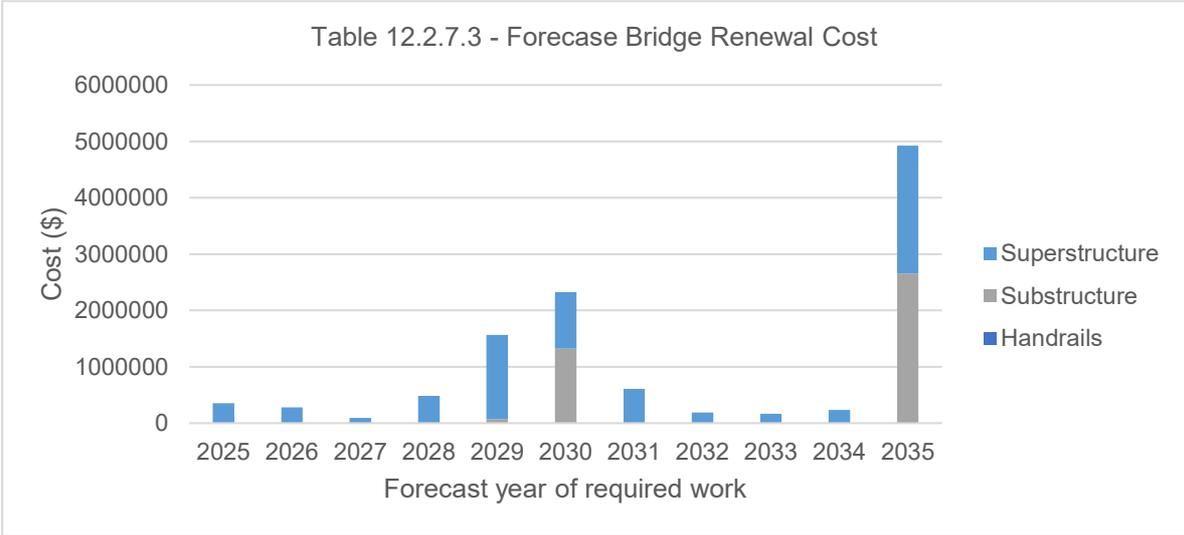
Our current information suggests that the following bridges will be a focus for investigation of remedial and renewal works in the indicated years.

Year	Bridge Description	Suburb
2025	Old Coast Road Bridge	Stanwell Park
	Pioneer Beach Estate Footbridge	Woonona
	Valley Drive Lower Footbridge	Figtree
	Valley Drive Upper Footbridge	Figtree
2026	Helen St West Footbridge	Mount Ousley
	Botanic Gardens Pedestrian Bridge (Kawasaki Bridge)	Keiraville
2027	Baden Powell Park Footbridge	Tarrawanna
2028	Bellambi Lagoon Carpark Footbridge	East Corrimal
	Dalton Park North Footbridge	Fairy Meadow
	Fred Finch Park P1 South Cycle bridge	Berkeley
	Harry Graham Park Footbridge	Figtree

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Year	Bridge Description	Suburb
	John Parker Reserve Footbridge	Russell Vale
	Lawrence Hargrave Dr Coalcliff Footbridge	Coalcliff
	TAFE UNI Cycle bridge	North Wollongong
2029	Memorial Park Bridge	Corrimal
	Hooka Point Park Footbridge	Berkeley
	Primbee Foreshore Footbridge	Primbee
	Windang Peninsula Heritage Park Footbridge	Windang
2030	Angels Bridge	Corrimal
	Bulli Beach Caravan Park Bridge	Bulli
	Botanic Gardens Pedestrian Bridge (1st bridge near front entry)	Keiraville
	Botanic Gardens Pedestrian Bridge (1st Bridge N-W of Kawasaki Bridge)	Keiraville
	Botanic Gardens Pedestrian Bridge (2nd bridge in Rainforest)	Keiraville
2031	Transport-Bridges - Superstructure - Bridge 0593 - Hooka Point Park Jetty	Berkeley
2032	Helen St East Footbridge	Mount Ousley
	Hicks St Footbridge	Russell Vale
	Meads Ave Reserve West Footbridge	Tarrawanna
2033	Botanic Gardens Pedestrian Bridge (2nd bridge N-W of Kawasaki Bridge [in Rainforest])	Keiraville
2034	Coalcliff Beach Reserve Bridge	Coalcliff
2035	Cordeaux Rd Bushells Hill Bridge	Mount Kembla
	Princes Hwy Cabbage Tree Creek Bridge	Fairy Meadow

12.2.7.4   Infrastructure Resilience

Existing structures are typically designed to the standards applicable at the time of construction. The National Association of Australian State Road Authority published bridge design specifications from 1953 to 1976, this was replaced with Austroads Bridge Design Code and subsequently converted to the Australian Standards (HB 77) in 1996 and redesignated to *AS 5100* in 2004. As part of our routine bridge inspection program, we assess and identify recommendations for strengthening and repairs to elements that affect the resilience of the bridge to hazards. Below is a summary of the identified works that will be prioritised for implementation and indication of the expected cost bracket for the work. These works will be prioritised and included in the scope of existing works programs over the life of the asset plan.
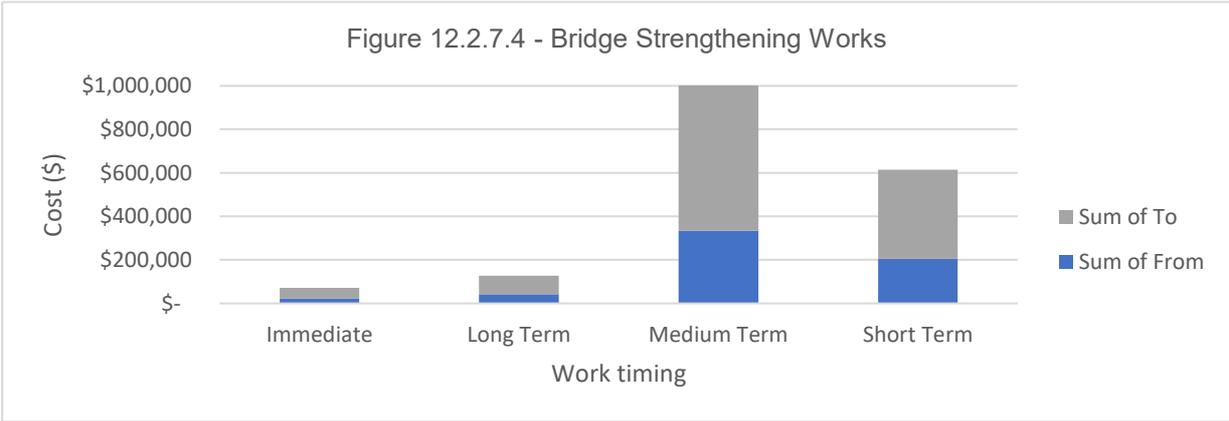
Figure 12.2.7.4 - Bridge Strengthening Works

12.2.7.5   Future investment plan – Bridges

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Depreciation	2,347,129	2,347,129	2,347,129	2,347,476	2,350,390	2,350,529	2,370,245	2,424,032	2,630,416	3,030,211	3,428,121
Estimated required Maintenance and Operating works	845,695	845,695	845,820	846,870	846,920	854,024	873,404	947,766	1,091,816	1,235,188	1,322,349
Operating expenditure	3,192,824	3,192,824	3,192,949	3,194,346	3,197,310	3,204,553	3,243,649	3,371,798	3,722,232	4,265,398	4,750,470
Renewal works	895,000	3,305,000	1,640,000	1,400,000	600,000	2,800,000	730,000	300,000	202,000	300,000	5,625,000
Upgrade works	-	130,000	1,370,000	2,000,000	1,000,000	-	-	-	-	-	-
Expansion works	-	-	-	-	-	-	-	-	-	-	-
New works	-	-	-	-	25,000	25,000	250,000	227,000	300,000	280,000	-
Capital expenditure	895,000	3,435,000	3,010,000	3,400,000	1,625,000	2,825,000	980,000	527,000	502,000	580,000	5,625,000
Totals	4,087,824	6,627,824	6,202,949	6,594,346	4,822,310	6,029,553	4,223,649	3,898,798	4,224,232	4,845,398	10,375,470
Estimated Required Renewals	895,000	3,085,000	3,895,000	3,410,000	1,886,822	2,802,682	733,279	225,441	198,102	281,914	5,934,937
Planned renewal as a % of estimated required	100%	111%	77%	100%	85%	100%	100%	133%	102%	106%	95%

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12.2.7.6   West Dapto

The following bridges are identified in the West Dapto development contributions plan with timing based on current projections of the rate of development. The timing below is indicative based on current projections. We will continue to monitor the actual rates against forecast to review and adjust the timing of infrastructure delivery to input into the IDP as appropriate.

Road Ref	Map Ref	Road Name	Link Description
Bridges over watercourses for existing roads			
		Hayes Ln Bridge Detailed Design	
TR01	B15	West Dapto Road (2 x Mullet Creek tributaries)	Wyllie Road to Reddalls Road
TR01	B16	West Dapto Road (2 x Mullet Creek tributaries)	Wyllie Road to Reddalls Road
TR01	B17	West Dapto Road (between WD5-WD6)	Reddalls Road to Sheaffes Road
TR01	B18	West Dapto Road (between WD6-WD7)	Reddalls Road to Sheaffes Road
TR01	B19	West Dapto Road (tributary n/o Sheaffes Road)	Reddalls Road to Sheaffes Road
TR01	B20	West Dapto Road (tributary n/o Darkes Road)	Sheaffes Road to Darkes Road
TR01	B21	West Dapto Road (3 x Mullet Creek tributaries)	Darkes Road to Shone Avenue
TR01	B22	West Dapto Road (3 x Mullet Creek tributaries)	Darkes Road to Shone Avenue
TR01	B23	West Dapto Road (3 x Mullet Creek tributaries)	Darkes Road to Shone Avenue
TR04	B10	Paynes Road	Sheaffes Rd to Paynes Rd (North)
TR04	B27	Paynes Road	Paynes Road (west of Northcliffe Drive Extension)
TR06	B29	Wongawilli Road	Shone Avenue to Smiths Lane
TR07	B24	Darkes Road (Mullet Creek western tributary)	West Dapto Road to Princes Hwy
TR07	B25	Darkes Road (Mullet Creek eastern tributary)	West Dapto Road to Princes Hwy
TR07	B26	Darkes Road (Mullet Creek eastern tributary)	West Dapto Road to Princes Hwy
TR08	B30	Shone Ave (Robins northern tributary)	West Dapto Road to Bong Bong Road
TR08	B31	Shone Ave (Robins Creek southern tributary)	West Dapto Road to Bong Bong Road
TR13	B45	Cleveland Road (2 x Mullet Creek tributaries)	Princes Hwy to Daisybank Drive
TR13	B46	Cleveland Road (2 x Mullet Creek tributaries)	Princes Hwy to Daisybank Drive
TR13	B47	Cleveland Road (2 x Mullet Creek tributaries)	NR46 to Western Ring Road
TR13	B48	Cleveland Road (2 x Mullet Creek tributaries)	NR46 to Western Ring Road
TR13	B49	Cleveland Road (Mullet Creek tributary)	Western Ring Road to Avondale Road
TR13	B50	Cleveland Road (Mullet Creek tributary)	Western Ring Road to Avondale Road
TR13	B51	Cleveland Road (Mullet Creek tributary)	Western Ring Road to Avondale Road
TR16	B63	Yallah Road (3 x Duck Creek tributaries)	Marshall Mount Road to Princes Hwy
TR16	B64	Yallah Road (3 x Duck Creek tributaries)	Marshall Mount Road to Princes Hwy
Bridges over watercourses for new roads			
TR18	B1	Northcliffe Drive Extension	Wyllie Road to Northcliffe Drive (existing)
TR18	B3	Northcliffe Drive Extension	Northcliffe Drive (existing) to Wyllie Road
TR18	B4	Northcliffe Drive Extension (2 x tributaries)	Reddalls Road to Wyllie Road
TR18	B5	Northcliffe Drive Extension (2 x tributaries)	Reddalls Road to Wyllie Road
TR18	B6	Northcliffe Drive Extension	Reddalls Road (east) to Reddalls Road (west)
TR18	B7	Northcliffe Drive Extension (southern tributary)	Reddalls Road (west) to Paynes Road
TR18	B8	Northcliffe Drive Extension (northern tributary)	Reddalls Road (west) to Paynes Road
TR18	B9	Northcliffe Drive Extension (northern tributary)	Reddalls Road (west) to Paynes Road

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Road Ref	Map Ref	Road Name	Link Description
TR19	B11	Northcliffe Drive Extension	Sheaffes Road to West Dapto Road
TR19	B12	Northcliffe Drive Extension	Sheaffes Road to West Dapto Road (Bridge adjacent to ESA)
TR19	B13	Northcliffe Drive Extension	Sheaffes Road to West Dapto Road
TR19	B14	Northcliffe Drive Extension	Sheaffes Road to West Dapto Road
TR20	B34	Iredell Road	Western Ring Road to Bong Bong Road
TR21	B41	New road (not in Plan) (Brooks Reach east)	Brooks Reach to Cleveland Road
Rail crossings			
TR07	DRC	Darkes Road	West Dapto Road to Princes Hwy

12.2.8   Bridge Infrastructure Improvement Program

The following opportunities have been identified through the preparation of this asset management plan that will assist in improving future asset management planning outcomes:

Item	Issue	Description	Responsible	Timing
2.1	Componentisation	The current description of bridges should be reviewed to identify components with differing useful life	MISP	2026
2.2	Material description	The maintenance and renewal activities vary according to the construction material of the component. The material type needs to be identified to ensure the appropriate maintenance activities are scheduled.	MISP	2026
2.3	Hierarchy	Investigate the applicability of a hierarchy associated with footbridges, jetties, and boardwalks.	MISP	2026
2.4	Useful life review	The design life of several bridges in the asset group is 100 years. The useful is identified at 80 years. The useful life should be reviewed to determine if 100 years (plus) is appropriate.	MISP	2026
2.5	Constraint hierarchy protocol	Current floodplain and stormwater DCP requirements can trigger embellishment in the design and trigger the need increased construction costs and whole of life costs.	MISP	2026

12.3 Transport Facilities including Street Lighting

Transport facilities and street lighting provide our community with a safer and efficient road network through managing traffic with a range of traffic measures and treatments.

Transport facilities includes the delivery and maintenance of signage and line marking; roundabouts; pedestrian refuges; medians, blisters, and splitter islands; raised thresholds and speed humps; parking and bus bays; intersection treatments; and similar devices.

The plan excludes the lifecycle cost for traffic signals. In New South Wales, all traffic signals are owned and operated by Transport for NSW (TfNSW), including those on roads operated by Council. Council will typically need to fund the cost of works where it seeks to initiate the installation of a new traffic signal, or upgrade and existing traffic signal subject to TfNSW approval. In this scenario, Council will recognise the cost of the works as a future investment and handover the ownership and control of the asset to TfNSW on completion.

Regulatory signs and linemarking form an important part of managing traffic and parking efficiency and safety. The cost of individual regulatory sign is typically well below the cost at which we would recognise and asset, however we have taken the approach of grouping the network of signs as one asset. This enables us to better plan for the maintenance and proactive replacement of signs over the expected life of the asset. Linemarking is normally treated as a non-financial asset without a capital value. Existing linemarking is monitored for condition on a routine basis and works undertaken as an operational expense. We are trailing the use of camera-based inspections as part of our Intelligent Defect Monitoring project to improve the rate of inspections on linemarking.

Street lighting supports and improves the safe transportation of people at times when natural light levels are insufficient. Street lighting is typically within the road corridor, however, may include some spaces adjacent to open space and public domains where the movement of people is a primary function. Lighting is primarily for the benefit of pedestrian safety to illuminate the space between eye level and the ground to enable identification of hazards and pathways for safe walking and to enable motorists to see pedestrians within and adjacent to the road corridor.

Street lighting is not a requirement for all roads as vehicles use headlights to illuminate the roadway. This is why freeways and other main roads where pedestrians are not permitted rarely have street lighting. These roads typically only use street lighting at junctions and other key point on the road network to identify a change in road geometry or hazards.

Most street lighting is owned and operated by energy network suppliers, Endeavour Energy in our region. The primary service model for street lighting has Council as the customer and Endeavour Energy as the provider. The basis for this arrangement is that Council provides a transport service and lighting is provided to support this service. Council's role is to determine the level of lighting required and fund the installation, depreciation, maintenance, and energy usage costs. The costs of these services are determined by the Endeavour Energy and monitored by the Independent Pricing and Regulatory Tribunal. The street lighting provided under this model is not included in Council's asset register as we do not own or have control of the street lighting assets. However, we recognise the operational expenditure (energy, maintenance costs, replacements, and additions) and any subsidies from Transport for NSW towards street lighting on State Roads in this asset management plan.

In addition to street lighting owned and operated by Endeavour Energy, Council has a small number of streetlights operated on privately metered arrangements. Under this scenario, Council owns and controls the streetlights and as a result, they are recognised as Council asset. This has typically been done where lighting selected is outside of the range offered by Endeavour Energy. These poles and lights are included in this section of the plan.

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General open space and sport field lighting is a specific category of light with the primary purpose of supporting open space and recreation activities. This category of light is included in the Open Space section of the asset management plan.

12.3.1   Profile

Community Strategic Plan Goal: Goal 2: We have well planned, connected, and liveable places

Service: Transport Service
Transport facilities including Street Lighting is one of six delivery streams that contribute to the Transport Service. The transport facilities delivery stream provides implementation and maintenance of signage, lighting, and transport facilities across the Local Government Area to allow safe, efficient, and effective transport. The service includes:

- Maintenance of existing transport facilities
- Plan and manage street light coverage.
- Oversee streetlights in new developments.
- Plan and install new transport facilities in partnership with Transport for NSW.

12.3.2   Strategic priorities

The transport facilities delivery stream is guided by our Transport Supporting Documents. Transport services are guided and informed by the following strategic supporting documents:

- Draft Wollongong Integrated Transport Strategy (ITS)
- City of Wollongong Pedestrian Plan 2017-2021
- Wollongong Cycling Strategy 2030
- Wollongong City Centre Access and Movement Strategy 2013
- Keiraville Gwynneville Access and Movement Strategy 2020
- West Dapto Contributions Plan
- Wollongong City-Wide Development Contributions Plan

As the overarching strategy that informs The Wollongong Integrated Transport Strategy identifies the following key strategic framework and priorities:

Vision - Wollongong is a liveable and green city where everyone has viable transport choices that provide connected journeys through Country that are safe, reliable, and accessible.

Guiding Principles:

- Connecting to Country and Place.
- Sustainability-focused.
- Multi-modal transport options for all.
- Integrated land use and transport decisions.
- Work with the community for change.
- Comfortable and convenient active travel

Asset Management Plans

Goals – the strategy identifies a range of actions linked to achieving the following six goals:

Goal 1 | Competitive Public Transport
Goal 2 | Everyday needs within 15 minutes
Goal 3 | A connection to Country and sense of place
Goal 4 | Increased use of active modes
Goal 5 | All ages and abilities can get around with ease
Goal 6 | Sustainable transport options

Table 12.3.2 below summarises the actions from the strategy with a relationship to transport facilities and street lighting:

Table 12.3.2 – Supporting Document Actions

Strategy & Reference	Action	Resource Impact
ITS – 03	Design and implement on-road measures to prioritise public transport such as dedicated bus traffic light signalling, queue jumps and bus lanes on key transport corridors.	Council is identified as a support. Funding will need to be considered for any actions relating to roads where Council is the roads authority
ITS – 13	Develop a walking plan to provide high-quality pedestrian routes in town centres that are co-located with train stations: Stanwell Park, Coledale, Austinmer, Thirroul, Bulli, Woonona, Corrimal, Fairy Meadow, Coniston, Port Kembla, Unanderra, and Dapto. The plans to consider lighting, crossings, and shade/shelter.	Outcome of the plan may require additions to the 10-year plan for lighting and pedestrian transport facilities.
ITS-16	Implement a car share trial including a space allocation policy and permit scheme.	Minor impact on allocation of signage, and potential management system.
ITS-23	Implement 30 km/h speed limits within school zones and in town centres.	Operational costs associated with preparing the traffic assessment and application process. May require some capital expenditure to implement traffic calming to complement the speed zone change.
ITS-24	Ensure all new and renewed intersections within 500m of a train station or school prioritise pedestrians through options like continuous footpaths, raised "wombat" crossings and signals.	Allocation of additional assets to meet the change in standard within 500m of train stations.
ITS-25	Traffic signals to have late/start or red arrow hold for parallel pedestrian movements.	Funding required to modify signals located on local roads, however as the asset is owned by the NSW Government, the cost would be operational.
ITS-32	All town centre traffic signals to have pedestrian and bicycle priority and low cycle times to promote walking and bike riding.	Funding required to modify signals located on local roads, however as the asset is owned by the NSW Government, the cost would be operational.

Asset Management Plan |

Asset Management Plans

12.3.2.1   Future Impacts

The following future impacts were identified in the delivery stream report for Transport facilities, the strategic response, and the consequences of not funding the impact is summarised below in Table 12.3.2.2:

Table 12.3.2.2 – Future Impacts and Strategic Response

Future Impacts	Strategic Response	Consequences of Not Funding
Service demands may increase with population growth, new and upgraded roads and existing assets require renewal.	Densification and growth are likely to increase demand for transport facilities as the number of road users increase. Expect demand increase for traffic calming and pedestrian facilities.	Difficulty in meeting the vision of safe, reliable, and accessible transport network.
Industry trends towards energy efficient street lighting.	Changeover of remaining lighting stock to LED technology will require additional funding for up-front costs. The lifecycle costs are typically reduced through lower on-going energy usage, longer service life and reduces maintenance requirements.	Higher energy usage. Challenges meeting net-zero targets. Higher life-cycle costs for lighting, with increasing risk as energy prices rise.
Changes to NSW Government Transport strategies, funding programs and priorities. Changes in NSW Government delivery of infrastructure and services		
Disruptive Technology including driverless cars, ride sharing.	Likely to increase the demand for maintaining a higher condition standard for road linemarking and signage.	In ability for technology to read the local road network.
Higher priority towards Crime Prevention Through Environmental Design on path networks.	Ensure key precincts and transport networks have sufficient and appropriate lighting.	Reduced activity in precincts and transport networks

12.3.2.2   Traffic Facility Provision

Transport facilities include a range of asset types and lighting to support a safe, reliable, and accessible transport network. Decisions to provide or modify assets under this group are led by traffic assessment and studies. Traffic facility devices assist in the regulation of traffic and are largely covered by a legislative framework. The oversight of decisions to support the implementation of transport facilities is overseen by the City of Wollongong Traffic Committee (WTC). This is a technical committee that operates under the authority conferred to Council by the NSW Government under the Transport Administration Act 1988, and in accordance with the powers delegated to Council by the Road Transport Act 2013 and the Roads Act 1993. Reviews are based on technical merit and design standards, with decision of the WTC published on Council's website.

Traffic facility provision is primarily guided by Austroads Guide to Traffic Management series, Transport for NSW technical directions, industry guides and emerging traffic and transport research. The need and priority are determined through assessment and study of the existing and forecast traffic demand. Council maintains a request list for proposals that are supported by the WTC and works are planned based on priority.

Asset Management Plans

Street lighting provision is determined following a lighting assessment conducted in accordance with the provisions of the Australian Standard AS1158 series of standards. Guides for general spacing of street lighting to meet the relevant lighting categories are based on operational knowledge and advice of subject matter experts from Council, Endeavour Energy, and lighting suppliers.

12.3.3   Asset Snapshot

**Asset Register – ** Assets

Financial Reporting Group: Roads

Valuation Information: Valuation Technique – Infrastructure assets are recognised using the cost method, which equates to the current replacement cost of a modern equivalent asset.

Asset Class Plan	Asset Classification	No*	Indicative Useful Life (Years)	Carrying Value	Annual Depreciation	Current Asset Cost
				@ 30 June 2024		
Transport facilities	Blister	566	76	8,260,422	129,466	11,205,691
	Median	609	78	41,670,056	819,242	73,971,119
	Pedestrian Island	291	75	3,560,795	65,236	5,044,840
	Raised crossing	35	45	1,198,440	45,444	2,200,255
	Roundabout	153	77	15,264,261	276,957	21,022,852
	Speedhump	156	42	2,872,249	129,519	5,854,342
	Traffic separators	19^	80	419,123	4,291	392,430
	Subtotal	**1829**	**73**	**73,245,346**	**1,470,155**	**119,691,529**
Street furniture	Road Signs	4*	26	568,606	194,308	4,415,423
	Street Lighting	23	35	2,819,605	684,612	3,504,217
	Subtotal	**27**		**3,388,211**	**878,920**	**7,919,640**
	Total			**76,633,557**	**2,349,075**	**127,611,169**

^Traffic separators – indicates the number of locations, not devices

*Road signs are primarily recognised as a single grouped asset.

12.3.3.1   Components and attributes

The traffic facility assets are currently recorded as single assets on the year of acquisition.

12.3.3.2   Risks and criticality

Critical services are defined as those which have a high consequence of failure causing significant loss or reduction of service to the community as outlined in Section 7.4.4. A review of the Transport Service identified that it provides a critical service, however there are no related assets within the transport facilities and street lighting group of assets.

12.3.3.3   Operation and maintenance requirements

Traffic facility assets require the following operation and maintenance activities:

- routine inspections.
- reactive maintenance.
- proactive maintenance of landscaping within transport facilities.

We are investigating the use of Artificial Intelligence (AI) with machine learning to undertake proactive inspections of road signage. The technology uses vehicle mounted cameras and similar technology to facial recognition to record and analyse signs as a vehicle drives by. This technology has been trialled in Australia and will piggy-back our AI analysis of road surface condition monitoring. The intention is to link the defect identification with work management to improve efficiency and performance of the signs and linemarking assets.

Council funds the operational inspections, proactive and reactive maintenance of street lighting operated by Endeavour Energy as part of the annual tariff.

12.3.3.4   Depreciation and degradation curves

Traffic facility assets use a straight-line depreciation and degradation curves.

12.3.4   Roles and responsibilities

Transport facilities

Service Manager: Manager Infrastructure Strategy and Planning

Role	Lifecycle	Function	Responsible	Activities
Service Management	Planning	Service Planning	Manager Infrastructure Strategy and Planning	Ensure service linkage to CSP Define service needs Determine service hierarchy Analyse capacity and demand Summarise service-related legislative requirements (Service Manager) Establish customer levels of service Determine asset requirements for service delivery
	Operation	Service Operations (except lines and signs)	Manager Infrastructure Strategy and Planning	Act as customer liaison for service Provide information and communications to customers Initiate notifications for service interruptions Undertake functional assessment Monitor and manage service and asset utilisation
	Planning and End of Life	Asset Acquisitions and Disposals	Manager Infrastructure Strategy and Planning	Develop plan for acquisitions and disposals of assets aligned to service plan and demand forecast Engage with stakeholder on acquisition and disposal plan

Asset Management Plans

Role	Lifecycle	Function	Responsible	Activities
				Arrange or transition of service and data migration
				Arrange establishment or termination of agreements
Asset management	Planning	Asset Planning	Manager Infrastructure Strategy and Planning	Complete performance assessment Assess asset related legislative requirements Coordinate scope preparation Asset review Renewal/upgrade planning
		Asset Data	Manager Infrastructure Strategy and Planning	Administration of asset register Updates for capital improvements Initiate asset disposal system process Prepare asset management plan Coordinate asset reporting data
		Asset Financials	Manager Infrastructure Strategy and Planning	Revaluation Unit rates Estimates Monitor expenditure
Project Delivery	Delivery	Project Sponsor	Director Infrastructure + Works	Capital expenditure review (OLG) Approval project governance framework Approve and monitor project plan
		Asset Concept	Manager Infrastructure Strategy and Planning	Define the problem/need Options assessment Feasibility Lifecycle costing Funding strategy Business case/proposal
		Program Management	Manager Infrastructure Strategy and Planning	Oversee project as part of program Responsible for managing overall program costs, risks, progress
		Asset Design	Manager Project Delivery	Ensure design solutions align with strategy Options analysis Proof of concepts Cost estimating Approvals process
		Asset Delivery	Manager Project Delivery Manager City Works	Procurement strategy Contract management Project management User acceptance testing Oversee project commissioning and handover
Maintenance and	Maintenance	Asset Maintenance	Manager City Works	Complete maintenance inspections and testing Customer request triage and scheduling

Asset Management Plans

Role	Lifecycle	Function	Responsible	Activities
Operation Management				Establish maintenance activity protocols and procedures Work order scheduling Undertake maintenance requests
		Asset Maintenance – Lines	Manager City Works	Complete maintenance inspections and testing Customer request triage and scheduling Establish maintenance protocols and procedures Work order scheduling Undertake maintenance requests
		Asset Maintenance – Signs	Manager City Works	Complete maintenance inspections and testing Customer request triage and scheduling Establish maintenance protocols and procedures Work order scheduling Undertake maintenance requests
	Operation	Asset Operations	Manager Infrastructure Strategy and Planning	Utility management Compliance audits

Public Lighting

Service Manager: Manager Project Delivery

Role		Function	Responsible	Activities
Service Management	Planning	Service Planning	Manager Infrastructure Strategy and Planning	Ensure service linkage to CSP Define service needs Determine service hierarchy Analyse capacity and demand Summarise service-related legislative requirements (Service Manager) Establish customer levels of service Determine asset requirements for service delivery
	Operation	Service Operations	Manager Project Delivery	Act as customer liaison for service Provide information and communications to customers Initiate notifications for service interruptions Undertake functional assessment Monitor and manage service and asset utilisation
	Planning and End of Life	Asset Acquisitions and Disposals	Manager Project Delivery	Develop plan for acquisitions and disposals of assets aligned to service plan and demand forecast Engage with stakeholder on acquisition and disposal plan

Asset Management Plan |

Asset Management Plans

Role		Function	Responsible	Activities
				Arrange or transition of service and data migration
				Arrange establishment or termination of agreements
Asset management	Planning	Asset Planning	Manager Project Delivery	Complete performance assessment Assess asset related legislative requirements Coordinate scope preparation Asset review Renewal/upgrade planning
		Asset Data	Manager Infrastructure Strategy and Planning	Administration of asset register Updates for capital improvements Initiate asset disposal system process Prepare asset management plan Coordinate asset reporting data
		Asset Financials	Manager Infrastructure Strategy and Planning	Revaluation Unit rates Estimates Monitor expenditure
Project Delivery	Delivery Delivery	Project Sponsor	Director Infrastructure + Works	Capital expenditure review (OLG) Approval project governance framework Approve and monitor project plan
		Asset Concept	Manager Infrastructure Strategy and Planning	Define the problem/need Options assessment Feasibility Lifecycle costing Funding strategy Business case/proposal
		Program Management	Manager Project Delivery	Oversee project as part of program Responsible for managing overall program costs, risks, progress
		Asset Design	Manager Project Delivery	Ensure design solutions align with strategy Options analysis Proof of concepts Cost estimating Approvals process
		Asset Delivery	Manager Project Delivery	Procurement strategy Contract management Project management User acceptance testing Oversee project commissioning and handover
Maintenance and Operation Management	Maintenance	Asset Maintenance – Street lighting network	Endeavour Energy	Complete maintenance inspections and testing Customer request triage and scheduling

Asset Management Plans

Role	Function		Responsible	Activities
				Establish maintenance protocols and procedures
				Work order scheduling
				Undertake maintenance requests
		Asset Maintenance – Privately Metered	Manager City Works Manager Infrastructure Strategy and Planning	Complete maintenance inspections and testing Customer request triage and scheduling Establish maintenance protocols and procedures Work order scheduling Undertake maintenance requests
	Operation	Asset Operations	Manager Project Delivery	Utility management Compliance audits

12.3.5   Performance

We currently have limited information on the performance of transport facilities as we are yet to comprehensively rate the condition, function, and capacity of the asset group.

A service agreement is in place with Endeavour Energy for the condition and functionality of the street lighting network. Street lighting is meeting performance expectations.

12.3.5.1   Customer Satisfaction Survey

Below is an extract of table 13 from the Wollongong City Council Community Satisfaction Survey as it relates to transport facilities. The change in level of mean satisfaction scores for regulation of traffic suggests it is an area of priority for Council. Roads and traffic were also identified as key priorities from the Residents' Wish List, with 41% of respondents suggesting this is a key focus area for Council over the next 4 years.

DIRECT SERVICES	2010	2012	2014	2017	2019	2021	2023	SIGNIFICANT CHANGE SINCE 2021
Regulation of traffic flow in local area	3.2	3.2	3.3	3.2	3.1	3.3	3.1	⬇
Compliance and regulation of parking	-	-	-	-	-	3.2	3.1	⬄
Regulation of traffic flow in city centre	3.0	3.2	3.1	3.1	3.2	3.2	3.0	⬇
Provision of parking in high demand areas (city centre, foreshore)	-	-	-	-	-	2.5	2.5	⬄

12.3.5.2   Legislative Requirements

The following legislation is associated with the Transport facilities service provision:

- Roads Act 1993
- NSW Road Rules 2008
- Road Transport (Safety and Traffic Management) Act 1999
- Road Transport (Safety and Traffic Management) Regulation 1999
- Transport Administration Act, 1988

Asset Management Plans

12.3.6   Future Investments

12.3.6.1   New and Upgrade Plans

The following table includes new and upgraded intersections that are listed in the West Dapto Vision and Development Contributions Plan. The intersections were identified as part of the demand analysis for transport associated with the population growth, and a review of the existing transport provision and developing a proposed transport model. The timing of the works is driven by the rate of development, with the contribution plan providing indicative timing. The data and references are compiled using the following tables from the West Dapto Development Contribution Plan: 11, 13, 16, and Schedule 3. The table includes bridges that are anticipated beyond the 10-year life of the plan; however, they are included for completeness. These forecasts are subject to vary in according to rate of development.

Road Item Ref	Map Ref	Road 1	Road 2	Intersection Treatment	Indicative Timing	Cost estimate - Road Level
Intersections for existing roads						
TR01	IN12	Wyllie Road	West Dapto Road	Small roundabout	2020/21 - 2030/31	4,535,905
TR01	IN14	Industrial Access Road	West Dapto Road	Small roundabout	2020/21 - 2030/31	
TR01	IN15	Darkes Road	West Dapto Road	Large signals	2020/21 - 2030/31	
TR01	IN16	New road (not in Plan) (south of Darkes Road)	West Dapto Road	Small roundabout	2020/21 - 2030/31	
TR01	IN17	New road (not in Plan) (south of Darkes Road)	West Dapto Road	Large signals	2020/21 - 2030/31	
TR01	IN18	Rainbird Drive / New Road (not in Plan)	West Dapto Road	Large signals	2020/21 - 2030/31	
TR01	IN13	Reddalls Road	West Dapto Road	Small roundabout	2020/21 - 2030/31	
TR01	IN10	Northcliffe Drive Extension	West Dapto Road	Large signals	2020/21 - 2030/31	
TR02	IN11	Princes Hwy	West Dapto Road	Large signals	2010/11 – 2031/32	1,790,415
TR03	IN20	Sheaffes Road	New Road (not in Plan) (east of Paynes Road)	Small roundabout	2021/22 - 2025/26	1,309,467

Asset Management Plans

Road Item Ref	Map Ref	Road 1	Road 2	Intersection Treatment	Indicative Timing	Cost estimate - Road Level
TR03	IN21	Sheaffes Road	New Road (not in Plan) (west of Paynes Road)	Small roundabout	2021/22 - 2025/26	
TR03	IN7	Sheaffes Road	Paynes Road	Large signals	2021/22 - 2025/26	
TR04	IN6	Paynes Road	Northcliffe Drive Extension / Paynes Road	Large signals	2026/27 - 2030/31	958,486
TR07	IN22	Darkes Road	New Road (not in Plan)	Small roundabout	2027/28 - 2031/32	1,133,976
TR07	IN23	Darkes Road	Princes Hwy	Large signals	2027/28 - 2031/32	
TR08	IN19	Shone Avenue	West Dapto Road	Large signals	2012/13 – 2026/27	2,584,078
TR08	IN24	Shone Avenue	Western Ring Road	Large signals	2012/13 – 2026/27	
TR08	IN25	Horsley Drive	Shone Avenue	Small roundabout	2012/13 – 2026/27	
TR08	IN26	Bong Bong Road	Shone Avenue	Small signals	2012/13 – 2026/27	
TR10	IN27	Bong Bong Road	Station Street	Small signals	2035/36 - 2040/41	2,190,305
TR10	IN28	Bong Bong Road	Eastern Link Road	Large signals	2035/36 - 2040/41	
TR10	IN30	Fairwater Drive (west)	Bong Bong Road	Small roundabout	2035/36 - 2040/41	
TR10	IN29	Bong Bong Road	Sierra Drive	Mini roundabout	2035/36 - 2040/41	
TR10	IN63	Bong Bong Road	Glenlee Drive	Small roundabout	2035/36 - 2040/41	
TR13	IN37	Cleveland Road	New Road (not in Plan) (Brooks Reach east)	Large signals	2013/14 - 2031/32	4,009,434
TR13	IN40	Cleveland Road (dogleg)	New Road (not in Plan)	Small roundabout	2013/14 - 2031/32	
TR13	IN36	Cleveland Road	Eastern Link Road (Daisybank Drive)	Large signals	2013/14 - 2031/32	
TR13	IN38	Cleveland Road	Brooks Reach to Huntley Link	Large signals	2013/14 - 2031/32	
TR13	IN39	Cleveland Road	Western Ring Road	Large signals	2013/14 - 2031/32	
TR14	IN41	Cleveland Road	Avondale Road	Small roundabout	2040/41 – 2050/51	2,926,864
TR14	IN45	Avondale Road	Brooks Reach to Huntley Link	Small roundabout	2040/41 – 2050/51	
TR14	IN46	Avondale Road	Western Ring Road	Large signals	2040/41 – 2050/51	

Asset Management Plans

Road Item Ref	Map Ref	Road 1	Road 2	Intersection Treatment	Indicative Timing	Cost estimate - Road Level
TR14	IN43	Avondale Road	Eastern Link Road (NR53)	Small signals	2040/41 – 2050/51	
TR14	IN44	Avondale Road	Huntley Road	Large signals	2040/41 – 2050/51	
TR15	IN58	Huntley Road	Princes Hwy	Large signals	2035/36 - 2040/41	
TR15	IN59	Huntley Road	Marshall Mount Road	Small signals	2035/36 - 2040/41	2,276,309
TR15	IN60	Huntley Road	Penrose Drive	Small signals	2035/36 - 2040/41	
TR16	IN62	Yallah Road	Princes Hwy	Large signals	2031/32 - 2035/36	958,486
TR17	IN55	Yallah Road	Marshall Mount Road	Large signals	2031/32 - 2055/56	
TR17	IN56	Marshall Mount Road	North Marshall Mount Road	Small signals	2031/32 - 2055/56	1,943,344
TR17	IN57	Marshall Mount Road	Marshall Mount Town Centre Bypass	Small signals	2031/32 - 2055/56	
Intersections for new roads						
TR18	IN1	Northcliffe Drive extension	Church/Ian McLennan Park access	Large signals	2031/32 - 2035/36	
TR18	IN2	Northcliffe Drive extension	Wyllie Road	Large signals	2031/32 - 2035/36	
TR18	IN5	Northcliffe Drive extension	Industrial Access Road	Large roundabout	2031/32 - 2035/36	3,610,339
TR18	IN3	Northcliffe Drive extension	Reddalls Road (east)	Large signals	2031/32 - 2035/36	
TR18	IN4	Northcliffe Drive extension	Reddalls Road (west)	Large roundabout	2031/32 - 2035/36	
TR19	IN8	Northcliffe Drive extension	New Road (not in Plan)	Small roundabout	2025/26 - 2034/35	350,981
TR19	IN9	Northcliffe Drive extension	New Road (not in Plan)	Small roundabout	2025/26 - 2034/35	
TR22	IN31	Fairwater Drive	Sierra Drive	Small roundabout	Completed - 2012/13	
TR22	IN32	Fairwater Drive	Fowlers Road Extension & Eastern Link Road (Daisybank Drive)	Large signals	Completed - 2012/13	
TR23	IN33	Fowlers Road Extension	Princes Hwy	Large signals	2016/17 - 2022/23	
TR23	IN34	Fowlers Road Extension	Marshall Street	Large roundabout	2016/17 - 2022/23	1,693,367
TR23	IN35	Fowlers Road Extension	Eastern Link Road (NR27)	Large roundabout	2016/17 - 2022/23	

Asset Management Plans

Road Item Ref	Map Ref	Road 1	Road 2	Intersection Treatment	Indicative Timing	Cost estimate - Road Level
TR25	IN47	Western Ring Road	New Road (not in Plan) (Jersey Farm Road)	Small signals	2021/22 - 2050/51	
TR25	IN48	Western Ring Road	Iredell Road	Large roundabout	2021/22 - 2050/51	
TR25	IN49	Western Ring Road	Bong Bong Road	Large signals	2021/22 - 2050/51	
TR25	IN50	Western Ring Road	New Road (not in Plan) (Brooks Reach west)	Small signals	2021/22 - 2050/51	5,295,603
TR25	IN51	Western Ring Road	New Road (not in Plan)	Large roundabout	2021/22 - 2050/51	
TR25	IN52	Western Ring Road	New Road (not in Plan)	Large roundabout	2021/22 - 2050/51	
TR25	IN53	Western Ring Road	Eastern Spine Road (NR55)	Large signals	2021/22 - 2050/51	
TR25	IN54	Western Ring Road	New Road (not in Plan)	Large signals	2021/22 - 2050/51	
TR26	IN42	Brooks Reach to Huntley Link	Stockyard Crescent	Small roundabout	2035/36 - 2055/56	175,490
TR29	IN61	Marshall Mount Town Centre Bypass	Yallah Road	Large signals	2035/36 - 2040/41	818,284

Asset Management Plans

12.3.6.2   Decommissioning and Disposal Planning

There are no assets under this grouping currently identified for decommissioning.

12.3.6.3   Renewals

Figure 12.3.6.3(a) below provides an overview of the renewal profile over the 10-year period of this plan.

Figure 12.3.6.3(a) - Traffic Facility Forecast Renewals
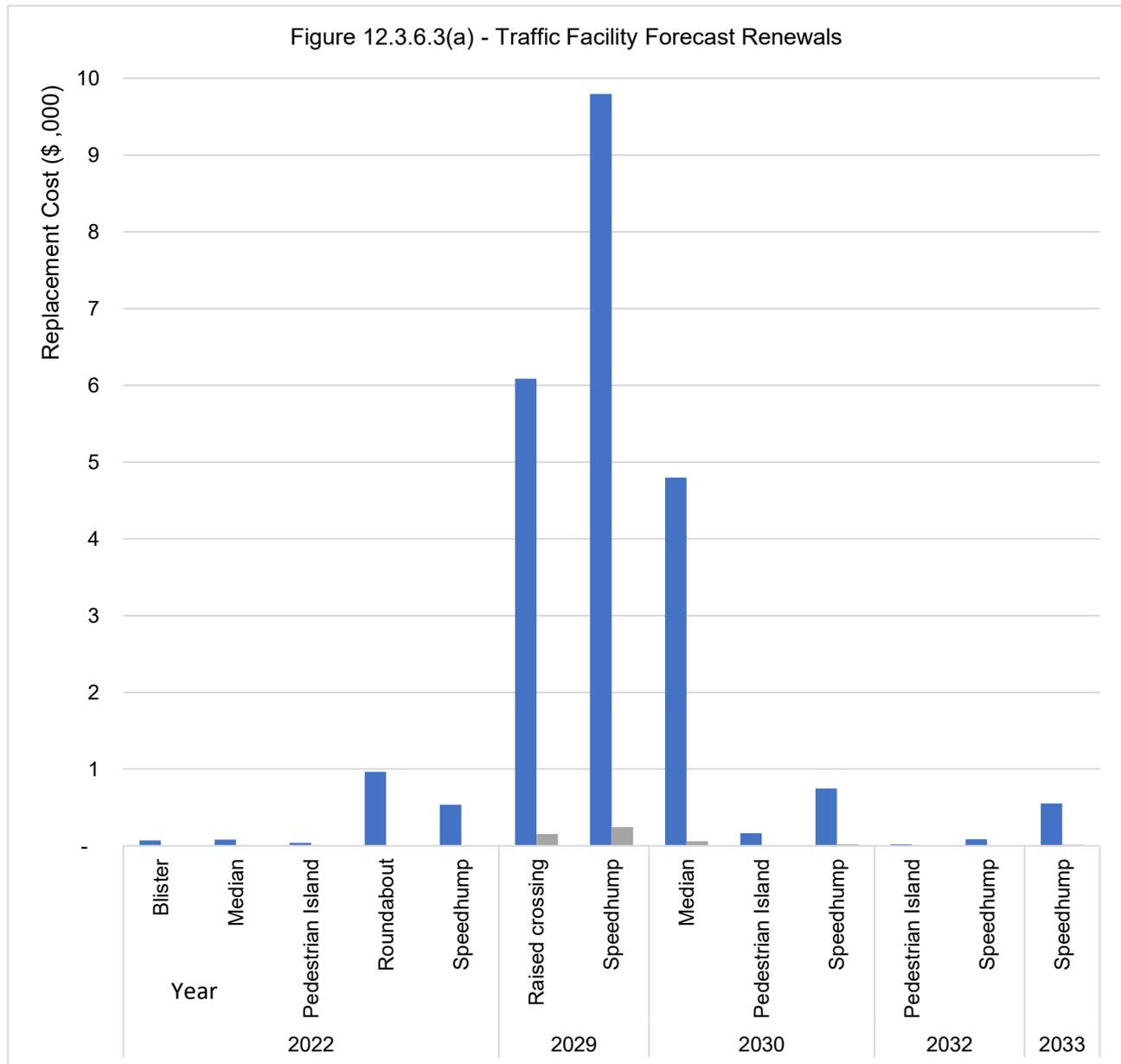
If we look at the renewal profile of the whole asset group, as shown in the Figure 12.3.6.3(b) below, there are distinct peaks occurring in the years of 2049 and 2069. This is because of two assumed commission dates for large groups of assets for 1969 and 1989, with 80-year useful life. To smooth out the profile and provide a more realistic renewal forecast, the condition and remaining useful life should be reassessed. At present the primary driver for forecasting renewal is age, not observed condition.

Asset Management Plans

Figure 12.3.6.3(b) – Traffic Facility Renewal Profile
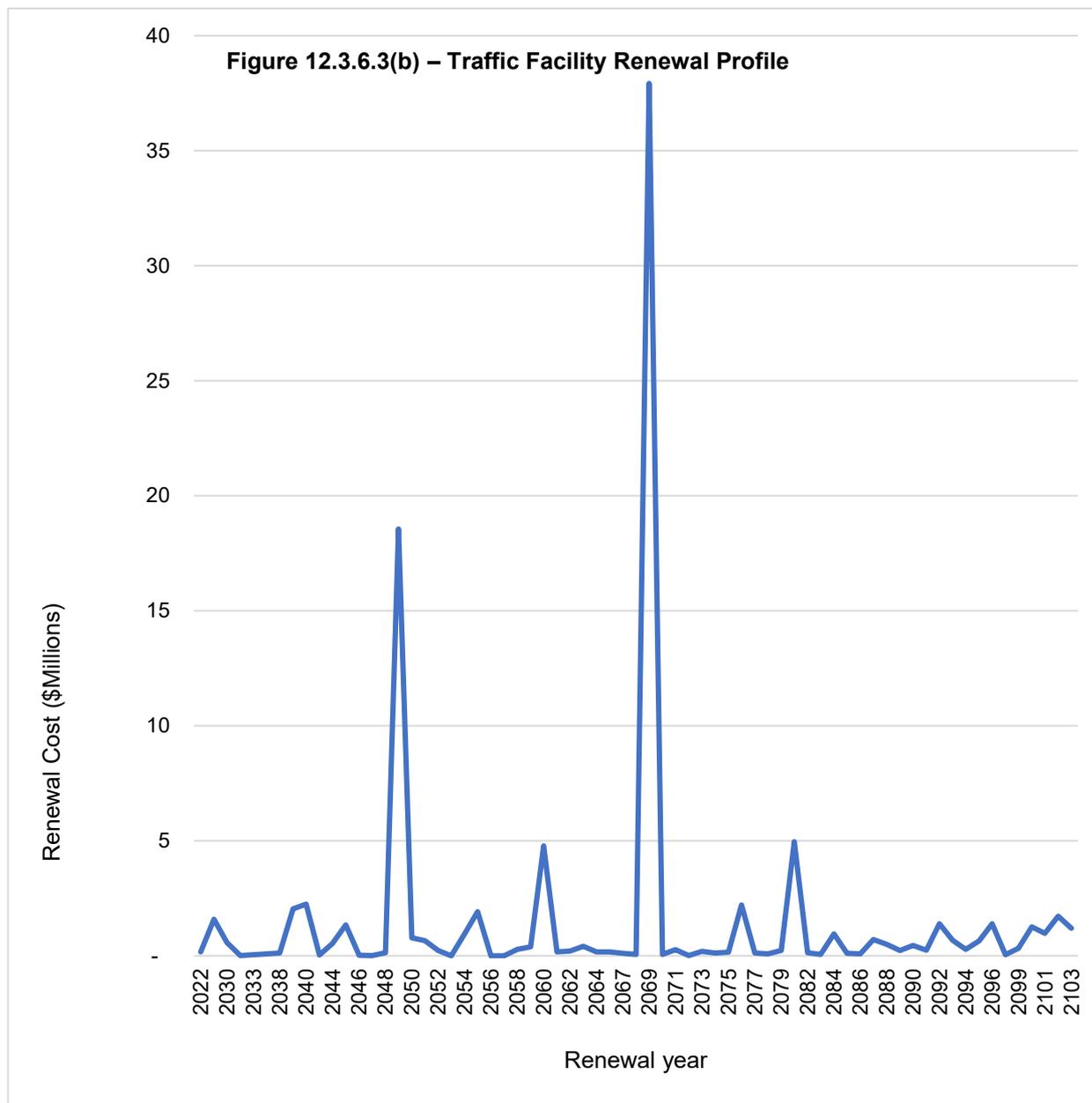
Damage to traffic facility assets resulting from minor vehicle impact is a main cause for early renewal intervention. This accelerates the renewal forecast ahead of the age-based forecast. We have factored in an estimate of the traffic facility assets requiring renewal across the network resulting from minor vehicle damage. Our assumption is 1% of the network being damaged and requiring partial renewal of 30% of the asset. This assumed percentage will be further refined with proactive observed condition rating. Council will pursue insurance claims (where possible), when damage to infrastructure is sustained through motor vehicle accidents.

Maintenance of line marking requires further review. The functionality of transport facilities is often associated with line marking on approach to the device to guide and warn motorists.

12.3.6.4 Future investment plan – Transport facilities

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Depreciation	2,349,075	2,373,705	2,373,005	2,390,309	2,409,573	2,415,095	2,430,282	2,445,469	2,460,655	2,475,842	2,491,029
Required Maintenance works	765,667	773,695	773,467	779,107	785,386	787,186	792,136	797,086	802,036	806,986	811,936
Street Lighting tariff	3,484,991	3,636,155	3,792,760	3,955,005	4,123,086	4,297,223	4,477,628	4,664,526	4,858,154	5,058,752	5,267,633
Operating expenditure	6,599,733	6,783,555	6,939,233	7,124,421	7,318,045	7,499,504	7,700,046	7,907,081	8,120,845	8,341,580	8,570,598
Renewal works	40,000	-	-	-	-	675,000	725,000	740,000	775,000	700,000	775,000
Upgrade works	1,870,000	1,199,435	2,095,000	-	-	-	-	-	-	-	-
Expansion works	-	-	-	-	-	-	-	-	-	-	-
New works	1,338,000	1,821,000	1,710,000	1,659,907	700,000	825,000	825,000	825,000	825,000	825,000	825,000
Capital expenditure	3,248,000	3,020,435	3,805,000	1,659,907	700,000	1,500,000	1,550,000	1,565,000	1,600,000	1,525,000	1,600,000
Totals	9,847,733	9,803,990	10,744,233	8,784,328	8,018,045	8,999,504	9,250,046	9,472,081	9,720,845	9,866,580	10,170,598
Estimated Required Renewals	740,854	740,854	740,854	740,854	740,854	740,854	740,854	740,854	740,854	740,854	740,854
Planned renewal as a % of estimated required	258%	162%	283%	0%	0%	91%	98%	100%	105%	94%	105%

Asset Management Plans

12.3.7   Traffic Facility Asset Improvement Program

Item	Issue	Description	Responsible	Timing
3.1	Condition rating	The group of assets has limited condition rating, with renewal planning based on age. Lack of detailed information on commission date, the age profile results in lumpy forecast renewals that should be reassessed (current significant renewals in 2049 and 2069).	MISP	2025
3.2	Artificial Intelligence (AI) condition and defect monitoring	Road signs and line marking perform an important function from a traffic management perspective to advise motorist about road conditions. Investigate the ability to use artificial intelligence with machine learning to increase the frequency of road sign and line marking monitoring.	MISP	2026
3.3	Classification structure	Consider utilising an additional classification level to further group different types of transport facilities. This will address the current naming convention being used to identify the asset type.	MISP	2026
3.4	Prioritisation model	Consider documenting the process for determining priority of expansion and new traffic facility assets for greater transparency on decision making.	MISP	2027
3.5	Useful life assessment	Some minor inconsistencies in the useful life of similar assets were identified. This may be associated with different hierarchy of roads and risk exposure of the devices to traffic volumes. The reason should be documented in asset data dictionaries, or in a future asset management plan to ensure greater reliability in data.	MISP	2025
3.6	Road sign assets	Road signs are recognised as a group asset, not individually itemised. This approach needs to be reviewed to determine if it continues to be appropriate, and that measures are in place to validate the assumptions and verify the value of the asset.	MISP	2026
3.7	Line marking	A review of the condition of line marking and forecasting the expenditure on annual renewal is required.	MISP	2025
3.8	Service levels	Develop asset related service levels	MISP	2026
3.9	Accessibility	Develop and implement a prioritised program to improve accessibility of existing pedestrian transport facilities	MISP	2026
3.10	Standard drawings	A standard suite of drawings prepared for all traffic facilities and different road environments for Council works and contributed assets from developers.	MIS	2026

12.4   Street Furniture, Bus Shelters, and Guardrails

This group of assets contributes to defining and supporting the movement and place vision established through our Integrated Transport Strategy. The assets assist in providing our community and visitors multi modal, efficient and accessible transport options that are safe and connected and enhance the character and experience of our valued places.

12.4.1   Profile

Community Strategic Plan Goal: Goal 2: We have well planned, connected, and liveable places

Service: Transport Services

Street furniture, bus shelters and guardrails contribute to the services under the delivery streams of Road Safety, Traffic and Transport Planning; and the Footpaths, Cycleways and Transport Nodes.

12.4.2   Strategic priorities

Transport services are guided and informed by the following strategic supporting documents:

- Draft Wollongong Integrated Transport Strategy (ITS)
- City of Wollongong Pedestrian Plan 2017-2021
- Wollongong Cycling Strategy 2030
- Wollongong City Centre Access and Movement Strategy 2013
- Keiraville Gwynneville Access and Movement Strategy 2020
- Town Centre Plans
- Disability Inclusion Action Plan 2020-2025
- West Dapto Contributions Plan
- Wollongong City-Wide Development Contributions Plan

As the overarching strategy that informs The Wollongong Integrated Transport Strategy identifies the following key strategic framework and priorities:

Vision - Wollongong is a liveable and green city where everyone has viable transport choices that provide connected journeys through Country that are safe, reliable, and accessible.

Guiding Principles:

- Connecting to Country and Place.
- Sustainability-focused.
- Multi-modal transport options for all.
- Integrated land use and transport decisions.
- Work with the community for change.
- Comfortable and convenient active travel

Asset Management Plans

Goals – the strategy identifies a range of actions linked to achieving the following six goals

        Goal 1 | Competitive Public Transport
        Goal 2 | Everyday needs within 15 minutes
        Goal 3 | A connection to Country and sense of place
        Goal 4 | Increased use of active modes
        Goal 5 | All ages and abilities can get around with ease
        Goal 6 | Sustainable transport options

Table 12.4.2 below summarises the actions from the strategy with a relationship to street furniture, bus shelters, and guardrails:

Table 12.4.2 – Supporting Document Actions

Strategy & Reference	Action	Infrastructure Impact
ITS – 04	Prioritise improvements to amenity at high-use public transport stops by developing guidelines to support service delivery and inform public domain and private development infrastructure. The guidelines to cover items like wayfinding, shade/shelter, and bike parking.	Council is identified as a support. Funding will need to be considered for any actions relating to roads where Council is the roads authority.
ITS-09	Develop an infrastructure investment tool and standard designs for Station Precinct Upgrades for local government owned public domain.	The tool and design will impact the cost of future infrastructure.
ITS – 13	Develop a walking plan to provide high-quality pedestrian routes in town centres that are co-located with train stations: Stanwell Park, Coledale, Austinmer, Thirroul, Bulli, Woonona, Corrimal, Fairy Meadow, Coniston, Port Kembla, Unanderra, and Dapto. The plans are to consider lighting, crossings, and shade / shelter.	The outcomes of the plan may result in identification of new and upgrade infrastructure under a future asset plan.
ITS-21	Develop an implementation plan to improve accessibility at public transport stops.	The upgrade plan is to be funded as part of the 10-year plan.
ITS-31	Develop a public domain planting guide to support walking and cycling to reduce urban heat island effect. Integrate this guide into the Urban Greening Strategy.	The design and placement of infrastructure needs to consider the space requirements for planting.
ITS-36	Develop a Micro Mobility Policy to support the roll-out of shared e-scooter and e-bike schemes across the City. Policy to focus on first/last mile public transport trips, events, and tourism experiences such as the coastal paths.	The plan may identify supporting street furniture to guide and manage micro mobility vehicles.
ITS-42	Develop a program for infrastructure that supports staying activities, rest, and a sense of place. This may include seating, shade trees and water bubblers.	The program will be included in a future asset plan.
DIAP	Increase the number of accessible bus stops and shelters – develop priority list, upgrade priorities linking to continuous path of travel.	Inspections completed and priority list being compiled to inform the priority list. New shelters to meet accessibility standards.

Asset Management Plans

12.4.2.1   Future Impacts

The following future impacts were identified, the strategic response, and the consequences of not funding the impact is summarised below in Table 12.4.2.1:

Table 12.4.2.1 – Future Impacts Street Furniture, Bus Shelters and Guardrails

Future Impacts	Strategic Response	Consequences of Not Funding
Increasing interest and demand for walking, cycling and public transport options is likely to result in growth of this service.	This action impacts the planning for bus shelters and related infrastructure. The pathways plan addresses increase demand for walking and cycling.	Bus shelters encourage the use of public transport by providing shelter from the elements. People may be less likely to use public transport in inclement weather without shelters and if the shelters condition and appearance is undesirable.
Increased awareness and requirements to address disability access and inclusion requirements.	An audit has been undertaken to assess current compliance with requirements. A plan for improvements is being developed.	Not funding necessary improvements will fail to meet our commitments and objectives in the Community Strategic Plan.
Changing New South Wales Government strategies, priorities, and funding programs - Active Transport Funding Program.	Council leverages available funding to support and bring forward planned improvements	Lack of supporting NSW Government funding will delay progress on improvements and upgrades.

12.4.2.2   Future Demand

Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
Population growth -	Wollongong LGA growth by 55,000. During the next 20 years, several of Areas will evolve from 'sub district' sized populations of less than 30,000 people to areas hosting 'district' level populations of more than 30,000 people.	The West Dapto contribution plan identifies areas for town centre and villages that are likely to increase the number and value of street furniture. The plan also supports access to public transport with provision of facilities for the bus network	The main area of growth in Wollongong is situated in West Dapto. The West Dapto vision and development contributions plan outline the facilities required to support the growth and funding from development towards the	The West Dapto contribution plan identifies the infrastructure and funding required to meet the demand. This plan integrates the contributions plan forecasts.

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			recommended infrastructure.	
Increased Residential Density	Increased residential density in some of the district hubs within the LGA.	Increased density may create additional demand and capacity issues for existing street furniture and shelters.	The Integrated Transport Strategy provides a strategic review of demand and capacity.	Capacity needs are expected to be met by current programs.

12.4.2.3   Street Furniture, Bus Shelters, and Guardrail Provision

The provision of street furniture, bus shelters and guardrail assets are assessed and determined based on merit. We consider the demand generated by the community, the risks, accessibility, demographics, and other relevant factors when assessing proposals to provide additional services. Bus shelters are also informed by patronage numbers from bus stop locations, and in growth areas, based on forecast demand.

12.4.3   Asset Snapshot

Asset Register – Assets

Financial Reporting Group: Roads, Footpaths, Other Structures

Valuation Information: Valuation Technique – Infrastructure (including roads and footpaths), and Other Structures are recognised using the cost method, which equates to the current replacement cost of a modern equivalent asset.

Asset Classification L4	Count of Asset	Average of Useful Life (Years)	Sum of Current Asset Cost	Sum of Current Annual Depreciation as at 30 June 2024	Sum of Carrying Value
Bus Shelters	468	28	8,960,000	498,549	6,315,678
Guardrails	356	52	16,716,867	352,722	10,440,992
Street Furniture	112	25	9,922,522	374,847	6,975,963
Fences	132*	30	4,631,505	160,701	3,724,635
Parking Meters	2*	10	1,973,279	45,613	136,510
	1,070		**42,204,173**	**1,432,431**	**27,593,777**

*The quantity reflects grouped assets

12.4.3.1   Components and attributes

The assets are currently recorded as single assets on the year of acquisition. Items such as fencing, bollards and parking meters are recorded as a group per location/zone.

12.4.3.2　Risks and criticality

Critical services are defined as those which have a high consequence of failure causing significant loss or reduction of service to the community as outlined in Section 7.4.4. Whilst the Transport Service supports critical services, there are no assets under this grouping that are considered critical.

12.4.3.3　Operation and maintenance requirements

The street furniture, bus shelters and guardrail asset group require the following operation and maintenance actions:

- routine inspections
- defect repairs
- clearing

This is based on a review of required maintenance for this group of assets, we estimate the following percentage of the gross replacement cost:

- Street furniture – 0.1%
- Bus shelters – 0.65%
- Guardrails – 0.6%

12.4.3.4　Depreciation and degradation curves

This group of assets use a straight-line depreciation and degradation curves.

12.4.4　Roles and responsibilities

Street Furniture, Bus Shelters, and Guardrails

Service Manager:　　Manager Infrastructure Strategy and Planning

Role	Lifecycle	Function	Responsible	Activities
Service Management	Planning	Service Planning	Manager Infrastructure Strategy and Planning	Ensure service linkage to CSP Define service needs Determine service hierarchy Analyse capacity and demand Summarise service-related legislative requirements (Service Manager) Establish customer levels of service Determine asset requirements for service delivery
	Operations	Service Operations (except existing lines and signs)	Manager Infrastructure Strategy and Planning	Act as customer liaison for service Provide information and communications to customers Initiate notifications for service interruptions Undertake functional assessment Monitor and manage service and asset utilisation

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Role	Lifecycle	Function	Responsible	Activities
	Planning and End of Life	Asset Acquisitions and Disposals	Manager Infrastructure Strategy and Planning	Develop plan for acquisitions and disposals of assets aligned to service plan and demand forecast Engage with stakeholder on acquisition and disposal plan Arrange or transition of service and data migration Arrange establishment or termination of agreements
Asset management	Planning	Asset Planning	Manager Infrastructure Strategy and Planning	Complete performance assessment Assess asset related legislative requirements Coordinate scope preparation Asset review Renewal/upgrade planning
		Asset Data	Manager Infrastructure Strategy and Planning	Administration of asset register Updates for capital improvements Initiate asset disposal system process Prepare asset management plan Coordinate asset reporting data
		Asset Financials	Manager Infrastructure Strategy and Planning	Revaluation Unit rates Estimates Monitor expenditure
Project Delivery	Delivery	Project Sponsor	Director Infrastructure + Works	Capital expenditure review (OLG) Approval project governance framework Approve and monitor project plan
		Asset Concept	Manager Infrastructure Strategy and Planning	Define the problem/need Options assessment Feasibility Lifecycle costing Funding strategy Business case/proposal
		Program Management	Manager Infrastructure Strategy and Planning	Oversee project as part of program Responsible for managing overall program costs, risks, progress
		Asset Design	Manager Project Delivery	Ensure design solutions align with strategy Options analysis Proof of concepts Cost estimating Approvals process
		Asset Delivery	Project Delivery – Major Projects	Procurement strategy Contract management

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Role	Lifecycle	Function	Responsible	Activities
			Manager City Work	Project management User acceptance testing Oversee project commissioning and handover
Maintenance and Operation Management	Maintenance	Asset Maintenance -	Manager City Works	Complete maintenance inspections and testing Customer request triage and scheduling Establish maintenance protocols and procedures Work order scheduling Undertake maintenance requests
	Maintenance	Asset Maintenance – Lines and Signage	Manager City Works	Maintenance inspections and testing Customer request triage and scheduling Establish maintenance protocols and procedures Work order scheduling Undertake maintenance requests
	Operation	Asset Operations	Manager Infrastructure Strategy and Planning	Utility management Compliance audits

12.4.5   Performance

We monitor the performance of our street furniture, bus shelters and guardrail assets by reviewing condition and customer feedback. We have completed a visual condition assessment on our guardrails and bus shelter assets. The condition of other assets in this group has been derived based on expected useful life and straight-line degradation. Figure 12.4.5 below summarises the condition of these assets.

Figure 12.4.5 - Value of Assets by Condition
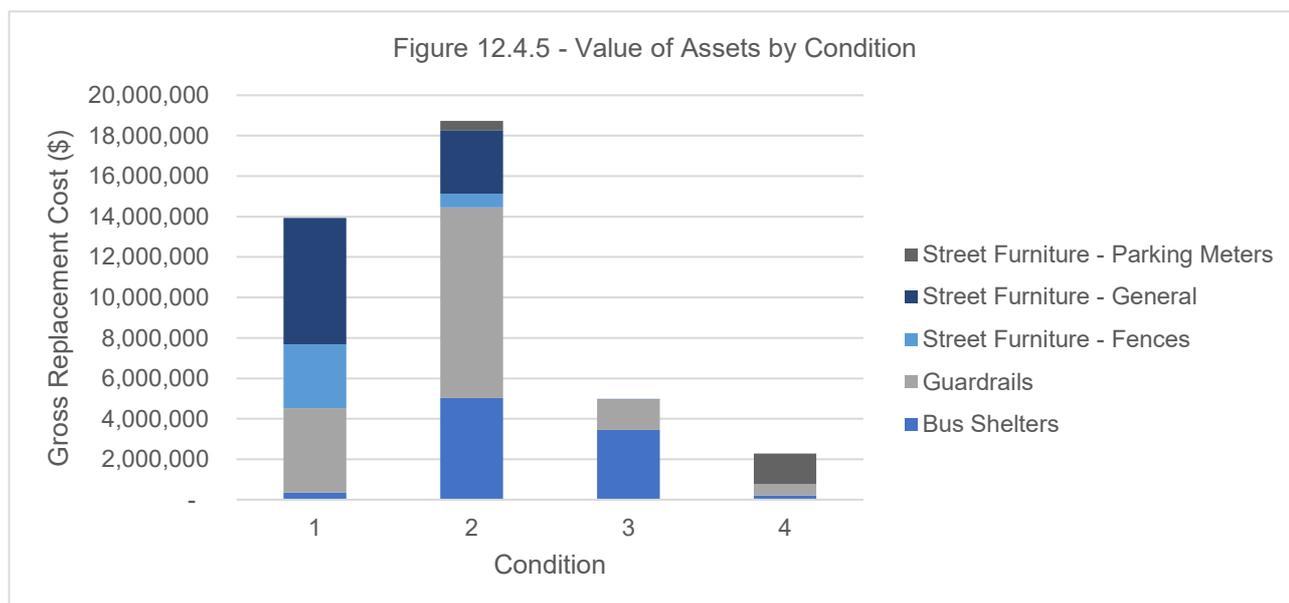
Asset Management Plans

12.4.5.1   Customer Satisfaction Survey

Below is an extract of table 13 from the Wollongong City Council Community Satisfaction Survey as it relates to street furniture, bus shelters and guardrails.

DIRECT SERVICES	2010	2012	2014	2017	2019	2021	2023	SIGNIFICANT CHANGE SINCE 2021
Public bin collection	-	-	-	-	-	3.9	4.0	⇔
Maintenance and cleanliness of bus shelters	3.0	3.2	3.3	3.0	3.5	3.6	3.6	⇔

The results of the community survey demonstrate that Council is maintaining community satisfaction with these services. The quadrant analysis for these services (the derived importance compared to satisfaction), represents opportunities as the importance was relatively lower and satisfaction high.

12.4.5.2   Legislative Requirements

The following legislation is associated with the Transport facilities service provision:

- Roads Act 1993
- NSW Road Rules 2008
- Road Transport (Safety and Traffic Management) Act 1999
- Road Transport (Safety and Traffic Management) Regulation 1999
- Transport Administration Act, 1988
- Disability Discrimination Act 1992

12.4.6   Future Investments

12.4.6.1   Acquisition and Upgrade Plans

Several new assets and upgrade to existing services are planned under this group of assets. The details are summarised in the 10-year outlook section below. New street furniture is associated with upgrades in the CBD, village, and town centre public domain areas. It is estimated that 5% of the project budget for these locations would be allocated towards new street furniture as part of these projects which is included in this plan.

An audit of accessibility provision associated with our bus shelters network has been undertaken. A prioritised list of upgrades are being planned and prioritised based on the utilisation and demand. These works will be considered for inclusion in the upgrade works.

Guardrail upgrades are scheduled for upgrade existing guardrail to contemporary standards, such as end terminal replacement.

The West Dapto Contribution plan identifies the provision of the following infrastructure to support the utilisation of public transport:

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Asset Classification	Qty	Description	Planned Year	Source of Funding	Estimated Value*
Bus shelters	218	Item TR30 - West Dapto contribution plan	2019/20 – 2059/60	West Dapto development contributions	8,506,595
Bus transport kiosk	8	Item TR31 - Bus Transport Kiosk	2024/25 – 2059/60	West Dapto development contributions	2,020,336

*Draft West Dapto Development Contribution Plan 2024

The future investment plan includes a provision from the 2028/29 to 2034/35 financial year for the implementation of these initiatives. The timing will need to be reviewed to align with the rate of development and provision of bus services in the area by Transport for NSW.

12.4.6.2   Decommissioning and Disposal Planning

Council reviews the effectiveness of transport facilities to identify the need for decommissioning of assets that are not providing effective service. Decommissioning may also be initiated by changes to standards. Unforeseen decommissioning may result where damage occurs to devices through motor vehicle accidents.

There are no plans at this stage for decommissioning of assets in this asset group.

12.4.6.3   Renewals

The following Figure 12.4.6.3 provides an overview of the estimated 10-year renewal profile.

Figure 12.4.6.3 - Forecast Renewal - St Furniture, Bus Shelters, Guardrails
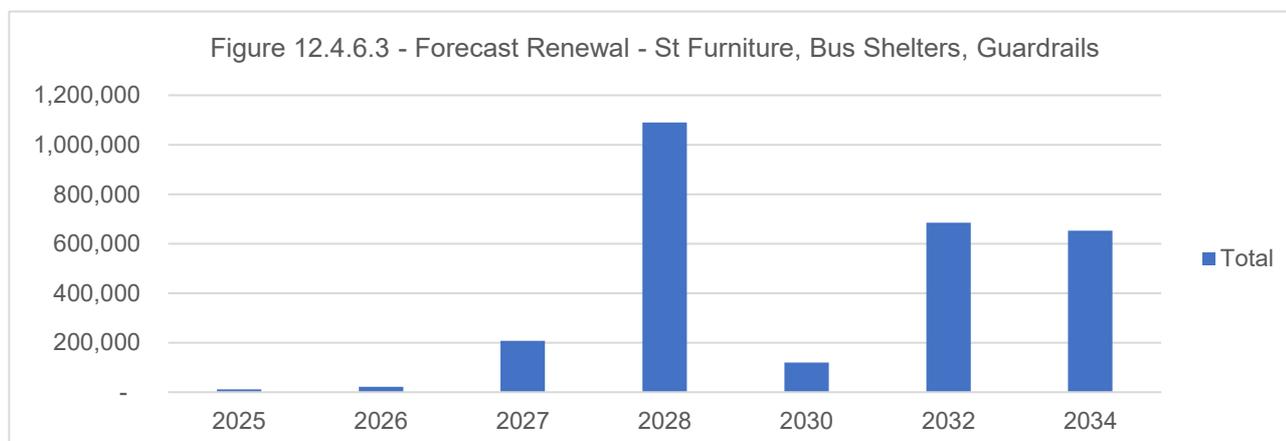
Damage to assets resulting from vehicle impact is a main cause for early renewal intervention for this group of assets. This accelerates the renewal forecast ahead of the age-based forecast. We have factored in an estimate of the traffic facility assets requiring renewal across the network resulting from vehicle damage. Our assumption is 1% of the network being damaged and requiring partial renewal of 30% of the asset. This assumed percentage will be further refined with proactive observed condition rating.

The fleet of parking meters has reached the end of useful life based on technological obsolescence. The existing meters have been upgraded since installation, however there are new smart technology devices available that have greater functionality for users and council. A scope is being prepared for replacement of the meters.

The estimated required renewal funding over the 10-year period is $4,100,000.

12.4.6.4 Future investment plan – Street Furniture, Bus Shelters, and Guard Rails

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Depreciation	1,432,431	1,432,431	1,433,551	1,439,609	1,463,911	1,470,699	1,477,487	1,484,275	1,491,063	1,497,851	1,504,639
Required Maintenance	251,229	251,592	253,830	260,041	260,241	260,441	260,641	260,841	261,041	261,241	261,441
Operating expenditure	**1,683,660**	**1,684,023**	**1,687,381**	**1,699,650**	**1,724,152**	**1,731,140**	**1,738,128**	**1,745,116**	**1,752,104**	**1,759,092**	**1,766,080**
Renewal works	-	245,000	30,000	250,000	250,000	-	-	-	-	-	-
Guardrail and Street furniture	40,000	-	-	-	-	-	-	400,000	-	500,000	-
Bus Shelters	-	-	-	-	-	50,000	-	325,000	50,000	325,000	50,000
Upgrade works	-	40,000	50,000	300,000	300,000	-	-	-	-	-	-
Guardrail	-	-	-	-	-	75,000	75,000	75,000	75,000	75,000	75,000
Bus Shelters	20,000	-	-	-	-	100,000	100,000	100,000	-	-	-
Expansion works	-	-	-	-	-	50,000	50,000	50,000	50,000	50,000	-
New works	20,000	250,000	355,000	75,000	75,000	-	-	-	-	-	-
Street Furniture	3,000	-	-	-	-	200,000	200,000	200,000	200,000	200,000	200,000
Guardrail	10,000	-	-	-	-	-	-	-	-	-	-
Bus Shelters	-	-	-	-	-	-	-	-	-	-	-
Capital expenditure	**93,000**	**535,000**	**435,000**	**625,000**	**625,000**	**475,000**	**425,000**	**1,150,000**	**375,000**	**1,150,000**	**325,000**
Totals	**1,776,660**	**2,219,023**	**2,122,381**	**2,324,650**	**2,349,152**	**2,206,140**	**2,163,128**	**2,895,116**	**2,127,104**	**2,909,092**	**2,091,080**
Estimated Required Renewals	131,900	141,758	328,000	1,209,447	120,000	239,289	120,000	805,000	120,000	773,000	120,000
Planned renewal as a % of estimated required	**45%**	**201%**	**24%**	**45%**	**458%**	**94%**	**146%**	**112%**	**104%**	**116%**	**104%**

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12.4.7 Street Furniture, Bus Shelters, and Guard Rails Infrastructure Improvement Program

Item	Issue	Description	Responsible	Timing
4.1	Review remaining useful life	Condition assessments have been undertaken for a range of assets in this group. A review of the remaining useful life and asset expiry date should be undertaken to align with the observed condition.	MISP	2026
4.2	Bus shelter renewal	The allocated funding for renewal of bus shelters is approximately 35% of the required expenditure. Consider the option of advertising to provide income to fund maintenance and renewal costs of shelters.	MISP / MCO+P	2026
4.3	West Dapto	The timing of the West Dapto rate of development and the bus service provided by Transport for NSW needs to be monitored to inform the timing of infrastructure delivery.	MISP	2028
4.4	Accessibility Upgrade	Prepare, prioritise and implement accessibility upgrades to bus shelters and transport nodes to improve accessibility of existing infrastructure. Coordinate works with planned renewals or earlier if works identified as high priority.	MISP	2026
4.5	Standardisation	Develop a standard suite of street furniture and shelters based on place outcomes and hierarchy.	MISP	2026
4.6	Prioritisation	Develop a risk-based approach to guardrail installations considering whole of life cost considerations	MISP	2026

12.5 Pathways

Pathways provide an essential transportation function for people to move around our city. This section of the asset plan details our footpath, shared paths, off-road cycleways, access ramps and kerb ramp assets. It includes a profile of the services they support and the attributes determining how we manage them.

There are over 639km of pathways across the Wollongong local government area, primarily located within and adjacent to road corridors, localised pathways connecting between streets, and pathways through open space making just over 7% of the network.

Our community satisfaction survey confirmed that 97% of respondents utilise the footpath network, 82% use shared paths, and 47% use cycleways. Footpaths were the highest utilised facility in the community survey, showing similar results in the 2021 survey. The survey also identifies footpaths and shared paths as a priority for council as they are of higher importance to the community, where we are not meeting expectations. Pathways were regarded as a key area by the community for council to focus on, and one of the most common reasons for contacting council with 17% of respondents raising issues with maintenance of roads/parks/footpaths. Further information on the reasons for these responses would enable better alignment of actions to improve community satisfaction in this area.

12.5.1   Profile

Community Strategic Plan Goal: Goal 2: We have well planned, connected, and liveable places

Service: Transport Services

The Footpaths, Cycleways and Transport Nodes service delivery stream provides the community with a plan for the delivery of footpaths, cycleways, and transport nodes (bus stops, taxi stands, etc) to be safe and accessible for the current and future communities. This is achieved through implementing the Wollongong Cycling Strategy, developing, and implementing the Wollongong City Integrated Transport Strategy and City Centre Access and Movement Plan.

The service includes inspection, construction and maintenance of footpaths, shared paths, and off-road cycleways (on-road cycleways are managed under roads). The service includes a range of infrastructure that supports pathways, such as regulatory and directional signage and line marking, roadside furniture (bin surrounds, bollards, tree guards, pedestrian fences, rest seats). This plan focuses on the surface of pathways that facilitate the movement of people. Assets that support pathway infrastructure are addressed in other parts of this asset plan.

12.5.2   Strategic priorities

Transport services are guided and informed by the following strategic supporting documents:

- Draft Wollongong Integrated Transport Strategy
- City of Wollongong Pedestrian Plan 2017-2021
- Keiraville Gwynneville Access and Movement Strategy 2020
- Wollongong City Centre Access and Movement Strategy 2013
- Wollongong Cycling Strategy
- Disability Inclusion Action Plan
- West Dapto Contributions Plan

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- Wollongong City-Wide Development Contributions Plan

The service is primarily guided by Council's *Integrated Transport Strategy (ITS)* supporting document. The *ITS* identifies the following key strategic framework and priorities:

Vision – Wollongong is a liveable and green city where everyone has viable transport choices that provide connected journeys through Country that are safe, reliable, and accessible.

Guiding Principles - Connecting to Country and Place.

Sustainability-focused.

Multi-modal transport options for all.

Integrated land use and transport decisions.

Work with the community for change.

Comfortable and convenient active travel

Goals - Goal 1 | Competitive public transport

Goal 2 | Everyday needs within 15 minutes
Goal 3 | A connection to Country and sense of place
Goal 4 | Increased use of active modes
Goal 5 | All ages and abilities can get around with ease
Goal 6 | Sustainable Transport Options

Pathways form an important part of the transport network, providing access for pedestrians and cyclists to move locally and beyond.

Table 12.5.2 below summarises the actions from the strategy with a relationship to pathways and an assessment of the direct impact on pathway infrastructure planning:

Table 12.5.2 – Supporting Document Actions

Strategy & Reference	Action	Infrastructure Impact
ITS-10	Embrace the 15-minute neighbourhood concept. Prepare a network map detailing where people can travel within 15 minutes of their location in town centres by walking or active transport options like cycling.	The network plan will identify gaps and locations to consider for future expansion of the network.
ITS-12	All town and village centres, and any Master Planned development, have a tailored Movement and Place plan developed	Town and village centre masterplans identify materials and widths of pathways which impact the lifecycle cost of providing the network. The masterplans should consider lifecycle costs as part of the planning process.
ITS-13	Develop a walking plan to provide high-quality pedestrian routes in town centres that are co-located with train stations: Stanwell Park, Coledale, Austinmer, Thirroul, Bulli, Woonona, Corrimal, Fairy Meadow, Coniston, Port Kembla, Unanderra, and Dapto. The plans are to consider lighting, crossings, and shade/shelter.	The plan will identify gaps and locations to consider for future expansion of the network.

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Strategy & Reference	Action	Infrastructure Impact
ITS-14	Develop Wollongong Movement Framework study to understand current categorisation of road network and look for opportunities for enhanced permeability function through Parks and Schools	The study will identify gaps and locations to consider for future expansion of the network.
ITS-15	Develop an 'investment weighting' tool that provides a transparent evaluation of merits for all proposed projects. A suite of criteria should be set in the tool that will show how to deliver the greatest benefit for the community and help build the integrated network and aligned with the safe systems approach.	This action will guide the evaluation of future investment into expansion of the network
ITS-17	Develop an eco-friendly travel tourism strategy and plan across the LGA incorporating a program of targeted: ▪ Wayfinding signage at train stations ▪ Carshare near train stations ▪ Micro-mobility at train stations connecting to key tourist destinations ▪ Event green travel plan Marketing material promoting Wollongong as a tourist destination accessible by train for Sydney-residents.	The travel tourism plan will require support of an integrated pathway network to function.
ITS-20	Develop a multi-modal transport plan for people wanting to visit the Seacliff Bridge and surrounds from Coalcliff and/or Scarborough Stations.	The plan will identify gaps and locations to consider for future expansion of the network.
ITS-22	Develop a future mobility plan that considers emerging technologies to better support all ages, all abilities access at key transport nodes.	The plan will identify gaps and locations to consider for future expansion of the network.
ITS-26	Create a community reporting system for poor access in transport infrastructure and a council audit register to prioritise upgrading infrastructure based on priority.	Responding to the reports will require resources to implement prioritised upgrades.
ITS-27	Through Council's Safer Routes to School, develop 15- minute walking and 5-minute cycling catchment plans around schools to support child-friendly routes to schools.	The plan will identify gaps and locations to consider for future expansion of the network.
ITS-28	Develop a Safe Systems program and suite of projects to address road safety throughout the Wollongong LGA.	Projects identified through this process may include pathway upgrades to consider for future planning.
ITS-31	Develop a public domain planting guide to support walking and cycling to reduce urban heat island effect. Integrate this guide into the Urban Greening Strategy.	The design and specification for pathways needs to consider the space requirements, and potentially subsurface infrastructure to reduce the likelihood of future pathway damage induced by tree roots (concrete locking/articulation joint, root barriers, etc)

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Strategy & Reference	Action	Infrastructure Impact
ITS-32	All town centre traffic signals to have pedestrian and bicycle priority and low cycle times to promote walking and bike riding	Action is unlikely to impact on pathway planning – it will improve functionality and user experience.
ITS-33	Council adoption of a LGA Cycling Network Plan	The plan will identify gaps and locations to consider for future expansion of the network.
ITS-36	Develop a Micro Mobility Policy to support the roll-out of shared e-scooter and e-bike schemes across the City. Policy to focus on first/last mile public transport trips, events, and tourism experiences such as the coastal paths.	The policy will outline the commitment, principles and high-level roles and responsibilities. There is no direct impact on infrastructure because of the policy. It is anticipated that there may be impacts on the specification (width, materials, etc) to support the additional use demand for shared paths.
ITS-37	Develop a multi-modal transport plan to connect to the NPWS Great Southern Walk from the Royal National Park	The plan will identify gaps and locations to consider for future expansion of the network.
ITS-38	Develop a cycle-tourism strategy that incorporates sites and routes other than the Grand Pacific Walk that can bring in and maintain a multi-day bike riding tourism.	The strategy will identify objectives and needs that will need to be investigated for future expansion and/or modification of the network.
ITS-39	Build knowledge and acknowledge the traditional routes of the Dharawal people and develop a plan of how the routes may be appropriately recognised	The outcome may identify recommended modification of the network.
ITS-40	Develop a wayfinding plan and infrastructure design standard for walking and cycling recognising the stories of the Dharawal people	The plan and design standard will influence the specification and standards for pathways.
ITS-45	Prepare a multi-agency feasibility study for a cycling commuter corridor within the unused lands of the rail network, with connection to the Lake Illawarra Shared Use Path Plan.	The feasibility plan and multiagency approach will require allocation of resources to support the study. Further implications may include the consideration of funding to provide additional pathway network.
ITS-46	Develop a micro-mobility park and ride plan for Thirroul Station and Church Street car park.	The plan may identify gaps in the network that provide the most direct and safe route, requiring modification and/or expansion of the network.
ITS-54	Develop a plan to manage services and utility infrastructure impacts to our footpath networks	Utility providers need to access underground services to facilitate reactive and planned maintenance and capital works. These works result in the excavation and need for restoration of pathway (and typically road) surface. There have been several examples of works undertaken by utility providers within a short period of newly constructed pathways. The plan is aimed to reduce wastage and impact on long-term service life through

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Strategy & Reference	Action	Infrastructure Impact
		better planning and coordination of planned works between Council and utility providers.
ITS-55	Develop a road safety plan and education campaign for the Wollongong LGA. Including addressing the use of high speed, illegal e-bikes.	An objective of the plan is to create a safer environment for utilisation of the pathway network. The outcome is to increase the utilisation and reduction in injuries to pedestrians on pathways.

12.5.2.1   Future Impacts

The following future impacts were identified in the delivery stream report for transport. The strategic response as it relates to pathway assets, and the consequences of not funding the impact is summarised below in Table 12.5.2.1.

Table 12.5.2.1 – Future Impacts

Future Impacts	Strategic Response	Consequences of Not Funding
Increasing interest and demand for walking, cycling and public transport options is likely to result in growth of this service.	The community satisfaction survey already demonstrates the importance of the pathway network, with 97% of participants indicating that they utilise footpaths. The increase in additional modes of transport including cycling and micro-mobility will generate a need to consider increased capacity (widening) in parts of the network.	Investing in improving capacity in locations of high demand will improve the likelihood of encouraging and maintaining greater mode shift and reduce likelihood of incidents.
Increased awareness and requirements to address disability access and inclusion requirements.	We have undertaken a comprehensive network review of accessibility requirements at pathways in the immediate vicinity of bus stops. Our specification and standard details for new works includes consideration of accessibility requirements.	Goal 5 and Goal 6 of Our Wollongong Our Future 2032 Community Strategic Plan are aligned to providing access and inclusive facilities. Not funding this issue will impact the ability to achieve our objectives.
Changing New South Wales Government strategies, priorities, and funding programs - Active Transport Funding Program	The main source of funding for council services is via rates, with the second source being grants. Grant funding is used to leverage and support the implementation of (primarily) new infrastructure. Funding programs can bring forward the implementation of priority projects to meet the demand for accessible facilities.	The NSW Government funding programs are allocated on a competitive priority basis. Council is not guaranteed funding through these programs. Reduction or cessation of the NSW Government funding program will impact our ability to bring forward high priority projects.
Increased demand for tree canopy to reduce the urban heat island effect	A key reduction measure addressing the urban heat island effect of our cities are trees. Tree root systems have a	Street tree planting will be avoided and increase temperatures of our urban environment will continue.

	direct impact to path performance and condition.	Community surveys will continue to decline without integrated tree and path standard designs.

12.5.2.2   Future Demand

The Integrated Transport Strategy identified the case for change outlining the future for transport in 2036 without changes. These implications will help create changes in demand that influences our planning associated with pathways, as summarised below in Table 12.5.2.2:

Table 12.5.2.2 – Future Demand for Pathways

Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
Increased car travel	22% increase in vehicle km's travelled	Increase congestion on roads will increase demand for alternative transport modes including walking and cycling and associated pathways	Actions in the Integrated transport strategy	Pathway programs. Traffic facility program.
More trips to Wollongong City Centre	13% more cars equivalent to 13,000 more car trips in the am peak	Increase congestion on roads will increase demand for alternative transport modes including walking and cycling and associated pathways throughout the city centre.	Actions in the Integrated transport strategy	Pathway programs Traffic facility program
People want better access to safe facilities for active transport	25% of people are interested in bike riding – 22% are concerned about facilities in the National Cycling participation survey The cycling strategy targets the following increases in cycling: • participation to 20%. • journey to work trips to 2%.	Additional cycling options for daily travel needs through an increased active transport network	Actions in the Integrated transport strategy	Pathway program Transport for NSW Active Transport Program

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Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
	• transport trips to 25%			
Increased demand for public transport	Road congestion increase with an AM peak delay increasing by 21% in 2036 leading to changes in mode priority.	Increased demand for public transport will have a corresponding increase in pathway usage for the first and last stage of the trip. The need for maintenance of pathways around transport nodes will increase with increased use patterns.	Actions in the Integrated transport strategy	More trains more services (Transport for NSW initiatives). Pathway program Footpath maintenance program
Population Ageing	The average age of the population is increasing, and the proportion of people aged 75+ increases.	Increased need to create environments that are accessible for people with vision or auditory impairment. Also increased demand for mobility scooters and alike on the pathway network.	Accessibility standards for new pathways and audits for existing pathways.	Access improvements through the pathways program.
Increased incidence of Road trauma	Previous years have seen a significant increase in serious injury and fatalities on our roads in NSW. If this trajectory was to continue additional interventions will need to occur.	Increased demand for new traffic facilities to make a safer road environment.	NSW Centre for Road Safety	Funded traffic facilities new program.

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12.5.3.1   Pathway Provision

Based on the results of the Community satisfaction survey, pathways are some of the most utilised infrastructure groups by the community. Whilst we have an extensive network of over 639km of pathways, there are still many streets without a formalised pathway. Council receives many requests every year for the provision of new pathways to connect the local community to various destinations.

We must balance the needs of renewing existing infrastructure against the provision of new pathways across the city. Our current Infrastructure Delivery Program includes a plan to invest over $40M into pathways, with approximately $11M (28%) towards expanding the network with new pathways. The balance funds renewal of existing pathways and improvements to the CBD Public Domain and the many Village and Town Centre pathways under this program.

Considering the number of streets without pathways, the number of requests from the community each year, and the available budget for new pathways, we prioritise locations balancing risk and benefits. We analyse a range of factors that may include the hierarchy of the adjoining road (speed and traffic volume), proximity to pedestrian generators (public transport, schools, shops, sport fields etc), accident history, catchment serviced, ability to complete missing links, alignment with strategic plans, feasibility, and cost to inform the priority. This generates a list of candidate projects that is considered for inclusion in a future program. The Walking, Cycling and Mobility Reference Group helps to inform council on strategic plans related to pathways, advise of issues and barriers, and advocate for matters relating to pathways and functionality.

12.5.4   Asset Snapshot

Asset Register – Assets

Financial Reporting Group: Footpaths (93%), Roads (2%), and Other Open Space/Recreation Assets (6%)

Valuation Information: – Pathways infrastructure assets are recognised using the cost method, which equates to the current replacement cost of a modern equivalent asset. The cost to replace the asset (gross replacement cost) is to equal the amount that a market participant buyer of that asset would pay to acquire it.

Fair Value Hierarchy - the general valuation approach to determine the fair value of the pathway infrastructure inventory is to determine a unit rate based on square metres or an appropriate unit supported by market evidence (Level 2 input). Further to this other input such as asset condition and useful life require a significant level of professional judgement and can impact significantly on the fair value. As such the level of valuation input for these assets was considered level 3.

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Asset Type	Qty	Av Useful Life	Carrying Value	[1]Annual Depreciation	Current Asset Cost
			($) @ 01/07/2024		
Access Ramps			**0**		
Concrete	2	100	**151,262**	1,793	**179,352**
Other	5	62	**464,971**	8,084	**568,407**
Pathway *			**0**	0	
Asphalt	238	66	**13,710,346**	563,722	**33,574,477**
Concrete	4,598	100	**188,410,553**	3,412,006	**340,119,964**
Concrete & Timber	11	80	**638,524**	12,140	**971,215**
Granite	2	100	**531,183**	6,157	**615,708**
Other	62	80	**6,305,532**	117,638	**9,411,046**
Pavers	259	80	**19,892,803**	535,374	**42,525,576**
Synthetic #	1	80	**9,520**	138	**11,051**
Timber	5	56	**21,751**	1,819	**107,383**
Various Materials	8	80	**1,155,056**	16,930	**1,354,401**
Grand Total			**231,291,500**	**4,675,800**	**429,438,580**

*Kerb ramps are included in the pathway assets

Synthetic treatments are typically isolated and have traditionally not been separately identified. There is further discussion in Maintenance Treatments.

[1] Note that the annual depreciation estimate includes a revised estimate of useful life for concrete access ramps, concrete pathways and granite pavers to 100 years.

12.5.4.1   Components and attributes

Pathways assets are recognised as a single component level and descriptor to indicate construction material.

12.5.4.2   Risks and criticality

Critical services are defined as those which have a high consequence of failure causing significant loss or reduction of service to the community as outlined in Section 7.1.5. A review of the Transport Service identified that it is a critical service, and consequently, does have critical assets. However, pathways were not identified as a critical to supporting the service.

12.5.4.3   Operation and maintenance requirements

Pathways require reactive maintenance to ensure they can meet the expected service and functionality requirements. Typical maintenance actions include grinding and localised slab replacement to address defects. Operational requirements include inspections and in limited locations, sweeping and/or pressure washing. We estimate that the required annual investment into operations and maintenance of pathways is 0.78% of the gross replacement cost.

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12.5.4.4   Depreciation and degradation curves

Pathway assets use a straight-line depreciation and degradation profile.

12.5.5   Roles and responsibilities

Service Manager: Manager Infrastructure Strategy and Planning

Role	Lifecycle	Function	Responsible	Activities
Service Management	Planning	Service Planning	Manager Infrastructure Strategy and Planning	Ensure service linkage to CSP Define service needs Determine service hierarchy Analyse capacity and demand Summarise service-related legislative requirements Establish customer levels of service Determine asset requirements for service delivery
	Operation	Service Operations	Manager Infrastructure Strategy and Planning	Act as customer liaison for service Provide website information and communications Initiate notifications for service interruptions Undertake functional assessment Monitor and manage service and asset utilisation
	Planning and End of Life	Asset Acquisitions and Disposals	Manager Infrastructure Strategy and Planning	Develop plan for acquisitions and disposals of assets aligned to service plan and demand forecast Engage with stakeholder on acquisition and disposal plan Arrange relocation or transition of service Arrange establishment or termination of agreements (utilities)
Asset management	Planning	Asset Planning	Manager Infrastructure Strategy and Planning	Complete condition and performance assessment Assess asset related legislative requirements Coordinate scope preparation Asset review Renewal planning
		Asset Data	Manager Infrastructure Strategy and Planning	Administration of asset register Updates for capital improvements Initiate asset disposal system process Prepare asset management plan Coordinate asset reporting data
		Asset Financials	Manager Infrastructure Strategy and Planning	Revaluation Unit rates Estimates

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Role	Lifecycle	Function	Responsible	Activities
				Monitor expenditure
Project Delivery	Delivery	Project Sponsor	Director Infrastructure + Works	Approval of project plan Oversee business proposal Capital expenditure review (OLG)
		Asset Concept	Manager Infrastructure Strategy and Planning	Define the problem/need Options assessment Feasibility Lifecycle costing Funding strategy Business case/proposal
		Program Management	MPD	Oversee project as part of program Responsible for managing overall program costs, risks, progress
		Asset Design	Manager Infrastructure Strategy and Planning Major Projects – Manager Project Delivery	Ensure design solutions align with strategy Options analysis Concepts Design development Cost estimating Complete safety in design report Approvals process
		Asset Delivery	Manager Infrastructure Strategy and Planning Major Projects – Manager Project Delivery	Cost estimate Value engineering Procurement strategy Contract management Procurement Project management Oversee project commissioning and handover
Maintenance and Operation Management	Maintenance	Asset Maintenance	Manager City Works	Complete maintenance inspections Work management triage and scheduling Establish maintenance procedures Undertake maintenance works
	Operation	Asset Operations	Manager City Works	Sweeping Cleaning

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12.5.6   Performance

We monitor the performance of our pathway assets by monitoring condition and community satisfaction.

A snapshot of the condition profile against the current replacement cost is provided below in Figure 12.5.6. Condition has been derived based on the asset consumption and a straight-line degradation profile.

Figure 12.5.6 - Pathway Condition by Material Type and Cost
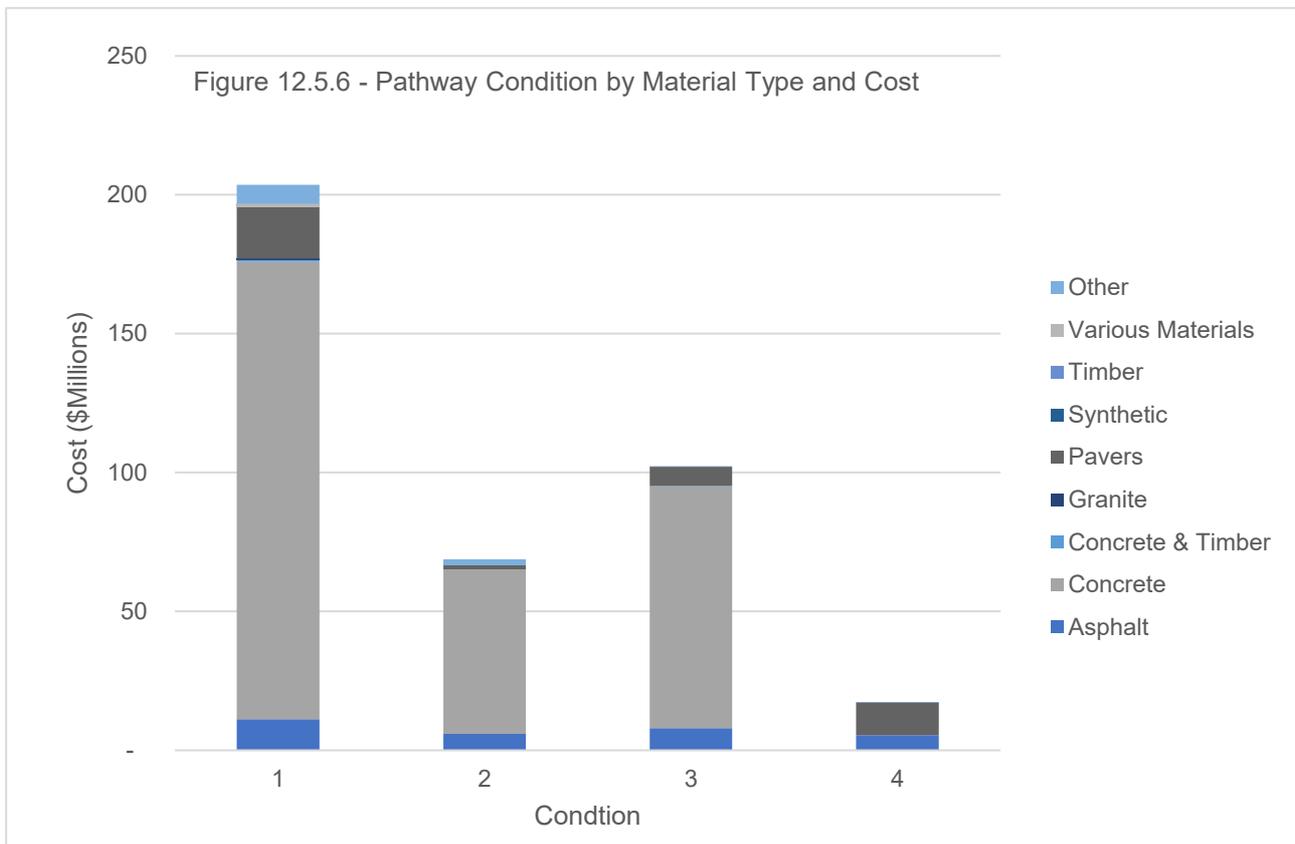
A comprehensive review of the condition of pathways is to be planned within the next 2-year period. The results of this audit will enable a more thorough renewal plan to be prepared. It will also enable a maintenance program to be developed based on a collection of defects.

The specification of pathways is determined based on the intended use. Capacity is monitored in high use locations.

12.5.6.1   Community Satisfaction Survey

Council's most recent Community Satisfaction Survey shows a high level of utilisation and satisfaction with the provision of pathways. A summary of the utilisation of pathways is shown below in Table 12.5.6.1 (a):

Table 12.5.6.1 (a) –Pathway Utilisation

	AT LEAST MONTHLY	UP TO 9 TIMES A YEAR	UP TO 6 TIMES A YEAR	UP TO 3 TIMES A YEAR	USAGE RATE	NOT IN THE LAST 12 MTHS	NEVER	CAN'T SAY
Footpaths	92%	1%	1%	2%	97%	1%	2%	**1%**
Shared use paths	67%	4%	4%	7%	82%	3%	15%	**1%**
Cycleways	30%	4%	4%	9%	47%	10%	43%	**0%**

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The average satisfaction results, using a five-point scale where 1 meant 'not at all satisfied' and 5 meant 'very satisfied', for the categories relevant to pathways are provided below in Table 12.5.6.1 (b):

Table 12.5.6.1 (b) - Community Satisfaction Pathway Related Results

FACILITIES	2010	2012	2014	2017	2019	2021	2023	SIGNIFICANT CHANGE SINCE 2021
Cycle ways (including pop up cycle ways)	-	-	-	-	-	3.8	3.8	⇔
Shared use paths	-	-	-	-	-	3.8	3.7	⇔
Footpaths	-	-	-	-	-	3.5	3.3	⬇

12.5.6.2   Criteria for levels of service

Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
Customer Levels of Service				
Safety	Pathways are safe for use	Number of claims alleging injury or damage associated with condition of a pathways	Pathway condition not found to have contributed to injury or damage.	
Function and Serviceability	Pathways are fit for purpose and available for use	No restrictions that unreasonably limits usability of the pathways	Less than 5% of pathway network unavailable for use	
Utilisation	Pathways are being utilised by the community	Community survey – Facility Utilisation Rate	Utilisation rate not reducing by more than 10% to previous survey	Target achieved 😊 Target not achieved for cycleways (reduction of 13%) 🙁
Satisfaction	The community is satisfied with the services provided by Council supported by this asset group	Community survey Facilities – Internal Benchmark	No significant decrease in average satisfaction results to previous survey	Target achieved 😊 Target not achieved for footpaths – decreased from 3.5 to 3.3 🙁
Residents' Wish List	The community do not see this asset group or associated service as an area of focus for council over the next 4-years	Community survey internal benchmark – "In your view what are the three key areas you think Council should focus on over the	Less than 5% increase on previous percentage	Footpath increased from 15% to 18% between 2021 and 2023. Target achieved

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Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
		next four years?"		😊
Technical Levels of Service				
Condition Inspection	Comprehensive condition assessment	4-yearly	75% compliance	
Urgent safety repairs	Requests responded to and pathway made safe	Actioned and made safe within service standard	85% compliance	
Removal of wind-blown sand	Creating a hazard	Addressed within service standard	75% compliance	
Cost	Implementation of efficient and cost-effective maintenance programs	Maintenance costs attributed to work orders	Assets with high maintenance costs identified for major maintenance program or renewal.	
Risk	Pathways are maintained within a tolerable risk profile.	Risk assessment of assets to be undertaken.	All pathways managed in accordance with the infrastructure risk appetite statement	
Performance	Asset management actions and funding allocation supports long-term sustainability	Percentage of identified renewals funded		
		Percentage of planned renewals completed		
		Ratio of planned maintenance to reactive maintenance expenditure increasing over time		
		Percentage of identified proactive maintenance works completed		

12.5.6.3   Legislative Requirements

The following legislation are relevant to pathway works:

- Roads Act 1993
- Road Transport Act 2013
- Environmental Planning & Assessment Act 1979
- Threatened Species Conservation Act 1995
- Native Vegetation Act 2003

12.5.6.4   Infrastructure Resilience

An assessment of the vulnerability of pathway infrastructure identified the most relevant hazards below:

Risk Rating	Hazard Name	Rating Priority	Residual Risk Rating
1	Severe Storm	EXTREME	Major/Likely
4	Flood – Lake and Flash	EXTREME	Major/Likely
9	Landslip/Mudflow/Rockfall	HIGH	Moderate/Likely
24	Coastal Erosion	RARE	Minor/Low

A significant portion of the Wollongong Local Government area is affected by flood hazard. Given the scale of the pathway infrastructure impacted, it is not practical to implement a proactive program to modify footpaths in response to flood risk. We have seen damage to pathways adjoining areas that have been impacted by erosion induced by storms and flooding. When this occurs, a review will be undertaken to determine options to improve resilience of the path to future events.

Landslip, mudflow and rockfall hazards may result in short-term closure for minor repairs, through to major destruction of the pathway. Due to the topography and geology of parts of the local government area, we have many pathways located near to embankments and on challenging geology. The construction of new pathways in these areas is typically supported with geotechnical assessment and structural design to reduce the risk of damage from instability. Existing pathway assets will be monitored for signs of movement or instability and necessary works implemented.

The Coastal Zone Management plan reviewed the locations most vulnerable to impacts from severe storm and coastal erosion along the Wollongong coastline. This is further discussed below.

12.5.6.5   Coastal Zone Management Plan

The Wollongong Coastal Zone Management Plan 2017 (CZMP) reviewed the vulnerability of the pathway network to storm erosion and sea-level rise induced foreshore recession. The CZMP notes that sections of the cycleway network have in the past been impacted by storm damage and it is expected that further damage is likely in the future. Sea-level rise will cause further shoreline recission, and storm damage from wave action.

There are eleven locations identified that are most at risk in the CZMP and are summarised below in table 12.5.6.5. The assessment identified four locations that are likely to increase to high risk by 2050 at Bulli, Towradgi, North Beach, and City Beach.

Table 12.5.6.5 – Pathway Coastal Hazard Assessment

Location and Asset	Risk Now	Risk at 2050	Risk at 2100
Bulli Beach; North Beach; and City Beach cycleway / shared path	Medium	High	Extreme
Towradgi Beach cycleway / shared path	Medium	High	High
McCauley Beach; Sandon Point; Woonona Beach; Bellambi Beach (west of Lagoon and along Dobbie and Murray Avenue); and Bellambi Point Beach cycleway / shared path	Medium	Medium	High
Corrimal cycleway (across and next to Towradgi Lagoon)	Medium	Medium	High
Bellambi Beach cycleway / shared path (Nth of Bellambi Gully entrance)	Low	Medium	Medium

Investigation is recommended to identify long-term management options to manage the impacts from sea-level rise and storms at these locations. Where feasible, planning for retreat and relocation should be considered as a renewal or upgrade (where incorporating widening or higher quality materials), and where insufficient land is available, costal erosion works considered.

12.5.7   Future Investments

12.5.7.1   Network Expansion and Upgrade Plans

An average of $4.5M has been included across the 10-year period of the plan for expansion and upgrade of the network. This includes the provision of new pathways where there is currently no path, and upgrades include widening and/or material upgrades such as replacing concrete with pavers in town centres. Upgrades include a change of use of a footpath to a shared path, necessitating additional width to accommodate cyclists.

The amount invested varies from year to year, largely in response to the forecast value of renewal work undertaken in the respective years. The length of pathway delivered for this investment will vary according to the materials used and width of path. Standard residential grade 1.5m wide concrete footpaths, being the most common and cost-effective construction would equate to approximately 10km of pathway. However, town centres using full-width stone paving, would achieve in the order of 2km of upgraded pathway for the same investment (excluding street furniture and ancillary landscape and traffic treatments).

The locations of proposed new pathways are recommended based on a review of risk and benefits. The final list is reviewed by elected Council prior to placing on public exhibition for community feedback as part of the annual Infrastructure Delivery Program.

Most of the current pathway network is constructed from steel reinforced concrete. To meet the levels of service above in a sustainable way, we will investigate a range of material options and suitability for providing pathways. We will also review the scope of footpath upgrades in Town Centre locations to ensure material specification considers life cycle costs. The material review will include life cycle costing, forecast demand and site-specific environmental assessment. Materials under consideration include:

- Concrete – unreinforced, permeable, fibre reinforced
- Concrete and paving
- Asphalt
- Decomposed Grass / vegetation
- Verge gardens

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We have analysed the value of pathways dedicated to Council in conjunction with subdivision and development frontage works over recent years and estimate of $1,000,000 per annum has been included in the plan.

The West Dapto Contributions plan makes provision for new active transport linkages that will form part of the pathway network. An averaged annualised amount has been included in the future investments estimates from 2029 and beyond. The timing is based on estimated rate of development. These proposed works are 100% apportioned to the plan and do not require additional contribution. The following active transport pathways as shown in Table 12.5.7.1 are forecast for acquisition in the plan:

Table 12.5.7.1 – Active Pathways in West Dapto Contributions Plan

Ref	Infrastructure Item	Qty	Cost (exc. land)	Annual depreciation expense	Annual maintenance cost	Indicative Timing
TR32	Shared use paths - Stage 1-2	18.33km	$5,687,215	56,870	44,360	2018/19 – 2047/48
TR33	Shared use paths - Stage 3	9.51km	$2,956,625	29,560	23,060	2021/22 – 2059/60
TR34	Shared use paths - Stage 4	9.51km	$2,956,625	29,560	23,060	2035/36 – 2059/60
TR35	Shared use paths - Stage 5	4.65km	$1,444,881	14,450	11,270	2031/32 – 2059/60
TR36	Shared use path bridge crossings	5	$1,636,569	16,370	12,765	2023/24 – 2059/60

It should be noted that expanding the pathway network creates associated on-going maintenance and depreciation for the life of the pathway. The figure below indicates the costs associated with concrete pathway construction:

Each $1M of new concrete paths

requires an extra $7,800 in maintenanc every year

Adds $10,000 in annual depreciation

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12.5.7.2   Maintenance Treatments

Footpaths are typically long-life assets that provide a high level of service to the community. There are limited proactive maintenance treatments required, however repairs works are required to repair defects in footpaths to maintain safe and functional infrastructure. Defects typically result from unauthorised vehicle access, inadequate expansion joints, erosion or settlement, and tree roots.

Maintenance treatments for concrete include footpath grinding where practical. This method reduces wastage of materials as the existing footpath remains in-situ and the displacement is ground flush to restore a safe and functional footpath. This treatment has a much lower whole of life cost than slab replacement.

We have been trialling a range of treatments where tree roots have lifted the path. The use of a permeable and flexible rubber in-fill, like permeable playground softfall, minimises the need to trim or remove tree roots. The material also enable water to infiltrate into the rootzone, minimising damage to the tree. As the tree grows, the surface will deform around the root and still maintain a serviceable path. An example of a pathway prior to using this treatment is shown in Image 12.5.7.2 (a) and after treatment in Image 12.5.7.2 (b) below. Alternative treatments to concrete include asphaltic concrete (reduced depth required) and bridging roots with at-grade boardwalks.

Image 12.5.7.2 (a) – Before Rubberised Treatment

Image 12.5.7.2 (b) – After Rubberised Treatment

The treatments around trees help us to maintain the urban tree canopy and reduce the heat island impact of hard infrastructure like buildings, roads and pathways. It should be noted however, that the treatment has a relatively high life-cycle cost as the materials are substantially more expensive up-front and have a significantly lower expected useful life (by a factor of 10+). In some locations where the tree roots are causing damage to other surrounding infrastructure and/or severely limit the functionality of the pathway, removal of the tree may be required.

12.5.7.3   Renewal Requirements

Where there is limited observed condition data, the useful life drives the planned renewal profile. The expiry date is a simple calculation of the commission date plus the useful life. Commission dates are assumed for many old assets and was typically allocated on bulk, based on estimates of the associated subdivision age. This resulted in several peaks as commissioning estimates were typically associated with change in decades (e.g. 1950, 1960, etc). This results in mass grouping of renewals at the end of useful life. This is not practical from a funding or implementation perspective. Minor adjustments were made to the useful life within a +/- 5 years of the peak to smooth out the renewal profile. The renewal profile will be refined over time as observations of condition and assessments of remaining useful life are undertaken on a routine basis.

The average calculated renewal investment per year over the period of this plan is $3.72M. The following ten-year period from 2036-2045 will increase to $4M per year, and as more footpaths start reaching the end of service life in the 2046-55 period, the annual amount increases to $9.2M.

A detailed visual condition audit of pathways is planned in the next 18 months and will improve the forecast of remaining useful life of the network and the associated renewal requirements.

Many of the concrete pathways requiring renewal is not a result of material failure or wear-and-tear, the renewal is generated by an impact from an external factor, such as tree roots, erosion, and/or loading from vehicles. We estimate the renewals generated by impacts from external factors to be $2M per year.

12.5.7.4   Decommissioning Planning

There are currently no pathways identified for decommissioning (removal and not replaced) during the period of this plan. Paths that are demolished and reconstructed on a different alignment, but effectively providing the same connection, are considered as a renewal and not a decommissioning.

12.5.7.5 Future investment plan - Pathways

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Depreciation	4,605,701	4,677,525	4,746,997	4,791,954	4,815,358	4,872,508	4,929,657	4,994,971	5,060,284	5,125,598	5,190,912
Required Maintenance works	3,300,180	3,351,644	3,401,424	3,433,638	3,450,408	3,491,358	3,532,308	3,579,108	3,625,908	3,672,708	3,719,508
Operating expenditure	7,905,881	8,029,169	8,148,421	8,225,592	8,265,766	8,363,866	8,461,965	8,574,079	8,686,192	8,798,306	8,910,420
Renewal works	3,395,000	2,315,000	2,685,000	5,950,000	4,300,000	4,300,000	4,300,000	4,300,000	4,300,000	4,300,000	4,300,000
Upgrade works^	512,000	486,900	5,800,000	1,020,000	2,500,000	-	-	-	-	-	-
Expansion works	25,000	-	-	-	-	550,000	550,000	550,000	550,000	550,000	550,000
New works	5,573,000	3,557,000	3,329,941	4,130,000	2,350,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
New works - dedications #	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Capital expenditure	9,505,000	6,358,900	11,814,941	11,100,000	9,150,000	9,850,000	9,850,000	9,850,000	9,850,000	9,850,000	9,850,000
Totals	17,410,881	14,388,069	19,963,362	19,325,592	17,415,766	18,213,866	18,311,965	18,424,079	18,536,192	18,648,306	18,760,420
Estimated Required Renewals	2,171,690	2,395,063	5,177,817	6,432,339	6,527,815	4,596,346	2,234,155	2,688,794	3,132,929	2,431,881	4,947,129
Planned renewal % of required	180%	117%	164%	108%	104%	94%	192%	160%	137%	177%	87%

^Upgrade works are typically associated with CBD, Village and Town Centre public domain upgrades – 5% of the project cost is estimated as street furniture and included in the Street Furniture plan.
#This is the average annual value of pathways dedicated in conjunction with subdivision and development frontage work

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12.5.8   Pathway Infrastructure Improvement Program

The following opportunities have been identified through the preparation of this asset management plan that will assist in improving future asset management planning outcomes:

Item	Issue	Description	Responsible	Timing
5.1	Condition Audit	Complete comprehensive condition audit to inform the required renewal and maintenance expenditure.	MISP	2026
5.2	Useful life assessment	The estimates in the plan are based on an adjusted useful estimate for both concrete and stone pavers increasing from 80 years to 100 years. This is based on the serviceability of the material. It is recommended to update the asset register to reflect this change. Maintenance actions may be required over the life of the asset, however there are examples of both materials providing more than 100years service in other parts of Australia and Internationally.	MISP	2026
5.3	Useful life assessment – Town Centres	Town Centre pathway useful life is often driven by the masterplan objectives more than the effective life of the material. The redundancy of the existing material should be factored into the remaining useful life assessment where there is an adopted masterplan and a likelihood to implement the design.	MISP	2027
5.4	New pathways	There is a significant investment proposed during the period of this plan. Consider community engagement on prioritised list of locations.	MISP	2026
5.5	Accessibility	Develop a strategy for improving accessibility of footpaths and shared paths to meet the objectives of the Disability Inclusion Action Plan	MISP & MCCE	2027
5.6	Proactive Maintenance Planning	Continue investigation and trial of Intelligent Defect Monitoring to utilise smart technology for identifying defects and linking to work orders based on a prioritisation model.	MISP & CD & IO	2026
5.5	CBD Public Domain	Approach change on how the CBD public domain new investment will be managed. It often better to have the developments within the CBD construct the public domain to ensure that when they are working isn't impacting the new construction and their designs integrate with the public domain.	MISP	2026
5.6	Standardisation	Standard drawings will be prepared for all incidence where elements can affect the path such as trees and surrounding environments	MISP	2027
5.7	Path width	Standard approach reviewed to width and locations of path. An example may be rather than a 1.5m path both sides, a 2m path one side supports improved accessibility, reduces the urban heat island effect, and acts as a low order cyclepath.	MISP	2026

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12.6 Stormwater and Floodplain Management

This section of the asset plan details our stormwater and floodplain assets. This service seeks to implement a coordinated approach to managing the transport of stormwater flows within the urban environment and risk to life and property within the floodplain. We seek to manage the efficiency of the drainage systems for the management of runoff and develop risk management strategies to manage the risk of flooding. This service also includes the ongoing management and protection of prescribed dams and basins.

The assets provided under the stormwater and floodplain management service are intended to manage and effectively improve the movement of surface runoff; reduce risk associated with flooding and storms; reduce risk to the health and biodiversity of land and water including creeks, lakes, waterways, and oceans; and increase resilience to natural disasters and a changing climate to protect life, property, and the environment. We do this by improving the efficient conveyance of surface runoff created through most frequent rain events. Urban stormwater drainage systems are not designed to convey the large quantities of runoff generated by rare flood events. Rainfall events of very high intensity, generally overwhelm existing drainage systems and as a result, the runoff is mainly conveyed overland. The protection of waterways including beaches, lakes, lagoons is assisted through the provision of stormwater quality improvement devices such as gross pollutant traps and sediment basins.

The stormwater service includes:

- Preparation and Implementation of flood studies and floodplain risk management plans.
- Flood mitigation works delivered within capital works program.
- Dam safety management.
- City and rural drainage water course maintenance.
- Construction and maintenance of stormwater pits,
- Construction and maintenance of pipes and detention basins.
- Development controls for stormwater quality and riparian vegetation management.
- Deliver construction, inspection, and maintenance of Water Quality Control Devices.
- Provide effective stormwater management programs and integrated stormwater management.
- Coordinated natural area restoration works inclusive of the stormwater levy funded riparian sites.

This is the second largest grouping of assets, accounting for one-third of the total value of infrastructure assets.

12.6.1   Profile

Community Strategic Plan Goal: Goal 1: We are a sustainable and climate resilient city

Service: Stormwater Services
The assets in this grouping support the Stormwater service. This service strategically plans for a coordinated approach to floodplain risk management and stormwater management including the protection of waterways, beaches, lakes, lagoons, and creeks. This service manages and maintains 835 kilometres of drainage and associated infrastructure assets across the city that aim to be safe, efficient, effective, and sustainable. The summary below excludes those assets controlled by entities other than Council.

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12.6.2   Strategic priorities

The strategic planning for Stormwater and Floodplain infrastructure is part of the Floodplain Management framework. The floodplain risk management strategies and plans for each of the catchments across the Wollongong Local Government Area are the relevant informing strategies for this infrastructure network. The following Table 12.6.2 summarises the actions from the Floodplain Risk Management Plans and the West Dapto Contributions Plan with a relationship to bridges and an assessment of the direct impact:

Table 12.6.2 – Supporting Document Actions

Supporting Document	Action	Resource Impact
Floodplain Risk Management Plans	We currently have floodplain risk management plans covering most of the Wollongong local government area including Allans Creek (2024); Collin Creek (2014); Fairy and Cabbage Tree Creek (2024); Hewitts Creek (2002); Lake Illawarra (2012); Minnegang Creek (2004); Mullet Creek (2023); Towradgi Creek (2023); Wollongong City (2015). There are approximately 330 actions across the plans. The oldest plan dates to 2002, with reviews currently being undertaken to update to contemporary guidelines and practice. The actions cover flood, property, and response modifications.	Most items included in the plans have a preliminary estimate based on the information available and the cost of similar works. All estimates have been indexed to present values and now require review. Several projects were not provided with an estimated cost for construction as they were subject to feasibility study.
West Dapto Vision and Contribution Plan	To manage stormwater quantity and quality to acceptable levels, a multi treatment approach is proposed to detain and treat stormwater flows from urban development. The devices that have been selected to mitigate the expected pollutant loads and stormwater volumes are conscious of land take requirements, future maintenance requirements, and to ensure water quality that discharges into Lake Illawarra meet the prescribed targets. Infrastructure to be provided under this Plan includes: • 54 Detention basins including wetlands. • 54 Gross pollutant traps. • 5 Enhanced storage areas totalling 64.5ha. • Trunk drainage servicing 25M m^2.	The capital cost of the stormwater management infrastructure is funded through development contributions. The ongoing costs for operations, maintenance and renewal will be funded through general funds.

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12.6.2.1   Future Impacts

The following future impacts outlined in table 12.6.2.1 were identified in the delivery stream report relating to stormwater and floodplain management infrastructure. The strategic response as it relates to assets, and the consequences of not funding the impact is summarised below.

Table 12.6.2.1 – Future Impacts – Stormwater and Floodplain

Future Impacts	Strategic Response	Consequences of Not Funding
Changes in State and Federal funding allocations for planning, investigation, and mitigation programs.	Council leverages several programs for the implementation of actions from floodplain risk management study and plans. In addition, we continue to look for funding opportunities to support enhanced resilience for infrastructure from hazards.	Lack of funding support from other levels of Government would have significant consequences on the provision of floodplain management infrastructure.
Anticipated climate and sea level changes.	We already factor climate and sea level changes into our floodplain risk management planning processes. This work will identify risks as part of the floodplain risk management study and potential options to mitigate risk as part of the floodplain risk management plan. We review the actions from all floodplain risk management plans and prioritise for implementation based on risk, anticipated benefits, and cost.	Not funding actions from floodplain risk management plans that aim to mitigate risk associated with climate and sea level rise will maintain the forecast risk profile in the floodplain management risk study.
Changes to Australian Rainfall and Runoff guidelines	Geoscience Australia will continue to review and update the Australian Rainfall and Runoff guidelines (ARR), the National source of information about hydrology used in flood estimation and catchment analysis, as data becomes available. As a results of updates to the ARR guidelines, we will need to review our flood studies to determine the impact of changes on our catchments. The 1987 ARR was superseded by ARR 2016, and updates in 2019.	Not funding a review of amendments to ARR updates will delay our understanding of impacts on catchments until the scheduled review of flood studies for each catchment. The NSW Government recommends a review of flood studies on a 5 yearly basis, or after a major flood under the Flood risk management manual.
Increased urbanisation - West Dapto.	Urbanisation impacts several factors considered as part of the flood plain risk management planning process. We consider the land use in the Local Environment Plan as part of the process.	The impacts of increased urbanisation are included in our planning for stormwater and floodplain infrastructure.
Changes to the Dam Safety Act 2015 or its administration.	Council manages several detention basin dams that meet the classification as dams under the Dam Safety Act. Our dams are primarily detention facilities that operate as part of our flood mitigation strategy. These dams detain water and help to control the discharge rate of run-off and reducing downstream flooding risk.	Consequences of not funding the required modifications derived from changes in the Act may result in a breach under legislation and penalties from the Regulator. It may also impact our risk profile.

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Future Impacts	Strategic Response	Consequences of Not Funding
	Changes to the Act may increase our operational and/or capital funding requirements to respond to changes.	
This service is likely to be impacted by the impacts of climate change on rainfall intensity, temperature, and sea level rise.	We factor predicted changes into our floodplain risk management planning processes. We are seeing more frequent high intensity storms resulting in infrastructure and property damage. This is increasing pressure on implementing actions from floodplain risk management plans.	Not funding actions from floodplain risk management plans that aim to mitigate risk associated with climate and sea level rise will maintain the forecast risk profile in the floodplain management risk study. A reduction in community satisfaction with this service is also anticipated.
The growth in stormwater assets in West Dapto and continued priority identified from the community (biannual community survey).	The planning for West Dapto identifies stormwater and water quality infrastructure to support the increased population. The initial works are funded through development contributions; however the on-going maintenance and renewal is funded through recurrent income. The proposed infrastructure network will be reviewed to identify opportunities to rationalise and simplify the network to reduce whole of life costs.	Not funding the operational, maintenance and renewal of stormwater assets in West Dapto will affect the functionality of the infrastructure and premature failure.
The Lake Illawarra Coastal Management Program (LICMP) will impact and partly guide this delivery stream.	The LICMP identifies several actions relating to improving water quality, planning and management arrangements, foreshore and bank erosion and inundation risks relating to stormwater infrastructure.	Risk and opportunities will not be identified.
Increase in demand for stormwater quality improvement devices (SQIDs)	Managing stormwater quality as part of planning policy will drive an increase in certain types of assets. These water quality assets typically require greater maintenance and operational work to ensure they are functional.	Water quality of receiving water bodies may be impacted by an increase in gross pollutants.
Increased number of residents moving to Wollongong not investigating flood affected lots.	Improved communication to new arrivals to Wollongong and existing residents on the details of flood effected properties.	Not funding supporting soft interventions such as communications/education

12.6.2.2   Future Demand

The Local Strategic Planning Statement identifies the likely changes to our community in the future and the implications of population context. These implications, as summarised below in Table 12.6.2.2, will create changes in demand that influences planning associated with stormwater infrastructure:

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Table 12.6.2.2 – Future Demand for Stormwater Infrastructure

Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
Population growth -	Wollongong LGA growth by 55,000. During the next 20 years, several of Areas will evolve from 'sub district' sized populations of less than 30,000 people to areas hosting 'district' level populations of more than 30,000 people.	Areas of growth require new housing and stormwater networks to support development. Some existing stormwater infrastructure require upgrade to support the changes.	Most growth in Wollongong is situated in West Dapto. The West Dapto vision and development contributions plan outline the stormwater management required to support the growth and the funding contributions from development towards the recommended infrastructure.	The West Dapto contribution plan identifies the infrastructure and funding required to meet the demand. This plan integrates the contributions plan forecasts. There are 54 detention basins and gross pollutant traps proposed in the plan. These devices increase operational and maintenance costs.
Increased Residential Density	Increased residential density in some of the district hubs within the LGA.	Increased density may increase risk in areas impacted by flooding. This risk is associated with the increased number of people exposed to the hazard. The population density does not necessarily change the hazard or likelihood of flooding.	The draft Floodplain Risk Management Study and Plans for catchments to consider risk as part of the strategic framework for floodplain management across Wollongong. Increased public education programs recommended to inform the public about managing floodplains and capacity constraints of stormwater networks.	Any identified need to upgrade capacity of stormwater infrastructure is included in the floodplain risk management plan.
Management of stormwater and natural water courses on private property	Storm events have increased enquiries relating to natural water course maintenance on private property. Approximately 60% of water bodies across the LGA are managed by private owners or other Government agencies	Lack of appropriate maintenance on private property adjoining public land may result in increased siltation or transfer of debris.	Increased public education to increase awareness of the responsibility and actions for private landowners in managing infrastructure and natural water courses on their land. Consider monitoring of high-risk locations.	Stormwater and natural areas maintenance to manage infrastructure and natural water bodies on public land.

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12.6.3 Asset Snapshot

Asset Register: Assets

Financial Reporting Group: Stormwater

Valuation Information: Last comprehensive valuation 2022

Asset Classification L3	Count of Asset	Average of Useful Life (Years)	Sum of Current Asset Cost	Sum of Current Annual Depreciation as at 30 June 2024	Sum of Carrying Value
Dams & Basins	2	-	968,397	-	968,397
Dam Walls	73	73	53,489,189	822,175	31,406,573
Spillway	42	65	21,296,736	346,439	12,184,724
Weirs	41	75	2,053,202	28,908	906,301
End Structure					
Headwalls	3,284	84	9,830,182	121,809	5,202,249
Node	10	84	8,615	99	2,557
Riparian Assets					
Bank Support	290	69	52,969,265	801,382	30,439,159
Energy Dissipater	47	63	1,184,659	25,117	775,238
Flood Diversion Mound	12	160	2,660,079	35,203	2,410,521
Scour Protection	325	70	46,575,420	688,772	33,509,633
Stormwater Pipe					
Pipe Reline	334	84	8,128,518	99,424	7,922,380
Pipes & Culverts	32,906	100	1,412,218,170	14,123,969	751,531,370
Stormwater Pit	28,115	88	111,757,069	1,313,902	58,836,513
Surface Drain					
Channel Linings	248	70	91,556,360	1,472,340	37,981,837
Open Channels	27	83	282,549	3,326	197,106
Water Quality					
Access Ramps	39	71	3,098,607	42,383	2,948,178
Trash Rack	86	64	305,668	4,624	257,370
WQD	81	67	7,014,802	116,844	5,195,562
WSUD Area	18	55	1,939,233	34,509	1,402,334
			1,827,336,720	**20,081,222**	**984,077,999**

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12.6.3.1   Components and attributes

Stormwater and floodplain assets are recognised under the following descriptions and components based on the complexity of the asset: Key components:

- Dams and Basins – dam walls; spillway; weirs
- End structure – converters; headwalls
- Riparian Assets – bank support; energy dissipater; flood diversion mound; scour protection
- Stormwater pipes – major culverts; pipe relines; pipes and culverts
- Stormwater pits
- Surface drains – channel linings; creek reach; open channels
- Water Quality – access ramps; trash rack; water quality device; water sensitive urban drainage area

12.6.3.2   Risks and criticality

Critical services are defined as those which have a high consequence of failure causing significant loss or reduction of service to the community. A review of the Stormwater Service identified that the management stormwater assets is critical. Declared dams are considered critical assets. Other critical assets are to be determined in association with floodplain risk management plans.

We manage many detention basins across the city that help reduce flood hazard. A small number of these are in a risk category to be classed as 'Declared Dams'. The general purpose of these structures is to withhold stormwater during flood events for a slower, more controlled release of water to minimise flooding effects downstream.

Under the NSW Dams Safety Act, 2015 and the NSW Dams Safety Regulation, 2019, as an owner of Declared Dams, we must regularly inspect and report on them to make sure they function safely. We publish our compliance reports on our website and provide a copy to Dams Safety NSW.

The location of declared dams under Council's control are:
- Barina Park Detention Basin
- Brokers Road Basin
- Foothills Road and Estate Retention Basins (3 in total)
- Gannet Avenue Basin
- Gunyah Park Basin
- Nyrang Park Basin

We identify hazard and risk categories as part of our floodplain management process. This information will be used to determine parts of the stormwater network that have a higher consequence when a blockage occurs. This will inform proactive inspection and maintenance programs.

12.6.3.3   Inspection and maintenance requirements

Inspections on the stormwater network are undertaken by a combination of visual inspections by council officers, and remote camera inspections by contract providers. To improve our understanding of the condition of pipes and pits within our network, camera inspections are proposed to increase to support decisions on the timing of relining. The current costs to inspect pipes is relatively high, however current progress towards developing AI to identify defects is expected to significantly reduce future costs of this service. Target maintenance activities are outlined in the technical levels of service at Section 12.6.5.2.

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12.6.3.4   Depreciation and degradation curves

Stormwater and floodplain assets use a straight-line depreciation and degradation profile.

12.6.3.5   Useful Life Assessment

A review of useful life estimates of the stormwater assets was completed in 2022, based on the condition and age profile, useful life estimates from other Councils, and industry guidelines from the Institute of Public Works Engineers Australia. This analysis informed the adopted useful projection on newly created assets, and it is recommended to review all existing assets in service. Many of the assets in this category have a long life of 50 plus years. Concrete reinforced pipes and culverts, and brick culverts have been demonstrated to remain in service for well over 100 years internationally. The age of our infrastructure and experience operating this group of assets to end of life is still relatively undeveloped and has tended towards a conservative estimate of useful life. Drawing on the experience of international examples suggests we can expect to achieve a longer life out of many of our concrete assets.

Most of the premature failures observed in the stormwater asset group tends to be damage induced through natural disasters, failure in the backfill or bedding of pipes leading to pipe displacement, geotechnical instability and creep movements causing damage and displacement, and/or overloading of pipes typically associated with construction works. In coastal zones, we also see some examples of early failure due to the exposure to the highly corrosive environment. We rarely observe extensive pipe deterioration due to aging in a typical installation at this point. We estimate a required annual investment of $3.5M into the renewal of assets that have reached end of life and experienced early failure based on recent observations.

We have been utilising pipe relining as a treatment to restore life to pipes that are in poor condition for several years. There are several benefits to lining pipes compared to excavation and replacement; including reduced material waste; cost saving; reduced impact and restoration cost of assets above the pipe; lower risks associated with trenching and ground instability; reduction in work time and inconvenience to the community.

Lining can also be used as a proactive treatment to extend the life of the existing concrete pipe. Liners are designed to Australian Standards with a design durability of a minimum of 50 years. The serviceability is expected to exceed the design life, however given the current technology has been in use for approximately 30 years, the whole of life durability has not been fully tested. Liners are designed to be structural, so the function of the concrete pipe will transition from primary structural support and conveyance of stormwater to a host for the liner. The current technology suggest at least two liners are conceivable within the concrete pipe.

It is recommended that we plan to reline our concrete pipes as a proactive approach at 80% of the useful life and again reline a second time once the liner has reached 80% of its useful life. The reason we intervene before we have reached 100% life is that the risk increases of needing to excavate sections or undertake other works to enable the liner to pass through the pipe increases along with the associated costs.

If we consider that the expected life of a concrete pipe in isolation is expected at 120 years, we will reline once it reaches 80% of consumed life (approximately 95 years of serviceable life). We expect the first liner to have a 75-year expected life and will be relined at 80% consumed life (i.e.. 60 years). We then place the second liner, and at this point assume a run-to-fail scenario and to the service life of 75 years. This gives a new life of 230 years for the concrete pipe (95-year service, plus 60 years as host for reline one, and 75 years as host for reline 2) and 135 years for liner 1 (60 years of service + 75 years as host for liner 2). This approach will enable us to extract the maximum life out of the existing concrete pipe without having to dig up and replace the pipe. The proposed treatment is to recognise each liner as a new component and treat it as a capital upgrade as the treatment extends the service life of the original asset.

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We are reviewing lining only for concrete pipes with a diameter of at least 300mm. We will investigate options for relining pipes constructed of materials other than concrete. Pipes with a smaller diameter that 300mm will be assessed on a case-by-case basis to determine if the pipe is able to provide the required capacity.

These assumed useful life estimated will need to be monitored and updated over time for any variations as we continue our program of inspections. Should inspection and technical assessment indicate that the remaining useful life is longer or shorter than expected, adjustments will be required as part of the fair value review or comprehensive revaluation.

Table 12.6.3.5 (a) below summarises the recommended useful life for the stormwater and floodplain asset class.

Table 12.6.3.5 (a) – Recommended Useful Life Estimates of Assets

Asset Type	Asset component	Adopted Life
Dams & Basins	Dam Walls	75
	Spillway	65
	Weirs	75
End Structure	Converters	75
	Headwalls	85
Riparian Assets	Bank Support	70
	Energy Dissipater	60
	Creek Reach	50
	Flood Diversion Mound	75
	Scour Protection	65
Stormwater Pipe	Pipes & Culverts	230
	Pipes (concrete <300mm)	80
	Pipes (steel)	60
	Pipes (Clay)	65
	Pipes (PVC)	100
	Pipes & Culverts (>1.0m)	120
	Major Culverts	120
	Pipe Reline 1	135
	Pipe Reline 2	75
Stormwater Pit	Stormwater Pit	115
Surface Drain	Channel Linings	70
	Creek reach	50
	Open Channels	100
Water Quality	Access Ramps	60
	Trash Rack	65
	WQD	70
	WSUD Area	55

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The following Table 12.6.3.5 (b) provides an estimation of the change in annual depreciation, using the revised useful life estimates. The estimate forecasts a significant reduction of $7.5million dollars but also extracts greater value out of the investment in the asset.

Table 12.6.3.5 (b) – Change in Annual depreciation after adjusting useful life estimates

Asset Type	Qty	Current Avg useful life (years)	Rev Avg.. Life	Revised Carrying Value at 30 June 2024	Revised annual dep	Current asset cost	Change in annual dep
Dams & Basins	**137**	**72**	**76**	**43,069,287**	**942,762**	**69,645,229**	**-147,403**
Dam Walls	63	73	77	29,576,022	618,313	47,487,353	-118,611
Spillway	34	65	69	12,525,750	300,491	20,228,545	-25,552
Weirs	40	75	79	967,515	23,958	1,929,331	-3,239
End Structure	**3,037**	**84**	**91**	**4,602,989**	**94,926**	**8,632,963**	**-10,936**
Riparian Assets	**632**	**71**	**73**	**66,728,022**	**1,328,597**	**97,011,753**	**-114,451**
Bank Support	276	70	74	30,334,486	674,562	49,360,534	-60,923
Energy Dissipater	46	62	68	839,030	17,632	1,126,874	-6,248
Flood Diversion Mound	12	160	83	2,329,089	33,207	2,526,580	-205
Scour Protection	298	70	73	33,225,416	603,197	43,997,765	-47,075
Stormwater Pipe	**30,562**	**100**	**225**	**1,031,986,865**	**6,450,664**	**1,333,384,935**	**-6,906,984**
Major Culverts	10	82	115	-	-	-	0
Pipe Reline	286	89	135	6,656,787	49,944	6,742,499	-25,878
Pipes & Culverts	30,266	100	225	1,025,330,078	6,400,720	1,326,642,436	-6,881,106
Stormwater Pit	**26,109**	**89**	**115**	**64,838,323**	**906,039**	**104,231,199**	**-317,883**
Surface Drain	**257**	**73**	**77**	**45,968,823**	**1,157,135**	**87,429,932**	**-45,455**
Channel Linings	242	72	76	45,775,569	1,154,446	87,161,042	-44,978
Open Channels	14	91	99	193,254	2,689	268,889	-477
Water Quality	**190**	**65**	**70**	**8,242,865**	**146,742**	**10,323,207**	**-18,332**
Access Ramps	26	68	74	2,114,371	29,843	2,219,896	-685
Trash Rack	76	64	69	151,058	2,661	191,860	-230
WQD	71	67	71	4,563,626	85,270	6,065,969	-13,547
WSUD Area	17	56	62	1,413,809	28,969	1,845,483	-3,870
Grand Total				**1,265,437,174**	**11,026,865**	**1,710,659,217**	**-7,561,443**

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12.6.4   Roles and responsibilities

Service Manager: Manager Infrastructure Strategy and Planning

Role	Lifecycle	Function	Responsible	Activities
Service Management	Planning	Service Planning	Manager Infrastructure Strategy and Planning	Ensure service linkage to CSP Define service needs Determine service hierarchy Analyse capacity and demand Summarise service-related legislative requirements Establish customer levels of service Determine asset requirements for service delivery
	Operation	Service Operations	Manager Infrastructure Strategy and Planning	Act as customer liaison for service Provide website information and communications Initiate notifications for service interruptions Undertake functional assessment Monitor and manage service and asset utilisation
	Planning and End of Life	Asset Acquisitions and Disposals	Manager Infrastructure Strategy and Planning	Develop plan for acquisitions and disposals of assets aligned to service plan and demand forecast Engage with stakeholder on acquisition and disposal plan Arrange relocation or transition of service Arrange establishment or termination of agreements (utilities)
Asset Management	Planning	Asset Planning	Manager Infrastructure Strategy and Planning	Complete condition and performance assessment Assess asset related legislative requirements Coordinate scope preparation Asset review Renewal planning
		Asset Data	Manager Infrastructure Strategy and Planning	Administration of asset register Updates for capital improvements Initiate asset disposal system process Prepare asset management plan Coordinate asset reporting data
		Asset Financials	Manager Infrastructure Strategy and Planning	Revaluation Unit rates Estimates Monitor expenditure
Project Delivery	Delivery	Project Sponsor	Director Infrastructure + Works	Approval of project plan Oversee business proposal Capital expenditure review (OLG)

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		Asset Concept	Manager Infrastructure Strategy and Planning	Define the problem/need Options assessment Feasibility Lifecycle costing Funding strategy Business case/proposal
		Program Management	Manager Infrastructure Strategy and Planning	Oversee project as part of program Responsible for managing overall program costs, risks, progress
		Asset Design	Manager Project Delivery	Ensure design solutions align with strategy Options analysis Concepts Design development Cost estimating Complete safety in design report Approvals process
		Asset Delivery	Manager Project Delivery	Cost estimate Value engineering Procurement strategy Contract management Procurement Project management Oversee project commissioning and handover
Maintenance and Operation Management	Maintenance	Asset Maintenance (Proactive)	Manager City Works Manager Open Space and Environmental Services	Complete maintenance inspections Work management triage and scheduling Establish maintenance procedures Undertake maintenance works
		Asset Maintenance (Reactive)	Manager City Works Manager Open Space and Environmental Services	Incident response Incident control and triage Establish maintenance response procedures Manage funding claim records Undertake maintenance works
	Operation	Asset Operations	Manager City Works	Pit and pipe cleaning
		Asset Operations	Manager Infrastructure Strategy and Planning	Dam safety inspection and registration Camera inspections on pipe network Condition inspections NSW Government Emergency funding claim processing

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12.6.5 Performance

Figure 12.6.5 below indicates the gross replacement value of assets within each condition rating. The condition profile has been generated based on a combination of observed condition (where available) and calculated condition based on the current consumption of the asset life and a straight-line degradation method. At this point, approximately 15% of assets have an observed condition rating.

Figure 12.6.5 - Condition of Assets by Gross Replacement Cost
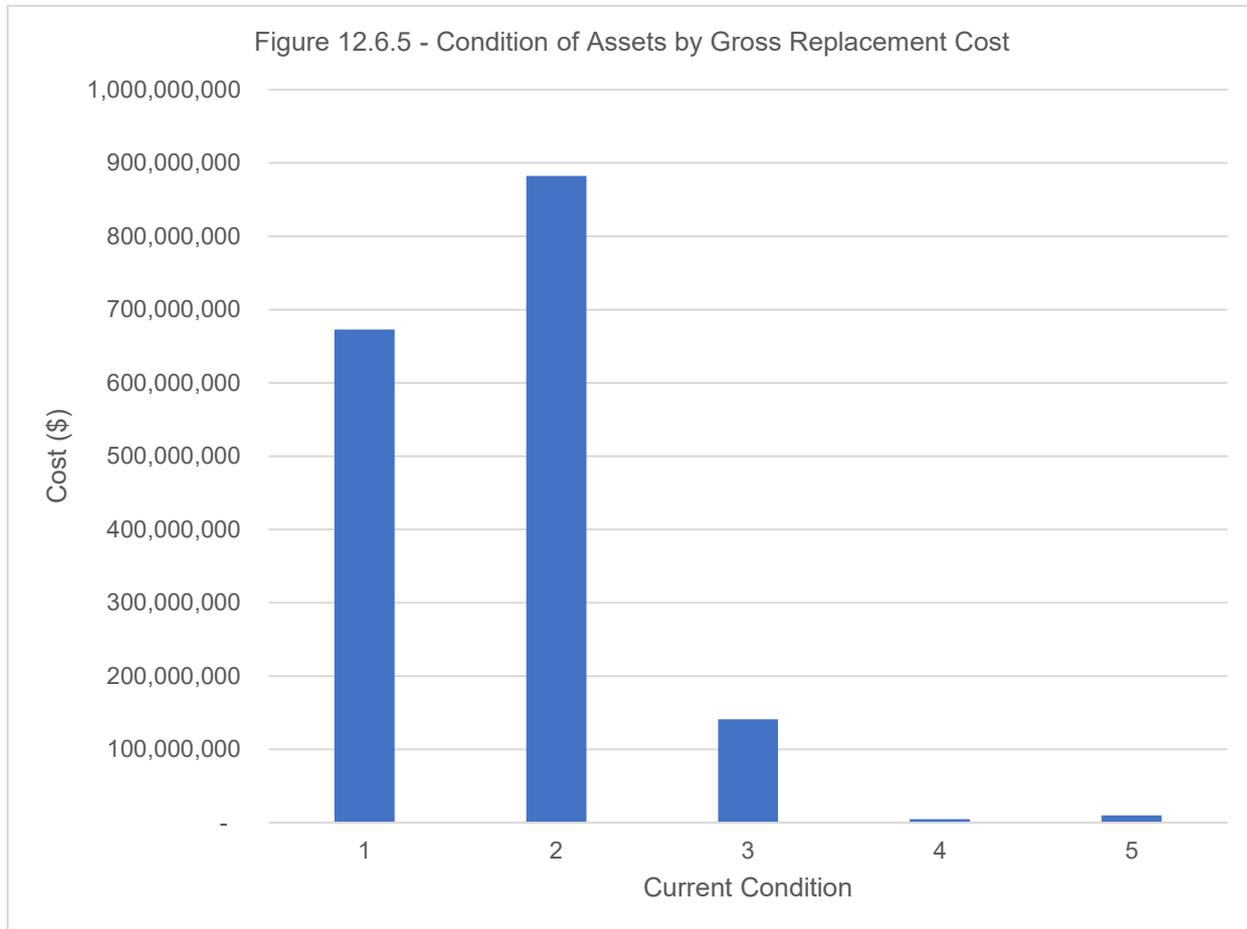
12.6.5.1 Community Satisfaction Survey

Council's most recent Community Satisfaction Survey does not specifically identify stormwater as part of the facility or direct service questions. A significant proportion of the stormwater network is integrated and connected to roadways, so we use the roads and pathway maintenance feedback as an indication of community satisfaction. The results of the community survey as reported in section 9.1.2 indicate that road and footpath maintenance are an area of focus for council.

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12.6.5.2   Criteria for levels of service

Customer Levels of Service			
Key Performance Measure	**Level of Service**	**Performance Measure**	**Target Performance**
Safety	Assets are designed to current standards	Compliance with design guides and quality management process at time of construction	Designs reviewed to meet quality standards requirement prior to issue for implementation
Risk	Risk based approach to prioritisation of works	Asset managed and maintained in accordance with risk appetite statement	Audit conducted once every five years for Declared Dams assets
			Audit conducted on sample every 5 years other infrastructure
Cleanliness	Stormwater pits and pipes are cleaned to an agreed service level to manage risk of blockage due to accumulation of sediments.	Inspection and cleaning service standard in place.	Develop a standard for inspections and cleaning of stormwater pits and pipes
Quantity	Floodplain risk management study and plan identifies opportunities for upgrade and expansion of the network	Upgrades and expansions with acceptable benefit cost ratio listed for consideration for a works program.	All identified proposals from adopted floodplain risk management plans listed and prioritised.
Environment	A commitment to monitor and manage the quality of runoff from council-controlled assets to improve/maintain the environmental conditions of water courses	Monitor for contaminants and health indicators	Measures are implemented and maintained to reduce impacts in priority locations of physical and chemical stressors from Council managed sources.

Technical Levels of Service				
Condition Inspection	Level 1 condition assessment	Annual	75% compliance	
	Level 2 condition assessment	4-yearly	75% compliance	
	Level 3 condition assessment	As required if identified in a level 1 or 2 inspection	100% compliance	

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Customer Levels of Service			
Key Performance Measure	**Level of Service**	**Performance Measure**	**Target Performance**
Post event Inspections	Level 1 inspection of identified hotspots and reported priority locations	Within 2 weeks of incident	100% compliance	Target met 😊
Cost	Implementation of efficient and cost-effective maintenance programs	Maintenance costs attributed to work orders	Assets with high maintenance costs identified for major maintenance program or renewal.	
Risk	Assets are maintained within a tolerable risk profile.	Risk assessment of road infrastructure to be undertaken.	All assets managed in accordance with the infrastructure risk appetite statement	
Performance	Asset management actions and funding allocation supports long-term sustainability	Percentage of identified renewals funded		
		Percentage of planned renewals completed		
		Percentage of identified proactive maintenance works completed		
Stormwater Assets		**Actions**	**Inspection Schedule**
Engineered vegetated open channels walls	Channels managed in accordance with vegetation management plans on Council owned land	Schedule identified hotspot and replant significant areas of exposed soil or with sparse growth	Annually in autumn and as outlined in the maintenance standards
		Armor fill erosion areas with riprap or divert the runoff to a stable area	
		Inspect and repair down-slope of all energy dissipators and rap for erosion	
Swales and Open Stormwater Channels	Assets are managed in accordance with blockage policy and maintenance standards	Remove obstructions, sediments or debris from swales and other open channels	Annually in autumn and as outlined in the maintenance standards
		Repair any erosion of the lining	

Asset Management Plans

Customer Levels of Service			
Key Performance Measure	**Level of Service**	**Performance Measure**	**Target Performance**
		Remove woody vegetation growing through riprap	
		Repair any significant slumping side slopes	
		Repair riprap where underlying filter fabric or gravel is showing or if stones have dislodged	
Culverts	Assets are managed in accordance with blockage policy and maintenance standards	Remove accumulated sediments and debris at the inlet, outlet, or within the conduit	Annually and as outlined in the maintenance standards
		Remove any major obstruction to flow	
		Repair any erosion damage at the culvert's inlet and outlet	
Roadways and Parking Areas	Assets are managed in accordance with blockage policy and maintenance standards	Clear and remove accumulated sediments car park and along roadways	As outlined in the maintenance standards
		Sweep gutters to remove sediment, vegetation, and litter	In accordance with agreed service plan
		Grade unsealed road shoulders and remove accumulated sediments and vegetation preventing flow to table drains	As required
Wetlands and Detention Basins	Assets are managed in accordance with maintenance standards	Inspect the embankments for settlement, slope erosion, piping, and slumping	Annually and as outlined in the maintenance standards
		Control woody vegetation as required	
		Inspect the outlet structure for broken seals, obstructed orifices, and blocked trash racks	
		Remove and dispose of sediments and debris within the control structure	
		Repair any damage to trash racks or debris guards	
		Replace any dislodged stone in riprap spillways	
		Remove and dispose of accumulated sediments	
Infiltration Basins and Raingardens	Assets are managed in accordance with maintenance standards	Clean the basin of debris, sediment, and hydrocarbons	As outlined in the maintenance standards
		Provide for the removal and disposal of accumulated sediments within the basin	

Asset Management Plans

Customer Levels of Service			
Key Performance Measure	**Level of Service**	**Performance Measure**	**Target Performance**
		Renew the basin media if it fails to drain within 72 hours after a 25mm rainfall event	
		Replant the basin if vegetation is sparse	
		Repair riprap where underlying filter fabric or gravel is showing or where stones have dislodged	
Gross Pollutant Trap Devices	Device is inspected and maintained to provide effective service and able to remove pollutants from runoff	Enclosed device may require specialised equipment for inspection and maintenance	Inspect quarterly and post major rainfall event
		Follow the manufacturer's plan for cleaning of devices	
Water Courses			
Bank stability	Banks of water courses on public land allowed to naturally shift – inspect for any stability hazards that may affect adjoining public areas	Inspect slopes and embankments of high priority locations and replant significant areas of exposed soil or with sparse growth	As outlined in the maintenance standards
		Armor fill erosion areas with riprap or divert the runoff to a stable area	
		Inspect and repair down-slope of all energy dissipators and rap for erosion	
Flow path	Flow path is clear of any major restrictions to flow	Remove accumulated sediments and debris at the inlet, outlet, or within the conduit	
		Remove any major obstruction to flow within public water courses	
		Identify obstructions within high-risk water courses on private land	
Inlets and headwalls	Inspect pipe and channel inlets into the water course identify scouring and erosion	Repair any erosion damage at the inlet and headwall	
Adjoining Public Infrastructure	Inspect for any hazards associated with natural watercourse movement on adjoining infrastructure.	Check for scarping	
		Look for subsidence and sinkholes	
		Check for longitudinal cracks	
		Listen for drumminess under concrete surfaces	
		Look for lateral movement of any adjoining walls	

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Key Performance Measure	Level of Service	Performance Measure	Target Performance
Customer Levels of Service			
Stormwater and On-site Detention Maintenance			
Discharge Control Pit			
Blockage	Inspect and remove any blockage of orifice, trash screen, grates, weir, and/or valves	Remove blockages.	Six Monthly
Orifice plate	Check attachment of orifice plate to wall of pit (ensure no gaps exist)	Remove the grate and screen. Ensure orifice plate is mounted securely, tighten fixings if required and seal any gaps which are present.	Annually
Valve	Check flap valve operation and attachment	Ensure flap valve moves freely and remove any blockages or debris	Annually
Walls	Inspect Discharge control pit walls (internal and external, if appropriate) for cracks or spalling	Remove the grate to inspect the walls. Repair as required. Clear vegetation from external walls if necessary and repair as required.	Annually
Sump	Inspect Discharge Control Pit sump and remove any sediment/sludge	Remove the grate and screen. Remove sediment/sludge build up and check orifice and flap valve are clear.	Six Monthly
Outlet	Inspect outlet pipe and remove any blockage	Remove the grate and screen. Ventilate underground storage if present. Check orifice and remove	Six Monthly
		any blockages in outlet pipe. Flush outlet pipe to confirm it drains freely. Check for sludge/debris on upstream side of return line.	
Steps	Check step irons for corrosion and fixing	Remove grate. Examine step irons and repair any corrosion or damage or replace step if necessary.	Annually
Above Ground Storage Area			
Pit	Inspect the return pit and remove any sediment/sludge in pit	Remove grate and screen. Remove sediment/sludge build up.	Six Monthly
	Inspect internal walls of return pit (and external, if appropriate) for cracks or spalling	Remove grate to inspect internal walls. Repair as required. Clear vegetation from external walls if necessary and repair as required.	Annually
Grate	Inspect and remove any debris/litter/mulch etc. blocking grates of return pit	Remove blockages from grate and check if pit blocked.	Six Monthly

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Customer Levels of Service			
Key Performance Measure	**Level of Service**	**Performance Measure**	**Target Performance**
Storage	Inspect storage areas and remove debris/litter/mulch etc. likely to block screens/grates	Remove debris and floatable material, i.e., pine bark mulch, likely to be carried to grates.	Six Monthly
Subsidence	Inspect storages for subsidence near pits	Check along drainage lines and at pits for subsidence likely to indicate leakages	Annually
Signs	Inspect On Site Detention Warning Signage	Check On Site Detention (OSD) Warning signage and ensure that it is fixed securely to wall, not faded, deteriorated, or missing and is clearly visible. Replace as necessary or reposition to a clearly	Annually
		visible location if vegetation growth has obscured.	
Dam Area			
	Activities identified in Dam Safety Management Plan	Complete activities as specified in the Dam Safety Management Plan (DSMP)	As outlined in the DSMP
General			
Inspect gutters of building and remove any debris/sludge	Gutters are clear of accumulated debris to prevent roof water overflow into the building	Remove any leaves or debris and sludge from gutters of building and flush downpipes of	Annually
		building to remove any blockages. Pits downstream of downpipes to be cleaned of flushed debris.	
Inspect pits and trench drains on site and remove debris/litter/ sludge	Pits and grates are clear and flowing to prevent surface flow entering building	Remove grate. Remove any debris/litter/sludge from within pits.	Six Monthly

12.6.5.3   Stormwater Asset Resilience

The natural and non-natural hazard exposure categories for the City of Wollongong are identified through the Local Emergency Management Committee. The hazards identified as part of the Local Emergency Risk Management Study, that may impact stormwater infrastructure are summarised in table 12.6.5.3 below:

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Table 12.6.5.3 – Stormwater Hazard Exposur2

Hazard	Risk Description	Likelihood	Conseq.	Risk
Flood (Lake and Flash)	Heavy rainfall causes excessive localised flooding with minimal warning time.	Likely	Major	Extreme
Severe Storm/ Storm Surge	Severe storm with accompanying lightning, hail, damaging winds, and/or rain that causes severe damage and/or localised flooding (includes tornado and waterspout) and coastal erosion.	Likely	Major	Extreme
Major Structural Collapse	Failure of a major culvert or bridge structure with or without warning owing to structural failure or because of external/internal events or other hazards/incidents.	Rare	Major	High
Earthquake	Earthquake of significant strength (> Magnitude 7) that results in localised or widespread damage.	Rare	Major	High
Landslip / Mudflow / Rockfall	Landslip/mudflow/rockfall resulting in localised or widespread damage.	Likely	Moderate	High
Tsunami	A tsunami wave of magnitude that presents a risk to land and marine elements.	Rare	Major	High
Utilities Failure*	Major failure of essential utility for unreasonable periods of time because of a natural or human-caused occurrence (>24 hours).	Rare	Major	High
Dam Failure	Uncontrolled release from an engineered dam can result in a damaging amount of liquid impacting downstream communities.	Low	Moderate	Moderate

*Water or sewer failure directly impacting stormwater network

The local emergency management plan covers the preparedness and response plans for the events listed above. Post incident, Council will instigate the appropriate inspection program to review any stormwater and flood infrastructure impacted by the event.

12.6.5.4   Climate Hazards

The key climate hazards identified through the Climate Change Adaptation Plan (CCAP) as most relevant to stormwater are flooding, storms and sea-level rise. All contemporary flood studies used to inform stormwater design include climate risk factors associated with storm surges and sea level rise.

A summary of the actions from the CCAP and relation to stormwater are provide in the table 12.6.5.4 below:

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Table 12.6.5.4 – Climate Change Action Plan Stormwater Actions

Priority Actions		
Hazard	**Climate Change Adaptation Plan Action**	**Stormwater Action**
Flooding	Continue managing flood risk through floodplain risk management plans, incorporating climate predictions.	Review floodplain risk management study and plans for recommended work items on bridges.
	Continue and monitor maintenance schedules to reduce the risk of drainage network blockages.	Bridges to be inspected in accordance with agreed levels of service to identify blockages. Levels of service to be based on the criticality of the drainage network.
	Undertake community education to increase awareness of the dangers of floodwaters and precautions to minimise risks to people and property.	Education to include traversing bridges where the water level is approaching the soffit of the bridge.
Storms	Prepare and implement an Open Coast Coastal Management Program.	Implementation of infrastructure actions will be included in forecast expenditure
	Identify Council's business continuity plans (BCPs) and review and updated as required to address increase the likelihood of storm and extreme weather events.	BCPs may identify critical services and associated assets. Any changes to critical assets will be listed in revisions of the asset management plan, and appropriate management plans developed.
Sea-level rise	Prepare and implement an Open Coast Coastal Management Program.	Implementation of infrastructure actions will be included in forecast expenditure. The current Wollongong Coastal Zone Management Plan 2017 (CZMP) identifies Windang Bridge with an inundation risk. This bridge is managed by the NSW Government. The CZMP also suggests part of Lawrence Hargrave Drive with risk and potentially elevating the road as a bridge. This road is managed by the NSW Government.
	Recovery plans from emergencies are to be developed in partnership with communities and other relevant service providers.	Recovery plans typically result in unscheduled maintenance activities. Some recovery actions are part funded through State agencies for major events.

Implementation of the above actions will assist in identifying vulnerable infrastructure to enable appropriate mitigation and response plans to be prepared.

12.6.5.5   Prevention, Preparedness, Response and Recovery

The Wollongong Community will continue to be impacted by flooding and severe storms. Council's stormwater and floodplain management infrastructure forms part of the preparedness and response network. The overall process for assessing the hazards to the community resulting in a significant emergency response is part of the functions of the Illawarra Local Emergency Management Committee. As noted in the above section, flood and severe storm were rated as extreme risks for the Illawarra area.

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The responsibility for overseeing the planning for prevention, preparation, response and recovery to flood and major storms is the State Emergency Service (SES). The SES have prepared the Illawarra Flood Emergency Sub Plan that outlines the arrangements for emergency management of flooding in the Wollongong Local Government Area, in addition to Shellharbour and Kiama Local Government Areas.

As a key stakeholder in the process, Council's has a primary responsibility for management of flood prone land. Our flood risk management process follows the NSW Government *Flood risk management manual.*

The process involves the collection of data, preparation of a flood study, undertaking a flood risk management study, and completion of a flood risk management plan. This process is aligned to the vision for flood risk management in NSW:

> *Floodplains are strategically managed for the sustainable long-term benefit of the community and the environment, and to improve community resilience to floods*

A summary of the prevention, preparedness, response, and recovery actions relating to stormwater and floodplain management infrastructure is provided in Table 12.6.5.5 below.

Table 12.6.5.5 – Stormwater Prevention, Preparedness, Response and Recovery Plan

Stage	Plan	Asset Impact
Prevention	Our floodplain risk management planning is one of the main prevention measures. It includes identifying flood hazard and determining options for appropriate land use planning. We have ten floodplain risk management plans in place that cover most of the local government area. Our process involves collaboration and engagement with the SES and community. Managing expectations on Council preventing impacts from flooding for properties within the floodplain area through public education and awareness programs.	The floodplain risk planning process will identify flood modification measures and likely costs to be considered in an asset management plan.
Preparedness	The NSW SES Illawarra Flood Emergency Sub Plan outlines the preparedness plan for flooding. Council's maintenance program supports the preparation of the stormwater network for emergency events.	Implementation of proactive and reactive maintenance to manage the functionality of the stormwater network. Public education programs relating to floodplain and stormwater management.
Response	Response to flooding emergencies is coordinated by the SES. The Illawarra Flood Emergency Sub Plan outlines the response plan. Council helps with road closures and re-opening of roads at the request of the SES. We provide support with intelligence on dam safety and other significant council infrastructure. Council does not provide a direct emergency response for the protection and functionality of infrastructure and property.	Flooding and storms are a hazard that may cause damage to stormwater and floodplain management infrastructure. Provision of advice and monitoring of declared dams for overtopping risk.
Recovery	Council provides services for the removal of debris and waste from council	Check for damage to dams and other significant flood mitigation infrastructure.

	infrastructure and land to mitigate health hazards and mitigate on-going risk.	Increased maintenance and operating costs for the clean-up and removal of debris and waste from stormwater and floodplain infrastructure.

12.6.5.6   Legislative Requirements

- Roads Act 1993
- Environmental Planning & Assessment Act 1979
- Catchment Management Authorities Act 2003
- Fisheries Management Act 1994
- Threatened Species Conservation Act 1995
- Native Vegetation Act 2003
- Noxious Weeds Act 1993
- Biodiversity Act 2015
- NSW Dams Safety Act, 2015
- NSW Dams Safety Regulation, 2019
- NSW Reconstruction Authority Act 2022

12.6.6   Future Investments

12.6.6.1   New and Upgrade Plans

Table 12.6.6.1 below includes new and upgraded stormwater infrastructure that are listed in the West Dapto Vision and Development Contributions Plan. The stormwater infrastructure is identified as part of the demand and risk analysis associated with the population growth, and a review of the existing floodplain risk management plans and infrastructure provision. The timing of the works is driven by the rate of development, with the contribution plan providing indicative timing. The data and references are compiled using the following tables from the West Dapto Development Contribution Plan: table 17 and Schedule 4. The table includes bridges that are anticipated beyond the 10-year life of the plan; however, they are included for completeness.

Table 12.6.6.1 – West Dapto Developer Contribution Plan – Stormwater Infrastructure

Ref	Infrastructure Item	Cost of Land	Cost of Works	Apportion to Plan	Cost to Plan	Qty	Description	Indicative Timing
Detention Basins								
SM01	Detention Basins (including Gross Pollutant Trap)	$21,828,348	$52,850,643	100%	$74,678,990	54	Detention basins will temporarily store floodwater from upper catchment areas during floods, releasing the water at a controlled rate. This treatment reduces the peak flows and levels downstream of the basin sites. There are fifty-four detention basins to be constructed within the release area. Wetlands will also be provided within the detention basin to provide secondary treatment to the stormwater prior to it flowing out of the detention basin. Gross pollutant trap (GPT) devices are to be provided at the outlet to stormwater pipes leading to stormwater detention basins. These systems operate as a primary treatment to remove litter, vegetative matter, free oils and grease and coarse sediment prior to discharge to downstream treatment devices. It is envisaging each detention basin will contain one GPT.	2020/21 - 2059/60
Enhanced Storage Areas								

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Ref	Infrastructure Item	Cost of Land	Cost of Works	Apportion to Plan	Cost to Plan	Qty	Description	Indicative Timing
SM02	Forest Creek	$360,000	$5,697,737	100%	$6,057,737	12ha	There are five proposed enhanced storage areas. Each will be on-line and confined to land zoned for riparian corridor. The design will involve embankments across the floodplain to the tops of the banks of the existing low flow channel, so that the ecological connectivity of the low flow channel and its habitat would not be comprised.	2026/27 – 2030/31
SM03	Robins Creek	$270,000	$3,798,491	100%	$4,068,492	9ha		2036/37 – 2040/41
SM04	Reed Creek	$315,000	$3,165,409	100%	$3,480,410	10.5ha		2036/37 – 2040/41
SM05	Mullet Creek	$420,000	$4,431,573	100%	$4,851,573	14ha		2041/42 – 2045/46
SM06	Duck Creek	$570,000	$7,596,983	100%	$8,166,983	19ha		2046/47 – 2050/51
Trunk Drainage								
SM07	Trunk Drainage	$ -	$26,851,005	100%	$26,851,005	2,500 ha	Trunk drainage will be provided to deliver stormwater between development areas and receiving waters where catchments exceed fifteen hectares.	2020/11 - 2059/60
	Total	**$23,763,348**	**$104,391,841**		**$128,155,190**			

The number of small detention basins and gross pollutant traps should be reviewed to determine if it is feasible to consolidate stormwater management to reduce long-term operational and maintenance costs.

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12.6.6.2   Floodplain Risk Management Plans

The adopted floodplain risk management plans identify flood control measures to be consider based on priority to the relative catchment. The high priority actions total over $200m in works (adjusted to present value). It is noted that Floodplain Risk Management Plans are being reviewed in some catchments and the list of actions will be subsequently revised as plans are adopted by Council.

There is currently no formal funding strategy to implement all actions from floodplain risk management plans. Council typically leverages funding with supporting NSW Government grants. Applications are assessed on merit-basis under the Floodplain Management Grant program administered by NSW Environment and Heritage. A recommended action in the improvement plan is to revise and reprioritise actions and develop an appropriate implementation plan and funding strategy for the high priority works.

12.6.6.3   Lake Illawarra Coastal Management Program 2020-2030

The adopted Lake Illawarra Coastal Management Program identifies several actions relating to provision of new and upgraded infrastructure, renewal and maintenance of existing assets and potential decommissioning of underperforming assets to improve water quality in the Lake. The plan outlines indicative costs as of 2020 for the items. The actions within this site-specific plan need to be considered in the broader context of the Wollongong Local Government Area.

12.6.6.4   Decommissioning and Disposal Planning

Where infrastructure is no longer meeting the required level of service, we may look at decommissioning the asset. Unforeseen decommissioning may result from impacts of natural disaster.

There are currently no assets forecasted for decommissioning in the stormwater and floodplain management asst group.

12.6.6.5   Renewal Works

Many of the stormwater and floodplain assets have a long-life and most end-of-life renewal treatments are anticipated beyond the period of this asset plan. However, we anticipate renewal of stormwater and floodplain infrastructure that has experienced accelerated deterioration due to damage or unexpected failures.

We investigate options to rehabilitate or modify existing assets to reduce the cost of renewals and provide a similar service capacity as the original asset. An example of this is pipe relining. We aim to utilise the existing structure of the pipe and place an internal liner where:

- Failure of the pipe backfill material resulting in a displacement of the pipe (poor compaction);
- Unstable geotechnical conditions;
- Aggressive ground conditions (corrosive environments);
- Unsealed penetrations into the pipe;
- Minor to moderate pipe cracking; and
- Scour of the pipe invert.

Pipe relining is a more cost-effective and less disruptive method to return the pipe to an acceptable service life than complete replacement of the pipe. This treatment also generates less wastage and resource usage

as we can reuse the existing pipe. Relining of pipes is not always feasible and depending on the severity of the current defect in the pipe.

Based on the current information available, we anticipate a required annual renewal expenditure of $3,500,000 across the stormwater and floodplain management assets. We only look to intervene with a renewal treatment for pipes where the overall grade has reached a condition 4 or 5 or localised failures have occurred. Minor repairs to sections of pipe using a liner or patches may also be undertaken as a maintenance treatment.

12.6.6.6   Renewal Ratio

The Office of Local Government has set a *Buildings and infrastructure renewals ratio* as part of the requirements for Local Government to report on as part of its annual financial statements. The ratio is the value of completed *asset renewals*, divided by the *Depreciation, amortisation, and impairment.* The benchmark is >100%.

The concept of the *Buildings and infrastructure renewals ratio* is to demonstrate that the investment into renewing infrastructure is keeping pace with the rate at which it is depreciating. However, the basis of the indicator is not reliable for a group of assets in the early part of the asset life cycle for long life assets where a straight-line depreciation method is used. Long life assets such as stormwater assets, require relatively little renewal expenditure for many years, however the depreciation expense using a straight-line method annualises the amount depreciated over the life of the asset. As a result, a ration of renewal expenditure to depreciation is not a good indicator of infrastructure sustainability for this class of assets.

Having the ability to fund and complete the required renewals as and when they fall due is a better indicator for these assets.

The *Buildings and infrastructure renewals ratio* is better suited to asset groups where there is a better distribution of age, and the assets have a shorter (<50 years) useful life.

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12.6.6.7   Future investment plan – Stormwater and Floodplain Management

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Depreciation	11,026,865	11,038,239	11,038,239	11,038,239	11,038,239	11,038,239	11,038,239	11,038,239	11,038,239	11,038,239	11,038,239
Required Maintenance works	7,207,309	7,214,743	7,222,282	7,230,556	7,241,448	7,258,815	7,276,182	7,294,506	7,313,309	7,340,248	7,369,581
Operating expenditure	**18,234,174**	**18,252,982**	**18,260,521**	**18,268,795**	**18,279,687**	**18,297,054**	**18,314,421**	**18,332,745**	**18,351,548**	**18,378,487**	**18,407,820**
Renewal works	5,342,000	6,030,000	4,035,000	2,900,000	3,020,000	1,040,000	1,040,000	1,040,000	1,040,000	1,040,000	1,040,000
Upgrade works	2,830,000	980,000	565,000	1,700,000	1,530,000	-	-	-	-	-	-
Expansion works	-	-	-	-	-	135,000	135,000	135,000	135,000	135,000	135,000
Voluntary Purchase Scheme	-	-	-	-	-	400,000	400,000	400,000	400,000	400,000	400,000
New works	1,770,000	2,201,000	430,000	1,800,000	2,650,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Capital expenditure	**9,942,000**	**9,211,000**	**5,030,000**	**6,400,000**	**7,200,000**	**5,575,000**	**5,575,000**	**5,575,000**	**5,575,000**	**5,575,000**	**5,575,000**
Totals	**28,176,174**	**27,463,982**	**23,290,521**	**24,668,795**	**25,479,687**	**23,872,054**	**23,889,421**	**23,907,745**	**23,926,548**	**23,953,487**	**23,982,820**
Estimated Required Renewals	**3,500,000**	**3,500,000**	**3,500,000**	**3,581,330**	**3,500,000**	**3,500,000**	**3,500,000**	**3,625,599**	**3,513,979**	**3,500,000**	**3,500,000**
Planned renewal as a % of estimated required	**233%**	**200%**	**131%**	**128%**	**130%**	**30%**	**30%**	**29%**	**30%**	**30%**	**30%**

Note: the estimated required annual renewal funding is $3,500,000 based on a review of prior expenditure. This is to fund the renewal of premature infrastructure failures. It is recommended to reallocate the required funding from new works to renewal works from the 2029/2030 – 2034/25 years. It is also noted that funding opportunities for implementation of additional floodplain initiatives are being explored, which may result in the introduction of projects in later years.

12.6.7   Stormwater and Floodplain Infrastructure Improvement Program

The following opportunities have been identified through the preparation of this asset management plan that will assist in improving future asset management planning outcomes:

Item	Issue	Description	Responsible	Timing
6.1	Stormwater Strategy	Develop an overarching stormwater and floodplain strategy that outlines: • Management of natural watercourses; • Blockage policy; • Modelling parameters; • Assumptions on sea-level rise; • Stormwater design parameters (for new infrastructure).	MISP	2026
6.2	Floodplain Risk Management Plan Actions	Review and reprioritise actions. Formulate an implementation plan and funding strategy for the revised program of high priority projects. Ensure actions are able to funded through LTFP funds and grant funding.	MISP	2026
6.3	Asset description	Standardise the approach and convention for describing assets for consistency. Develop a data dictionary, validate, and update existing data.	MISP	2026
6.4	Criticality	Use risk analysis to assign a criticality to assets to inform priority for maintenance and renewal planning	MISP	2026
6.5	West Dapto Contribution Plan	The number of small detention basins and gross pollutant traps should be reviewed to determine if it is feasible to consolidate stormwater management to reduce long-term operational and maintenance costs.	MCS & MISP	2028
6.6	Adjust useful life of assets	The plan identifies the opportunity to revise the useful life to extract maximum value from the assets.	MISP	2026
6.7	Review relining	Investigate relining of pipes other than concrete	MISP	2027
6.8	Service standards	Develop a service standard for proactive maintenance and operational actions to keep council stormwater and floodplain infrastructure functional and to manage resources based on risk.	MISP	2027
6.9	Water course management guidelines	Prepare a guideline to assist private property owners in understanding inspections and triggers for managing watercourse on their land. Also provide guidance for adjoining landowners on roles and responsibilities.	MISP	2028
6.10	Asset Register	Improve accuracy and completeness of the Asset Inventory • Stocktake • Dimensions • Attributes • Spatial representation	MISP	2026

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Item	Issue	Description	Responsible	Timing
6.11	Asset Register	Review Asset Classification structure and attribute information contained within the asset records	MISP	2026
6.12	Asset Condition	Obtain asset condition information on minor stormwater classifications (riparian assets, WQD, etc) to improve AM planning and UL estimates	MISP	2028
6.13	Asset Condition	Review delivery strategy for stormwater pit, pipe, and culvert CCTV inspections to increase quantum inspected p.a. and minimise costs. Review the application of artificial intelligence to improve the monitoring function.	MISP	2026
6.14	Asset Governance	Further development data manuals and processes to improve control and asset data and asset accounting activities	MISP	2026
6.15	Process efficiency	Improvements to efficiency of existing processes through greater utilisation of the EMS and leveraging new technologies such as machine learning.	MISP	2028
6.16	Flood Intelligence & Asset Performance	Water level, blockage, and other monitoring to improve intelligence and optimise delivery of services.	MISP	2028
6.17	Works/Activity Cost	Improve the understanding of the cost of relevant work activities though improved system utilisation, activity-based cost tracking and budget forecasting.	MISP	2026
6.18	Works Prioritisation	Review and adjustments to current prioritisation practices to identify and improve outcomes.	MISP	2027
6.19	Maintenance Plan	Formalise and document a vegetation, blockage and maintenance strategy including standards, target response times, and risk hierarchy for stormwater assets, supported by a prioritisation and triage guideline. Developed maintenance library, template work orders and safe work method statements	MISP	2028
6.20	Maintenance records and Maintenance History	Guidelines and training on correct system utilisation to support cost and work record collection and utilisation of the OneCouncil SAM module for long term financial planning and investment optimisation	MISP	2028
6.21	Cost, Schedule, and Utilisation performance Measures	Utilise EMS to improve visibility of cost, schedule, and resource utilisation performance measures	MISP	2026
6.22	Map stormwater infrastructure with ownership responsibilities	A detailed review is to be undertaken of all stormwater infrastructure between Council and private ownership. The results are to be online available for awareness. A proactive roles and responsibilities education and compliance program to be established.	MISP	2026
6.23	Stormwater/road reserve optimisation	Develop a plan to introduce/modify infrastructure and use the road environment infrastructure to optimise flood water conveyance and storage.	MISP	2028

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12.7 Open Spaces

This section of the asset plan details our open space assets except for playgrounds. This group of assets focusses on the infrastructure provided to support a range of services. This section includes assets such as beach access, shelters, skate parks, outdoor exercise equipment, park furniture, and sport grounds. This section of the plan does not include the value of the land that provides the open space; however, it does include the maintenance of the park surface.

Open space assets contribute to and provide opportunities to support the health and wellbeing of our community through the provision of a variety of quality and accessible public places and opportunities for sport, play, leisure, recreation, learning and cultural activities in the community.

Wollongong maintains over 427 parks across the Local Government Areas. This includes a selection of parks and reserves including Mount Keira and Bald Hill Reserve, and hundreds of outdoor green spaces for our community to utilise and enjoy. These parks and reserves are used for active recreation, such as skate facilities, bike trails and outdoor fitness equipment, as well as leisure for picnics, gatherings and special occasions, or time outdoors.

12.7.1 Profile

Community Strategic Plan Goal: Goal 1: We are a sustainable and climate resilient city

Services: Natural Area Management

Goal: Goal 4: We have a healthy, respectful, and inclusive community

Services: Parks and Sports Fields, Botanic Gardens and Annexes, Memorial Gardens and Cemeteries, Russell Vale Golf Course

Our community is passionate about enjoying our outdoor spaces, the natural environment and recreation. As a result, we find several services that are supported by assets within open space. A summary profile of each service is provided below.

12.7.1.1 Parks and Sport Fields

This service operates over 427 parks (approximately 576ha), 85 sports grounds, 193 playing fields, 7 outdoor fitness stations, and 9 turf wickets, 40 synthetic cricket wickets 174 hardcourts, four synthetic fields (football and hockey), five skateparks, nine outdoor fitness stations and 11 baseball/softball diamonds across the Wollongong Local Government Area and includes Russell Vale Golf Course. Provision of passive access to community parks and playgrounds, and affordable and equitable access to sports fields and facilities. Twenty-two sports fields are licensed by volunteer or semi-professional sporting clubs.

Our community has a strong passion for sports and recreation activities, with many community members actively participating in a diverse range of organised and unstructured sporting pursuits. Council's Sportsgrounds and Sporting Facilities Strategy 2023-2027 outlines our approach and demand for this service and the assets required to support recreation.

12.7.1.2 Natural Areas

The service includes the active management of approximately 286ha of natural areas, 46ha of asset protection zones under Council care and control (actively worked by hand/bush regeneration contractors and does not include slashed/mown sites), in addition to supporting 68 groups of bushcare, dunecare and fire-

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ready programs. Activities undertaken as part of this service include restoration of natural areas, weed management, pest management, as well as the conservation of endangered ecological communities and threatened species. These activities are funded through a combination of Council's own operating funds, external grants, partnerships with other organisations and the support of community volunteers. Much of the work undertaken in natural areas is considered operational with limited financial assets.

12.7.1.3   Botanic Gardens

The Botanic Gardens (BG) plays a key role in delivering environmental education for the community, has significant historical links to the City's aboriginal heritage, built heritage and industrial history. The BG hosts a range of quality outdoor events, and maintains significant plant collections contributing to local, national, and international plant conservation objectives. Mount Keira Summit Park, Korrongalla and Puckeys Estate Nature Reserve are recognised as annexes to the main Botanic Gardens site.

12.7.1.4   Memorial Gardens and Cemeteries

This service provides memorial, burial, and funeral facilities at six sites across the Local Government Area including Wollongong Memorial Gardens, Helensburgh, Bulli, Scarborough, Wollongong, and Wollongong Lawn Cemetery, as well as the maintenance and care of Pioneer Cemeteries located at Kembla Grange, Berkeley and Garrawarra. This asset plan focusses on the maintenance and care of the open space assets in Memorial Gardens and Cemeteries as well as Pioneer Cemeteries.

12.7.1.5   Russell Vale Golf Course

The public golf course provides affordable access to a northern suburb's recreation facility. The 18-hole course appeals to a variety of age groups and is popular with the community and visitors.

12.7.2   Strategic priorities

A range of supporting documents guide and influence the investment into open space assets including:

- Sportsgrounds and Sporting Facilities Strategy 2023-2027 (primary document)
- Lake Illawarra Coastal Management Plan
- Plans of Management for Public Open Spaces
- Site masterplans for Beaton Park, Cringila Hills, Figtree Oval, Hill 60, King George V Park, Lindsay-Mayne Park, and Stuart Park.
- Beach Access and Foreshore Access Strategy
- Disability Inclusion Action Plan
- Biodiversity Strategy
- Riparian Corridor Management Study
- Wollongong Dune Management Strategy
- Urban Greening Strategy

A summary of the key actions from supporting documents relating to open space assets is provided in table 12.7.2:

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Table 12.7.2 – Supporting Document Open Space Actions

Supporting Document	Action	Resource Impact
Sportsgrounds and Sporting Facilities Strategy 2023-2027	Renew and enhance sports facility infrastructure: a) Continue to invest in the programmed renewal of sports field lighting, incorporating LED lighting and innovative technologies. b) Work with stakeholders to plan for the renewal and provision of new hard court playing surfaces, including netball, tennis, and basketball facilities. c) Progress the staged realignment of the outdoor netball courts at Fred Finch Park, Berkeley. d) Maintain the provision of existing and future turf and synthetic cricket wickets to align with the sportsground hierarchy and needs of current and future participants. e) Incorporate operational, maintenance and whole of life costings in the renewal and provision of new sporting infrastructure.	a) Projects are included in the current infrastructure delivery program to upgrade sports field lighting. b) Completion of a review and priority assessment will enable a plan to be prepared showing lifecycle costs. c) 16 courts have been completed. d) Lifecycle costing should be prepared to understand the commitment required for turf wickets compared to synthetic wickets. e) More detailed understanding of actual costs will improve the modelling of whole of life costs.
	Manage sportsground capacity issues: a) Ensure equitable allocation of sportsgrounds while encouraging the development of multipurpose facilities. b) Strategically identify and activate under-utilised sports fields with lighting. c) Consider the Department of Planning, Industry and Environment, Synthetic Turf Study in Public Open Space Report 2021, and the findings of the NSW Chief Scientist & Engineer review of the Report during sports field planning and development. d) Prioritise the ongoing allocation of funding for the implementation of irrigation and drainage infrastructure at highly utilised sportsgrounds.	a) Multipurpose facilities to be planned. b) This action will require identification of underutilised facilities to enable lighting upgrades to be planned. c) The guidelines to be considered in planning for facilities. d) Irrigation and drainage projects are included in the infrastructure delivery program.
	Effectively plan and manage sportsground precincts: a) Ensure all lease and license agreements have a clearly defined and consistent approach to roles and responsibilities, with consideration to facility upgrades, renewal, maintenance, and operation.	a) Clearly defined roles will enable better planning for life cycle costs. b) This is a consideration for the delivery phase of projects.

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Supporting Document	Action	Resource Impact
	b) Ensure all new and renewed facilities are constructed in accordance with Council's Hierarchy system, Australian Standards, and sport specific facility guidelines.	
	Support safe and inclusive participation in sport: a) Provide natural and built shade at all sporting facilities. b) Ensure that perimeter control interventions are renewed or installed at key locations. c) Ensure all new sporting facilities and upgrades to existing, incorporate the principles of universal design and comply with access legislation including continuous accessible paths of travel to amenities, accessible parking, and seating.	a) Consider locations for tree planting and/or built shade with projects. Investigate the opportunity for tree planting at priority locations. b) Funding required for the renewal or installation of perimeter control. Investigate the opportunity to coordinate with need for shade and use of trees to form part of the perimeter control. c) No change required – part of considerations of all new facilities.
	Strategically plan for the development of new sports facilities a) Continue planning for the provision of new sportsgrounds and sporting facilities in the West Dapto catchment area, with a focus on district level sportsgrounds. b) Work collaboratively with Local and State Sport Organisations and nearby LGA'S in the hierarchical planning of sports facilities in the Wollongong LGA c) Continue to plan and deliver the implementation of the Beaton Park Master Plan d) Engage the local Aboriginal community during the planning and development of new sports field sites to inform the design of culturally safe spaces and to appropriately incorporate local Aboriginal culture, history, and connection to place	a) The West Dapto developer contribution plan outlines the high-level details on the needs assessment and plan to provide services for the growth in population. Detailed studies are required to inform the design of future facilities. b) Hierarchy is an important factor in determining the level and mix of facility and asset to support the intended use. This work will have a significant impact on the lifecycle cost of the facility. c) Stages are to be considered for upgrade and renewal plans. d) The engagement and collaboration will help inform the scope and brief of future projects.
	Support female participation in sport a) Prioritise the renewal and provision of new facilities to better accommodate female participation in sport. b) Identify and pursue grant funding opportunities which encourage female participation in sport.	a) Develop standards that support inclusive participation in sport. Prioritised sites should be informed by utilisation data. b) Grant funding will help leverage available funding and potentially bring forward completion of planned works.
	Cater for emerging and unstructured sport and recreation pursuits: a) Provide opportunities for affordable exercise pursuits through the	a) There are currently 9 outdoor exercise areas provided across the local government area. Lifecycle

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Supporting Document	Action	Resource Impact
	construction and renewal of outdoor exercise equipment and outdoor 'ninja warrior' style obstacle courses. b) Provide additional opportunities for affordable unstructured recreation through the construction of multipurpose hard courts, half-courts and rebound walls. c) Repurpose under-utilised hard courts to better cater for a wider variety of sporting and active recreation pursuits. d) Continue to collaborate with the community on the development and maintenance of parkland bike trails. e) Provide access to sportsgrounds and facilities for unstructured and/or emerging sports, including but not limited to disc golf, ultimate frisbee and parkour. f) Progress the planning and development of the Wollongong City Centre, Northern Suburbs and Port Kembla skate facilities. g) Explore suitable locations for the installation of skate features, modular pump tracks and mobile skate facilities. h) Plan for the provision of off-beach outdoor volleyball opportunities at key locations across the city	costs need to be considered for the provision of new infrastructure. b) Lifecycle costs need to be considered for the provision of new infrastructure. c) Increasing utilisation of existing assets extracts value from the investment in infrastructure d) The support for parkland bike trails increases the demand on operational budgets to maintain he facility. e) Potential increase in demand for supporting infrastructure and increase in current service levels. f) The current infrastructure delivery program includes provision of funding to progress the planning for these skate facilities. g) The current infrastructure delivery program includes provision of funding to progress the planning for future facilities. Lifecycle costs should be included in the considerations for provision of facilities. h) Service standards and lifecycle costs need to be considered for the provision of outdoor volleyball facilities
	Strengthen partnerships with clubs and associations and leverage from effective collaboration: a) Review and consider private and public partnership ventures to assist in the development of sporting infrastructure in accordance with relevant legislation requirements. b) Ensure regional facilities meet the required standards to host major regional, state, or national level competitions, events and/or training. c) Explore partnerships with public and private education providers and school Infrastructure NSW to explore shared-use opportunities. d) Support sporting groups and associations to identify grant opportunities that align with this Strategy and relevant Plans of Management and provide guidance through the application process.	a) Partnership models may reduce the cost-of-service provision to the community through a shared and/or user pay model. The considerations will need to outline the funding arrangements, with an understanding of lifecycle costs. b) Service standards should be developed to ensure the requirements are clearly articulated so that an expenditure and funding model can be developed. c) Shared use of facilities has potential to reduce the demand and over utilisation of open space assets and reduce the overall lifecycle costs. d) Aligning grants with strategies and plans of Council ensures that we are seeing investment into more sustainable infrastructure.

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Supporting Document	Action	Resource Impact
	Transition sportsgrounds and sporting facilities towards greater climate resilience a) Implement Council's Urban Greening Strategy during the planning and construction of new facilities and precincts. b) Plan for the provision of resilient playing surfaces, through innovative processes including enhanced drainage, recycled water irrigation and where appropriate, synthetic or hybrid surfaces at key locations. c) Improve sustainability and reduce carbon emissions from the operation of sportsgrounds and sporting facilities consistent with key actions within Council's Sustainable Wollongong 2030 and Climate Change Mitigation Plan 2020. d) Utilise sustainable sportsground maintenance and management practices to minimise impacts of climate change on the quality of sports fields.	a) Opportunities exist to achieve multiple outcomes of shade provision, perimeter protection and urban greening through coordinated planning. The use of tress can achieve multiple objectives, and when planned correctly, will provide optimal environmental outcomes with minimal lifecycle costs. b) The current infrastructure delivery program includes projects to improve drainage and irrigation to enhance the resilience of natural turf for active recreation. c) A move to more energy efficient lighting is helping to reduce energy usage.
	Attract and support sporting events and tourism: a) Ensure Council's regional sports facilities are provided with appropriate infrastructure to support the hosting of regional, state, and national sports events. b) Pursue grant funding for sports infrastructure to attract and support events in the city	a) Service standards should be developed to ensure the requirements are clearly articulated so that an expenditure and funding model can be developed. b) Grant funding helps to support the delivery of infrastructure that is aligned with current strategies and plans.
Lake Illawarra Coastal Management Program	Manage foreshore and waterway recreational infrastructure	Council currently maintains and manages a range of open space assets along the foreshore of Lake Illawarra. A range of assets in this area are under the responsibility of a range of Government authorities.
	Undertake a bank condition assessment and determine and implement erosion control measures	This action is related to resilience and discussed in the relevant section below. A coordinated plan on approach to reseeding shorelines needs to be prepared to avoid isolated bank stabilisation that may increase impacts on adjoining areas. Consider retreat strategy for open space assets to reduce ongoing impacts from bank erosion.

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Supporting Document	Action	Resource Impact
	Update Asset Management Plans for all publicly owned and managed assets to clearly identify asset at risk from inundation over future timeframes, including tidal inundation	Further studies are required to identify the impact of inundation on open space assets.
	Improve litter management through provision of extra bins and bin collection in high usage areas over summer	The provision of enhanced services increases operational costs of litter management and needs to be factored into the required maintenance cost estimate.
	Rehabilitate vegetation and manage public access along foreshores and banks of the Lake, its tributaries, islands, and broader low-lying areas.	Revegetation works are primarily operational expenditure and not typically recognised as a financial asset.
	Undertake targeted action to control damage to foreshore and lake vegetation, including seagrasses	This action will require supporting technical study to identify the locations and requirements for actions.

12.7.2.1   Future Impacts

The future impacts for each of the services associated with open space infrastructure are listed below:

Category	Future Impact
West Dapto Growth	Careful planning for the provision of recreational spaces and open spaces in West Dapto
	The growth of West Dapto and handover of other subdivisions across the city will increase the number of natural area sites under Council's care and control.
West Dapto and Infill Development	Increasing sports participation and the implications of population growth.
	Population growth implications and service level expectations
Sport Fields and Recreation	Enhancing sports field lighting, drainage and irrigation remain a key focus to improve the capacity of existing sites and enhance greater participation.
	Escalating costs of sports infrastructure and funding opportunities. Accessible and inclusive sports facilities for growth codes including football and AFL
	Emerging trends in unstructured sports participation has placed greater demand on the provision of facilities, including skateparks, mountain bike trails and outdoor exercise equipment.
Memorial Gardens and Cemeteries	Ongoing financial sustainability of the Wollongong Memorial Gardens and Cemeteries service to ensure viability of maintenance across all sites.
Climate Change	Climate adaptation and responding to the impacts of significant weather events is placing greater focus on the provision of more resilient playing surfaces, including drainage/ irrigation infrastructure and synthetic or hybrid turf surfaces.
Botanic Gardens	Ageing asset renewal at Botanic Gardens and annexes.
	Ongoing growth in visitation to Botanic Gardens due to successful promotions, events, and capital improvements on site.
Russell Vale Golf Course	Continue to provide a quality affordable golf course that is available for the community to utilise and continue to investigate additional opportunities to improve and support the use of the golf course for alternative uses that support the ongoing operation.

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12.7.2.2 Future Demand

The Local Strategic Planning Statement identifies the likely changes to our community in the future and the implications of population context. These implications, as summarised below in Table 12.7.2.2, will create changes in demand that influences planning associated with open space infrastructure:

Table 12.7.2.2 – Future Demand for Open Space

Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
Population growth -	Wollongong LGA growth by 55,000. During the next 20 years, several of Areas will evolve from 'sub district' sized populations of less than 30,000 people to areas hosting 'district' level populations of more than 30,000 people.	Areas of growth require new access to open space for a range of active and passive recreation.	Most growth in Wollongong is situated in West Dapto. The West Dapto vision and development contributions plan outline the open space required to support the growth and the funding contributions from development towards the recommended infrastructure.	The West Dapto contribution plan identifies the infrastructure and funding required to meet the demand. This plan integrates the contributions plan forecasts.
Increased Residential Density	Increased residential density in some of the district hubs within the LGA.	Increased density may increase demand on existing open space and create drivers for upgrades to create additional capacity. Combined with an increase in sport participation across the community, the utilisation and management of sportsgrounds is an important issue for council.	Strategically identify open space with lower utilisation to transfer and distribute demand. Encourage shared use of existing facilities. Invest in renewal of priority open space infrastructure that supports higher utilisation and capacity. Invest in good maintenance practices and enable recovery time for natural assets to ensure long-term durability. Strategically plan for the development of new facilities in growth areas.	Existing programs for upgrade and renewal of open space assets. Operational and maintenance programs for open space assets. Works schedule in the Section 7.11 and 7.12 developer contributions plans.

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12.7.3   Asset Snapshot

Asset Register – Assets

Valuation Information: – Other Open Space/Recreational Assets incorporate park assets including, skateboard facilities, tennis courts, furniture, landscaping and lighting poles.

Valuation Technique – Other Open Space/Recreational Assets are recognised using the cost method.

Fair Value Hierarchy – while some elements of the cost method can be supported by market evidence (Level 2) other factors require professional judgement such as asset condition and useful life. As these inputs can have a significant impact on the fair value the valuation input all Other Open Space / Recreational Assets were considered level 3.

Asset Type	Av Useful Life (Years)	Carrying Value	Annual Depreciation	Current Asset Cost
		($) @ 30 June 2024		
Open Space Areas				
Parks	15	596,213	74,527	744,234
Pools #	5	20,839	5,587	26,541
Sports Grounds	25	1,779,181	74,141	1,853,080
Tourist Parks	20	20,329	2,034	40,682
Open Space Areas Land Formation *	**995**	**94,131,208**	291,126	**94,748,092**
Open Space Infrastructure				
Beach Access	35	948,024	34,997	1,028,730
Cemetery Specific	-	1,258,668	26,786	1,638,678
Lighting	22	6,650,649	358,548	7,562,726
Memorials	50	225,126	4,790	239,454
Minor Infrastructure (signs, gates, fences etc)	22	7,015,122	1,279,362	24,666,235
Outdoor Exercise	11	418,017	58,861	837,016
Outdoor Furniture	21	1,521,113	777,666	13,411,850
Shelters	36	9,133,584	416,026	12,490,737
Skate Park	35	2,111,223	100,007	3,704,200
Sports Areas and Equipment	46	15,681,500	1,023,640	32,289,165
Utilities	33	14,060,948	1,435,842	35,593,353
Grand Total		**155,571,744**	**5,963,941**	**230,874,773**

\# - Slurry pump at Port Kembla Pool (other pool pumps are listed in Pool Structures asset plan)

* This asset group are non-depreciable land formations. It is the cost of shaping the land and turfing to provide the open space for recreational use.

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12.7.3.1   Components and attributes

Open space assets are typically recorded as a single asset. A full asset class revaluation of the open space asset class is scheduled within the next 2 years, and the components and attributes for assets will be reviewed in conjunction with this work. We use descriptors with park name locations to link assets by location. Several asset types in the open space category are grouped assets at a particular location, such as outdoor furniture, minor infrastructure, and lighting. The use of grouped assets should be reviewed to determine if this approach will continue and ensure that supporting operational registers are available and kept current.

12.7.3.2   Risks and criticality

Critical services are defined as those which have a high consequence of failure causing significant loss or reduction of service to the community as outlined in Section 7.1.5. A review of the five services utilising assets in open space identified that Natural Area Management provides a critical service of Asset Protection Zone (Bushfire) Management. It is noted that the assets under this category are not critical to the provision of the service. As a result, there are no identified critical assets in the open space plan.

12.7.3.3   Inspection and maintenance requirements

Open space assets require routine and ad hoc inspections, including:

- routine maintenance
- defect investigation
- quality assurance inspections
- performance monitoring
- asset condition inspection.

The range of assets under the open space grouping require varying levels of maintenance and operational activities to keep them in service. We estimate that the cost of required maintenance and operational activities on open space are approximately 8% of the gross replacement cost, except for shelters which we forecast an annual cost of 0.65% of the gross replacement cost. This is to undertake activities such as:

- Cleaning,
- repair of surfaces,
- asset inspections,
- wages and salaries of staff undertaking operation and maintenance,
- litter and dumped rubbish removal,
- mowing,
- signage,
- pest control,
- recreation equipment repair,
- lighting energy and operating costs,
- tree maintenance,
- plant propagation and sourcing,
- gardening,
- fence painting and repair,
- furniture repairs,
- water feature servicing.

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The ratio of maintenance and operating expenditure relative to asset value for open space assets is the highest of all the infrastructure classes. The requirement for frequent grass cutting and cleaning services in open space are the major contributor to the maintenance and operating expense.

With the increasing demand for access to open space and recreation facilities, the network has expanded into new and emerging services. Our understanding of the operational and maintenance activity costs that form part of the lifecycle costs are developing and need to be documented to inform future asset planning decisions.

12.7.3.4 Depreciation and degradation curves

Open space assets and component use a straight-line depreciation and degradation curve.

12.7.4 Roles and responsibilities

Service Manager: Manager Sport and Recreation

Role	Lifecycle	Function	Responsibility	Activities
Service Management	Planning	Service Planning	Manager Sport and Recreation	Ensure service linkage to CSP Define service needs Determine service hierarchy Analyse capacity and demand Summarise service-related legislative requirements Establish customer levels of service Determine asset requirements for service delivery
	Operations	Service Operations	Manager Sport and Recreation	Act as customer liaison for service Provide website information and communications Initiate notifications for service interruptions Undertake functional assessment Monitor and manage service and asset utilisation Establish fees and charges
	Planning and End of Life	Asset Acquisitions and Disposals	Manager Sport and Recreation	Develop plan for acquisitions and disposals of assets aligned to service plan and demand forecast Engage with stakeholder on acquisition and disposal plan Arrange relocation or transition of service Arrange establishment or termination of agreements (user agreements, utility connections, etc)
Asset management	Planning	Asset Planning	Manager Open Space and Environmental Services	Condition assessment Asset related legislative requirements Coordinate scope preparation Condition and performance monitoring

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Role	Lifecycle	Function	Responsibility	Activities
			Manager Sport and Recreation	Asset review
		Asset Data	Manager Open Space and Environmental Services Manager Infrastructure Strategy and Planning	Administration of asset register Data updates Initiate asset disposal system process Prepare asset management plan Coordinate asset reporting data
		Asset Financials	Manager Open Space and Environmental Services	Revaluation Unit rates Estimates Monitor expenditure
Project Delivery	Delivery	Project Sponsor	Manager Open Space and Environmental Services	Capital expenditure review (OLG)
		Asset Concept	Manager Sport and Recreation Manager Open Space and Environmental Services	Define the problem/need Options assessment Feasibility Lifecycle costing Funding strategy Business case/proposal
		Program Management	Manager Open Space and Environmental Services	Oversee project as part of program Responsible for managing overall program costs, risks, progress
		Asset Design	Manager Open Space and Environmental Services Manager Project Delivery (complex)	Ensure design solutions align with strategy Options analysis Concepts Design development Cost estimating Complete design safety report Approvals process
		Asset Delivery	Manager Open Space and Environmental Services	Cost estimate Value engineering Procurement strategy Contract management Procurement Project management Oversee project commissioning and handover
Maintenance and Operation Management	Maintenance	Asset Maintenance	Manager Open Space and Environmental Services	Complete maintenance inspections Work management triage and scheduling

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Role	Lifecycle	Function	Responsibility	Activities
				Establish maintenance procedures
				Undertake maintenance works
	Operation	Asset Operations	Manager Open Space and Environmental Services	Utility management
				Compliance audits
				Cleaning services

12.7.5   Performance

We monitor the performance of our open space assets by reviewing condition, utilisation, customer satisfaction, functionality, and capacity. The Sportsgrounds and Sporting Facility Strategy (S&SFS) reviews the functionality and capacity of our sports grounds and established ten strategic directions and actions to address the function and capacity demands.

The current profile of condition of open space assets is provided in Figure 12.7.5 below. All shelters were subject to a comprehensive revaluation and condition rating in 2024. Other asset types in open space condition is derived from the useful life and straight-line degradation.

Figure 12.7.5 - Condition of Open Space Infrastructure by Replacement Cost
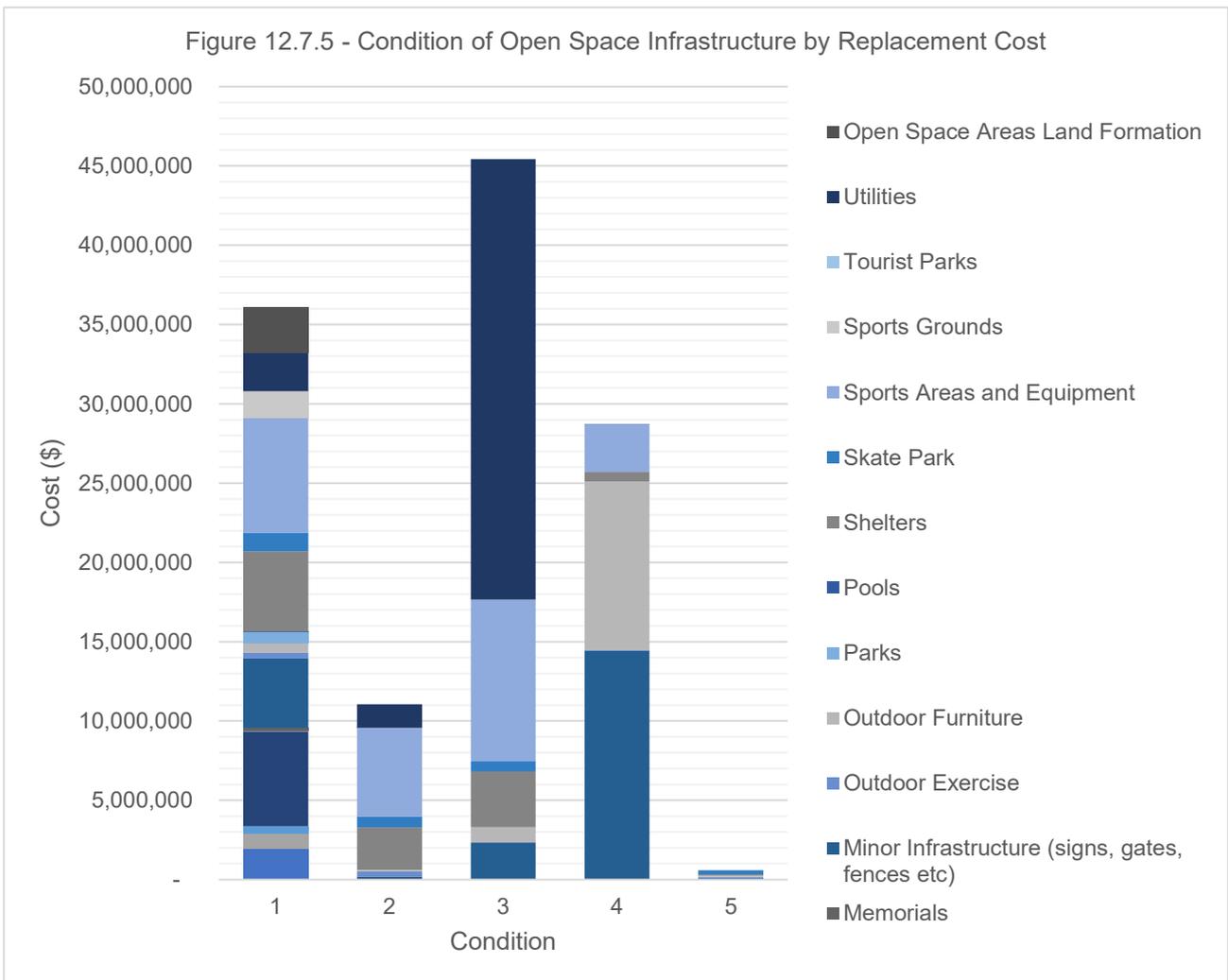
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12.7.5.1   Community Satisfaction Survey

Council's most recent Community Satisfaction Survey includes results relating to open space as part of the facility questions. The results of the community survey indicate minor changes in usage patterns of open space facilities as shown below in Table 12.7.5.1 (a):

Table 12.7.5.1 (a) – Community Survey Open Space Utilisation Data

FACILITY USAGE RATE	2017	2019	2021	2023	CHANGE SINCE 2021
Botanic Garden	55%	52%	70%	61%	-9
Russell Vale Golf Course (The Vale)	11%	7%	11%	13%	+2
Parks, open spaces, and sports fields for passive recreation purpose	76%	74%	84%	80%	-4
Parks, open spaces and sports fields for active sport or recreation activities	71%	70%	71%	65%	-6

The community survey provided satisfaction with open space, as summarised in Table 12.7.5.1 (b) below, indicating a consistent result over multiple years:

Table 12.7.5.1 (b) – Community Survey Open Space Utilisation Data

FACILITIES	2010	2012	2014	2017	2019	2021	2023	CHANGE SINCE 2021
Botanic Garden	4.4	4.6	4.5	4.4	4.6	4.7	4.6	⬇
Russell Vale Golf Course (The Vale)	3.9	4.1	4.4	4.1	4.2	4.2	4.2	⇔
Parks, open spaces, and sports fields for passive recreation purpose	-	4.2	4.3	4.1	4.2	4.1	4.1	⇔
Parks, open spaces and sports fields for active sport or recreation activities	-	4.1	4.2	4.1	4.2	4.1	4.0	⇔

12.7.5.2   Criteria for levels of service

We monitor a range of customer and technical levels of service to understand how our assets and our services are performing. Below is a summary of the main categories that we monitor.

Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
Customer Levels of Service				
Safety	Assets are safe for use	Number of claims alleging injury or damage associated with condition of a assets	Asset condition not found to have contributed to injury or damage.	
Function	Assets are fit for purpose	No restrictions that unreasonably limit the	Down time of open space assets from	

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Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
		usability of open space assets	service less than 5% of available hours	
Serviceability	Assets are available for use	Percentage of assets in serviceable condition.	No extended "closures" of assets/locations, except those identified for decommissioning or impacted by rainfall events	
Utilisation	Open space assets and facilities are being utilised by the community	Community survey – Facility Utilisation Rates for Botanic Gardens	Utilisation rate not reducing by more than 10% to previous survey	Utilisation reduced by 13% Target not achieved ☹
		Community survey – Facility Utilisation Rate Russell Vale Golf Course	Utilisation rate not reducing by more than 10% to previous survey	Utilisation increased Target achieved 😊
		Community survey – Facility Utilisation Rate for Parks, open spaces, and sports fields for passive recreation purpose	Utilisation rate not reducing by more than 10% to previous survey	Target achieved 😊
		Community survey – Facility Utilisation Rate for Parks, open spaces and sports fields for active sport or recreation activities	Utilisation rate not reducing by more than 10% to previous survey	Target achieved 😊
Satisfaction	The community is satisfied with the services provided by Council supported by this asset group	Community survey Facilities – Internal Benchmark for Botanic Gardens	No significant decrease in average satisfaction results to previous survey	The results for 2023 showed a minor drop from 4.7 to 4.6 Target achieved 😊
		Community survey Facilities – Internal Benchmark for Russell Vale Golf Course	No significant decrease in average satisfaction results to previous survey	The results for 2023 remained the same as 2021, with a result of 4.2. Target achieved 😊
		Community survey Facilities – Internal Benchmark for open spaces and sports fields for passive recreation purpose	No significant decrease in average satisfaction results to previous survey	The results for 2023 remained the same as 2021, with a result of 4.1. Target achieved 😊
		Community survey Facilities – Internal Benchmark for open spaces and sports	No significant decrease in average satisfaction results to previous	The results for 2023 remained the same as 2021, with a

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Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
		fields for active sport or recreation activities	survey	result of 4.0. Target achieved 😊
Residents' Wish List	The community do not see this asset group or associated service as an area of focus for council over the next 4-years	Community survey internal benchmark – "In your view what are the three key areas you think Council should focus on over the next four years?"	Less than 5% increase on previous percentage	Parks, green spaces, sporting fields, playgrounds as a group decreased from 23% to 19% between 2021 and 2023. Target achieved 😊
Technical Levels of Service				
Condition Inspection	Level 1 condition assessment	Annual	75% compliance	
	Level 2 condition assessment	4-yearly	75% compliance	
Event damage	Level 1 inspection	Within 2 weeks of incident	100% compliance	Target met 😊
Cost	Implementation of efficient and cost-effective maintenance programs	Maintenance costs attributed to work orders	Assets with high maintenance costs identified for major maintenance program or renewal.	
Risk	Assets are maintained within a tolerable risk profile.	Risk assessment of assets to be undertaken.	All open space assets managed in accordance with the infrastructure risk appetite statement	
Performance	Asset management actions and funding allocation supports long-term sustainability	Percentage of identified renewals funded		
		Ratio of reactive maintenance to planned maintenance expenditure trending downward over time		
		Percentage of planned renewals completed		
		Percentage of identified proactive maintenance works completed		

Our Parks and Open Space team have been championing a service review to improve the planning, coordination, and resourcing to services. It is recommended that an open space maintenance management plan be developed to outline our approach to scheduled maintenance activities, and how we respond to ad hoc reactive maintenance. With such a broad range of open space assets, a maintenance management plan

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will clearly identify maintenance priorities for an increasing portfolio. Such a plan will also assist with planning future assets, as it will be used to inform the lifecycle costs to provide on-going maintenance.

12.7.5.3   Open Space Resilience

The natural and non-natural hazard exposure categories for the City of Wollongong are identified through the Local Emergency Management Committee. The hazards identified as part of the Local Emergency Risk Management Study, that may impact open space infrastructure are summarised below in Table 12.7.5.3 (a):

Table 12.7.5.3 (a) – Hazard Rating for Open Space

Risk Rating	Rating Priority	Residual Risk Rating	Hazard Name
1	EXTREME	Major/Likely	Severe Storm
2	EXTREME	Major/Likely	Fire – Bush/Grass
3	EXTREME	Major/Likely	Heatwave
4	EXTREME	Major/Likely	Flood – Lake and Flash
8	EXTREME	Catastrophic/Unlikely	Biosecurity (Animals, Aquatic & Plants)
9	HIGH	Moderate/Likely	Landslip/Mudflow/Rockfall
18	HIGH	Major/Rare	Earthquake
19	HIGH	Major/Rare	Tsunami – Land inundation threat
20	HIGH	Major/Unlikely	Maritime Event and Environmental Impact
21	MODERATE	Moderate/Low	Dam Failure
24	RARE	Minor/Low	Coastal Erosion

The local emergency management plan covers the preparedness and response plans for the events listed above. Post incident, Council will instigate the appropriate inspection program to review any locations impacted by the event.

The key climate hazards identified through the Climate Change Adaptation Plan (CCAP) as most relevant to open space are summarised below with the actions from the CCAP and relationship to open space is provided below in Table 12.7.5.3 (b):

Table 12.7.5.3 (b) – Climate Hazard Actions for Open Space

Hazard	Climate Change Adaptation Plan Action	Open Space Action
Heat	Further investigation of heat in the Wollongong area to understand this issue further and develop appropriate heat management strategies including city design, shade, construction materials and cooling infrastructure.	Integrate strategies relating to public infrastructure in open spaces.
	Assess the suitability of Council facilities to be utilised for respite centres on hot days. This may include provisions for adequate water and food, power supply and potentially use of recycled water and appropriate	Most open space locations provide access to shade. Provision and access to water for drinking needs to be considered in open space where a need is identified.

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Hazard	Climate Change Adaptation Plan Action	Open Space Action
	landscaping to provide shade.	
	In partnership with Land Management Agencies and other Botanic Gardens, develop translocation programs for threatened Illawarra flora susceptible to mean temperature increase.	Actions will be dependent on the outcomes of the investigation to determine whether there are asset related actions to support the program.
Flooding	Undertake community education to increase awareness of the dangers of floodwaters and precautions to minimize risks to people and property.	Criticality assessment and risk management associated with stormwater infrastructure, noting that open space may form part of the catchment mitigation plan for conveyance and/or storage of water during floods.
Bushfire	Proactively maintain fire trails and other bushfire related infrastructure to be fire ready e.g., hazard reduction.	Fire trails are listed as a type of road. Inspections and maintenance of Council fire trails are scheduled.
Storms	Prepare and implement an Open Coast Coastal Management Program.	Implementation of infrastructure actions will be included in forecast expenditure. Council controlled open space on the foreshore of Lake Illawarra needs to be reviewed and a plan for retreat of infrastructure and/or stabilisation needs to be prepared.
Drought	Council will review the water efficiency of its operations including detecting leaks in water supply (for Council managed section of water network).	The review may identify the need for capital works. The outcomes of the works should decrease operational costs associated with water usage; however the option will need to be assessed for any other associated changes in costs (eg. Maintenance of water harvesting systems such as filters, pumps, flush systems, etc.)
	Council to consider rainwater, sewerage mining/ recycling and stormwater harvesting and usage, to support irrigation for sports fields.	The outcome of review may result in implementation of capital works and adjustment to maintenance and operational costs.
Sea-level rise	Prepare and implement an Open Coast Coastal Management Program.	Implementation of infrastructure actions will be included in forecast expenditure. There are many open space locations along the Wollongong foreshore. Further detail is provided in the Coastal Zone Management Plan section below.
	Recovery plans from emergencies are to be developed in partnership with communities and other relevant service providers.	Recovery plans typically result in unscheduled maintenance activities. Some recovery actions are part funded through State agencies for major events. An allowance will be included in estimates based on a review of prior years' activities.

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12.7.5.4   Coastal Zone Management Plan

Our community has access to a range of open space areas along the Wollongong coastline. These areas contain numerous park furniture items, lighting, accessways and other assets that form part of this plan. A review of the hazards undertaken as part of the Coastal Zone Management Plan (CZMP) identified the locations most vulnerable to coastal threats. In many instances, natural retreat of the beach is acceptable, with minimal overall impact on the adjoining open space. A summary of the current and future risks associated with open space is provided in Table 12.7.5.4

Table 12.7.5.4 – Open Space Coastal Hazard Assessment

Location and Asset	Risk Now	Risk at 2050	Risk at 2100
McCauleys Beach Reserve City Beach – Football Ground and Showground	High	Extreme	Extreme
Thirroul Beach Reserve (south of pool) – Heritage Site Stuart Park – Heritage Site	Medium	High	Extreme
Stanwell Park Recreation Area Park and Natural Area; Coalcliff Beach Reserve Nature Area; Coalcliff Beach Reserve; Coledale Beach Reserve; Coledale Beach Camping Ground and Caravan Park; Sharkys Beach Reserve; Little Austinmer Beach Reserve; Austinmer Beach Reserve; Tuckermans Park; Tingara Park Thirroul; McCauleys: Woodland Avenue Reserve, Corbett Avenue Reserve, Sandon Point Reserve; Sandon Point Beach Reserve (not including Heritage Area); Bulli Beach Reserve; Ocean Park, Bulli; Bulli Tourist Park; Woonona: Collins Point Reserve; Woonona Beach Reserve; Beach Drive Park Bellambi: Beach Drive Park; Bellambi Natural Area; Bellambi Point Reserve; Bellambi Pool Reserve City Beach – open space, parks and foreshore Coniston – Wollongong Golf Course (inundation only a small section at the south end)	Medium	Medium	High

It is recommended that assets are relocated away from areas of coastal risk as assets require renewal or following impacts from storm damage. This will enable natural retreat to occur without impacting assets. The plan identified that there are no specific actions required at the current time.

12.7.5.5   Legislative Requirements

- Local Government Act 1993
- Environmental Planning & Assessment Act 1979
- Fisheries Management Act 1994
- Threatened Species Conservation Act 1995
- Noxious Weeds Act 1993
- Biosecurity Act 2015

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12.7.6   Future Investments

12.7.6.1   Network Expansion and Upgrade Plans

The West Dapto Contributions plan makes provision for new open space to meet the needs of the growing community. The projects have been included in the future investments estimates from 2025 and beyond, with timing based on estimated rate of development. The citywide sports park (reference OS01) is included in the current Infrastructure Delivery Program with design planned in the 2025 and 2026 Financial Years, and construction forecast for the 2027 Financial Year. The following open space projects are forecast for acquisition in the plan:

Reference	Infrastructure Item	Indicative location	General Description	Indicative Timing	Project Cost ($)
Stage 1-2 Darkes Town Centre					
OS01	City wide sports park	Adjacent to Darkes Town Centre and conservation land	City wide competitive sporting facilities including 2 AFL/cricket fields or 4 rugby fields and passive recreation	2021/22 - 2026/27	5,384,348
OS02	Local Park	On ridge to east of Darkes Town Centre	Passive open space including pathways and seating	2019/20 – 2022/23	1,271,304
Stage 1-2 Sheaffes - Wongawilli					
OS03	Stane Dyke Park	Within residential area - northern end of Saddleback Cres & corner of Paynes Rd	Local Park providing active and passive open space including 1 informal playing field	Completed – 2018/19	
OS04	McPhail Reserve	Within residential area - corner of Sheaffes & Paynes Roads	Local Park providing passive open space including pathways and seating	Completed – 2018/19	
OS05	Mogomorra Park	Within residential area along Sheaffes Road and to the west of Local Park OS04	Local Park providing passive open space including play equipment and seating	Completed – 2019/20	
OS06	Neighbourhood Park	Adjacent to Wongawilli Village Centre - along West Dapto Road	Active (2ha formal playing fields) and passive (2ha) open space	2019/20 – 2022/23	1,794,783
OS07	Local Park	Within residential area - western end of Sheaffes Road	Active and passive open space including 1 informal playing field	2021/22 – 2025/26	1,121,739
OS08	Local Park	Within residential area - along West Dapto Road & south of the railway line	Active and passive open space including 1 informal playing field	2021/22 – 2025/26	1,121,739
OS09	Bankbook Park	Within residential area - along Bankbook Drive	Local Park providing passive open space including play equipment and seating	Completed – 2018/19	
Stage 1-2 West Horsley					
OS10	Neighbourhood Park	Adjacent to Jersey Farm Village Centre	Active (2ha formal playing fields) and passive (2ha) open space	2026/27 - 2028/29	1,794,783

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Reference	Infrastructure Item	Indicative location	General Description	Indicative Timing	Project Cost ($)
OS11	Neighbourhood Park	Adjacent to Bong Bong Town Centre	Active (1-2ha formal playing fields) and passive (1-2ha) open space	2036/37 - 2040/41	4,412,174
OS12	Local Park	Within residential area - along Haynes Lane	Active and passive open space including 1 informal playing field	2021/22 - 2025/26	1,121,739
Stage 3 Cleveland					
OS13	Community leisure and recreation centre (part only)	Southern side of Cleveland Road adjacent Daisy Bank Drive	Active open space including 12 Netball Courts and 8 Tennis Courts	2036/37 – 2040/41	2,683,008
OS14	Local Park	Within residential area - south of the western end of Bong Bong Road	Active and passive open space including 1 informal playing field	2026/27 – 2030/31	841,304
OS15	Local Park	Within residential area - north of the western end of Cleveland Road	Passive open space including embellishment	2026/27 – 2030/31	560,870
OS16	Neighbourhood Park	Adjacent to Community Leisure & Recreation Centre	Active (2ha formal playing fields x 4) and passive (2ha) open space	2036/37 – 2040/41	1,944,348
OS17	Local Park	Within residential areas - south of Cleveland Road	Active and passive open space including 1 informal playing field	2046/47 – 2050/51	1,121,739
OS18	Local Park	Within residential areas - northern side, far western end of Cleveland Road	Active and passive open space including 1 informal playing field	2046/47 – 2050/51	1,121,739
Stage 4 Avondale					
OS19	Neighbourhood Park	Adjacent to Huntley Village Centre and residential area	Active (2ha formal playing fields) and passive (2ha) open space	2045/46 – 2050/51	1,944,348
OS20	Neighbourhood Park	Adjacent to Avondale Village Centre and residential area	Active (2ha formal playing fields) and passive (2ha) open space	2045/46 – 2050/51	1,944,348
OS21	Local Park	Within residential areas - along Avondale Road & west of South Avondale Road	Active and passive open space including 1 informal playing field	2046/47 – 2051/52	1,121,739
OS22	Local Park	Within residential areas - southern side along Avondale Road	Active and passive open space including 1 informal playing field	2046/47 – 2051/52	1,121,739
Stage 5 Yallah - Marshall Mount					
OS23	Neighbourhood Park	North side along Marshall Mount Road & adjacent to Marshall Mount Town centre	Active (2ha formal playing fields) and passive (2ha) open space	2031/32 - 2035/36	1,944,348
OS24	Local Park	Within residential areas - along the western end of Marshall Mount Road	Active and passive open space including 1 informal playing field	2031/32 - 2035/36	1,121,739

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Reference	Infrastructure Item	Indicative location	General Description	Indicative Timing	Project Cost ($)
OS25	Local Park	Within residential areas - along the northern end of Marshall Mount Road	Active and passive open space including 1 informal playing field	2031/32 - 2035/36	1,121,739

As playgrounds are covered in a separate asset plan, the estimated cost of each playground component is included in the corresponding forecast expenditure of the playground plan.

It should be noted that expanding the open space network creates associated on-going maintenance, operations and depreciation for the life of the assets. For each $1M invested into expanding open space assets it brings an additional annual maintenance and operational expenditure of $80,000 and annual depreciation expense of $38,500. Open space shelters have a lower maintenance requirement, and each $1M invested into shelters carries a maintenance cost of $6,500 and annual depreciation of $27,800.

12.7.6.2   Renewal Works

Based on the current information relating to condition and forecast useful life, Figure 12.7.6.2 below provides an indication of the timing and cost to replace open space asset over the next 10-years. The spike in 2034 is due to light pole assets being recorded as a grouped asset. This will be addressed as part of the open space revaluation, where it is expected that the grouped asset will be reviewed to enable more detailed planning and condition assessment to be determined. The average required annual renewal investment (over the 11-year period) based on the current condition information is $4,466,000.

Figure 10.7.6.2 – Estimated Renewal Requirements
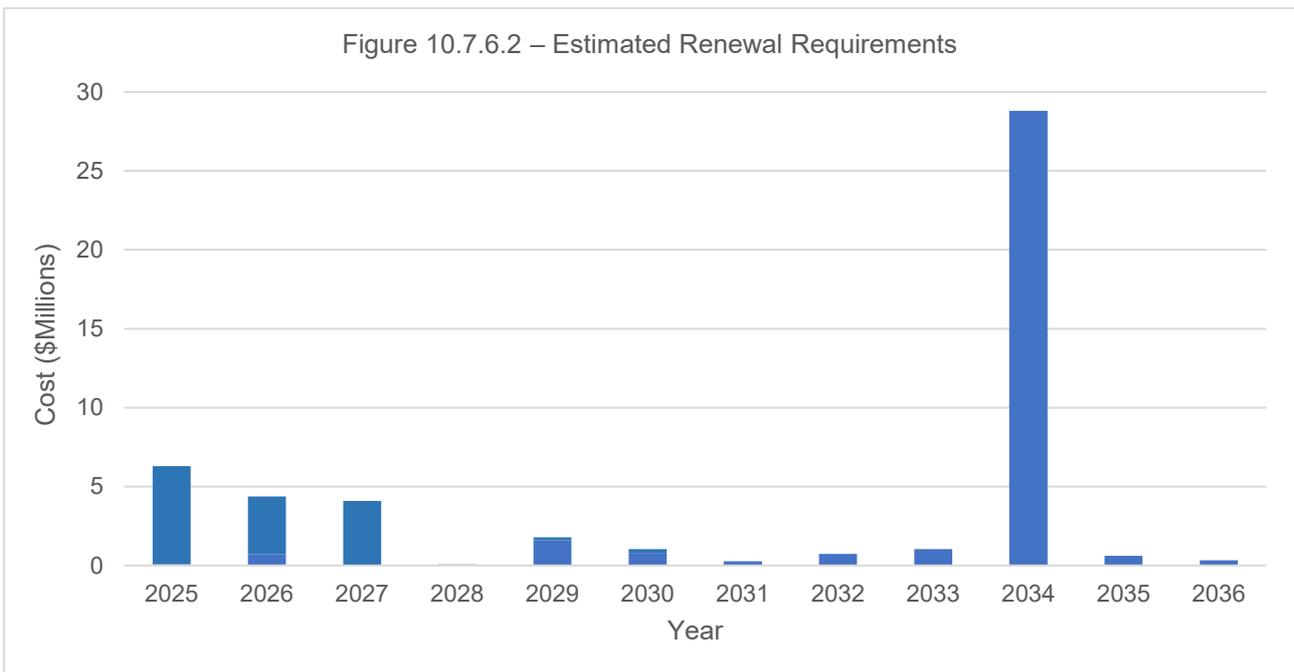
12.7.6.3   Decommissioning Planning

There are currently no significant open space assets identified for decommissioning (removal and not replaced) during the period of this plan. Assets that are demolished and reconstructed in a different location, but effectively providing the same service to the existing catchment, are considered as a renewal and not a decommissioning.

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12.7.6.4   Future investment plan – Open Spaces

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Depreciation	5,963,941	6,041,307	6,094,909	6,306,472	6,317,838	6,318,871	6,318,871	6,318,871	6,318,871	6,318,871	6,318,871
Required maintenance and operational works	17,551,913	17,791,513	17,957,513	18,612,713	18,647,913	18,651,113	18,651,113	18,651,113	18,651,113	18,651,113	18,651,113
Operating expenditure	23,515,853	23,832,820	24,052,421	24,919,185	24,965,751	24,969,984	24,969,984	24,969,984	24,969,984	24,969,984	24,969,984
Renewal works	580,000	1,470,000	470,000	990,000	960,000	1,357,000	1,239,000	1,286,000	1,334,000	1,395,000	2,708,000
Upgrade works	5,160,000	570,000	535,600	551,668	520,000	600,000	200,000	200,000	200,000	200,000	200,000
Expansion works	40,000	250,000	-	-	-	-	-	-	-	-	-
New works	2,955,000	2,715,000	8,540,000	440,000	440,000	-	-	-	-	-	-
Capital expenditure	8,735,000	5,005,000	9,545,600	1,981,668	1,920,000	1,957,000	1,439,000	1,486,000	1,534,000	1,595,000	2,908,000
Totals	32,250,853	28,837,820	33,598,021	26,900,853	26,885,751	26,926,984	26,408,984	26,455,984	26,503,984	26,564,984	27,877,984
Estimated Required Renewals	4,466,067	4,466,067	4,466,067	4,466,067	4,466,067	4,466,067	4,466,067	4,466,067	4,466,067	4,466,067	4,466,067
Planned renewal as a % of estimated required	129%	46%	23%	35%	33%	44%	32%	33%	34%	36%	65%

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12.7.7   Open Space Infrastructure Improvement Program

The following opportunities have been identified through the preparation of this asset management plan that will assist in improving future asset management planning outcomes:

Item	Issue	Description	Division	Timing
7.1	Open space resilience	Several open space assets and locations are exposed to risks of erosion induced by storm surges and sea level rise. Locations along the Wollongong coastline, Lake Illawarra and natural water courses are most at risk. An assessment of risk to infrastructure should be included in masterplans, and scopes of any specific hazard studies. In addition, the location of infrastructure in these locations needs to be reviewed at the time of renewal or planning for new infrastructure	MISP	2028
7.2	Asset Register Structure	A review of the asset register structure should be undertaken to ensure that it is fit for purpose prior to undertaking a full class revaluation. Assess compliance with the requirements of the Australian Accounting Standards Board standards for fair value and accounting for infrastructure, property, plant, and equipment to determine if proposed approach is fit for purpose. Review approach to grouped assets to ensure required data to support the grouping is available and up to date.	MISP	2025
7.3	Data Dictionary	To support the structure of the asset register, prepare a data dictionary to provide guidance and consistency in classification, description, and attributes.	MISP	2025
7.4	Operational Service Review	The Open Space and Environmental Services Division are reviewing service approach to improve efficiency and coordination of works. Continue review to establish work order structure and plant and equipment requirements to support efficient service delivery.	MOS&ES	2026
7.5	Open space hierarchy and service standard	Develop service standards outlining indicative asset provision, intervention triggers for actions, frequency of services and alike for open space assets aligned to the hierarchy of the location.	MISP, MOS&ES, MSR	2026
7.6	Maintenance management plan for Open Space	Using the hierarchy and service standard, develop a maintenance management plan that clearly identifies maintenance priorities for the range of activities across the asset portfolio	MOS&ES	2026
7.7	Lifecycle costs	Increasing demand for more diverse open space services has resulted in new assets to meet the emerging needs. It is recommended that lifecycle costs be analysed to inform future asset planning decisions (exercise equipment, parkour equipment, mountain bike tracks, skate plazas, etc).	MISP	2026
7.8	Condition and Useful life	The network requires assessment of condition and remaining useful life.	MISP	2027
7.9	Heritage Sites	Ensure that heritage open space sites are appropriately identified in the register and develop a management plan for the item.	MISP	2028
7.10	Hierarchy	Open space hierarchy to be analysed and rationalised considering life cycle costs.	MS&R MOS&ES	2027

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12.8 Playgrounds

Access to safe play space is important to people of all ages and abilities in our community, which is why Council continues to invest and plan for quality and accessible play opportunities across the Wollongong Local Government Area. This section of the asset management plan details our playground assets. Playgrounds are part of our Open Space infrastructure. This group of assets focusses on the playground equipment and the safety surfacing below the equipment. This section excludes other supporting assets such as pathways, seating, and other park furniture, which is reported in other sections of this plan.

Council carries out planning and maintenance for 156 play spaces across the Local Government Area. This includes the renewal and construction of new and existing play spaces, as well as the planning and delivery of supporting infrastructure, such as access to facilities, lighting, seating, and amenities.

12.8.1 Profile

Community Strategic Plan Goal: Goal 4: We have a healthy, respectful, and inclusive community

Service: Parks and Sports Fields

Playgrounds are associated with the Parks and Sports Fields service. Play is important to people of all ages and abilities in our community, which is why Council has invested in and continues to plan for quality and accessible play opportunities across the Wollongong Local Government Area. Playground assets facilitate a range of benefits as identified in the Play Wollongong Strategy. Our 10-year vision for plan is:

> *"Wollongong offers a range of high-quality play spaces that are distributed equitably across the city, are well maintained, and meet the needs of the community. Wollongong's play spaces are safe, enjoyable, challenging and serve as important community spaces that foster social connectedness and wellbeing.".*

The Playgrounds delivery stream is guided by the Play Wollongong (2014-2024) suite of supporting documents. The Play strategy is scheduled for review; however, the current document remains the current and is a reference for this asset management plan.

12.8.2   Strategic priorities

Play Wollongong Principles	Delivery Stream Actions	Supporting Documents
The Play Wollongong Strategy outlines the following six principles to ensure best practice and deliver high quality play spaces in a sustainable manner. These principles influence the location, planning, design, and management of play spaces to fully support the needs of children. Quality play opportunities are equitably distributed across the city, including large regional play spaces and smaller local play spaces. Play Spaces are easily accessed by walking and encourage healthy living and independent access by children. Meaningful engagement is undertaken with the community including children, in relation to play space planning, provision and management. Play spaces are well designed, inclusive of all ages and abilities and encourage participation in play. Informal play spaces and the provision of natural play elements is given priority, recognising the benefits of connecting with nature. Play spaces will provide children with an appropriate level of risk and challenge while complying with relevant safety standards.	• Strategic oversight in the provision of safe and accessible playgrounds to the community, including the renewal of existing playgrounds and planned construction of new play spaces. • Quality play opportunities are equitably distributed across the city, including large regional play spaces and smaller local play spaces. • Play Spaces that are easily accessed by walking and encourage healthy living and independent access by children. Meaningful engagement with the community including children, to inform play space planning, provision, and management. • Informal play spaces and the provision of natural play elements is given priority, recognising the benefits of connecting with nature. • Include an appropriate level of risk and challenge in play spaces for children while complying with relevant safety standards. • Conduct annual playground compliance audits to help inform play space upgrades and equipment renewals. • Deliver key strategic actions and principles of Councils Play Wollongong Strategy 2014 - 2024. • Develop, implement, and review policies aligned to playgrounds. Example, Smoke Free Recreation Areas. Replace, repair, maintain and renew playgrounds in accordance with the playground hierarchy.	• Play Wollongong Strategy 2014-2024 • West Dapto Contributions Plan • Wollongong City-Wide Development Contributions Plan • Asset Management Strategy • Tourist Parks Improvement Strategy & Master Plan 2017-2022

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12.8.2.1   Future Impacts

Future Impacts	Strategic Response	Consequences of Not Funding
The strategies outlined in the Play Wollongong Strategy 2014-2024 will inform Councils Delivery Program and Operational Plan, to ensure that the future and existing needs of our community are considered in Council decision making, planning, and resourcing processes. This document will be required to be reviewed soon	The Play Wollongong Strategy is scheduled for review. Works are planned in Infrastructure Delivery Program (IDP) over a 4-year period. This asset management plan informs the IDP and provides guidance on priority locations based on age and hierarchy.	If funding is not made available planning will continue based on the current strategy. This Asset Management Plan is providing an indicator of future costs based on the current strategy and highlights some areas for consideration and review to reduce the lifecycle cost of providing a playground service.
A focus on accessible play spaces which are suitable for people of all ages and abilities will be a key consideration during the design of all district and regional level playgrounds.	Accessibility is a major consideration as part of the design process for district and regional facilities. Significant upgrades and new playgrounds completed at Cringila Hills and Stuart Park, including complementary facilities at the site.	Not funding the provision of accessible play spaces will result in a failure to deliver on the following action in the 2020-2025 Disability Inclusion Action Plan: *Increase access to our recreation services and facilities:* - *Include accessible play elements when renewing and installing playgrounds.*
Ongoing maintenance and escalating cost associated with the renewal of playgrounds.	Maintenance costs require more detailed understanding to isolate costs associated with playgrounds from other parks and sports field expenditure. The renewal of playgrounds is associated with an enhancement of service in many locations. This is a result of a change in safety standards and expectations since the installation of older equipment. Funding opportunities will continue to be explored to leverage the funding allocated for renewals, including grants and Section 7.12 Developer contributions.	Maintenance is required to keep playgrounds in a safe and functional condition. Not funding maintenance will increase the likelihood of injuries due to equipment and/or soft fall not meeting the target technical levels of service.

12.8.2.2   Future Demand

The Play Wollongong Strategy identified demand drivers that will impact the provision of play spaces. The projected impacts will help create changes in demand that influences our planning associated with playgrounds, as summarised below in Table 12.8.2.2:

Table 12.8.2.2 – Future Demand for Playgrounds

Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
Population growth - Change in target demographics (0-12years) **Increasing visitor numbers to coastal foreshore as surrounding LGA's grow to 1Million people living within 40mins of the foreshore** **Increased visitor numbers to locations catering for inclusive play and facilities.** **Demand for inclusive play spaces that cater to all age and abilities** **Demand for tourist park stays**	Wollongong LGA growth by 33,000 by 2036. Forecast increase of 3,500 (11.1%) children aged 0-12 from 2011 to 2024. Wollondilly 2040 population is estimated to increase by 41,000 between 2017 and 2036; the population of Campbelltown is forecast to grow from by 104,000 between 2019 and 2036	Increased demand, particularly on Regional and District facilities will potentially result in increased operations and maintenance costs associated with wear and tear items. It may also increase the required frequency for cleaning and racking of soft fall mulch. Increased demand for equipment that caters for a range of ages and abilities. The current provision of play spaces at tourist parks is not in keeping with other holiday parks and may fail to attract tourists with children.	The West Dapto Vision 2018 includes Open Space and Recreation Principles catering for play spaces – this will see additional assets provided as the area develops and open space provided. Design for inclusive play Transport and parking strategies should assist with managing the supply of parking associated with the increased demand for access to foreshore facilities and playgrounds.	Investigate inspection and maintenance programs in response to hierarchy and usage to mitigate risk associated with high demand. Consider masterplan and play strategy for tourist parks to plan for replacement of current facilities. West Dapto planning to include vision for play spaces and standard of provision. Review supply of play spaces to identify opportunities to consolidate playground locations to ensure appropriate distribution and play value.

12.8.2.3   Playground Hierarchy

Playgrounds are categorised according to the play space hierarchy. The following table 12.8.2.3 summarises the designation of hierarchy per site is identified as identified in the Play Wollongong – Current Situation Report (23/06/2014):

Table 12.8.2.3 – Playground Hierarchy and Features

Hierarchy	Time/ Travel Distance	Features	Indicative Funding Allocation for new and upgrade*
Local	Walkable: 5 minutes/ 400 metres	A local play space should be safe and appealing but is generally a small play space that may only cater for one age group (e.g., toddlers 2-4 years or 5–8-year-olds). The play space may include standard play equipment however the natural landscape will be maximised for play.	Up to $73,500
Neighbourhood	Walkable: 15 minutes/ 1000 metres	A neighbourhood play space should be good quality and could include several pieces of equipment that cater for more than one age group. The play space will generally include standard rather than unique equipment and surrounds and an emphasis will be on utilising the natural landscape elements.	$73,500 - $220,500
District	Car Journey: Up to 15 minutes car travel	A district play space should be high quality and include unique features and landscaping. The quality and uniqueness of the play space could be significant as a regional play space; however, a district play space is generally smaller in size.	$220,500 - $441,000
Regional	Destination: Up to 1 hour car travel	A regional play space should be substantial quality and will generally be larger than other play spaces. It will include unique and innovative features and provide a range of equipment and activity opportunities. Features could include innovative equipment and design, adventure components, accessible design, and equipment for inclusive play for a range of ages and abilities, fencing of some play areas to create unique enclosed areas, integrated landscaping, and art features.	$441,000 - $882,000
Tourist Park#	Destination: for guests of the tourist park	A play space catering to the needs of the tourist park. The facility should be of a standard that supports the ongoing commercial competitive operation of the tourist park. The provision of equipment and services is likely to be uniquely different from public infrastructure as it is provided under a different operational model. The tourist park has on-site operators, and the maintenance and risk profile may be different to public playgrounds, and of a similar nature to similar offerings across the tourist and holiday park sector.	$220,500 - $441,000

*Prices have been adjusted for inflation to 2024 costs using the 6427.0 Producer Price Indexes, Australia–Index Number; 3020 Non-residential building construction New South Wales; Series ID A2314865F

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Tourist Parks are not a designated classification under the current hierarchy – the district standard is adopted for planning purposes

12.8.3   Asset Snapshot

Financial Reporting Group: Open Space / Recreation Assets

Asset Classification - Playground

Valuation Information: Last valuation date: 2019

Play Space Type	Qty	Average useful life	Carrying Value	Annual Depreciation	Current Asset Cost
			($) @ 30 June 2024		
Local	87	20	3,231,836	360,208	6,383,072
Neighbourhood	55	17	3,514,635	429,865	6,995,754
District	25	14	2,079,785	334,985	4,469,079
Regional	13	14	1,110,526	362,360	5,491,263
Tourist	3	23	13,151	19,536	413,501
Grand Total	183*#	18	9,949,933	1,506,955	23,752,668

*Value of soft fall generally included with playground assets – note commentary in Components and attributes below

Note - there are 183 assets located across 156 playground sites. Some sites have multiple assets

12.8.3.1   Components and attributes

Most playgrounds are currently recorded as a single asset however we have commenced recognising a separate component for rubber soft fall. Rubber soft fall has a different useful life and can be renewed independently of the playground equipment. With an indicative useful life of 16 years for playground equipment, the rubber soft fall is expected to provide a service life of 8-10 years. On this basis, we expect to renew the rubber material once within the lifecycle of the playground equipment.

A full asset class revaluation of the open space asset class is scheduled within the next 2 years, and the components and attributes for playgrounds will be reviewed in conjunction with this work.

Shade structures associated with playgrounds are recognised as Shelters in the Open Spaces asset plan. Many playgrounds have access to natural shade from surrounding trees, with shade structures typically only considered for regional facilities if sufficient natural shade is not available.

12.8.3.2   Risks and criticality

Critical services are defined as those which have a high consequence of failure causing significant loss or reduction of service to the community as outlined in Section 7.1.5. A review of the Playground Service identified that it is not a critical service, and consequently, does not have critical assets.

Risk management actions need to be applied throughout the lifecycle management of playgrounds from the initial planning, design and construction, maintenance, and operation through to decommissioning. The Play Wollongong – Background Research Report outlines key issues for *Managing Risk in Play* and the approach to *Planning for Play*.

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12.8.3.3   Operation and maintenance requirements

The Australian Standard AS/NZS 4486.1 Playgrounds and playground equipment outlines best practice for the inspection, maintenance and operation of playgrounds and playground equipment. There are three levels of inspection recommended for playgrounds:

Level 1 – Routine Inspection	Level 2 – Operational Inspection	Level 3 Annual inspections
A visual inspection to identify obvious hazards resulting from wear and tear; hazardous litter and debris; accident, storm and/or vandalism damage. Routine inspections may be carried out depending on use and resourcing and include raking loose-fill soft fall. This inspection and soft fall maintenance is typically undertaken by Council.	A more detailed inspection, used to check on equipment operation. Recommended to be conducted on a quarterly basis, or as indicated by the manufacturer. Includes all checks noted in AS 4685.0:2017 clause no. 8.5.3 routine visual and check for: • Excess wear on moving parts • Bolts and fasteners secure • Structural integrity test (e.g., push-pull) • Foundations for exposed concrete, rot, and corrosion	The playground Standard requires a competent inspector to conduct Annual Inspections and submit a report. This work is specialised and requires extensive experience at a professional level. These inspections will be conducted by people who are Level 3 Comprehensive Inspector-qualified. Routine and minor maintenance actions will be undertaken as required based on Level 1, 2 or 3 inspections.

12.8.3.4   Depreciation and degradation curves

Playground assets and component use a straight-line depreciation and degradation curve.

12.8.4   Roles and responsibilities

Service Manager: Manager Sport and Recreation

Role	Lifecycle	Function	Responsible	Activities
Service Management	Planning	Service Planning	Manager Sport and Recreation	Ensure service linkage to CSP. Define service needs. Determine service hierarchy. Analyse capacity and demand Summarise service-related legislative requirements. Establish customer levels of service. Determine asset requirements for service delivery
	Operation	Service Operations	Manager Sport and Recreation Service Manager – site specific	Act as customer liaison for service Provide website information and communications. Initiate notifications for service interruptions Undertake functional assessment.

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Role	Lifecycle	Function	Responsible	Activities
				Monitor and manage service and asset utilisation
	Planning and End of Life	Asset Acquisitions and Disposals	Manager Sport and Recreation	Develop plan for acquisitions and disposals of assets aligned to service plan and demand forecast. Engage with stakeholder on acquisition and disposal plan Arrange relocation or transition of service Arrange establishment or termination of agreements (utilities) Inform Planning Proposal, Development Control Plan and LEP amendments
Asset management	Planning	Asset Planning	Manager Infrastructure Strategy & Planning	Complete condition and performance assessment Assess asset related legislative requirements Coordinate scope preparation Asset review Renewal planning
		Asset Data	Manager Infrastructure Strategy & Planning	Administration of asset register Updates for capital improvements Initiate asset disposal system process Prepare asset management plan Coordinate asset reporting data
		Asset Financials	Manager Infrastructure Strategy & Planning	Revaluation Unit rates Estimates Monitor expenditure
Project Delivery	Delivery	Project Sponsor	Director Community Services	Capital expenditure review (OLG)
		Asset Concept	Manager Sport and Recreation	Define the problem/need Options assessment Feasibility Lifecycle costing Funding strategy Business case/proposal
		Program Management	Manager Open Space and Environmental Services Manager Project Delivery	Oversee project as part of program Responsible for managing overall program costs, risks, progress
		Asset Design	Manager Sport and Recreation	Ensure design solutions align with strategy Options analysis

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Role	Lifecycle	Function	Responsible	Activities
			Manager Project Delivery (District and Regional)	Concepts Design development Cost estimating Complete safety in design report Approvals process
		Asset Delivery	Manager Open Space and Environmental Services Manager Project Delivery (District and Regional)	Cost estimate Value engineering Procurement strategy Contract management Procurement Project management Oversee project commissioning and handover
Maintenance and Operation Management	Maintenance	Asset Maintenance	Manager Open Space and Environmental Services	Complete maintenance inspections Work management triage and scheduling Establish maintenance procedures Undertake maintenance works
	Operation	Asset Operations	Manager Open Space and Environmental Services	Utility management Compliance audits

12.8.5   Performance

We monitor the performance of our playground assets by:

- Condition – the actual physical and technical state of the asset.
- Functionality – the ability of the physical infrastructure to meet service needs including social, environmental, and economic performance.
- Capacity – the ability of the physical infrastructure to meet demand.

Playgrounds are comprehensively inspected on an annual basis and high priority repairs undertaken. Informal inspections are undertaken throughout the year to monitor for any maintenance requirements. A business proposed we be undertaken to consider funding more frequent inspections to increase the level of service.

12.8.5.1   Community Satisfaction Survey

Council's most recent Community Satisfaction Survey includes results relating to playground as part of the facility questions. The results of the community survey indicate minor changes in usage patterns of playgrounds over the multiple surveys as shown below in Table 12.8.5.1 (a):

Table 12.8.5.1 (a) – Playground Community Usage Data

FACILITY USAGE RATE	2017	2019	2021	2023	CHANGE SINCE 2021
Children's playgrounds	48%	45%	51%	47%	-4

Table 12.8.5.1 (b) provides a summary of the community satisfaction with playgrounds, indicating a stable satisfaction rating over recent years:

Table 12.8.5.1 (b) – Playground Community Satisfaction Data

FACILITIES	2010	2012	2014	2017	2019	2021	2023	CHANGE SINCE 2021
Children's playgrounds	-	4.1	4.1	3.9	3.9	3.9	3.9	⇔

12.8.5.2   Criteria for levels of service

Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
Customer Levels of Service				
Safety	Playgrounds are safe for use	Number of claims alleging injury or damage associated with condition of a playground	Playground condition not found to have contributed injury or damage.	
Function	Playgrounds are fit for purpose	Playgrounds are operating with the expected useful life range	Less than 2.5% of playgrounds exceeding the useful life.	

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Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
Capacity	Playground provision meets the needs of the community	Asset plan aligns with strategy for provision	Plans for new, upgrade and decommissioning of playgrounds included in program	
Serviceability	Playgrounds are available for use	The number of playgrounds is in serviceable condition.	No playgrounds closed for longer than 4 weeks, except those identified for decommissioning	
Utilisation	The community is using playground assets	Community survey	Less than 10% reduction in utilisation between community surveys	A reduction from 51% to 47% in utilisation from 2021 to 2023 was recorded. That is an overall reduction of 8%. Target achieved 😊
Satisfaction	The community is satisfied with the services provided by Council supported by this asset group	Community survey Direct Services – Internal Benchmark for children's playgrounds	No significant decrease in average satisfaction results to previous survey	The satisfaction rating for children's playgrounds remained at 3.9 across the 2021 and 2023 survey. Target achieved 😊
Residents' Wish List	The community do not see this asset group or associated service as an area of focus for council over the next 4-years	Community survey internal benchmark – "In your view what are the three key areas you think Council should focus on over the next four years?"	Less than 10% increase on the previous percentage.	Parks, sporting fields and playgrounds were ranked three in terms of priority. The percentage decreased from 23% to 19% between 2023 and 2021. Target achieved 😊
Technical Levels of Service				
Condition Inspection	Level 1 routine inspection	With planned maintenance activities at the playground	75% compliance	
	Level 2 operational inspection	Quarterly	75% compliance	These inspections are undertaken in conjunction with level 3 inspections. Target not achieved 🙁
	Level 3 annual	Annually or as required if identified in a level 1 or 2 inspection	100% compliance	Target achieved 😊

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Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
Removal of Algae and/or Moss	Clean and remove buildup of algae and/or moss on rubber soft fall	Identified as part of Level 2 operational inspections	Removed within 4 months	
Rubber soft fall cleaning	Remove built up debris on surface of the soft fall to prevent accelerated deterioration	Identified as part of level 1 inspections	Debris removed within 4 weeks	
Playground signage	Visual inspection	Signage is in place and remains legible	100% compliance	
Manufacturer maintenance actions	Undertake maintenance activities as recommended by manufacturer for functional service (lubrication, tensioning, tightening, etc)	As required	Activities completed to ensure equipment remains functional and prevent accelerated deterioration	
Vegetation	Removal of self-propagated vegetation from playground area	Lack of vegetation growing within the playground area	Removal with level 1 inspection or within 4 weeks of report	
Cost	Implementation of efficient and cost-effective maintenance programs	Maintenance costs attributed to work orders	Playgrounds with high maintenance costs identified for major maintenance program or renewal.	
Risk	Playgrounds are maintained within a tolerable risk profile.	Risk assessment of playgrounds to be undertaken.	All playgrounds managed in accordance with the infrastructure risk appetite statement	
Performance	Asset management actions and funding allocation supports long-term sustainability	Percentage of identified renewals funded		
		Percentage of planned renewals completed		
		Percentage of identified proactive maintenance works completed		

12.8.5.3   Legislative Requirements

The following legislative requirements are associated with playgrounds:

- Smoke-free Environment Act 2000
- Civil Liability Act 2002
- Local Government Act 1993

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12.8.6   Future Investments

12.8.6.1   Acquisition and Upgrade Plans

The West Dapto contribution plan identifies open space, and recreation needs to support the growing community. The following list includes the work items from the plan that are anticipated to include playgrounds within open space. Note that the cost of works includes additional items beyond the scope of playgrounds so an estimated cost of the playground component using the rates from the playground hierarchy is provided. The timing is forecast based on estimated rate of development:

Ref	Item	Indicative location	General Description	land area (ha)	Timing	Cost of Works	Estimated value of playground
Stage 1-2 Darkes Town Centre							
OS01	City wide sports park	Adjacent to Darkes Town Centre and conservation land	City wide competitive sporting facilities including 2 AFL/cricket fields or four rugby fields and passive recreation	9.4	2021/22 - 2025/26	5,384,348	$220,500 - $441,000
OS02	Local Park	On ridge to east of Darkes Town Centre	Passive open space including pathways and seating	10.23	2019/20 – 2022/23	1,271,304	Up to $73,500
Stage 1-2 Sheaffes – Wongawilli							
OS06	Neighbourhood Park	Adjacent to Wongawilli Village Centre - along West Dapto Road	Active (2ha formal playing fields) and passive (2ha) open space	4	2019/20 – 2022/23	1,794,783	$73,500- $220,500
OS07	Local Park	Within residential area - western end of Sheaffes Road	Active and passive open space including one informal playing field	2	2021/22 – 2025/26	1,121,739	Up to $73,500
OS08	Local Park	Within residential area - along West Dapto Road & south of the railway line	Active and passive open space including one informal playing field	2	2021/22 – 2025/26	1,121,739	Up to $73,500
Stage 1-2 West Horsley							

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Ref	Item	Indicative location	General Description	land area (ha)	Timing	Cost of Works	Estimated value of playground
OS10	Neighbourhood Park	Adjacent to Jersey Farm Village Centre	Active (2ha formal playing fields) and passive (2ha) open space	4	2026/27 - 2028/29	1,794,783	$73,500-$220,500
OS11	Neighbourhood Park	Adjacent to Bong Bong Town Centre	Active (1-2ha formal playing fields) and passive (1-2ha) open space	3	2036/37 - 2040/41	4,412,174	$73,500-$220,500
OS12	Local Park	Within residential area - along Haynes Lane	Active and passive open space including one informal playing field	2	2021/22 - 2025/26	1,121,739	Up to $73,500
Stage 3 Cleveland							
OS13	Community leisure and recreation centre	Southern side of Cleveland Road adjacent Daisy Bank Drive	Active open space including 12 Netball Courts and 8 Tennis Courts	N/A	2036/37 – 2040/41	2,683,008	$220,500 - $441,000
OS14	Local Park	Within residential area - south of the western end of Bong Bong Road	Active and passive open space including one informal playing field	1.5	2026/27 – 2030/31	841,304	Up to $73,500
OS15	Local Park	Within residential area - north of the western end of Cleveland Road	Passive open space including embellishment	1	2026/27 – 2030/31	560,870	Up to $73,500
OS16	Neighbourhood Park	Adjacent to Community Leisure & Recreation Centre	Active (2ha formal playing fields x 4) and passive (2ha) open space	4	2036/37 – 2040/41	1,944,348	$73,500-$220,500
OS17	Local Park	Within residential areas - south of Cleveland Road	Active and passive open space including one informal playing field	2	2046/47 – 2050/51	1,121,739	Up to $73,500
OS18	Local Park	Within residential areas - northern side, far western end of Cleveland Road	Active and passive open space including one informal playing field	2	2046/47 – 2050/51	1,121,739	Up to $73,500
Stage 4 Avondale							
OS19	Neighbourhood Park	Adjacent to Huntley Village Centre and residential area	Active (2ha formal playing fields) and passive (2ha) open space	4	2045/46 – 2050/51	1,944,348	$73,500-$220,500

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Ref	Item	Indicative location	General Description	land area (ha)	Timing	Cost of Works	Estimated value of playground
OS20	Neighbourhood Park	Adjacent to Avondale Village Centre and residential area	Active (2ha formal playing fields) and passive (2ha) open space	4	2045/46 – 2050/51	1,944,348	$73,500-$220,500
OS21	Local Park	Within residential areas - along Avondale Road & west of South Avondale Road	Active and passive open space including one informal playing field	2	2046/47 – 2051/52	1,121,739	Up to $73,500
OS22	Local Park	Within residential areas - southern side along Avondale Road	Active and passive open space including one informal playing field	2	2046/47 – 2051/52	1,121,739	Up to $73,500
Stage 5 Yallah - Marshall Mount							
OS23	Neighbourhood Park	North side along Marshall Mount Road & adjacent to Marshall Mount Town centre	Active (2ha formal playing fields) and passive (2ha) open space	4	2031/32 - 2035/36	1,944,348	$73,500-$220,500
OS24	Local Park	Within residential areas - along the western end of Marshall Mount Road	Active and passive open space including one informal playing field	2	2031/32 - 2035/36	1,121,739	Up to $73,500
OS25	Local Park	Within residential areas - along the northern end of Marshall Mount Road	Active and passive open space including one informal playing field	2	2031/32 - 2035/36	1,121,739	Up to $73,500

12.8.6.2   Upgrade Works

The replacement of the existing playground asset with a modern equivalent playground is considered a renewal. Standards have changed over time and as playgrounds are renewed, we comply with current standards. The gross replacement cost is determined as the value of playground equipment providing a modern equivalent level of service to the current equipment.

The level of service for play spaces has changed over time, and several existing playgrounds planned for renewal fall short of current expectations. In some instances, we are likely to plan for additional works to meet current expectations of a modern play space over and above the cost of equipment renewal. This may include concrete edging for the playground area, change in softfall material, provision of seating and other open space infrastructure. These works are considered an upgrade and expansion. Note that the ancillary items will be reflected in open space assets, only the playground equipment, soft fall and edging will be reflected in the playground asset plan. However, for simplicity we will recognise the playground project cost as part of this plan, and once delivered, recognise the delivered assets to the respective asset classification. The combined cost of the renewal and the upgrade is considered as the project cost. The cost of upgrade and expansion will be separately identified, and an appropriate funding strategy developed.

Each play space site has been assessed and those that are assessed as not meeting the current level of service will be planned as an upgrade, and those that meet the expected service levels will be planned at renewal cost of equipment and softfall in the future investment plan.

12.8.6.3   Renewals

The estimated annual renewal requirement for playgrounds is currently $3.2million. This is based on the current portfolio of playgrounds, the likely upgrade works, and the approach of specifying rubber softfall. By reviewing the service level and specifying the use of mulch and/or rubber depending on the playground hierarchy, the annual renewal estimate reduces to $2.25million.

We are currently investing an annual average of $1.1million. There are several playgrounds in service that have far exceeded the desirable service life. Whilst these playgrounds are monitored and maintained to ensure they remain safe; they are considered renewal backlog. The current level of renewal investment is insufficient based on the desired level of service and distribution of playgrounds.

The revision of the play strategy will need to consider the funding currently invested into expanding and renewing playgrounds and what opportunities exist to address the shortfall.

12.8.6.4   Decommissioning and Disposal Planning

Playgrounds provide a valuable service to encourage activity and cognitive development, however an oversupply comes at a significant lifecycle cost to the community. The primary driver for decommissioning of playgrounds will be based around excess supply and availability of alternate play spaces within an acceptable catchment area. The identification of catchments and hierarchy of playgrounds is undertaken as part of the Play Wollongong strategy. Playgrounds identified for decommissioning through strategic review will be planned for removal based on condition, age and/or serviceability. When play spaces are identified for consolidation, the condition of the existing equipment will continue to be monitored, and once it fails to meet the required technical standard (age exceeds service life; defects/damage sustained that is not feasible to repair), then the playground will be programmed for removal.

As part of the review of age profile for the asset management plan, several locations have been identified for review to determine if continued provision of a play space is still appropriate. The locations are typically

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within proximity to other play spaces, are poorly sited from a crime prevention through environmental design, and/or located near to other infrastructure that is not complementary to play spaces.

Sites identified for decommissioning as part of the Play Strategy will be reflected in this plan, including the provisions in the financial investment required over the 10-year period. The timing of the decommissioning will be based on the remaining useful life of the existing equipment, or as described in the Strategy. We will include the costs for removal and make-good of the site following removal of the equipment.

In addition to the planned decommissioning defined above, on occasion playgrounds may need to be decommissioned for unforeseen reasons, including:

- Obsolescence of equipment and/or spare parts.
- Change in safety standards.
- Damage through storm, accident, or vandalism.

If the location of the unforeseen decommissioning is identified to continue as a play space, replacement equipment will be prioritised as part of the infrastructure renewal program.

Play space utilisation and distribution will be further reviewed in conjunction with the play strategy. The strategy my identify playgrounds for decommissioning.

12.8.6.5   Future investment plan - Playgrounds

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Required Maintenance and Operating	1,543,923	1,543,923	1,543,923	1,543,923	1,543,923	1,567,811	1,589,310	1,598,865	1,598,865	1,598,865	1,598,865
Depreciation	1,506,955	1,506,955	1,506,955	1,506,955	1,506,955	1,530,271	1,551,255	1,560,581	1,560,581	1,560,581	1,560,581
Operating expenditure	3,050,878	3,050,878	3,050,878	3,050,878	3,050,878	3,098,081	3,140,564	3,159,445	3,159,445	3,159,445	3,159,445
Renewal works	1,057,000	1,195,000	1,450,000	1,450,000	1,450,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000
Upgrade works	-	-	-	-	-	200,000	200,000	200,000	200,000	200,000	200,000
Expansion works	-	-	-	-	-	-	-	-	-	-	-
New Works	-	-	-	-	-	-	-	-	-	-	-
Capital expenditure	1,057,000	1,195,000	1,450,000	1,450,000	1,450,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Totals	4,107,878	4,245,878	4,500,878	4,500,878	4,500,878	4,598,081	4,640,564	4,659,445	4,659,445	4,659,445	4,659,445
Estimated Required Renewals	2,250,000	2,250,000	2,250,000	2,250,000	2,250,000	2,250,000	2,250,000	2,250,000	2,250,000	2,250,000	2,250,000
Planned renewal as a % of estimated required	47%	53%	64%	64%	64%	67%	67%	67%	67%	67%	67%

Note: most of the playground being replaced are partial renewal, upgrade, and expansion. An estimate of 50% of the upgrade work has been included as an expansion and it adds to the value of the portfolio in subsequent years and proportionally increases the maintenance and depreciation expense.

12.8.7   Playground Infrastructure Improvement Program

Item	Issue	Description	Responsible	Timing
8.1	Play Wollongong Strategy	Strategy is scheduled for review	Sport and Recreation	2026
8.2	Review usage of soft fall material	The standardised specification of rubber has a significant capital and depreciation implication. It may have lower maintenance costs; however the full lifecycle costs of alternate options needs to be reviewed.	Sport and Recreation (Lead) Open Space and Environmental Services Infrastructure Strategy and Planning	2026
8.3	Establish play services standards linked to hierarchy	The strategy provides some description relating to the hierarchy. It is beneficial to articulate the expected provision of infrastructure based on hierarchy.	Sport and Recreation	2026
8.4	Play strategy to include all council owned play spaces such as tourist parks, pools, and community buildings.	The current strategy refers to play spaces in tourist parks however strategic planning is required for other council operated locations that provide play spaces as part of the service provision.	Sport and Recreation	2026
8.5	Strategy to plan provision in growth areas	Our Local Strategic Planning Statements forecast growth across Wollongong. The West Dapto Development Contributions Plan reviews the additional demand and forecasts the requirements for open space and recreation, including playgrounds. The strategy should provide guidance on the standard and provision for these proposed spaces to inform developers of the requirements.	Sport and Recreation	2026
8.6	Review inspection frequency	Review the frequency and arrangements for Level 1, 2 and 3 inspections to manage risk and safety of playground assets.	Open Space and Environmental Services	2026
8.7	Condition and Useful life	The network requires assessment of condition and remaining useful life.	MISP	2026
8.8	Shade Provision	Review the provision of shade at playgrounds to align with the Urban Greening Strategy	Open Space and Environmental Services	2026

12.9 Pool Structures

The provision of pools is a fundamental component of the Aquatic Services provided by Council. We operate two heated swimming pool locations at Dapto and Corrimal, six community swimming pool facilities located at Helensburgh, Thirroul, Western Suburbs (Unanderra), Continental Baths Wollongong, Port Kembla, and Berkeley, and one heated indoor pool at Beaton Park Leisure Centre. Aquatic Services also provides pool lifeguard services at these locations.

Council manages nine ocean rock pool sites situated at Coalcliff, Wombarra, Coledale, Austinmer, Bulli, Woonona, Bellambi, Towradgi, and Wollongong Gentleman's pool.

This section of the asset plan details our pool assets. Pools are part of our Open Space infrastructure classification. This group of assets focusses on the pool structure. The buildings, car parks and ancillary assets associated with the swimming pool complexes are covered in the respective sections of the asset plan. This is consistent with the Office of Local Government Report on Infrastructure guidelines.

Council carries out planning for renewal and maintenance of the public pools, including delivery of supporting infrastructure, such as amenity and change facilities, lighting, seating, and lifeguard facilities.

12.9.1   Profile

Community Strategic Plan Goal: Goal 4: We have a healthy, respectful, and inclusive community

Service: Aquatic Services & Leisure Centres
Pools are associated with the Aquatic Services service, and the assets are intended to deliver on our 10-year vision for pools:

> *"Wollongong City is host to a variety of highly used diverse and appealing aquatic recreational opportunities that meet our community's needs of today and their desires of tomorrow."*

The Aquatic Services has four delivery streams:

1.   Community Pools
2.   Commercial Heated Pools
3.   Lifeguard Services
4.   Ocean Rock Pools

One heated indoor pool is located at Beaton Park Leisure Centre,

The Lifeguard Services are associated with the operation of 17 patrolled beaches throughout Wollongong. The lifeguard service provided at the community pools and commercial heated pools is included in each of the respective delivery streams.

The service is guided by *The Future of our Pools Strategy 2014-2024* supporting document. The strategy is scheduled for review; however, the current document remains current and is a reference for this asset management plan.

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12.9.2   Strategic priorities

The Future of our Pools Principles	Delivery Stream Actions	Supporting Documents
DIVERSITY: A diverse range of aquatic recreation opportunities are available for all to enjoy, assisting in promoting healthy living. ENGAGEMENT: Our community is involved in the planning, use and renewal of our aquatic facilities. PROMOTION: Our community and visitors have access to current information on our city's aquatic recreation opportunities. SUSTAINABILITY: A sustainable based approach is undertaken in the planning and management of our current and future aquatic facilities. EFFECTIVE MANAGEMENT: Our pools are effectively managed with a strong focus on the customer's experience and public safety. PARTNERSHIPS: We are open to exploring partnerships which value-add to our aquatic recreation opportunities.	**Community Pools:** • Day to day operations and maintenance of six community pools located at Helensburgh, Thirroul, Western Suburbs, Continental Baths, Port Kembla, and Berkeley. • Provide a diverse range of aquatic recreation opportunities are available for all to enjoy, assisting in promoting healthy living. • Ensure our community is involved in the planning, use and renewal of our aquatic facilities. Ensure our community and visitors have access to current information on our city's aquatic recreation opportunities. • Ensure our pools are effectively managed with a strong focus on the customer's experience and public safety. • Undertake a sustainable based approach in the planning and management of our current and future aquatic facilities. • The primary function/ output of these community pools is to provide affordable recreational swimming opportunities for the community. • Provide facilities maintained and operated in accordance with New South Wales Public Health Guidelines and the New South Wales Government's Water Safety Practice Note 15 (October 2017). • Provide capacity for pool facilities to conduct programs (e.g. learn to swim and squad training) and to be hired by accredited coaches, schools, recreation and community groups. **Commercial Heated Pools**: • Operate and maintain Corrimal and Dapto heated pools. • Provision of year-round access to recreational swimming opportunities for the community, schools, and swimming groups/clubs. • Provide facilities that are maintained and operated in accordance with New South Wales Public Health Guidelines and the New South Wales Government's Water Safety Practice Note15 (October 2017). • Provide capacity for pool facilities to conduct programs (e.g. learn to swim and squad training) and to be hired by	• The Future of our Pools Strategy 2014-2024 • West Dapto Contributions Plan • Wollongong City-Wide Development Contributions Plan (not currently included) • Asset Management Strategy

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The Future of our Pools Principles	Delivery Stream Actions	Supporting Documents
	accredited coaches, schools, recreation, and community groups	
	Ocean Pools • Maintenance of nine ocean rock pools. • Offer clean swimming facilities to the public (cleaning schedule delivered by City Works and varies dependent on season and tides. It is estimated in summer; the cleaning schedule is once per month per pool). • Maintain Ocean Rock Pool Infrastructure at an appropriate standard to allow safe community access year-round.	

12.9.2.1   Future Impacts

The following future impacts were identified in the delivery stream report for Aquatic Services relating to pools. The strategic response as it relates to pool structure assets, and the consequences of not funding the impact is summarised below.

Future Impacts	Strategic Response	Consequences of Not Funding
Challenge of ageing swimming pools	Review The Future of our Pools Strategy to identify the strategy for each site. Plan for renewal required works as part of the Infrastructure Delivery Program (IDP) over a 4-year period. This asset management plan informs the IDP and provides guidance on priority locations based on condition and age.	Not funding renewals at the required intervention point may result in the interruption of the service at a particular site. The frequency of inspections and operational costs are likely to increase. Deferring renewals is likely to increase maintenance costs and frequency of minor repairs to prevent total failure.
Increasing annual maintenance and operational costs	Council has implemented a strategic purchasing approach for the supply of materials and chemicals. A detailed condition assessment of the Dapto Pool site has been undertaken to prepare a planned maintenance program. The activity list will inform the required actions and interventions at other sites. The intention is to reduce the costs associated with reactive maintenance and improve reliability of the service.	Not funding the increase in maintenance costs will result in a reduction in frequency and range of maintenance services able to be completed. Not funding the increase in maintenance costs will increase the likelihood of: • Non-compliance with the New South Wales Public Health

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Future Impacts	Strategic Response	Consequences of Not Funding
	A review of the maintenance service approach will be undertaken in association with the review of the Strategy.	Guidelines and the New South Wales Government's Water Safety Practice Note15 • down-time due to failures • premature renewal requirement
Falling attendance	Patronage gradually declined over the 6-year period between 2007-2013, dropping by 17%. Despite falling attendances, annual visitation for all pools, except Berkeley and Beaton Park, far exceeds industry benchmark comparisons. It is likely that free entry is a major contributor to attendance levels with four of the five most highly patronised pools having free admission. Three of these are supervised ocean pools.	Falling attendance and increasing costs over time results in a higher subsidy per visitation at pools.
Need for modern facilities	The primary focus in modern aquatic facility design is on expanding the facility mix to include a combination of 'wet' and 'dry' options. These include heated water spaces that accommodate a range of activities such as lap swimming, aquatic programs/ learn-to-swim, adventure water, 'leisure water' with interactive water play elements and beach entry, café with quality furnishings and menu choices, merchandising/ retail areas, health and fitness centres, wellness services, multi-purpose program spaces and meeting rooms. These types of facilities provide more reasons for people to visit and stay longer, thus facility viability is improved.	Community satisfaction associated with Aquatic Services may decline. Patrons may look for other facilities that meet their requirements.
Demand for longer season times and/ or opening hours	September to April is the common season for outdoor pools with winter closures. There is demand for people wanting to access pools before and after work.	The demand for longer season and longer opening times increases the operational costs associated with the service. Not funding the request will not increase costs

Future Impacts	Strategic Response	Consequences of Not Funding
	Ocean Pools and Heated pools are open year-round.	
The West Dapto Community Leisure and Recreation Centre Needs assessment has identified that a multipurpose facility will need to be developed in the coming ten years to service the existing and future Dapto and West Dapto communities.	The West Dapto Development Contributions Plan outlines the estimated cost and timing of delivery at 2036/37 – 2040/41.	The recreation needs to support the growth in the West Dapto catchment may not be met.
Electrification of pool heating infrastructure	The Net Zero Wollongong Climate Change Mitigation Plan outlines the emissions reduction targets, which should have reduced operating costs.	Pools are some of the major gas consuming sites operated by Council. Failing to fund electrification of pool heating will create challenges in achieving emissions targets.

12.9.2.2   Future Demand

The Local Strategic Planning Statement identifies the likely changes to our community in the future and the implications of population context. These implications will create changes in demand that influences our planning associated with pools, as summarised in Table 12.9.2.2:

Table 12.9.2.2 – Future Demand for Stormwater Infrastructure

Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
Population growth -	Wollongong LGA growth by 55,000. During the next 20 years, several of Areas will evolve from 'sub district' sized populations of less than 30,000 people to areas hosting 'district' level populations of	The Plan identifies the formal open space and recreation facilities required to support the future population including a community recreation and leisure centre in Cleveland.	The main area of growth in Wollongong is situated in West Dapto. The West Dapto vision and development contributions plan outline the community facilities required to support	The West Dapto contribution plan identifies the infrastructure and funding required to meet the demand. This plan integrates the contributions plan forecasts.

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			the growth and the funding contributions from development towards the recommended infrastructure.	The provision of a community leisure and recreation centre at Cleveland will consider the needs for aquatic services.
Increased Residential Density	Increased residential density in some of the district hubs within the LGA.	Increased density may create additional demand and capacity issues for existing pool infrastructure.	The Pool Strategy provides a strategic review of demand and indicates that capacity needs are met.	Capacity needs are currently met/ exceeded by current provision

12.9.2.3   Pool Types

Pools are categorised according to the service provided as each location. The following table and the designation of pool type is used to define the delivery stream and services provided:

Hierarchy	Features
Commercial Heated	Council owns, plans, maintains and services two heated pools located at Dapto and Corrimal. These swimming pools operate year-round on a user pays model that provides a partial subsidy toward the cost of heating these facilities.
Community Pools	The provision of safe, well maintained, and accessible aquatic recreation facilities. Council owns and maintains six community swimming pools located at Helensburgh, Thirroul, Western Suburbs, Continental Baths, Port Kembla, and Berkeley. These swimming pools operate on a seasonal basis and are free to access by the community. Continental Baths and Port Kembla are saltwater pools.
Indoor Heated Pool	Heated indoor pool providing public swimming, learn to swim, aquarobics. This pool is part of the Beaton Park Leisure Centre under an operating lease arrangement.
Tidal Rock Pools	Council maintains nine ocean rock pool sites situated at Coalcliff, Wombarra, Coledale, Austinmer, Bulli, Woonona, Bellambi, Towradgi, and Wollongong Gents pool. Councils tidal rock pools are popular with local early morning and evening lap swimmers. Many of our tidal rock pools are home to several winter swimming clubs. Our tidal rock pools are also popular with visitors to the region. There is no lifeguard service at our rock pools.

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12.9.3   Asset Snapshot

Asset Register – Assets

Financial Reporting Group: Swimming Pools, Other Open

Last comprehensive revaluation: 30/06/2021

Valuation Information: – Valuation Technique – Swimming Pools and Rock Pools are valued using the cost approach, which equates to the current replacement cost of a modern equivalent asset.

Fair Value Hierarchy - the general valuation approach to determine the fair value of Council's swimming pool inventory is to determine a unit rate based on square metres corroborated by market evidence (Level 2 input). A process is then undertaken to compare these rates with internal unit rates derived by Council because of specific work that has been undertaken. Further to this other input such as asset condition and useful life require a significant level of professional judgement and can impact significantly on the fair value. As such the level of valuation input for these properties was considered level 3.

Asset	Financial Reporting Group	Qty	Av Useful Life (Years)	Carrying Value	Annual Depreciation	Current Asset Cost
				($) @ 30 June 2024		
Pool Concourse		**16**	**49**	**6,853,317**	**420,974**	**17,786,316**
	Other	1	61			
	Other Open Space/Recreational Assets	15	49			
Pool Plant*		**27**	**28**	**4,035,473**	**334,359**	**10,131,044**
	Other Open Space/Recreational Assets	25	28			
	Plant and Equipment	1	10			
	Swimming Pools	1	50			
Pool Structure		**21**	**53**	**14,563,939**	**725,601**	**52,246,840**
	Other Open Space/Recreational Assets	1	15			
	Swimming Pools	20	55			
Grand Total		**64***	**42**	**25,452,729**	**1,480,934**	**80,164,200**

* A number of pool assets are grouped per location – quantity reflects the number of asset records

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12.9.3.1 Components and attributes

Pools are recognised at component level depending on the complexity of the structure, including:

- Structure (shell)
- Concourse
- Plant

The ancillary and supporting assets at pool facilities such as kiosks, amenities, car parks and alike are listed in the respective asset plans.

12.9.3.2 Risks and criticality

Critical services are defined as those which have a high consequence of failure causing significant loss or reduction of service to the community as outlined in Section 7.1.5. A review of the Aquatic Services & Leisure Centres identified that it is a critical service. This asset plan is related to pool structures - there are no assets under this grouping that are considered critical to supporting the aquatic service.

12.9.3.3 Operation and maintenance requirements

Routine inspections and maintenance actions are required to keep pools functional and to ensure they remain serviceable to meet the expected useful life, including those listed below:

- routine inspections
- water sampling
- expansion joint
- removal of vegetation and debris
- waterproofing
- lifting equipment
- lane ropes
- filtration
- sanitation maintenance

12.9.3.4 Depreciation and degradation curves

Pool assets and components use a straight-line depreciation and a straight-line degradation profile.

12.9.4 Roles and responsibilities

Service Manager: Manager Sport and Recreation

Role	Lifecycle	Function	Responsibility	Activities
Service Management	Planning	Service Planning	Manager Sport and Recreation	- Ensure service linkage to CSP - Define service needs - Determine service hierarchy - Analyse capacity and demand

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Role	Lifecycle	Function	Responsibility	Activities
				• Summarise service-related legislative requirements • Establish customer levels of service • Determine asset requirements for service delivery
	Operation	Service Operations	Manager Sport and Recreation	• Act as customer liaison for service • Provide website information and communications • Initiate notifications for service interruptions • Undertake functional assessment • Monitor and manage service and asset utilisation
	Planning and End of Life	Asset Acquisitions and Disposals	Manager Sport and Recreation	• Develop plan for acquisitions and disposals of assets aligned to service plan and demand forecast • Engage with stakeholder on acquisition and disposal plan • Arrange relocation or transition of service • Arrange establishment or termination of agreements (utilities)
Asset management	Planning	Asset Planning	Manager Sport and Recreation	• Complete condition and performance assessment • Assess asset related legislative requirements • Coordinate scope preparation • Asset review • Renewal planning
		Asset Data	Manager Sport and Recreation	• Administration of asset register • Updates for capital improvements • Initiate asset disposal system process • Prepare asset management plan • Coordinate asset reporting data
		Asset Financials	Manager Infrastructure Strategy and Planning	• Revaluation • Unit rates • Estimates • Monitor expenditure

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Role	Lifecycle	Function	Responsibility	Activities
Project Delivery	Delivery	Project Sponsor	Director Infrastructure + Works	• Approval of project plan • Oversee business proposal • Capital expenditure review (OLG)
		Asset Concept	Manager Infrastructure Strategy and Planning	• Define the problem/need • Options assessment • Feasibility • Lifecycle costing • Funding strategy • Business case/proposal
		Program Management	Manager Infrastructure Strategy and Planning	• Oversee project as part of program • Responsible for managing overall program costs, risks, progress
		Asset Design	Manager Project Delivery	• Ensure design solutions align with strategy • Options analysis • Concepts • Design development • Cost estimating • Complete safety in design report • Approvals process
		Asset Delivery	Manager Project Delivery	• Cost estimate • Value engineering • Procurement strategy • Contract management • Procurement • Project management • Oversee project commissioning and handover
Maintenance and Operation Management	Maintenance	Asset Maintenance	Manager City Works	• Complete maintenance inspections • Work management triage and scheduling • Establish maintenance procedures • Undertake maintenance works
	Operation	Asset Operations	Manager Sport and Recreation	• Aquatic services • Lifeguards

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12.9.5   Performance

We monitor the performance of our pool assets by:

- Condition – the actual physical and technical state of the asset.
- Functionality – the ability of the collection to meet service needs including social, environmental, and economic performance.
- Capacity – the ability of the collection to meet demand.

By undertaking regular assessments, we determine which assets meet our levels of service and which require capital intervention – renewal, upgrade, or expansion – to meet service level thresholds.

Most of our pools were constructed between the 1960's and 1980's. With an average useful life of 55 years, many need a detailed review of the current condition to inform our plans. We have made provision to undertake assessments in conjunction with the review of the pool strategy.

We have encountered functional issues with some of our pool plant and equipment. We have also identified issues relating to gaps between current standards and site provisions. This will be further reviewed as part of the detailed work on the pool strategy.

12.9.5.1   Community Satisfaction Survey

Council's most recent Community Satisfaction Survey includes results relating to pools as part of the facility questions. The results of the community survey indicate minor changes in usage patterns of pools as shown in Table 12.9.5.1 (a):

Table 12.9.5.1 (a) – Community Satisfaction Survey – Pool Utilisation

FACILITY USAGE RATE	2017	2019	2021	2023	CHANGE SINCE 2021
Tidal rock pools	56%	50%	52%	53%	**+1**
Public swimming pools (free entry)	43%	42%	52%	46%	**-6**
Leisure centres (Beaton Park and Lakeside)	25%	18%	33%	33%	**-**
Council heated pools	28%	31%	31%	31%	**-**

Table 12.9.5.1 (b) below provides a summary of community satisfaction with pools, showing a consistent satisfaction except Beaton Park where there has been a slight decrease over the last 3-years:

Table 12.9.5.1 (b) – Community Satisfaction Survey

FACILITIES	2010	2012	2014	2017	2019	2021	2023	SIGNIFICANT CHANGE SINCE 2021
Tidal rock pools	-	3.9	4.1	4.1	4.1	4.2	4.2	⇔
Public swimming pools (free entry)	3.8	4.2	4.5	4.1	4.2	4.1	4.1	⇔
Council heated pools	-	4.2	4.2	4.0	4.1	4.1	4.1	⇔
Leisure centres (Beaton Park and Lakeside)	4.0	4.2	4.3	3.9	4.2	4.1	3.9	↓

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12.9.5.2   Criteria for levels of service

Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
Customer Levels of Service				
Safety	Swimming pool structures are safe for use	Number of claims alleging injury or damage associated with condition of a pool structure	Pool structure condition not found to have contributed injury or damage.	
Function	Swimming pools are fit for purpose	No restrictions that unreasonably limits usability of the swimming pool structure	Down time of pool structure from service less than 5% of available hours	
Serviceability	Swimming Pool structures are available for use	Number of pools in serviceable condition.	No "closed" pools, except those identified for decommissioning	
Utilisation	Pool assets are being utilised by the community	Community survey – Facility Utilisation Rate for Tidal Rock Pools	Utilisation rate not reducing by more than 10% to previous survey	Utilisation of increased by from 52% to 53% Target achieved 😊
		Community survey – Facility Utilisation Rate for Public Swimming Pools (free entry)	Utilisation rate not reducing by more than 10% to previous survey	Utilisation of increased decreased from 52% to 46%. This is a 11.5% reduction. Target not achieved 🙁
		Community survey – Facility Utilisation Rate for Council heated pools	Utilisation rate not reducing by more than 10% to previous survey	Utilisation remained constant at 31%. Target achieved 😊

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Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
Satisfaction	The community is satisfied with the services provided by Council supported by this asset group	Community survey Facilities – Internal Benchmark for Tidal rock pools	No significant decrease in average satisfaction results to previous survey	The results for 2023 remained the same as 2021, with a result of 4.2. Target achieved 😊
		Community survey Facilities – Internal Benchmark for Public Swimming Pools (free entry)	No significant decrease in average satisfaction results to previous survey	The results for 2023 remained the same as 2021, with a result of 4.1. Target achieved 😊
		Community survey Facilities – Internal Benchmark for Council heated pools	No significant decrease in average satisfaction results to previous survey	The results for 2023 remained the same as 2021, with a result of 4.1. Target achieved 😊
Residents' Wish List	The community do not see this asset group or associated service as an area of focus for council over the next 4-years	Community survey internal benchmark – "In your view what are the three key areas you think Council should focus on over the next four years?"	Less than 5% increase on previous percentage	Beaches, pools, and foreshore as a group increased from 8% to 9% between 2021 and 2023. Target achieved 😊
Technical Levels of Service				
Condition Inspection	Level 1 condition assessment	Annual	75% compliance	
	Level 2 condition assessment	4-yearly	75% compliance	
Expansion joint	Clean and inspect elastomeric joints	Annually		
Waterproofing		As required	Waterproofing adequate to prevent accelerated deterioration	No known defects 😊

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Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
Health compliance				
Water quality maintenance				
Debris removal	Inspect and remove	With level 1 inspection and reactive		
Event damage	Level 1 inspection	Within 2 weeks of incident	100% compliance	Target met 😊
Sand removal from ocean pools	Depth of sand accretion			
Cost	Implementation of efficient and cost-effective maintenance programs	Maintenance costs attributed to work orders	Assets with high maintenance costs identified for major maintenance program or renewal.	
Risk	Pools are maintained within a tolerable risk profile.	Risk assessment of assets to be undertaken.	All pools managed in accordance with the infrastructure risk appetite statement	
Performance	Asset management actions and funding allocation supports long-term sustainability	Percentage of identified renewals funded		
		Percentage of planned renewals completed		
		Percentage of identified proactive maintenance works completed		

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12.9.5.3   Pool Resilience

The natural and non-natural hazard exposure categories for the City of Wollongong are identified through the Local Emergency Management Committee. The hazards identified as part of the Local Emergency Risk Management Study, that may impact pool infrastructure are summarised below:

Hazard	Risk Description	Likelihood	Consequence	Risk
Earthquake	Earthquake of significant strength (> Magnitude 7) that results in localised or widespread damage.	Rare	Major	High
Landslip / Mudflow / Rockfall	Landslip/mudflow/rockfall resulting in localised or widespread damage.	Likely	Moderate	High
Severe Storm/Storm Surge	Severe storm with accompanying lightning, hail, damaging winds, and/or rain that causes severe damage and/or localised flooding (includes tornado and waterspout) and coastal erosion.	Likely	Major	**Extreme**
Tsunami	A tsunami wave of magnitude that presents a risk to land and marine elements.	Rare	Major	High

The local emergency management plan covers the preparedness and response plans for the events listed above. Post incident, Council will instigate the appropriate inspection program to review any pools impacted by the event.

The key climate hazards identified through the Climate Change Adaptation Plan (CCAP) as most relevant to pools are storms and sea-level rise. A summary of the actions from the CCAP and relation to pools is provide below.

Priority Actions		
Hazard	**Climate Change Adaptation Plan Action**	Pool Action
Storms	Prepare and implement an Open Coast Coastal Management Program.	Implementation of infrastructure actions will be included in forecast expenditure
	Identify Council's business continuity plans (BCPs) and review and updated as required to address increase the likelihood of storm and extreme weather events.	BCPs may identify critical services and associated assets. Any changes to critical assets will be listed in revisions of the asset management plan, and appropriate management plans developed.

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Sea-level rise	Prepare and implement an Open Coast Coastal Management Program.	Implementation of infrastructure actions will be included in forecast expenditure. The current Wollongong Coastal Zone Management Plan 2017 (CZMP) identifies nine of our ocean pools with current considerable risk to erosion and sea level rise.
	Recovery plans from emergencies are to be developed in partnership with communities and other relevant service providers.	Recovery plans typically result in unscheduled maintenance activities. Some recovery actions are part funded through State agencies for major events.

12.9.5.4   Coastal Zone Management Plan

Our community has access to ocean pools in nine locations. The pools are mostly constructed within the intertidal rock platforms of the foreshore. A review of the hazards undertaken as part of the Coastal Zone Management Plan (CZMP) identified the locations most vulnerable to coastal threats. The ocean pools can be susceptible to sand build-up with Bulli requiring regular maintenance. Most of the ocean pools are overtopped during high tide. It is likely with sea level rise that some of the ocean pools will become permanently submerged. A summary of the current and future coastal risks associated with pools is provided below in table 10.9.6.4:

Table 10.9.6.4 – Pool Coastal Hazard Assessment

Location and Asset	Risk Now	Risk at 2050	Risk at 2100
Coledale Rock Pool; Austinmer Rock Pool; Thirroul Pool (heritage site); Thirroul Pool office and amenities; Thirroul Pool intake; Bellambi Pool; Towradgi Pool; Port Kembla Olympic Pool; and Port Kembla Pool amenities, kiosk and lifeguard tower.	High	**Extreme**	**Extreme**
Thirroul Pool toilet; Thirroul Pool storage shed (large); Bulli Pool; and Woonona Ocean Pool (Collins Point).	Medium	High	**Extreme**
Coalcliff Tidal Rock Pool (south end)	Medium	High	High
Wombarra Rock Pool	Medium	Medium	High

The CZMP recommends reviewing each location to investigate the sensitivity to wave impact and sea level rise, and potential for future adaptation or modification. Once this work is completed, it may identify actions to be included in a future asset management plan. At this stage, there are no significant modification plans for ocean pools within the next 4 years.

12.9.5.5   Legislative Requirements

- Swimming Pools Regulation 2018
- The Public Health Act 2010 and Public Health Regulation 2022
- Environmental Planning & Assessment Act 1979
- Fisheries Management Act 1994
- Threatened Species Conservation Act 1995

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- Noxious Weeds Act 1993
- Biosecurity Act 2015

12.9.6   Future Investments

12.9.6.1   New and Upgrade Plans

The provision of a community leisure and recreation centre at Cleveland will consider the needs for aquatic services. The indicative timing of the facility is likely to be beyond the period of this plan, with a forecast of 2036-2041. Advanced planning will need to commence within the period of this plan.

We have scheduled the design of upgrades at Corrimal and Western Suburbs Pool, and construction at Helensburgh within the next four-year period. A review of the pool strategy will determine the requirements for upgrades at the existing pool sites, set priorities and review timing of works.

12.9.6.2   Renewal Works

We have scheduled the design of renewal works at Continental Pool, Corrimal, Western Suburbs pools and Port Kembla Pool inlet pipe within the next four years. The scope and priority of these proposals will be reviewed based on a needs analysis and required funding. The following assets are identified as deferred renewals that require review and assessment of functionality. At this stage, the equipment will be managed with planned maintenance to determine the scope of renewal requirements and timing.

Details	Current Asset Cost
Pool Plant and Equipment - Corrimal Pool	918,813
Pool Plant and Equipment - Western Suburbs Pool - Parrish Memorial Park	635,388
Pool Plant and Equipment - Towradgi Rock Pool	9,775
Pool Plant and Equipment - Berkeley Pool	499,268
Pool Plant and Equipment - Bulli Rock Pool	13,440
Pool Plant and Equipment - Dapto Pool	682,309
Pool Plant and Equipment - Wombarra Rock Pool	3,665
Pool Plant and Equipment - Coledale Rock Pool	19,550
Pool Plant and Equipment - Bellambi Rock Pool	13,440
Pool Plant and Equipment - Helensburgh Pool	686,366
Pool Plant and Equipment - Continental Pool	153,348
Pool Plant and Equipment - Woonona Pool	373,901
Total	**4,009,269**

Many of our pools have been in service for over 40 years. Contemporary levels of service will be reviewed as part of the pool strategy. It is anticipated that as pool infrastructure reaches the end of service life, the expectations of renewal will bring changes in service level, and upgrade and/or expansion associated with the work. The strategy will look at supply and demand, hierarchy of the service and options to support the service into the future. At this point it is difficult to determine the priority of works and the cost implications,

however based on our understanding of the industry, the cost to provide facilities to a modern standard is significantly higher than the gross replacement cost of existing infrastructure.

Significant investment into the Electric Hot Water System at Dapto Pool, to replace boilers has been completed and replacement of heat pumps has been committed, awaiting delivery of the plant. Additional work is anticipated on associated pipework, valves, pumps and controls at end of life with new heat pumps, pipework, controls and associated equipment. In addition, the chlorination and filtration system require renewal. The total estimated cost of these works is $1.2M.

The estimated current renewal investment required over the period of this plan is $3.44M per year.

12.9.6.3   Decommissioning and Disposal Planning

There are no current plans for decommissioning and disposal of pools included in this asset grouping.

12.9.6.4 Future investment plan – Pool Structures

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Depreciation	1,480,934	1,480,934	1,480,934	1,480,934	1,480,934	1,482,597	1,484,259	1,485,922	1,487,585	1,489,247	1,490,910
Required Maintenance works	1,907,908	1,907,908	1,907,908	1,907,908	1,907,908	1,910,050	1,912,192	1,914,334	1,916,476	1,918,618	1,920,760
Operating expenditure	3,388,842	3,388,842	3,388,842	3,388,842	3,388,842	3,392,647	3,396,451	3,400,256	3,404,061	3,407,865	3,411,670
Renewal works	1,000,000	5,500,000	-	500,000	6,010,000	2,892,500	2,907,600	2,923,022	2,938,815	2,959,029	2,979,850
Upgrade works	350,000	-	-	-	-	-	-	-	-	-	-
Expansion works	-	-	-	-	-	-	-	-	-	-	-
New works	-	-	-	-	-	-	-	-	-	-	-
Capital expenditure	1,350,000	5,500,000	0	500,000	6,010,000	2,892,500	2,907,600	2,923,022	2,938,815	2,959,029	2,979,850
Totals	4,738,842	8,888,842	3,388,842	3,888,842	9,398,842	6,285,147	6,304,051	6,323,278	6,342,876	6,366,894	6,391,520
Estimated Required Renewals	3,612,744	3,612,744	3,612,744	3,612,744	3,612,744	3,612,744	3,612,744	3,612,744	3,612,744	3,612,744	3,612,744
Planned renewal as a % of estimated required	37%	152%	0%	14%	166%	80%	80%	81%	81%	82%	177%

12.9.7   Pool Structures Infrastructure Improvement Program

The following opportunities have been identified through the preparation of this asset management plan that will assist in improving future asset management planning outcomes:

Item	Issue	Description	Responsible	Timing
9.1	Ocean pool resilience	Investigate the relative sensitivity of the pools to wave impacts and sea level rise, in addition to their current condition, maintenance regime, and community usage. Where necessary, future adaptation/modification should be identified (e.g. raise seaward parapet wall, modify inlet/outlet system etc.)	MISP	2026
9.2	Review of the pool strategy	The pool strategy will help inform direction for investment and management of pool assets.	MS&R	2026
9.3	Review condition and remaining useful life	There appears to be inconsistent estimates of useful life, impacting the calculated condition. It is recommended to undertake a detailed review of the condition of the pool portfolio in preparation for the review of the pool strategy.	MISP	2026
9.4	Asset Register Structure	A review of the asset register structure should be undertaken to ensure that it is fit for purpose prior to undertaking a full class revaluation. Assess compliance with the requirements of the Australian Accounting Standards Board standards for fair value and accounting for infrastructure, property, plant, and equipment to determine if proposed approach is fit for purpose. Consider individual assets for each pool shell as opposed to grouping.	MISP	2026
9.5	Data Dictionary	To support the structure of the asset register, prepare a data dictionary to provide guidance and consistency in classification, description, and attributes.	MISP	2026
9.6	Future growth of population to inform infrastructure planning	Ensure that the forecasted growth of areas of Wollongong are informing with an interactive live tool; the pool strategy and forward planning of asset maintenance/management.	MCS	2026

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12.10 Buildings

The building asset management plan documents the strategic context and service provision to cater for levels of service relating to building safety, quality, quantity, availability, cleanliness, environmental sustainability, utilisation, and cost effectiveness into the future. We manage over 750 buildings that cater for a range of services including community facilities, art gallery, sports ground facilities, tourist parks, lifeguard towers and surf clubs, Rural Fire Service stations and State Emergency Services centres; operational buildings and commercial facilities.

12.10.1 Profile

Building assets are utilised to support the provision of each of the four goals in the community strategic plan. Most council services require the support of a building asset to operate. Buildings have a direct relationship to the associated services, as is the case for tourist parks, libraries, community facilities, where the building is integral to the service that is delivered. In other cases, a building indirectly supports the function of the service, such as sport field amenities, youth services, transport services. As a result of the wide relationship of services with buildings, there are several supporting documents and often more than one service supported by the building.

12.10.2 Strategic priorities

Buildings are guided and informed by the following strategic supporting documents:

- Places for People – Wollongong Social Infrastructure Planning Framework
- Places for the Future – Social Infrastructure Future Directions Plan
- Sportsgrounds and Sporting Facilities Strategy
- Disability Inclusion Action Plan
- Public Toilet Strategy
- Wollongong Community Safety Plan
- Net Zero Wollongong Climate Change Mitigation Plan
- West Dapto Contributions Plan
- Wollongong City-Wide Development Contributions Plan

The Places for People identifies the following key strategic framework and priorities:

Vision - Residents, workers and visitors will have access to quality, sustainable social infrastructure that meets their needs and reflects Wollongong's role as a leading regional city, now and into the future.

Guiding Principles:

- Holistic
- Strategic
- Fit for purpose
- Equitable
- Quality
- Sustainable

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The following table summarises the actions from the key supporting documents with a relationship to buildings and an assessment of the direct impact. The actions from the Places for the Future' Social Infrastructure: Future Directions Plan are the proposed future directions for each of the planning areas where recommended:

Supporting Document	Action	Resource Impact
Places for the Future' Social Infrastructure: Future Directions Plan	**PA1- Helensburgh Community Centre and Library** Secure appropriate site for a new co-located community centre and library; investigate feasibility; develop scope. Complete concept design, due diligence, and approvals processes. Final design, approvals, construction and commissioning of community centre and library.	Planning and feasibility work continue the proposals for community centre and library facilities in Helensburgh. These works are included in the current infrastructure delivery program.
	PA1 – Otford Community Hall Upgrade kitchen, car parking amenities to DDA standards.	A feasibility has been undertaken on upgrades to achieve the anticipated outcomes. Works are proposed in the current 4-year infrastructure delivery program.
	PA1 – Coalcliff Community Hall Review the condition, functionality, and capacity of the hall to meet the needs of the community. Consider options for co-location with local 'Supporting' social infrastructure to provide a contemporary facility.	The hall was assessed as having 30 years remaining useful life on the structure. Some components may require renewal within the next 10years. A plan for the facility should be prepared prior to planning any renewals. This will require allocation of technical resources to undertake the assessment. These works are currently unfunded.
	PA1 – Helensburgh Community Centre and Youth Centre Demolish this facility during 2022/2023 due to intractable problems with air quality, damp, and mould. It will be replaced by the new community centre and library by 2027.	Feasibility and options are to be completed prior to proceeding with demolition of the building. This will require allocation of technical resources to undertake the assessment.
	PA2 – Thirroul Library & Community Centre Determine future use of former café space and design interface between library and community centre to increase connectivity and utilisation, including for library programs. Works to upgrade interface between library and community centre and convert café space to new purpose.	Funding is proposed in the 2025 program to remove a fixed wall between the library and the Ocean Breeze Room and the installation of a movable glass wall.

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Supporting Document	Action	Resource Impact
	Review car park capacity and non-visitor use to identify options for improving access to parking.	
	PA4 – Corrimal Library and Community Centre Investigate opportunities to extend and update the facility to service projected future community needs, including options to better leverage the co-location of this facility with adjacent recreational infrastructure.	Feasibility assessment to be undertaken following a review of needs and functional assessment of the adjoining Corrimal pool site. This will require allocation of technical resources to undertake the assessment. These works are currently unfunded.
	PA4 – Fairy Meadow Community Centre Conduct needs analysis, to understand demographic change, future needs and aspirations of the Planning Area 4 community and determine future requirements of the Community Centre. Investigate feasibility, scope, and concept to extend and improve the capacity of this facility. Design, approvals, and construction to re-purpose/create contemporary community centre.	The existing facility has been assessed as having over 20 years of remaining useful life in the structure. There are components of the building that will need to be renewed within the next 10 years. The needs analysis should be prioritised to ensure a feasibility can be undertaken. This will require allocation of technical resources to undertake the assessment. These works are currently unfunded.
	PA5 – Wollongong Library Investigate design solutions to enhance functionality and delivery of contemporary library services. Investigate opportunities for co-location of library services with other Council community and cultural facilities.	Scope and requirements to be documented to enable feasibility and costing to be undertaken. This will require allocation of technical resources to undertake the assessment. These works are currently unfunded.
	PA5 - Wollongong Art Gallery Investigate opportunities to enhance the amenity and service scope of the gallery and its interface with the Arts Precinct with a café, including opportunities for co-location with other Council community and cultural facilities	Detailed condition assessment has been completed in 2024. This will help inform decisions on renewal requirements and coordination with any modifications proposed. Consideration needs to be given to heritage conservation requirements.
	PA5 – Illawarra Museum Investigate opportunities to enhance the amenity and functionality of the Museum, including opportunities for co-location with other Council community and cultural facilities.	Investigation works may require technical assessment and scope to inform a feasibility and cost plan. These works are currently unfunded.

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Supporting Document	Action	Resource Impact
	PA5 – Wollongong Town Hall Review of access arrangements required to ensure the facility supports Council's Disability Inclusion Action Plan.	A detailed condition inspection has been completed at the Town Hall in 2024 with recommendations on improvements to access. Minor works to be considered as part of operational budgets, capital works will require planning and prioritising.
	PA7 – Unanderra Library and Unanderra Community Centre Investigate opportunities to co-locate the library with the Figtree Community Hall. Investigate options to extend the footprint of the community centre into areas formerly occupied by the library building (subject to relocation of library). Design and construct to accommodate extended footprint of Unanderra Community Centre (subject to relocation of library).	Investigation works may require technical assessment and scope to inform a feasibility and cost plan. These works are currently unfunded.
	PA7 – Figtree Community Hall Conduct needs analysis, to understand demographic change, future needs, and aspirations of the Planning Area 5 and 6 communities and determine future requirements for 'Foundation' social infrastructure for Planning Area 7. Investigate feasibility, scope, and concept to extend and re-purpose the hall into a co-located community centre and library. Design, approvals, and construction to re-purpose hall as a co-located community centre and library.	Investigation works may require technical assessment and scope to inform a feasibility and cost plan. These works are currently unfunded.
	PA7 – Darkes Town Centre Sports Park and Community Hub Secure land required to accommodate Darkes Town Centre Sports Park & Community Hub. Establish scope for Darkes Town Centre Sports Park and Community Centre. Construct and commission Darkes Town Centre Sports Park. Construct and commission Darkes Town Centre Community Centre	Works are included in the current infrastructure delivery program to commence design and planning.

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Supporting Document	Action	Resource Impact
	PA8 – Dapto Ribbonwood Centre /Dapto Library Review design and functionality of Dapto Library to better integrate service delivery - Scoping and project design based on review. Design HVAC, lift replacement, lighting system upgrade, library refurbishment, amenities upgrade, and foyer and office refurbishment. Construct HVAC, lift replacement, lighting system upgrade, library refurbishment, amenities upgrade, foyer, and office refurbishment.	Works are included in the current infrastructure delivery program to commence design and planning.
	PA10 – Wongawilli Hall Design and approvals to extend the footprint and upgrade hall amenities. Construct and commission hall improvements	Works are included in the current infrastructure delivery program to commence design and planning.
	PA10 - Part A Consider the recommendations of the Community Cultural and Open Space (CC&OS) Needs Analysis, to address the future needs and aspirations of the West Dapto community in determining future requirements for recreational, community and cultural 'foundation' social infrastructure. Preliminary assessment of needs indicates an additional community centre at Avondale. However this proposal requires further investigation.	The further investigation should consider lifecycle costs of options. This will require allocation of technical resources to undertake the assessment. These works are currently unfunded.
	PA10 - Bong Bong Town Centre Library and Community Centre Conduct feasibility study to identify appropriate site for community centre and library. Acquire site for new community centre and library. Complete scope and concept design for community centre and library. Construct and commission new community centre and library.	This will require allocation of technical resources to undertake the assessment and feasibility study. These works are currently unfunded.

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Supporting Document	Action	Resource Impact
	PA10 – Yallah Marshall Mount Town Centre Community Centre Conduct feasibility, identify site, and secure land for community centre. Develop scope and complete concept design for the centre. Construct and commission new community centre.	This will require allocation of technical resources to undertake the assessment. These works are currently unfunded.
Sportsgrounds and Sporting Facilities Strategy	1.1 Continue to collaborate with key stakeholders to provide contemporary amenities for sport, incorporating accessible and gender equitable features and storage facilities that are consistent with the sportsground hierarchy	Lifecycle costs to be considered in the planning for any upgrades, expansion and new facilities to meet the hierarchy.
	3.2 Ensure all new and renewed facilities are constructed in accordance with Council's Hierarchy system, Australian Standards and sport specific facility guidelines.	
	4.4 Ensure all new sporting facilities and upgrades to existing, incorporate the principles of universal design and comply with access legislation including continuous accessible paths of travel to amenities, accessible parking and seating.	New facilities consider the requirements of the National Construction Code which includes provision for accessibility.
	4.7 Ensure all new infrastructure supports the needs of referees, umpires and volunteers.	Lifecycle costs to be considered in the planning for any upgrades, expansion and new facilities to meet the hierarchy.
	5 Strategically plan for the development of new sports facilities	These proposals are outlined in the West Dapto Vision.
	6.2 Prioritise the renewal and provision of new facilities to better accommodate female participation in sport.	Lifecycle costs to be considered in the planning for any upgrades, expansion and new facilities to meet the hierarchy.
	8.2 Ensure regional facilities meet the required standards to host major regional, state or national level competitions, events and/or training.	
	10.1 Ensure Council's regional sports facilities are provided with appropriate infrastructure to support the hosting of regional, state and national sports events	

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Supporting Document	Action	Resource Impact
Disability Inclusion Action Plan	Increase the number of accessible public toilets and accessible adult change facilities	Accessibility is included in the scope of all major renewal and new amenity project scopes.
	Increase access to our buildings	Accessibility is included in the scope of all major renewal and new amenity project scopes. Minor upgrades to be completed on a priority basis.
Public Toilet Strategy	Public toilets are equitably distributed and strategically located through the replacement, upgrade and provision of new amenities and decommissioning.	Any works for the provision of new facilities to consider equitable distribution.
	The replacement, upgrade and provision of toilet facilities incorporate Crime Prevention through Environmental Design (CPTED) and Ecologically Sustainable Design (ESD) principles	CPTED and ESD are consideration as part design principles when developing concepts and detailed designs,
	Public toilets are accessible and consider the need of different ages, abilities, and cultures.	Accessibility is a consideration of the design for all major renewals and new builds. Minor upgrades to improve accessibility are to be considered as part of operational budgets.
	Consistent signage and information on public toilet availability and location is promoted and accessible to the community.	Minor upgrades to improve accessibility are to be considered as part of operational budgets.
	Public toilets are cleaned and maintained to defined service levels.	Development of service levels are recommended as part of this plan.
Wollongong Community Safety Plan	Conduct rapid removal of graffiti on Council assets	Development of service levels are recommended as part of this plan.
	Participate in arts-based graffiti prevention partnership projects	This action is to be considered as part of the scoping for building projects in locations with a history of graffiti.
Net Zero Wollongong Climate Change Mitigation Plan	LE5. Council buildings and facilities to incorporate low emissions design and performance standards.	Look at utilising industry tools to assess and specify design solutions that reduce emissions having regard for lifecycle costs.
	LE6. Power Council with 100% renewable energy	Move away from existing fitout that is powered by non-renewable energy such as gas. Electricity is already contracted for 100% renewable energy supplies.
Heritage Strategy 2023-2027	Implement the Wollongong Heritage Asset Management Strategy for Council's Heritage Assets	Council has obligations under the Heritage Act as custodians of heritage assets to manage them appropriately. Conservation

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Supporting Document	Action	Resource Impact
		management plans (CMP) provide detailed information on significance, management strategies, and works that require special consideration. The list of heritage buildings needs to be reviewed and confirmed and the asset register updated accordingly. CMPs need to be attached to the asset register so that the information is readily available.
	Consider options for the use of the Bulli Miners Cottage property	Adaptive and active use of the facility is consistent with the objectives of the asset plan. Resources may be required to make this feasible.

12.10.2.1   Future Impacts

The following future impacts were identified across a range of services with the respective delivery stream identified at each impact. The strategic response as it relates to building assets, and the consequences of not funding the impact is summarised below.

Future Impacts	Strategic Response	Consequences of Not Funding
SOCIAL PLANNING - Ongoing service required as there are changes to demographic composition of the community and social need.	Social Planning provides the current and future social needs that underpins direction and planning for community facilities. It also indirectly influences planning for other buildings that are used to deliver services to the community.	Social planning informs us about current and future needs. Failing to fund this work results in provision of services and facilities that are aligned with what has traditionally been provided. Not funding the impact may result in buildings and facilities that are no longer meeting the needs of the community, or no longer required, resulting in poor investment of community funds.
SOCIAL PLANNING - West Dapto is a major growth area which will result in an increase in demand for services, facilities and initiatives that support connected communities.	The West Dapto development contribution plan identifies the high-level needs for the future community. This work needs more detailed assessment to ensure we have the required information to provide guidance on scope and concepts for facilities.	Social planning will inform the user requirements for proposed buildings and facilities in West Dapto at a more granular detail. Not funding this work will see proposals developed based on current understanding of requirements and may not deliver flexible and sustainable outcomes.
ANIMAL CONTROL - Council's role as the local impounding	Council will need to consider the service approach and facility	Council has a range of statutory responsibilities under the

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Future Impacts	Strategic Response	Consequences of Not Funding
authority will be impacted by the management, ownership and location of the animal pound given the withdrawal of New South Wales RSPCA from future contract renewals from March 2024.	requirements for longer term planning. This may require modification or construction of a fit-for-purpose facility.	Companion Animals Act including seizing and management of stray and roaming animals. Failing to invest in arrangements for services to manage the housing of animals may lead to non-compliance with statutory requirements.
LIBRARY SERVICES - The planning, design, and construction of new libraries at Warrawong and Helensburgh, within the context of a multipurpose Community Centre and Library will require ongoing focus and commitment of resources over the next five years.	Consideration of the two library services continues as works progress with design and procurement.	Allocation of resources to planning and design work will assist in positioning council to make informed decisions on these two projects.
LIBRARY SERVICES - The impact of the West Dapto land release and development and growth of new communities in the southwest of the city will demand further consideration regarding provision of libraries social infrastructure and planning for future service delivery.	The West Dapto development contribution plan identifies the need for a sub-district level multipurpose community centre and library.	Not funding the community centre and library would impact the communities access to social infrastructure and place greater demand on nearby facilities.
LEASING AND LICENSEs - Continue to focus on the ongoing sustainability on Council's assets and ensuring optimal revenue generation.	Optimised revenue balances return on investment with the services supported by the asset. Leases and licences recognise that there is a direct benefit to the party at a cost that reflects community benefit.	Optimising revenue ensures that balance of any subsidy from the community towards leasing and licensing is aligned to the community strategic plan objectives.
LEASING AND LICENSES - Future for the maintenance, upgrade, and renewal of assets.	Being clear on maintenance, upgrade and renewal responsibilities ensures that all parties understand their accountability in managing and operating the building.	Not providing clear accountabilities can lead to actions not being completed, or incorrect allocation of responsibility. This is likely to lead to increased costs.
LEASING AND LICENSES - Reviewing the portfolio to ensure optimum benefit to Council.	This aligns with the objective of minimising lifecycle costs and ensuring assets are supporting a service.	This action will identify under-performing assets that are not delivering expected services are reviewed.

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Future Impacts	Strategic Response	Consequences of Not Funding
STATUTORY PROPERTY AND PROPERTY DEVELOPMENT - ongoing consideration and review of Council's commercial property holdings is required to ensure strategies continue to align to objectives.	Routine review is required to ensure holdings are providing outcomes aligned to objectives	Commercial properties may not be delivering the desired outcomes.
GLENNIFFER BRAE (Botanic Gardens) - Council has resolved to review the future use of Gleniffer Brae	This resolution is to be resourced to determine appropriate uses of the facility that align with council's current strategic direction.	The facility may be underutilised.
COMMUNITY FACTILITIES - Future impacts include changing community needs, expectations, and demographics; increasing responsibilities of community management; cost of maintenance and age, condition, and suitability of buildings to meet contemporary community needs.	Lifecycle costing helps to inform the cost of providing services through community facilities. A continued move towards multipurpose shared facilities ensures more equitable access to services.	Community members may not be able to obtain equitable access.
COMMUNITY FACTILITIES - Changes to Commonwealth and New South Wales Government funding programs have the potential to impact on the future viability of some community-based organisations, which will in turn impact on their capacity to continue to meet their obligations as licensees.	This future impact has potential to result in in-direct cost shifting to council.	Reduced access to community facilities by groups that can no longer fund their operations.
COMMUNITY FACTILITIES - The 'Places for People' Social Infrastructure Planning Framework 2023-2036 (Supporting Document) provides a strategic and evidence-based approach to planning for the future of community facilities and poses challenges in balancing community needs against capital project priorities and investment capacity.	There are multiple actions that require further investigation and lifecycle costing. These were listed in the previous section of the plan.	There are numerous actions in the Places for People supporting document that funding to inform future direction. Not funding these actions may result in undertaking works that does not best align with the future needs of the community.
LEISURE CENTRES - Future planning for facilities to ensure they remain contemporary, in	The leisure centres were constructed between 1978 and 1988. Building components will require planning for renewal within	Not funding a review of the requirements will result in like-for-like renewal and potentially missing an opportunity to

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Future Impacts	Strategic Response	Consequences of Not Funding
good order and relevant to the needs of the community.	the timeframe of this plan, and a needs assessment of the facility will assist in planning works.	consider adjustments to improve the service to the community.
LEISURE CENTRES - Changing structure of the fitness needs of the community who are experiencing increased pricing pressures and finding alternatives to the traditional gym environment.	The service offering needs to remain current to contemporary trends to provide a sustainable business model.	Not funding and responding to changes in the market will result impact the viability of the service delivery.
LEISURE CENTRES - Ability to implement the Beaton Park Master Plan and new facility at West Dapto to meet the changing needs of the community.	Some works are included in the infrastructure delivery program. Risks will be managed throughout the delivery of the projects and council informed of risks that impact on ability to implement that agreed actions.	Ability to implement the actions may relate to funding or other risks. Not funding the impact may limit the service offered in the respective locations.
LEISURE CENTRES - Ageing infrastructure at Beaton Park that no longer meets the communities' expectations.	A Beaton Park masterplan has been developed, and several stages of implementation are included in the current infrastructure delivery program.	Beaton Park is recognised as an important facility for recreation. Not funding renewal of ageing infrastructure may result in limiting activities that can be supported at this location.
WORK HEALTH AND SAFETY - WHS is a key operational & business requirement of Council which will need continuous focus & development to comply with legislative changes and ensure ongoing employee wellbeing.	We need to ensure buildings continue to meet mandatory safety requirements and are safe for operation. This includes mandatory health and safety registrations such as lifts, cooling towers, and other requirements from SafeWork NSW. In addition, we need to ensure we are meeting our obligations as the owner of premises to comply with mandatory Codes of Practice from SafeWork. Areas of focus for buildings relate to the following hazards asbestos management, working from heights, confined spaces, electrical and power works, falling objects, formwork, hazardous chemical storage, ladders, lighting, mould, scaffolding, solar panels, structures, and ventilation.	Failing to invest in WH&S compliance will render buildings unfit for use and risk injuries and potential penalties.

12.10.2.2   Future Demand

The Local Strategic Planning Statement identifies the likely changes to our community in the future and the implications of population context. These implications will create changes in demand that influences our planning associated with road infrastructure as part of the enabling infrastructure and transport, as summarised below in Table 12.10.2.2:

Table 12.10.2.2 – Future Demand for Buildings

Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
Population growth	Wollongong LGA growth by 55,000. During the next 20 years, several of Areas will evolve from 'sub district' sized populations of less than 30,000 people to areas hosting 'district' level populations of more than 30,000 people.	Areas of growth require buildings to support service provision.	The main area of growth in Wollongong is situated in West Dapto. The West Dapto vision and development contributions plan outline the facilities required to support the growth.	The West Dapto contribution plan funds the acquisition of land for the facilities, but not the buildings. Council will need to develop a funding strategy for these facilities.
Increased Residential Density	Increased residential density in some of the district hubs within the LGA.	Increased density may create additional demand and capacity issues for existing building.	The Places for the Future provides a strategic framework for community facilities across Wollongong.	Any identified need to upgrade capacity of buildings is included in the new and upgrade plan.
Material and application advances	Advances in material technology and methodology of maintenance and renewal activities will result in greater efficiency and safety undertaking works.	Advances may also result in improved asset life cycle costs through reduced expenditure and/or longer asset life.	Keeping up to date with industry advances in material and work methods.	Existing maintenance and renewal programs.
Low energy design	Increased efficiencies of low energy design	New building designs can incorporate energy efficient and sustainable	Integrating an assessment of energy efficient options as part of the project scope	Existing programs for building renewal works.

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Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
		practices to reduce lifecycle costs. Existing buildings to be assessed for feasibility of energy efficient upgrades.	for renewal and new works.	
Emission reduction from energy use (Solar Power and/or green energy)	Installation of solar panels to generate energy or supply from green energy sources to reduce greenhouse gas emissions and long-term financial savings.	The additional roof loading to support the provision of solar panels. Energy supply contracts from green energy sources	Consideration of structural capacity as part of roof renewal projects and new builds. Procure energy from suppliers with renewable sources.	Building renewal programs that include roof replacements. Program for solar on existing buildings. Contracts for green energy supply.
Additional groups/members of buildings	Increased number of new groups and agencies looking to utilising Council buildings	New assets required of shared arrangements/policy to be in place.		Buildings management policy to be created.
Degas and electrification of tourist parks	Net zero emissions targets create demand for electrification of cabins and removal of gas appliances.	Additional electrical demand on the current supply for the sites.	Use intelligent systems to balance load and upgrade supply where required.	Demand management systems and balance load
Off-grid energy for disaster centre backup	Greater demand for energy supply at disaster centres	Provide limited independent supply during outage	Potential back-up battery and solar panels	Consider prioritising for building upgrades.

12.10.3 Asset Snapshot

Asset Register – Assets

Financial Reporting Group: Buildings – Non-Specialised, and Specialised

Last comprehensive revaluation: 2024

Valuation Information: – Buildings – Non-Specialised and Specialised Valuation Technique – Buildings are recognised using the cost method, which equates to the current replacement cost of a modern equivalent

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asset. The cost to replace the asset is equal to the amount that a market participant buyer of that asset would pay to acquire it.

Fair Value Hierarchy – Specialised and Non-Specialised buildings are generally assessed at level 3 of the fair value hierarchy due to lack of market evidence. Key inputs are unit rates and remaining useful life. The exception is non-specialised residential properties which have been valued using sale prices of comparable properties (level 2). The most significant input into this valuation approach is price per square metre. The level of evidence to support the critical assumptions of Council's residential property valuation was significant due to high levels of variability in the market for rental yields and future demands. As such the level of valuation input for all buildings was considered level 3.

Building Classification	Qty	Av. Useful Life (years)	Carrying Value	Annual Depreciation	Current Asset Cost
			($) @ 30 June 2024		
Botanic Gardens and Annexes	29	72	7,403,113		19,691,000
Commercial Facilities	64	74	52,156,995		108,882,000
Community Facilities	92	71	99,141,017		174,927,000
Council Leisure Facilities	14	62	8,695,434		19,684,000
Council Operations	41	57	97,936,741		185,811,000
Cemeteries	13	75	2,432,051		5,163,000
Cultural Life and Museums	9	116	56,539,952		110,721,000
Emergency Management - Mt Keira Tower	2	75	27,400		60,000
Emergency Management – Rural Fire Service	16	68	8,343,172		12,026,000
Emergency Management – State Emergency Service	5	51	2,696,454		4,134,000
Heritage/Special	19	97	1,521,793		4,505,000
Lifeguard Towers and Storage	15	50	1,325,169		1,800,000
Parks Facilities	57	76	9,319,190		15,602,000
Pools	25	73	12,071,706		23,397,000
Public Toilets	3	70	322,051		488,000
Rock Pool Amenities	5	75	1,436,934		2,862,000
Sportsgrounds Facilities	175	70	67,252,148		138,430,000
Surf Clubs	25	76	59,479,132		86,692,000
Tourist Parks	145	27	21,672,018		35,970,000
Waste Services	10	70	6,041,401		10,121,000
Grand Total	**764**	**63**	**515,813,871**	**20,003,961**	**960,966,000**

12.10.3.1   Components and attributes

We generally recognise buildings at component level depending on the complexity of the building, including:

- Structure – this is the minimum component for all buildings. Simple buildings, and those that are not renewed by component will only have a structure. Examples of simple buildings include prefabricated sheds and garages, tourist cabins and exeloo amenities. Structure includes all substructure footings, columns, roof framing, suspended slabs, stairs and ramps, external walls, windows, and external doors.

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- Roof – all assets provide a structurally sound and watertight covering over the building including portal frames. Includes insulation, roof drainage, and safe roof access systems.

- Fitout and fittings – general fixtures and fittings, fixed cabinetry internal walls, ceilings, doors, hard and soft flooring.

- Hydraulic services - To fit out the building with normal sanitary fixtures together with hot and cold-water services and soil and waste plumbing systems together with all associated ancillaries.

- Mechanical services - Comprises air conditioning, evaporative cooling, mechanical ventilation, and associated specialist services to provide heating, cooling, and ventilation to a building.

- Electrical services - To provide all light and light fittings (excluding emergency and exit lighting) and all power, and power outlets, including main distribution board; sub-mains and distribution boards; power sub-mains to mechanical equipment.

- Fire services - To detect and/or extinguish fires, including sprinklers and other automatic extinguishing systems; fire indicator board; fire communications; manual and automatic fire alarm installations; emergency and exit lighting; firefighting equipment; hydrant installations and hose reels and cupboards; hand appliances.

- Security Services - To provide computerised and electronic controlled access into and within a building. Excludes CCTV which is part of the Office and Other Equipment Asset register.

- Transportation services - To transport personnel and/or goods from floor to floor or area to area including all lifts, hoists, and conveyor systems; and escalators.

- Attached shelters and awnings - Attached shelters and awnings include the following items where they can reasonably be more significant than an eave or part of the building roof but are attached to or supported (fully or partially) by the building asset.

The valuation undertaken in 2024 includes an assessment at the level of components listed above with the value of each component, condition rating and remaining useful life. An overall condition rating is also provided for each building. The summary of condition provided in the performance section below utilises the replacement value and condition rating of the individual asset components, and not the consolidated building rating. This provides a more accurate representation of the condition of the portfolio, as a component may be in a poor condition, but the overall building may be classified as good. It is recommended that the asset register be reviewed to recognise buildings at component level.

12.10.3.2   Risks and criticality

Critical services are defined as those which have a high consequence of failure causing significant loss or reduction of service to the community as outlined in Section 7.1.5.

A review of critical services identified that buildings support the provision of critical services. Buildings that support the provision of critical services are the Rural Fire Service and State Emergency Service facilities, emergency evacuation sites and the emergency operation centre. These locations are recommended to be identified as part of the improvement program, and the appropriate criticality rating associated with the asset attributes. This will influence the service planning for these buildings.

12.10.3.3   Operation and maintenance requirements

Routine inspections are part of our operational requirements for buildings and include:

- Level 1 inspections – primary function of this inspection is to identify defects.
- Level 2 inspections – routine visual condition assessment.
- Level 3 inspections – detailed condition inspection.

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- Compliance based inspections.
- Service inspections (e.g. cleaning and serviceability).

Building maintenance comprise two main categories, namely reactive maintenance and planned (or preventive) maintenance. Reactive maintenance is primarily driven by requests from building users and occupants and includes corrective repair work to minor defects. The work requests are triaged according to risk and listed on a property maintenance program.

Planned maintenance programs (PMP) include regular maintenance and servicing to buildings and facilities. The PMP has been developed for each asset and includes minor replacement of building elements, scheduled servicing, cleaning, and routine repairs, testing and inspections for compliance with statutory requirements such as annual fire safety, lift registration and asbestos management. Further details of typical operational and maintenance activities are provided under the technical levels of service and at Appendix D.

We have reviewed the required maintenance and operational activities for buildings and estimated that 2% of the gross replacement cost is the average investment required per annum across the portfolio. Some buildings will require a higher amount for more complex buildings, and simple buildings will require less investment. We will continue to refine a schedule of activities and monitor costs to further improve this estimate over time so that it better reflects the requirements of individual sites and types of buildings.

As part of the preparation of this plan, we undertook detailed condition inspections of nine locations to better inform the future requirements of these sites. Seven of the sites have a detailed recommended maintenance and renewal investment plan for 20 years.

12.10.3.4   Depreciation and degradation curves

Building assets and component use a straight-line depreciation and degradation profile.

12.10.4   Roles and responsibilities

Service Manager: Manager Infrastructure Strategy and Planning *

* Note, there is no direct service for buildings. The Manager Infrastructure Strategy and Planning has overall responsibility for the asset management of buildings.

Role	Lifecycle	Function	Responsible	Activities
Service Management	Planning	Service Planning	Service & Asset Managers	- Ensure service linkage to CSP - Define service needs - Determine service hierarchy - Analyse capacity and demand - Summarise service-related legislative requirements - Establish customer levels of service - Determine asset requirements for service delivery
	Operation	Service Operations	Service Manager	- Act as customer liaison for service - Provide website information and communications

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Role	Lifecycle	Function	Responsible	Activities
				• Initiate notifications for service interruptions • Undertake functional assessment • Monitor and manage service and asset utilisation
	Planning and End of Life	Asset Acquisitions and Disposals	Service and Asset Managers	• Develop plan for acquisitions and disposals of assets aligned to service plan and demand forecast • Engage with stakeholder on acquisition and disposal plan • Arrange relocation or transition of service • Arrange establishment or termination of agreements (utilities)
Asset management	Planning	Asset Planning	Manager Infrastructure Strategy and Planning	• Complete condition and performance assessment • Assess asset related legislative requirements • Coordinate scope preparation • Asset review • Renewal planning
		Asset Data	Manager Infrastructure Strategy and Planning	• Administration of asset register • Updates for capital improvements • Initiate asset disposal system process • Prepare asset management plan • Coordinate asset reporting data
		Asset Financials	Manager Infrastructure Strategy and Planning	• Revaluation • Unit rates • Estimates • Monitor expenditure
Project Delivery	Delivery	Project Sponsor		• Approval of project plan • Oversee business proposal • Capital expenditure review (OLG)
		Asset Concept		• Define the problem/need • Options assessment • Feasibility • Lifecycle costing • Funding strategy • Business case/proposal

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Role	Lifecycle	Function	Responsible	Activities
		Program Management		• Oversee project as part of program • Responsible for managing overall program costs, risks, progress
		Asset Design	Manager Project Delivery	• Ensure design solutions align with strategy • Options analysis • Concepts • Design development • Cost estimating • Complete safety in design report • Approvals process
		Asset Delivery	Manager Project Delivery	• Cost estimate • Value engineering • Procurement strategy • Contract management • Procurement • Project management • Project commissioning and handover
Maintenance and Operation Management	Maintenance	Asset Maintenance	Manager City Works	• Complete maintenance inspections • Work management triage and scheduling • Establish maintenance procedures • Undertake maintenance works
	Operation	Asset Operations	Manager City Works	• Cleaning • Utility management • Removal of debris • Security
			Manager City Works ML+CF	• Facility Operations

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12.10.5 Performance

We monitor the performance of our buildings by condition (actual physical and technical state of the asset), capacity and customer satisfaction. The condition of buildings was comprehensively inspected as part of the revaluation of the portfolio in 2024. The condition rating was undertaken using a visual verification and rating against set criteria for each of the building components. Whilst this method is a reasonable indication of condition for the portfolio, more detailed condition inspections by subject matter experts is recommended for higher value and more complex buildings. This more detailed assessment was undertaken on the following nine buildings:

- Dapto Ribbonwood Centre
- Thirroul District Library and Community Centre
- Corrimal District Library and Community Centre
- Wollongong Town Hall
- Wollongong Art Gallery
- Dapto Pool
- Southern Gateway Centre
- 81/83 Burelli Street, Wollongong (former Integral Energy building)
- Council administration building

Figure 12.10.5 below is an overview of the current condition of buildings based on the individual assessment of all components.

Figure 12.10.5 – Building Condition
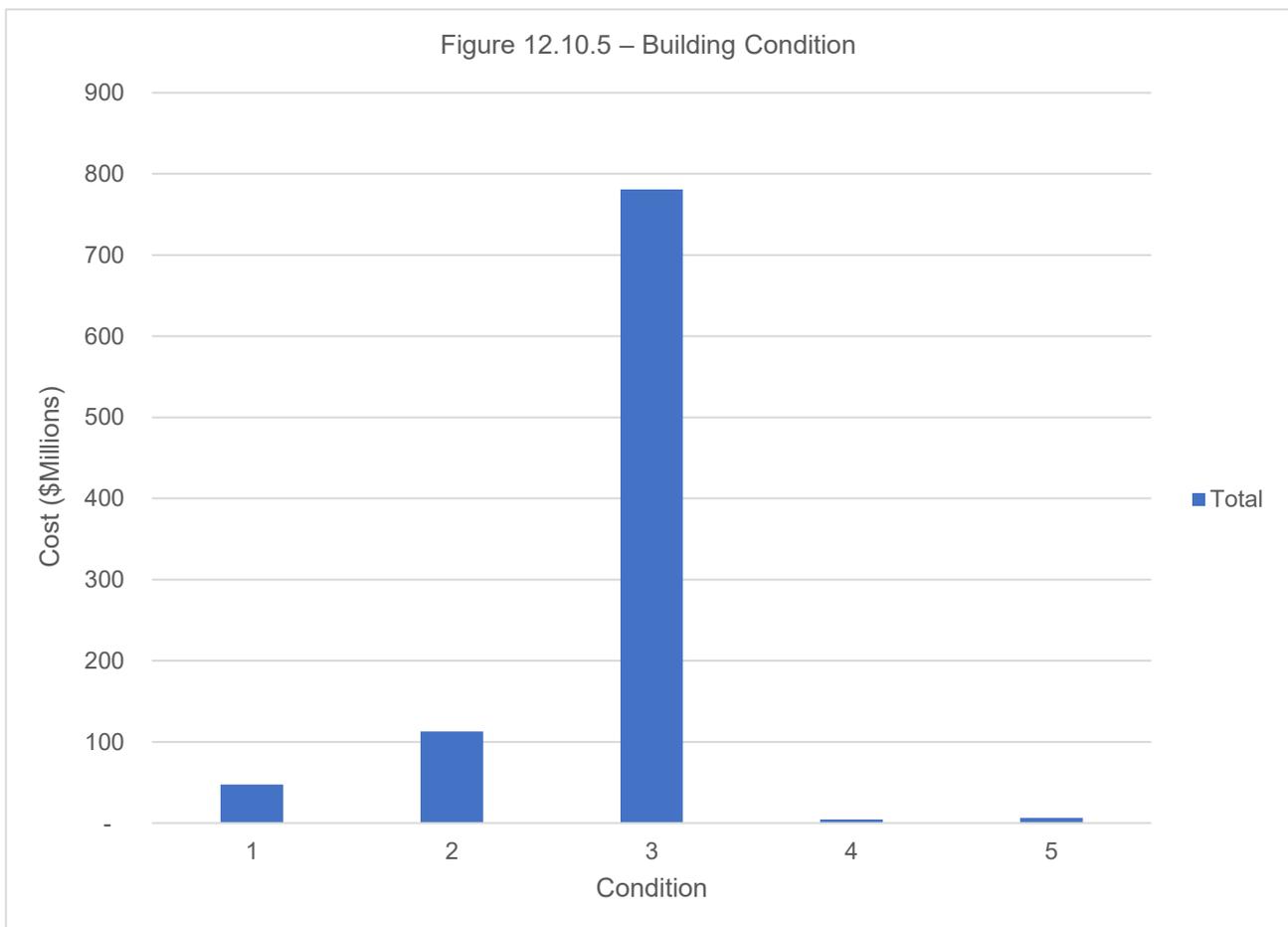
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Capacity of the building portfolio is monitored through our supporting document process for the relevant service. Our preferred operating model is for co-location and multipurpose facilities model to improve activation, safety, and socialisation. Where under-utilisation of a building is identified, we look for services that are experiencing challenges meeting capacity to rationalise use.

12.10.5.1   Community Satisfaction Survey

Council's most recent Community Satisfaction Survey indicated the level of utilisation and satisfaction with the provision of building facilities. We also monitor the provision of direct services that align to the operation of buildings. A summary of the utilisation of the facilities included in the survey is shown below:

FACILITY USAGE RATE	2017	2019	2021	2023	CHANGE SINCE 2021
Community centre at Thirroul, Corrimal or Dapto	-	-	21%	23%	+2
Community hall/centre	25%	28%	27%	30%	+3
Illawarra Performing Arts Centre and Town Hall	42%	39%	47%	41%	-6
Leisure centers (Beaton Park and Lakeside)	25%	18%	33%	33%	-
Libraries	-	-	53%	51%	-2
Wollongong Art Gallery	20%	15%	24%	25%	+1

It is noted that the utilisation of IPAC and Town Hall decreased 6% on the 2021 figures, however it is noted that IPAC was closed during parts of 2023 for refurbishment works to roof; heating, ventilation, and air conditioning; seating and carpet replacement in the IMB and Bruce Gordon theatres; installation of a new hearing loop system; accessibility upgrade of amenities; and upgrade of the servery areas.

The summary below details the community satisfaction with these facilities across multiple survey years:

FACILITIES	2010	2012	2014	2017	2019	2021	2023	CHANGE SINCE 2021
Community centre at Thirroul, Corrimal or Dapto	-	-	-	-	-	4.2	4.3	⇔
Community hall/centre	3.7	4.0	4.2	4.0	4.0	3.8	3.9	⇔
Illawarra Performing Arts Centre and Town Hall	4.1	4.2	4.3	4.4	4.4	4.2	4.3	⇔
Leisure centres (Beaton Park and Lakeside)	4.0	4.2	4.3	3.9	4.2	4.1	3.9	⬇
Libraries	-	-	-	-	-	4.4	4.4	⇔
Wollongong Art Gallery	3.9	4.0	4.2	4.2	4.1	4.2	4.1	⇔

Beaton Park is currently undergoing major works to improve some of the facilities at this location.

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The satisfaction with direct services relating the operation of buildings is summarised below:

DIRECT SERVICES	2010	2012	2014	2017	2019	2021	2023	CHANGE SINCE 2021
Customer Service Centre	3.5	3.6	3.8	3.7	3.9	3.9	3.9	⇔
The hours Council public toilets are open	-	-	-	3.1	3.5	3.7	3.6	⇔
Graffiti prevention and removal	3.0	3.1	3.3	3.2	3.4	3.6	3.4	⇔
Maintenance and cleanliness of public toilets	2.5	2.6	2.9	2.8	3.1	3.1	3.0	⇔

The survey indicated that libraries are a current strength to maintain – that is high importance and high satisfaction amongst the community. Community centres at Thirroul, Corrimal, and Dapto; IPAC and Town Hall; and the Art Gallery were of lower importance, but relatively high satisfaction. Facilities that were considered lower priority and lower satisfaction were community hall/centres and leisure centres. The community survey did not identify any building that should be a priority for attention.

In terms of direct services, the four listed above were identified as relatively lower importance, with higher satisfaction for customer service centre and the hours of operation for public toilets. Lower satisfaction was associated with maintenance and cleanliness of public toilets and graffiti prevention and removal.

12.10.5.2   Criteria for levels of service

Key Performance Measure	Level of Service	Performance Measure	Target Performance	Current Performance
COMMUNITY LEVELS OF SERVICE				
Safety	Building is safe for users/occupants	Rectification of emergency works. Prevent occupation of unsafe buildings	85% or higher completion of emergency works within agreed response time. Buildings found to be unsafe for use closed for use within agreed time frame.	
Quality	Well maintained and suitable buildings	Number of requests per annum in relation to renewal and maintenance requests	Council to monitor building requests pertaining to renewal and maintenance	

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Key Performance Measure	Level of Service	Performance Measure	Target Performance	Current Performance
Heritage preservation	Council is aware of the heritage listed buildings and is managing the facility in accordance with legislative requirements.	Each Council building listed in the Local Environmental Plan is preserved and maintained in accordance with a maintenance/ conservation plan	100% compliance	
Environment	A commitment to continually improve environmental efficiencies, reduce dependence on non-renewable fuels that emits greenhouse gases and promote sustainability	Reduction in power consumption. All high use energy consumption buildings will be fitted with solar panels and LED lighting by 2030, wherever possible	Reduction in overall power usage by Council and reduced operating costs	
Accessibility	Buildings comply with relevant minimum accessibility standards relative to building function	Compliance of available facilities with current standards relative to building function	85% compliance	
Satisfaction	The community is satisfied with the services provided by Council supported by this asset group	Community survey relating to building	No significant decrease in average satisfaction results to previous survey	The average across seven surveys is 2.9, and the rating for 2023 is consistent at 2.8. However there was a decrease from the 2021 result of 3.2 which is considered a significant decrease ☹
Residents' Wish List	The community do not see this asset group or associated service as an area of focus for	Community survey internal benchmark – "In your view what are the three key areas you think Council should	Less than 10% increase on previous percentage	Building facility and indirect services as a group increased from 35% to 41% between 2021 and

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Key Performance Measure	Level of Service	Performance Measure	Target Performance	Current Performance
	council over the next 4-years	focus on over the next four years?"		2023. This is a 17% increase 🙁
TECHNICAL LEVELS OF SERVICE				
Cleanliness	Buildings are cleaned to an agreed level	Cleaning arrangements in place	Cleaning undertaken in accordance with the agreed service standard	
Building Occupation				
NCC Building Classification Compliance	Building usage is appropriate for the class of building	Use of the building complies with NCC	85% compliance	
Permissible Use	The use of buildings must be permissible within the land use zone and/or consistent with the plan of management applying to the site for Community Land and Crown Community Land.	Use is permissible with the land use zone and/or the plan of management, or existing use rights are in place.	100% compliance	
Development consent	Certain use requires development consent under the Environmental Planning and Assessment (EP&A) Act. Those uses must obtain the necessary consent for occupation.	Identify uses that require approval under the EP&A Act and seek consent.	Development consent or complying development certificate obtained, and use is in accordance with the relevant conditions	
Safety and Compliance				
Electrical Safety	Mandatory electrical standards are maintained for safety	Compliant • RCDs • Thermal loading	100% compliance	

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Key Performance Measure	Level of Service	Performance Measure	Target Performance	Current Performance
		• Lightening arrestor		
Hydraulic Safety	Thermostatic Mixing Valve Backflow prevention First flush rainwater Rainwater filter	Current compliance certification and testing results available for all buildings Compliance with Sydney Water's backflow prevention requirements	100% compliance	
Emergency Management **Site evac plan**	Site evacuation plans available for emergency situations	Required plans are current and accessible at required locations	100% compliance	
Fire Safety	Fire safety measures maintained and certified in accordance with the legislative requirements and Annual Fire Safety Statement issued by a competent person. Inspection, testing and maintenance program to ensure compliance is maintained.	Current Annual Fire Safety Statement	100% compliance	
Hazardous Materials (lead, asbestos, PCBs, mineral fibres, site contamination, etc)	Asbestos register and management plan for buildings in accordance with legislative requirements.	Unobstructed access for all visitors, occupants and interested parties to asbestos register and management plan.	100% compliance	
Asbestos Audits	Completion of asbestos audit	Comply with the Code of Practice	Audit conducted every five years	
Registration and	Statutory inspections, registrations and	All statutory plant and equipment registrations and	100% compliance	

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Key Performance Measure	Level of Service	Performance Measure	Target Performance	Current Performance
compliance certificated	certificates obtained and kept valid.	component certification completed		
Pump Out System				
Inspect storage tank for silt and debris and remove.	Silt does not accumulate to reduce the effectiveness of the pump out system	Pump out any water from within tank and remove all silt and debris present	Annually	
Check float switches and pumps to ensure they function as required.	Triggers effectively operate to ensure pump out system is functional	Floats shall be raised to levels required to ensure pumps operate as designed. High level float shall activate siren and flashing strobe light in driveway entrance.	Six Monthly	
WHS	Provision of working from heights safety	Required access provisions in place such as platforms, restraint and anchor points, ladder brackets and alike	100% of fall from heights hazards identified and program in place to installation of facilities for safe access to work areas with fall hazards	
Condition	Condition assessment of building network completed in accordance with schedule	Council proactively monitors and keeps updated information on the condition of its building stock	Minimum of 85% of scheduled inspections complete	
Cost	Implementation of efficient and cost-effective maintenance programs	Maintenance costs attributed to work orders	Assets with high maintenance costs identified for major maintenance program or renewal.	

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Key Performance Measure	Level of Service	Performance Measure	Target Performance	Current Performance
Risk	Assets are maintained within a tolerable risk profile.	Risk assessment of road infrastructure to be undertaken.	All assets managed in accordance with the infrastructure risk appetite statement	
Utilities	Building is connected to required utilities to support service delivery	Utilities are functional, invoices paid and compliant	85% compliance	
Performance	Asset management actions and funding allocation supports long-term sustainability	Percentage of identified renewals funded		
		Percentage of planned renewals completed		
		Percentage of identified proactive maintenance works completed		

12.10.5.3   Buildings Resilience

The natural and non-natural hazard exposure categories for the City of Wollongong are identified through the Local Emergency Management Committee. The hazards identified as part of the Local Emergency Risk Management Study, that may impact buildings are summarised below:

Risk Rating	Rating Priority	Residual Risk Rating	Hazard Name	
1	**EXTREME**	**Major/ Likely**	Severe Storm	Severe storm with accompanying lightning, hail, damaging winds, and/or rain that causes severe damage and/or localised flooding (includes tornado and waterspout) and coastal erosion. This hazard may impact buildings, through sustained damage.
2	**EXTREME**	**Major/ Likely**	Fire – Bush/Grass	Major fires in areas of bush or grasslands. The impact on buildings is linked to facilities in the impacted area.

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4	EXTREME	Major/ Likely	Flood – Lake and Flash	Heavy rainfall causes excessive localised flooding with minimal warning time. This hazard may impact buildings within the floodplain area.
6	EXTREME	Major/ Possible	Infrastructure Failure – Power	Power failure may impact the ability to utilise some buildings due to amenity impacts.
9	HIGH	Moderate/ Likely	Landslip / Mudflow / Rockfall	Landslip/mudflow/rockfall resulting in localised or widespread damage. Landslip can cause instability and closure of the road. These impacts can create medium to long term closures whilst support is reinstated.
15	HIGH	Major/ Rare	Major Structural Collapse	Failure of a major structure with or without warning owing to structural failure or because of external/internal events or other hazards/incidents. This hazard could be associated with a council owned building, or with a structure adjacent to a council owned building.
17	HIGH	Major/ Rare	Infrastructure Failure – Water	Major failure of essential utility for unreasonable periods of time because of a natural or human-caused occurrence (>24 hours). Lack of water will render most impacted buildings unusable for hygiene reasons.
18	HIGH	Major/ Rare	Earthquake	Earthquake of significant strength (> Magnitude 7) that results in localised or widespread damage. The extent of damage can vary widely from minor cracking to major structural failures.
19	HIGH	Major/Rare	Tsunami – Land inundation threat	A tsunami wave of magnitude that presents a risk to land and marine elements. This hazard may impact buildings within the impacted zone.
22	MODERATE	Moderate/ Unlikely	Hazardous Materials	Release of a hazardous material stored within or adjacent to a building structure.
24	RARE	Minor/ Low	Coastal Erosion	Damage to building assets resulting from significant coastal erosion.

The local emergency management plan covers the preparedness and response plans for the events listed above. Post incident, Council will instigate the appropriate inspection program to review any building impacted by the event.

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12.10.5.4   Climate Hazards

The key climate hazards identified through the Climate Change Adaptation Plan (CCAP) as most relevant to buildings are summarised in table 12.10.5.4 below:

Table 12.10.5.4 – Climate Hazards Impacting Buildings

Priority Actions		
Hazard	**Action**	**Building Management Relationship**
Heat	Assess the suitability of Council facilities to be utilised for respite centres on hot days. This may include provisions for adequate water and food, power supply and potentially use of recycled water and appropriate landscaping to provide shade.	Any identified upgrade requirements to be included in future investments for buildings and facilities. Identified facilities may require specific management plans. Improvements to passive heat control of the facility in addition to conditioned air will improve performance and reliability of the respite location.
	Plan for the potential cost impacts of overlapping or more frequent heat events.	Include estimated increased operational costs to cool building and facilities. Improve thermal efficiency of high-priority and high-energy use locations.
Flooding	Ensure new developments consider climate change projections including rainfall intensity and sea level rise.	New buildings to be designed to cater for the relevant building controls in the DCP.
Bushfire	Review Council's response to manage air pollution for Council buildings and facilities.	Identified issues may require modifications to buildings and facilities.
	Review bushfire risk and emergency management plans for Council operational or leased buildings.	Potential for operational works for maintenance of asset protection zones around the building.
Storms	Identify Council's business continuity plans (BCPs) and review and updated as required to address increase the likelihood of storm and extreme weather events.	BCPs may identify critical services and associated assets. Any critical assets are listed in the asset management plan, and appropriate management plans developed.
Drought	Council will review the water efficiency of its operations including detecting leaks in water supply (for Council managed water network).	Monitor water usage associated with buildings. Check for leaks as part of inspection program.
	Council to consider rainwater, sewerage mining/ recycling and stormwater harvesting and usage, to support irrigation for sports fields.	Consider stormwater harvesting associated with buildings.
Sea-level rise	Recovery plans from emergencies are to be developed in partnership with communities and other relevant service providers.	Recovery plans typically result in unscheduled maintenance activities. Some recovery actions are part funded through State agencies for major events. An allowance will be included in estimates based on a review of prior years' activities.

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12.10.5.5 Coastal Zone Management Plan

The Wollongong Coastal Zone Management Plan 2017 (CZMP) reviewed the vulnerability of surf clubs and public buildings to storm erosion and sea-level rise induced foreshore recession. The CZMP notes that surf clubs are generally located immediately behind the beach, which typically means that they are at risk of costal inundation and/or shoreline recission. The buildings that remain under threat along the coastline, as summarised below in Table 10.10.8.5:

Table 12.10.5.5 – Buildings Coastal Hazard Assessment

Location and Asset	Risk Now	Risk at 2050	Risk at 2100
Thirroul Surf Club; Thirroul Pavilion (heritage site); Sandon Point Surf Club; and Bulli Surf Club	High	Extreme	Extreme
Helensburgh/Stanwell Park Surf Club; Austinmer Surf Club; Former Quest House, Thirroul (heritage) subject to inundation; Bellambi Surf Club (inundation)	Medium	High	Extreme
Austinmer Boatshed (wave overtopping); Bulli Kiosk and Residence; Corrimal Surf Club (inundation)	Medium	Medium	High
Woonona Surf Club; North Beach Kiosk (heritage)	Low	Medium	High
Coalcliff Surf Club; Coledale Surf Club; Coledale Beach camping reserve amenities building; Fairy Meadow Surf Club lifeguard tower	Low	Medium	Medium

Management of Surf Clubs and Public Buildings that are at 'high' or 'extreme' levels of risk at the current timeframe takes highest priority. An audit of the buildings and a plan for those at high and extreme risk is to be prepared. Each of the locations above with a current high risk were assessed as part of the building valuation as having remaining useful life that would extend into the period of extreme risk.

12.10.5.6 Legislative Requirements

- Work Health and Safety Act 2011
- Environmental Planning & Assessment Act 1979
- Heritage Act 1977
- Disability Discriminations Act, 1992
- Electrical Safety Act, 2002
- Building Fire and Safety Regulations
- Plumbing and Drainage Act 2011
- Surveillance Devices Act 2007
- Smoke Free Environment Act 2000

12.10.5.7 Buildings Provision and Management Arrangements

Council has historically owned and operated most buildings utilised for delivering services. This model is likely to continue for the foreseeable future. A small percentage of buildings leased by council to provide services via a lease, licence or other agreement with a Government Agency or private landowner. Council also provides access to buildings for use by specific user groups and service operators under agreement through lease, licence, permit and other use agreements. Some buildings and facilities are operated on a commercial basis where the market is tested for occupation of the space on a competitive basis.

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Our supporting documents identify our current and future demand for services that are supported through the provision of buildings. To ensure equitable access and sustainable provision of services, we primarily look to operate under a shared multi-use model. The lifecycle cost of providing, operating, and maintaining buildings is proportionally higher than other asset groups and the coordination or services and sharing of facilities is key to sustainably managing buildings. We will continue to monitor utilisation, capacity, and demand to inform future direction on the utilisation of buildings and facilities.

Legislative requirements under the Rural Fires Act 1997 (Cl. 37) and the State Emergency Service Act (Cl 17) place obligations on Council to provide certain facilities to the emergency services to undertake their functions. The standards to which these facilities are provided are as approved by the respective Commissioners. Council maintains buildings and facilities that accommodate a range of functions including office accommodation, change and amenity facilities, garaging and storage, and training.

Over 50% of the buildings currently in-service were constructed prior before 1986 and 75% by 2007. Figure 12.10.5.7 below provide an overview of the number of buildings constructed by year. The year of commissioning of buildings prior to the year 2000 are largely estimated and typically assigned at 5-year intervals. This is seen with notable spikes in 1955, 1960, 1965, 1970, 1975, 1980 and 1985. The spike in 2009 is a result of a renewal of several tourist park cabins.

Figure 12.10.5.7 – Building Portfolio by Year of Construction
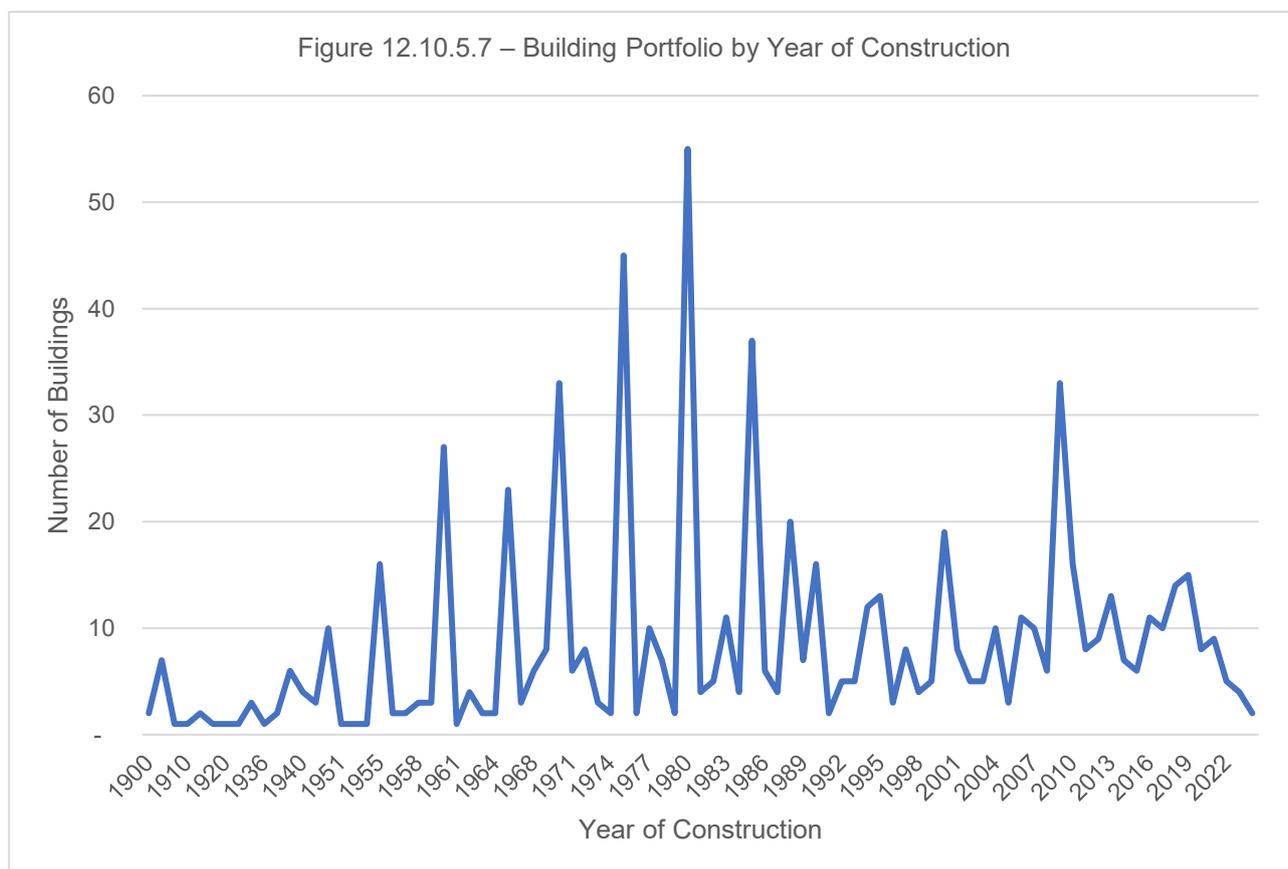
Council directly manages most of the building portfolio with several buildings operated under licence and lease agreements. We have been progressively updating legacy building agreements with clearly articulated arrangements for the management of operational, maintenance and renewal activities and costs. This ensures clear and transparent accountability for both council and the party under the agreement. We will continue to monitor these responsibilities through our on-going inspection program.

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12.10.6 Buildings and Facility Service Level Framework

The current and forecast demand for building space is generally very high (based on Usage rating in Places for the Future) since most services provided by council rely on a building to operate. Council is also mandated to provide space for legislated services provided by the NSW Government (e.g. Rural Fire Service and State Emergency Service). To meet these demands, we provide and manage over 700 buildings accommodating a wide range of service functions. We need to maintain buildings so they can continue to support the delivery of a wide range of services to meet the social, economic, and environmental needs of the community. We invested an average of $10.9 million/annum over three years on operational and maintenance functions to keep these facilities available for use.

Applying equal service levels across all buildings results in compromised service delivery on some facilities, and over servicing on others. A more sustainable approach is to apply a service level framework that informs the allocation of resources and decisions for future investment based on risk and criticality, service impacts, and resource availability. Service levels will enable a more strategic approach to the management of buildings will provide the following benefits:

- Improve the efficiency and effectiveness of maintenance.
- All buildings are adequately maintained based on priority.
- Risks are managed.
- Infrastructure and financial capital can be maintained over the long-term.
- Information is available for monitoring maintenance, condition, and performance of buildings.
- Improve planning for capital investment into renewal, upgrades, extension, and new assets.
- Rationalising buildings with low utilisation through facility sharing.

This can be achieved by applying a level of service framework specifically developed for managing buildings. The framework can be used to help prioritise reactive and proactive maintenance works, scheduling of operational activities, and determining priority for capital investments. It will sharpen the focus on life-cycle value and alignment of priorities to the community strategic plan goals.

A service level framework can be applied for all asset categories. A framework is partially implemented for roads that uses a similar approach to the recommended model for buildings. The model recommended is:

1. Define and assign **use categories** to each building.
2. Establish facility **service levels** associated with use categories and define performance measures relating to condition, renewals, and maintenance intervention.
3. Develop a matrix of **operational and maintenance activities** and assign standards and frequency to the facility service level.
4. Develop a **prioritisation and resource allocation model** for capital works on buildings.
5. Integrate and align service levels in **supporting documents** and asset plans.
6. Use service levels to assign operating hours, provision, risk management, and other functions.

The Places for People framework is an example of a supporting document that has defined service levels for facilities. The document provides guidance on the desirable size, distribution, catchment size and other relevant attributes.

A sample framework is provided at *Appendix D* to demonstrate how it could be applied to buildings. *It is not intended to be a completed framework for implementation*, rather an example of how it could apply in the

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Wollongong context. Local-specific information has been used in the sample from the Places for People classification for Community Facilities.

12.10.6.1   Defect Management

A defect management framework should be developed to complement the service level framework. The intervention and response time should be based on the severity of the defect and the criticality of the facility. This follows a risk-based approach to defect management and reactive maintenance. An example building defect management framework, based on a IPWEA model, is provided at *Appendix E*.

12.10.7   Future Investments

12.10.7.1   New and Upgrade Plans

The following list includes new buildings, upgrades to existing buildings, and those that require a feasibility investigation to determine the future direction:

- Southern Suburbs Library and Community Centre
- Helensburgh Library and Community Centre
- Stuart Park Amenities upgrade and extension
- Beaton Park multipurpose facility
- Lang Park Amenities
- Wollongong Animal Shelter
- Sublime Point Lookout
- Cliff Hanger
- Kembla terraces
- Rural Fire Services
- State Emergency Service

In addition, five new facilities are proposed under the West Dapto Development contribution plan as summarised in the table below. Whilst the plan collects contributions towards the purchase of land, the development contributions plan is restricted in essential works, which does not include the cost of the facility. Council will need to formulate a funding strategy to deliver the facilities and provide funds for operation, maintenance and renewals proposed under the plan:

Ref	Infrastructure Item	Indicative location	General Description	Indicative Timing
CF01	Neighbourhood multi-purpose community centre	Darkes Town Centre	New facility	2020/21 – 223/24
CF02	Neighbourhood community centre	Wongawilli Hall – west end of Wongawilli Road	Upgrade and extension of hall.	2020/21 – 2020/21
CF03	Sub-district multi-purpose community centre and library	Bong Bong Town Centre	New facility with an optional childcare centre.	2020/21 – 2023/24
CF04	Neighbourhood multi-purpose community centre	Co-located with Community Leisure & Recreation Centre	New facility	2041/42 – 2045/46
CF05	Neighbourhood multi-purpose community centre	Marshall Mount Town Centre	New facility	2021/22 – 2024/25

12.10.7.2   Decommissioning and Disposal Planning

Where we identify buildings that are not required to meet a required level of service, we may look at decommissioning the facility. Under-performing assets are currently under review to determine an appropriate course of action including buildings with a backlog of maintenance and renewal work with generally low utilisation. Unforeseen decommissioning may result from impacts of natural disaster or unplanned incident.

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12.10.7.3   Renewal Works

Based on the most recent revaluation of buildings, the renewal profile for the next 30 years is shown below in Figure 12.10.7.3. Over the next 10-year period, the average renewal requirement is approximately $4.3million/ annum. However, the forecast renewals escalate significantly in the following 20-year period between 2036-2054, increasing to $17.5 million/annum. The forecasts are based on the timing of renewal at building level. However, in practice it is preferable to understand renewal requirements at building at component level. To improve efficiency and avoid rework on previously completed works, the timing of works on components need to be coordinated within the building. We are proposing to invest and average of $11.7 million annually over the next 10 years.

Figure 12.10.7.3 – Renewal Forecast - Buildings
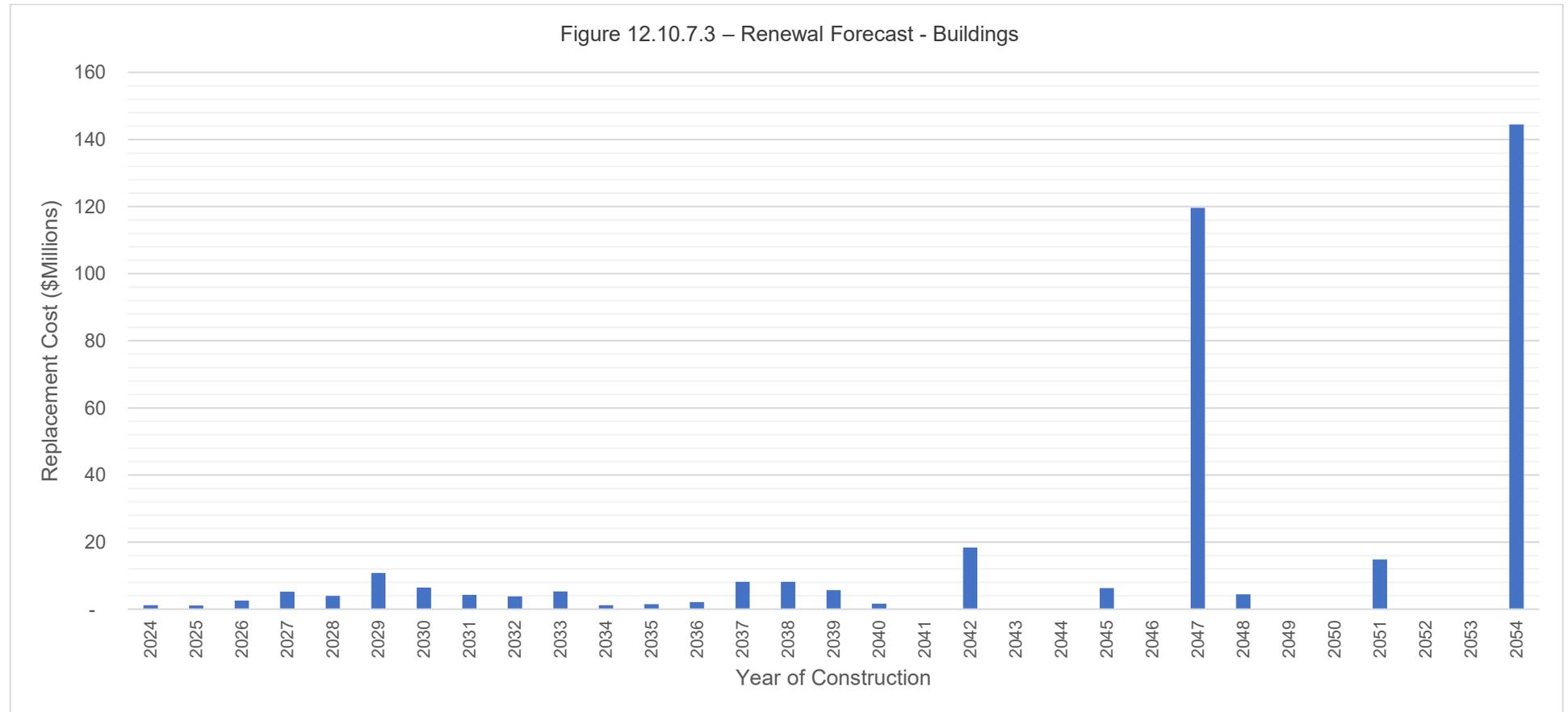
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Detailed condition audits were undertaken on the following buildings and the forecast renewal requirements for these properties are provided below:

Building	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
81 Burelli St				100,000	957,434	2,500,000	478,140	1,434,420			
Administration Building & Car Park	650,000	450,000	150,000	150,000	4,000,000	1,900,000					
Art Gallery	75,000	1,673,200	4,298,000	440,000	175,200	154,000	291,000	507,200	387,000	259,000	201,200
Corrimal District Library & Community Centre	27,000	30,200	43,800	58,200	67,200	138,000	122,800	133,200	103,000	58,200	54,400
Dapto Pool Amenities/Residence		3,900		141,000	112,800	158,800	137,000	105,000	161,000	64,000	201,000
Dapto Ribbonwood Centre	124,000	162,200	184,400	366,000	969,200	527,000	956,600	677,400	604,700	203,200	136,600
Southern Gateway Centre - Bulli Tops	40,000	128,000	200,000	138,000	429,000	744,000	394,000	246,900	274,000	152,000	155,000
Thirroul District Community Centre & Library	23,000	18,800	34,000	40,000	28,000	142,000	122,000	205,000	182,000	108,000	100,000
Wollongong Town Hall	155,000	113,000	201,000	373,000	221,000	202,000	420,000	462,000	377,000	322,000	72,000
Total	**1,094,000**	**2,579,300**	**5,111,200**	**1,806,200**	**6,959,834**	**6,465,800**	**2,921,540**	**3,771,120**	**2,088,700**	**1,166,400**	**920,200**

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These estimates are included in the estimated required renewals totals in the *Future Investment Plan – Buildings* table.

12.10.7.4   Future investment plan - Buildings

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Depreciation	20,003,961	20,113,352	20,530,619	20,936,541	20,992,745	21,079,342	21,088,189	21,097,036	21,105,883	21,114,730	21,123,577
Required maintenance & operational works	19,219,320	19,324,420	19,725,320	20,115,320	20,169,320	20,252,520	20,261,020	20,269,520	20,278,020	20,286,520	20,295,020
Operating expenditure	39,223,281	39,437,772	40,255,939	41,051,861	41,162,065	41,331,862	41,349,209	41,366,556	41,383,903	41,401,250	41,418,597
Renewal works	9,560,000	10,350,000	6,335,000	9,520,000	11,320,000	13,837,800	13,758,900	13,667,569	13,692,830	13,692,830	13,692,830
Upgrade works	615,000	10,715,000	12,310,000	3,570,000	2,050,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Expansion works	4,270,000	20,620,000	27,260,000	16,080,000	-	-	-	-	-	-	-
New works	985,000	180,000	1,900,000	13,950,000	750,000	-	-	-	-	-	-
Capital expenditure	15,430,000	41,865,000	47,805,000	43,120,000	14,120,000	15,837,800	15,758,900	15,667,569	15,692,830	15,692,830	15,692,830
Totals	54,653,281	81,302,772	88,060,939	84,171,861	55,282,065	57,169,662	57,108,109	57,034,125	57,076,733	57,094,080	57,111,427
Estimated required renewals	12,296,397	12,296,397	12,296,397	12,296,397	12,296,397	12,296,397	12,296,397	12,296,397	12,296,397	12,296,397	12,296,397
Planned renewal as a % of estimated required	83%	171%	152%	106%	109%	129%	128%	127%	128%	128%	128%

Asset Management Plans

12.10.8 Buildings Infrastructure Improvement Program

The following opportunities have been identified through the preparation of this asset management plan that will assist in improving future asset management planning outcomes:

Item	Issue	Description	Responsible	Timing
10.1	Componentisation	A data dictionary has been prepared for buildings with standardised descriptions for building components. This was utilised to inform the revaluation of buildings. It is recommended that the asset register be updated to recognise the requisite building components.	MISP	2026
10.2	Service level framework	It is recommended that a service level framework be developed and implemented to inform the service level and response times for different use cases. This will facilitate operational and scheduled maintenance planning and inform priorities for future investment.	MISP	2028
10.3	Defect management	It is recommended that a defect management framework be developed to complement the service level framework	MISP / MCW	2028
10.4	Proactive Maintenance	Continue development of proactive maintenance programs including activities, prioritisation methodology, target response times, and work order's structure. This will complement items 3.2 and 3.3	MISP / MCW	2028
10.5	Useful life review	As part of the building valuation, an estimate of the remaining useful life of each component was provided. A review should be undertaken to assess the overall useful life guide to determine if it remains current, or if updates are required.	MISP	2026
10.6	Climate Hazards	The Coastal Zone Management Plan identifies several buildings that are currently at high risk from coastal hazards. A plan is to be prepared for each of these sites to determine the management option going forward. This includes buildings with heritage significance. The feasibility of proposals to relocate heritage buildings will need to be undertaken.	MISP	2027
10.7	Decommissioning	Investigate the potential for decommissioning buildings that are not meeting expected service standards with relatively low utilisation.	MISP / MCO+P / ML+CF	2027
10.8	Criticality rating	Identify buildings that provide direct linkage to emergency services and other critical services to determine the appropriate criticality rating. This includes evacuation centres, heat respite locations and similar buildings providing shelter for vulnerable community members.	MISP	2026
10.9	Coalcliff Community Hall	Review the functionality of the hall and options for alternative service delivery as per the Social Infrastructure Plan. This is to be	ML+CF / MISP	2026

Asset Management Plans

Item	Issue	Description	Responsible	Timing
		actioned prior to commissioning any renewal works on the building.		
10.10	Fairy Meadow Community Centre	Complete a needs analysis to inform the brief for a feasibility and lifecycle cost plan to be prepared.	ML+CF / MISP	2027
10.11	Heritage assets	Ensure that heritage buildings are appropriately identified in the register and that the associated conservation management plan is attached to the asset listing.	MISP	2027
10.12	Animal Shelter	Identify the short, medium, and long-term accommodation needs and options for the service.	MR+E	2026
10.13	Commercial properties	Review options and feasibility, including lifecycle costs, for operation of kiosk or similar facilities at Sublime Point and Bulli lookout areas.	MISP / MCO+P	2026
10.14	Accessibility Service Level	Develop a prioritised program to support the Accessibility Level of Service objectives. Program to undertake high-level feasibility and cost estimate.	MCC&E & MISP	2026
10.15	Accessibility Service Level	Program the implementation of priority works identified in action 10.14.	MISP	2027
10.16	Standard/modular buildings	Develop a standard suite of buildings which can go from approved funding to design and construct.	MISP	2026
10.17	Sustainable and Resilient Building management and delivery.	A Sustainable Building Policy be developed and adopted balancing financial and environmental sustainability.	MISP	2026

Asset Management Plans

12.11 Plant, Fleet and Equipment

Plant, fleet and equipment enable Council to deliver its activities and services in the community. This section of the asset management plan focusses on variety of plant, fleet and equipment that includes items under the following categories:

- Earthmoving
- Rural Fire Service
- Light commercial
- Major ancillary equipment
- Minor ancillary equipment

- Mowers
- Passenger vehicles
- Tractors
- Trailers
- Trucks and buses

The asset snapshot below provides more detail on the types of plant, fleet and equipment we hold.

12.11.1 Profile

Community Strategic Plan Goal: Support Services

Service: Governance and Administration & Infrastructure Strategy and Support

Plant, fleet and equipment provide support for multiple services across the organisation. The provision and management of the light vehicle fleet (passenger and light commercial vehicles) is coordinated through the Customer + Business Integrity Division. The remainder of plant, fleet and equipment is managed and coordinated through the City Works Division. All plant, fleet and equipment maintenance and servicing are coordinated through the City Works Division. The requirement for plant, fleet and equipment is determined by the service manager for the respective service that the asset supports. Plant, fleet and equipment assets are linked to Support Services and the delivery stream of Vehicle Management and Support Assets.

Vehicle management facilitates permanent and casual usage to meet the needs of business units' fleet of vehicles. This stream manages motor vehicle fleet to balance cost, environmental and functionality requirements. It includes internal carpooling arrangements for leased vehicles and oversight of the vehicle acquisition strategy and replacement program.

We recognise that many services could not be delivered to the required service level without the appropriate plant, fleet and equipment. The table below provides some examples of how plant, fleet and equipment support services are linked to each goal of the CSP:

Goal 1: We are a sustainable and climate resilient city	
Service	**Plant, Fleet & Equipment Assets Utilised**
Botanic Garden & Annexes	- Loader - Skid steer - Mowers - Light commercial vehicle - Tractor - Trailers - Electric bus

Asset Management Plans

	• Trucks
Environmental Services	• Vehicles to support clean-up activities
Stormwater Services	• Passenger vehicles • Trucks • Excavators
Natural Area Management	• Small plant and equipment – • Watering equipment • Mowers • Woodchipper
Waste Management	• Compactors • Trucks

Goal 2: We have well planned, connected, and liveable places	
Service	**Infrastructure Asset Relationship**
Emergency Management	• RFS and SES equipment
Memorial Gardens & Cemeteries	• Excavator • Mowers • Trailers • Trucks
Regulatory Compliance	• Passenger vehicles • Light commercial vehicles
Transport Services	• Plant, Fleet & Equipment Assets Utilised

Goal 3: We foster a diverse economy, and we value innovation, culture, and creativity	
Service	**Infrastructure Asset Relationship**
Cultural Services	Light commercial vehicles
Engagement, Communications and Events	Light commercial vehicles
Tourist Parks	• E-Cars and ATV • Light commercial vehicles • Mowers • Trailer

Goal 4: We have a healthy, respectful, and inclusive community	
Service	**Infrastructure Asset Relationship**
Aged & Disability Services	• Buses
Aquatic Services	• Jetskis • Pool cleaners • Mowers • High pressure Gurney • Mobile pool hoists
Community Facilities	• Scissor lift

Asset Management Plan |

Asset Management Plans

	• Mowers
Community Programs	• High pressure gurney
Leisure Centres	• Lakeside leisure centre plant and equipment • Gym and sports equipment
Libraries	• Light commercial vehicles • Self-checker machines
Park & Sport fields	• Excavator • Light Commercial • Skid Steer • Trailers

12.11.2 Strategic priorities

Plant, fleet and equipment are operated under a partnership model, where the service manager determines the requirements of plant, fleet and equipment to provide effective services. The service manager is supported by a procurement and fleet expert to assist with advice and assistance with sourcing and managing assets. Planning for plant, fleet and equipment is associated with individual service plans. However, decisions are informed by the following strategic supporting documents:

• Net Zero Wollongong Climate Change Mitigation Plan 2023-30

• Sustainable Procurement Policy

• Vehicle Acquisition Strategy

The Net Zero Wollongong Climate Change Mitigation Plan (CCMP) identifies several actions that influence our planning for plant, fleet and equipment. Actions that we are implementing include the purchasing of energy from renewable energy sources, encouraging and advocating for sustainable transport, moving towards electrification, and improving our waste management practices.

The CCMP identifies that transport emissions will become a major source of emissions as we approach 2030. To reduce Council's transport emissions, the focus is on the transition of plant, fleet and equipment to low carbon alternatives. We have continued transitioning the fleet to Battery Electric Vehicles (BEV), electric plant, fleet and Hybrid electric vehicles. In addition, we have added e-bikes to our fleet to encourage sustainable transport for shorter trips.

The following table 12.11.2 summarises the actions from the CCMP with a relationship to plant, fleet and equipment assets and an assessment of the direct impact:

Table 12.11.2 – Strategic Actions

Plant, fleet and Equipment Action	Measurement	Resource Impact
LE8. Transition fleet to low carbon alternatives and increase operational efficiency	Measurement - # of EVs in fleet, Fuel Consumption	The CCMP analysis forecasts a transition to EV passenger vehicles. This will require additional funding for replacement as the relative cost of EVs are currently higher than equivalent internal combustion engine alternatives. However, the on-going operational costs are likely to decrease with lower servicing requirements and reduction in fuel costs.

LE9. Transition to low carbon plant and equipment and increase operational efficiency	Measurement - Fuel Consumption	This includes the electrification and replacement of plant and equipment with more efficient assets. This action requires planned redundance of gas and fuel powered plant. In addition, a program is required to identify high energy use plant and equipment and plan for replacement with more efficient assets.

12.11.2.1   Future Impacts

The following future impacts were identified in the delivery stream report for Vehicle Management relating to passenger vehicle grouping of the plant, fleet and equipment assets. The strategic response as it relates to the assets, and the consequences of not funding the impact is summarised below.

Future Impacts	Strategic Response	Consequences of Not Funding
Consolidating fleet options.	A review of options will enable decisions to optimise the management of fleet and improve certainty of whole of life costs.	The action is undertaken with internal resources at minimal operational cost. Failing to invest in the action is likely to result in greater uncertainty around whole of life fleet costs.
Review life of vehicles to optimise asset use.	The useful life of vehicles determines the change over time. The vehicle will have a longer service life than the optimised useful life, however the costs to operate and maintain increase and service reliability decreases.	Increased whole-of-life costs.
Enhanced environmental considerations and options within the fleet.	Moving towards low emissions vehicles in accordance with Net Zero objectives.	Impact on ability to meet targets for reducing emissions from fleet.
Introduction of IT system for Carpool operations.	The system will support greater utilisation of existing assets through improved access for users to available resources.	Reduced optimisation of resource usage and potential increase of carpool vehicles. Inefficiency through time loss of users looking for available fleet.

12.11.2.2   Future Demand

Demand drivers relating to plant, fleet, and equipment are directly related to the service the asset supports. In addition, two major demand drivers are summarised below:

Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
Electrification of fleet	Target of a transition to 50% of new EV	Change in fleet items.	The organisation has been trialling several EV options	Vehicle Management Program.

	passenger vehicles acquired by 2030, and 100% of new vehicles by 2035. This is during the life of this plan	Charging infrastructure. Potential change in distance travelled or hours of operation.	to add to the fleet. Modify the passenger vehicle list to include EV options. AC Charging infrastructure installed in Administration building car park.	Charging infrastructure plan to be developed for additional workplaces and potential DC charging needs.
Population Growth and West Dapto land release	Increased population by 55,000	Increase in public infrastructure provision, including open space, roads, drainage, community buildings. Increases demand on plant and equipment that support these service areas, such as mowers, street sweepers, trucks, etc.	Service plans aligned to the forecast growth. Monitoring of growth rate to enable commissioning of required plant and equipment to meet the increased service demand.	Plant and equipment programs.

12.11.2.3   Plant, Fleet and Equipment Provision

Plant, fleet and equipment can be essential to supporting the respective service and assets are often used every day. Given the specific nature of the assessment for plant, fleet and equipment, the need for plant, fleet and equipment is considered as part each service. Business proposals are required to demonstrate the life-cycle cost and benefits to the service for any expansion to the fleet.

We will need to provide access to charging infrastructure as we transition to a low emission passenger fleet. We are still working through the options at this stage; however our current position is to provide Level 2 charges at workplaces and leverage the public network of Level 3 charges. Level 1 chargers essentially utilise a standard 240V single-phase wall outlet (about 2kW); Level 2 chargers are (typically) hard wired to either single phase (7kW) or three-phase (11-22KW); and Level 3 are DC fast chargers typically ranging from 50kW to over 200kW.

We will need to monitor operational need, supply of public infrastructure, costs, and efficiency as part of our internal service reviews. This will indicate whether we need to make any changes to the provision of charging infrastructure for our passenger fleet. Our demand may also grow a more options for light commercial and small trucks become readily available on the market.

12.11.3 Asset Snapshot

Asset Register – Fleet

Financial Reporting Group: Plant, Fleet and Equipment

Row Labels	Count of Asset	Average of Useful Life (Years)	Sum of Current Asset Cost	Sum of Current Annual Depreciation as at 30 June 2024	Sum of Carrying Value
Earthmoving	**57**	**9**	**5,806,028**	**587,712**	**2,120,080**
Articulated Dump Truck	1	5	461,020	92,204	146,516
Backhoe	7	6	638,212	63,844	93,549
Excavators	21	9	1,501,639	152,283	858,316
Forklifts	7	12	113,813	8,685	70,766
Garbage Compactors	2	3	1,099,271	0	0
Loaders	5	8	762,561	64,193	589,700
Rollers	10	10	475,677	38,629	318,920
Skid Steer Loaders	3	13	82,335	0	0
Track Loaders	1	4	671,500	167,875	42,314
Executive / RFS*	**6**	**9**	**287,551**	**35,170**	**241,840**
Light Commercial	**210**	**4**	**4,979,222**	**649,406**	**2,632,511**
Various	8	4	197,551	12,848	171,157
LC 4x2 2,000 to 4,000 GVM	114	4	2,365,296	319,437	1,140,594
LC 4x4 2,000 to 4,000 GVM	67	5	2,001,234	264,051	1,088,530
Vans	14	4	415,141	53,070	232,230
Major Ancillary Equip	**168**	**7**	**4,967,808**	**645,281**	**3,000,896**
Miscellaneous	9	8	615,577	109,846	569,154
Air Compressor Over 20 cfm	1	15	29,600	1,974	19,399
All-Terrain Vehicle (ATV)	42	3	635,761	159,984	344,935
Caravan	12	15	562,020	37,476	321,884
Generator Fixed Power	5	6	111,837	11,085	42,395
High Pressure Gurney (major)	5	5	27,399	4,780	20,577
Jetski	16	2	70,909	15,455	44,181
Major Equipment - Fleet W/Shop	15	13	369,452	19,660	215,695
Major Equipment - Parks	8	10	167,648	14,884	100,373
Miscellaneous Major Plant or Equipment	30	9	458,611	28,685	182,888
Pool Cleaner	10	8	272,009	38,080	187,649
Sweepers (Footpath/Mall)	2	5	186,424	37,285	74,467
Sweepers (Large Road)	6	8	1,109,405	138,245	795,281
Water Tanks	1	8	0	0	0
Woodchipper	6	5	351,156	27,844	82,017
Minor Ancillary Equip	**21**	**10**	**928,096**	**90,925**	**141,746**
Various	2	3	258,605	86,202	131,184
Attachments	2	11	14,878	1,240	1
High Pressure Gurney (minor)	3	7	5,050	505	1
Minor Equipment (Miscellaneous)	5	13	475,649	1,801	6,790
Power tools Electrical/Cordless	1	15	5,990	399	2,362
Radio Communication Units	2	5	134,108	0	0

Asset Management Plans

Workshop Equipment (Minor)	4	17	33,817	778	1,407
Mowers	**137**	**6**	**2,559,026**	**336,668**	**1,057,701**
Ride-on Mowers	97	7	1,845,157	251,372	754,889
Tractor Mowers	36	6	700,751	83,984	298,201
Wicket Mower	3	7	13,117	1,312	4,611
Passenger Vehicles	**273**	**3**	**4,210,053**	**550,533**	**2,988,790**
Various	3	3	23,578	3,069	14,618
EV BYD Atto	5	3	242,802	35,478	240,342
EV BYD Seal	4	3	47,302	6,420	47,056
EV Kia Niro	15	3	523,832	61,763	494,602
EV MG4 64	2	3	40,801	5,406	39,294
Large Vehicle	10	3	115,239	21,280	61,864
PHEV	2	3	49,598	6,731	49,340
Small Vehicle	27	3	258,295	30,663	178,926
Standard Vehicle	150	3	2,908,607	379,723	1,862,748
Tractors	**27**	**9**	**1,663,504**	**186,111**	**712,223**
Tractors over 40 Hp under 80 Hp	9	9	399,448	49,958	49,393
Tractors over 80 Hp	13	8	1,116,374	122,338	630,942
Tractors up to 40 Hp	5	10	147,682	13,815	31,887
Trailers	**110**	**10**	**1,008,430**	**72,935**	**530,347**
Boat/Jetski Trailer	13	7	65,324	7,581	28,318
Box Trailer	21	13	150,961	7,843	48,348
Plant Trailer	22	14	195,134	13,342	96,079
Tandem Canopy Trailer	17	15	277,616	18,103	165,878
Tanker Trailer	4	12	55,403	4,153	5,284
Utility Trailer	32	6	263,992	21,914	186,440
Trucks and Buses	**150**	**9**	**17,784,157**	**1,472,195**	**5,509,895**
Buses	22	7	2,020,271	47,570	132,348
HC 4x2 12,000 to 20,000 GVM	33	9	5,186,619	333,984	1,490,902
HC 6x4 over 20,000 GVM	6	9	1,482,717	131,092	351,380
MC 4x2 4,000 to 8,000 GVM	26	8	1,515,532	137,324	594,433
MC 4x2 8,000 to 12,000 GVM	63	9	7,579,018	822,224	2,940,832
Grand Total	**1093**		**44,193,875**	**4,626,937**	**18,936,030**

^Council also operates four E-bikes – however the cost was below the threshold for recognising as a financial asset. They are part of our commitment to offering options to reduce emissions from Council operations.

*Following a change in the way Rural Fire Vehicles are recorded in the asset register, the plant, fleet and equipment utilised by the Rural Fire Service (RFS) are listed by asset type, only legacy items are shown in this field. The RFS is now identified as the entity in the plant, fleet and equipment register.

Asset Management Plans

The following table identifies the plant and fleet (included in the table above), that is associated with the Rural Fire Service:

Row Labels	Count of Asset	Average of Useful Life (Years)	Sum of Current Asset Cost	Annual Depreciation as at 30 June 2024	Sum of Carrying Value
Executive / RFS	**5**	**9**	**152,551**	**21,670**	**120,377**
Light Commercial	**20**	**10**	**851,506**	**52,036**	**255,600**
Mowers	**4**	**8**	**50,105**	**3,435**	**1,400**
Trailers	**8**	**13**	**102,643**	**6,592**	**11,752**
Trucks and Buses					
HC 4x2 12,000 to 20,000 GVM	20	10	3,472,280	147,124	594,984
HC 6x4 over 20,000 GVM	1	12	199,093	0	0
MC 4x2 4,000 to 8,000 GVM	2	5	180,000	0	0
MC 4x2 8,000 to 12,000 GVM	6	15	927,510	49,981	296,904
Grand Total	**66**	**10**	**5,935,688**	**280,838**	**1,281,018**

Life: The useful life of plant, fleet and equipment is determined based on each grouping of assets. We take an approach of replacement of assets based on an optimal turn-over period to balance the whole of life cost. We are also transitioning to a lower emissions fleet, and the turn-over period is influenced by the availability of suitable alternative vehicles in larger vehicle categories.

A review of optimal asset turnover is currently underway, with chippers to be replaced at 10 years/3,000hrs.

The assessment of useful life associated with RFS plant and equipment is undertaken by the RFS.

Valuation Information: These assets are recognised at depreciated historical cost as an acceptable substitute for fair value because any difference between fair value and depreciated historical cost is unlikely to be material.

Fair Value Hierarchy – The key unobservable unit to the valuation of this category is asset condition and useful life. The condition of assets is reviewed on an annual basis and an assessment of remaining life undertaken based on these results.

12.11.3.1   Low Value Assets

In addition to the assets listed above, we operate over 850 low-valued tools and equipment that support the delivery of our services. Low-value assets are considered items that do not satisfy the criteria for asset recognition under the asset accounting policy. The primary reason is that the value of the asset is below the asset recognition financial threshold.

Asset Classifications	Count of Asset
Major Ancillary Equip	**3**
Generator Fixed Power	1
Major Equipment – Parks (Aerators)	2
Minor Ancillary Equip	**791**
Air Blowers	50
Air Compressors up to 20 cfm	19
Attachments	6
Brush Cutter	39

Chain Saws	31
Concrete Saws	19
Edgers (lawn)	19
Generator Portable	25
Hedge Trimmer	32
High Pressure Gurney (minor)	5
Jack Hammer	1
Minor Equipment - Fleet W/Shop	16
Minor Equipment - Parks	9
Minor Equipment - Works	50
Miscellaneous Small Plant or Equipment	107
Power tools Electrical/Cordless	337
Pumps	8
Vibrating Plates (whackers)	13
Welder	5
Mowers	**47**
Lawn Mowers	37
Wicket Mower	10
Rollers	2
Trailers	**11**
Utility Trailer	11
Grand Total	**854**

12.11.3.2   Components and attributes

The plant, fleet and equipment are currently recorded as single assets on the year of acquisition.

12.11.3.3   Risks and criticality

Critical services are defined as those which have a high consequence of failure causing significant loss or reduction of service to the community as outlined in Section 9.1.5. A review of the Council's 33 Services identified that the following critical services require the associated plant, fleet and equipment assets:

Critical Service	Plant, fleet and Equipment Asset	Management Plan Status for Asset
Waste Service	Waste (Landfill) compactor	Operator's guide prepared
Lifeguard	Jetskis and ATVs	Operator's guide prepared
Emergency management support	Vehicles for managing road closures and assistance to emergency services during events.	To be determined

12.11.3.4   Operation and maintenance requirements

Plant, fleet and equipment assets required for ongoing operational activities and maintenance actions to remain safe, functional, and fit for service. Requirements for operational activities and maintenance are typically specified by the manufacturer and guide the procedures implemented by Council. An example of the operational actions and maintenance activities for plant, fleet and equipment includes:

- Prestart checks
- Routine inspections
- Registration and insurance
- Scheduled maintenance
- Replacement of wear and tear items

Council operates workshop facilities for the maintenance of most of the plant, fleet and equipment in-house. With the changes to work order management and smart devices such as plant telemetry, we are improving our understanding of utilisation and operational costs. This information will enable more informed decision making in future around the lifecycle approach for plant, fleet and equipment utilisation and a change to performance-based maintenance and disposal. At this point, the information is developing in maturity and assists in decision making about operational allocation and distribution of assets. As the level of information improves, it will help inform decisions about capital investment in plant, fleet and equipment.

12.11.3.5   Depreciation and degradation curves

Plant, fleet and equipment assets and component use a straight-line depreciation and degradation.

12.11.4   Roles and responsibilities

Service Manager: Manager Customer + Business Integrity – Passenger Vehicles & Light Commercial Vehicles

Manager City Works – Plant & Equipment (Exc. Passenger Vehicles & Light Commercial Vehicles)

Role	Lifecycle	Function	Responsible	Activities
Service Management	Planning	Service Planning	Service Manager	Ensure service linkage to CSP Define service needs Determine service hierarchy Analyse capacity and demand Summarise service-related legislative requirements Determine asset requirements for service delivery
	Operation	Service Operations	Manager Customer +	Act as customer liaison for service

Asset Management Plans

Role	Lifecycle	Function	Responsible	Activities
			Business Integrity Manager City Works	Initiate notifications for service interruptions Undertake functional assessment Monitor and manage service and asset utilisation
	Planning and End of Life	Asset Acquisitions and Disposals	Manager Customer + Business Integrity Manager City Works	Develop plan for acquisitions and disposals of assets Engage with stakeholder on acquisition and disposal plan Arrange transition of service Arrange establishment or termination of agreements (registrations, warranty, servicing)
Asset management	Planning	Asset Planning	Manager Customer + Business Integrity Manager City Works	Complete condition and performance assessment Assess asset related legislative requirements Asset review Renewal planning
		Asset Data	Manager Customer + Business Integrity Manager City Works	Administration of asset register Updates for capital improvements Initiate asset disposal system process Prepare asset management plan Coordinate asset reporting data
		Asset Financials	Manager Customer + Business Integrity Manager City Works	Unit rates Estimates Monitor expenditure
Plant and Equipment Procurement	Delivery	Project Sponsor	Director	Approval of project plan

Asset Management Plans

Role	Lifecycle	Function	Responsible	Activities
				Oversee business proposal
		Asset Concept	Service Manager	Define the problem/need Options assessment Feasibility Lifecycle costing Funding strategy Business case/proposal
		Program Management	Manager Customer + Business Integrity Manager City Works	Oversee project as part of program Responsible for managing overall program costs, risks, progress
		Asset Delivery	Manager Customer + Business Integrity Manager City Works	Procurement strategy Contract management Procurement Oversee asset commissioning and handover
Maintenance and Operation Management	Maintenance	Asset Maintenance	Manager City Works	Complete maintenance inspections Establish maintenance procedures Undertake maintenance works
	Operation	Asset Operations	Manager Customer + Business Integrity Manager City Works	Registration Registration Inspection

12.11.5 Performance

The performance of plant, fleet and equipment assets has traditionally been undertaken by the service area that the asset supports. A move towards more intelligent monitoring systems enables analysis of utilisation and capacity. Our maturity in this area is continuing to develop.

Condition is monitored as part of the procedures for operators of the assets and as part of the checks undertaken in conjunction with scheduled maintenance.

12.11.5.1 Customer Levels of Service

Plant, fleet and equipment customers are in discussions with Fleet Management regarding:
- Functionality of plant, fleet and equipment.
- Safety of item.
- Environmental impact of plant, fleet and equipment.
- Availability of plant, fleet and equipment to support service delivery.
- Compliance with replacement schedule (age, operating hours, distance travelled)

12.11.5.2 Technical Levels of Service

In managing the plant, fleet and equipment fleet, we monitor performance against the following criteria:

• Cleanliness	• Servicing and maintenance intervals
• Downtime + uptime	• Plant, fleet and equipment rotation – to balance usage
• Utilisation	• Unscheduled and scheduled maintenance

12.11.5.3 Legislative Requirements

There are legislative requirements associated with plant and fleet registration for assets intended to be used on the public road network with Transport for NSW. In addition, the Work Health and Safety (WH&S) legislation requires specified plant items that must be registered with SafeWork NSW or corresponding WH&S regulator.

12.11.6 Future Investments

12.11.6.1 Acquisition and Upgrade Plans

Acquisitions and upgrades of plant, fleet and equipment refers to additions to the current asset portfolio. It excludes renewal of existing items with a modern equivalent item.

The responsible service manager determines the requirements for plant, fleet and equipment to support the service. Any acquisitions and upgrades require the submission of a business proposal to define the need, the benefits, risks, and review the life-cycle cost. Proposals that have been through this assessment and supported based on the cost/benefit are included in the acquisition and upgrade plan below.

The following plant, fleet and equipment assets are forecast for acquisition during the 10-year period of this plan:

Asset Management Plans

Description	Service	Planned Year of Acquisition	Estimated Value
EV Charging infrastructure – Level 2 and 3 chargers	Workplace locations	Various – depending on roll-out of EV's per site.	To be determined. The provision of charging infrastructure may require upgrades to distribution boards and/or substations to provide the required supply.
Minor increases when there is a movement from an allowance to passenger/light commercial vehicle	Various	As required – these are ad hoc acquisitions to meet changes to the business.	$50,000

12.11.6.2   Decommissioning and Disposal Planning

We review the need for plant, fleet and equipment as part of our service reviews. A review of passenger vehicle fleet requirements is undertaken on a routine basis as part of the resource review when positions are vacated. Fixed plant is reviewed as part of the condition inspection associated with servicing. Major and minor plant is reviewed by the service manager in consultation with the City Works Workshop.

Assets no longer required to support the service based on cost and benefits, may be considered for decommissioning and disposal of assets. In some instances, we may look to dispose of existing assets and move toward an alternative method of supporting the service.

In some instances, unforeseen decommissioning may occur because of a change in legislation, premature failure of the asset, or a review triggered by some other action. In these instances, these assets will not be included in the plan below.

The following assets have been identified for decommissioning:

Description	Timing	Alternate Options
Minor reduction in passenger and light commercial vehicles as people move to an allowance	As requested	The alternative vehicle is provided by the user under a usage agreement.
Community transport – reduction in size of bus fleet	2024/2025	Reduced demand can be met with smaller fleet. Move to more efficient vehicles

12.11.6.3   Review of Service Life

There are currently 206 plant and equipment assets in service that were initially identified for replacement or disposal in prior years. A review will be undertaken of the condition and performance of the plant items to reassess the timing of replacement/disposal. In some instances, the deferral has occurred as the asset has not yet reached the planned operating hours or kilometres to trigger replacement. This review will also assist with the review of useful life for similar assets.

As part of the review, we will investigate options to rotate plant and equipment to balance operational use to optimise utilisation. This will include review of hours of use, kilometres travelled, number of repetitions, scheduled and unscheduled maintenance costs, and other factors that impact condition and performance.

12.11.6.4   Future investment plan – Plant, Fleet and Equipment

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Scheduled and reactive maintenance	1,691,757	1,793,048	1,893,052	1,998,955	2,123,548	2,251,100	2,385,208	2,539,774	2,697,551	2,841,736	2,993,627
Depreciation	4,626,937	4,752,494	4,752,494	4,752,494	4,752,494	4,752,494	4,752,494	4,752,494	4,752,494	4,752,494	4,752,494
Operating expenditure	**6,318,694**	**6,545,542**	**6,645,546**	**6,751,449**	**6,876,043**	**7,003,594**	**7,137,702**	**7,292,268**	**7,450,045**	**7,594,230**	**7,746,121**
Renewal works											
Emergency Services	-	-	-	-	-	300,000	300,000	-	300,000	300,000	300,000
Fleet	3,735,750	1,190,000	1,275,000	800,000	2,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000
Plant and Equipment	3,060,000	3,427,920	3,520,414	3,426,500	4,344,433	3,771,000	3,845,900	3,922,602	4,001,144	**4,101,678**	4,205,228
Upgrade works											
Emergency Services	-	-	-	-	-	-	-	-	-	-	-
Fleet	659,250	-	-	-	-	-	-	-	-	-	-
Plant and Equipment	540,000	-	-	-	-	-	-	-	-	-	-
Expansion works	-	-	-	-	-	-	-	-	-	-	-
New works	-	-	-	-	-	-	-	-	-	-	-
Capital expenditure	**7,995,000**	**4,617,920**	**4,795,414**	**4,226,500**	**7,144,433**	**5,871,000**	**5,945,900**	**5,722,602**	**6,101,144**	**6,201,678**	**6,305,228**
Totals	**14,313,694**	**11,163,462**	**11,440,960**	**10,977,949**	**14,020,476**	**12,874,594**	**13,083,602**	**13,014,870**	**13,551,189**	**13,795,908**	**14,051,349**
Renewal and upgrade as a % of depreciation	**173%**	**97%**	**101%**	**89%**	**150%**	**124%**	**125%**	**120%**	**128%**	**130%**	**133%**

12.11.7 Plant, Fleet and Equipment Asset Improvement Program

The following opportunities have been identified through the preparation of this asset management plan that will assist in improving future asset management planning outcomes:

Item	Issue	Description	Responsible	Timing
11.1	Rural Fire Service (RFS) Plant and Equipment	Council does not directly provide or operate the RFS. We partner and provide support for the RFS; however, Council has limited input into the control of RFS plant and equipment. Assets utilised by the RFS appear on Council's asset register and financial statements.	RFS	2026
11.2	RFS Asset transfer	Advocate for changes to the requirements for Council to recognise plant and equipment that it does not effectively control	Council	2027
11.3	Useful life assessment	There is some variability in the useful life of assets of the same type. City Works manager in consultation with the relevant service manager should review the current useful life assessment as part of an annual process.	MCW	2026
11.4	Lifecycle cost	Investigate utilisation rates and options to rotate plant and equipment to balance and improve operational use. Review should include review of hours of use, kilometres travelled, number of repetitions, scheduled and unscheduled maintenance costs, and other factors that impact condition and performance	MCW	2026
11.5	Skill development	With an increasing transition away from non-renewal internal combustion engine plant and equipment to sustainable technology, the workforce will require continued skill development to operate, service and maintain battery electric vehicles and battery-operated plant and equipment.	MCW	2027
11.6	Charging Infrastructure Strategy & Plan	There is a need to prepare a strategy and supporting plan for EV charging infrastructure to support the move to an electrified plant and fleet. This plan is to include a review of requirements for type 2 (wall box 7-22kW) and type 3 (DC fast charge) chargers, appropriate space for charging, required separation for flammables at depots, the supply capacity for worksites to support charging and scope of upgrades (supply to the board and/or substations), use of public fast chargers, etc Plan should consider the requirements for charging all plant and equipment, including minor plant and tools.	MC+BI MCW	2026
11.7	Deferred renewals	Undertake a review of the condition and performance of plant items identified for renewal in prior years to reassess the timing of replacement/disposal.	MCW	2026
11.8	Component	Consider the merits of separately recognising tray-back, custom body options etc as separate components if there is likelihood of separating from cab-chassis	MC+BI	2026
11.9	Condition and Useful life	The network requires assessment of condition and remaining useful life. Chippers to be updated to 10yrs/3,000hrs.	MCW	2026

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12.12 Library Collection and Resources

Council's Libraries provide information, access to technologies, opportunities to connect, learn and participate in community life and safe, accessible public spaces. Wollongong City Libraries consists of seven libraries located across the Local Government Area, with libraries in Corrimal, Dapto, Helensburgh, Thirroul, Unanderra, Warrawong, and Wollongong. In addition, seven street libraries are delivered across the Local Government Area, and through the Home Library Service, and a range of online services.

Wollongong City Libraries (WCL) offers the following services: lending of library materials (books, magazines, audiobooks, DVDs, CDs), reference and HSC collections, multi- lingual resources that meet the needs of our CALD community and interlibrary loans. Aside from physical items, the library also offers an extensive selection of eResources, including eBooks, eAudiobooks, eMagazines, movie and music streaming, social media sites, online customer voting for collection purchases, an online 24/7 catalogue, databases, online and face to face tutoring services.

A comprehensive Local Studies (History) collection is located at Wollongong Library, some of which is also available online (e.g.: Illawarra Images) and a quality Family History service is also offered.

Libraries provide free access to the Internet and public computers, free WiFi for those who bring their own devices and a variety of study spaces.

This section of the asset management plan focusses on the library resources used to deliver the library service to the community. Library collection and resources include collections of books, films, music, and magazines, in addition to IT equipment, furniture and fittings used to deliver these library services.

Buildings that provide a home for library services are included in the building section of the asset management plan.

12.12.1 Profile

Community Strategic Plan Goal: Goal 4: We have a healthy, respectful, and inclusive community

Service: Libraries

Libraries provide resources, spaces, people, and programs that support community learning, connection, creativity, and relaxation. The library services delivery stream is guided by Council's *Discover, learn, and connect Wollongong City Libraries Strategy 2024 - 2028* supporting document.

12.12.2 Strategic priorities

Library services are guided and informed by the following strategic supporting documents:

- Discover, learn, and connect Wollongong City Libraries Strategy 2024 – 2028
- Places for the Future' Social Infrastructure: Future Directions Plan 2023 – 2036
- Places for People - Wollongong Social Infrastructure Planning Framework 2018-2028
- West Dapto Contributions Plan
- Wollongong City-Wide Development Contributions Plan
- Asset Management Strategy

The libraries strategy identifies the following key strategic framework and priorities:

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Vision - We are the heart of our community where everyone can discover, learn, and connect.

Purpose - We empower people through lifelong learning, resources, information, and experiences.

Goals - Our libraries will...

> Goal 1 | Engage and connect with our community.
>
> Goal 2 | Inspire our community to learn, share and celebrate.
>
> Goal 3 | Develop customer-driven, dynamic, and sustainable collections.
>
> Goal 4 | Create welcoming, vibrant, and inclusive places and spaces.

The following table summarises the actions from the library's strategy with a relationship to resource collection and an assessment of the direct impact:

Libraries Action	Measurement	Library Resource Impact
1.3 Maximise membership, visitation, and participation in WCL	1.3.2 increased number of physical loans 5% annually	Increased turnover of stock may require stock to be replaced more frequently as being borrowed more. No impact on overall budget as budget will be sourced from reductions in other collection areas
2.4 Share and celebrate the culture and history of First Nations people	2.4.4 First Nations communities' content in our library's collections to increase by 5% annually, subject to publication	No impact on overall collection budget as budget will be sourced from reductions in other collection areas
2.5 Share and celebrate the culture and history of culturally and linguistically diverse (CALD) communities	2.5.4 CALD communities' content in our library's collections to increase by 5% annually, subject to publication	No impact on overall collection budget as budget will be sourced from reductions in other collection areas
2.6 Share and celebrate people in the LGBTQIA+ community	2.6.4 Content representing people in the LGBTQIA+ community in our library's collections to increase by 5% annually, subject to publication	No impact on overall collection budget as budget will be sourced from reductions in other collection areas
2.7 Empower, champion, and celebrate people with disability	2.7.4 Inclusive and accessible content in our library's collections to increase by 5% annually, subject to publication	No impact on overall collection budget as budget will be sourced from reductions in other collection areas
3.1 Build dynamic, customer-driven collections	3.1.1 85% of customer recommended titles are acquired 3.1.2 85% of customer "Suggestion for Purchase" are processed within four weeks 3.1.3 increased number of physical loans 5% annually 3.1.4 increased number of digital loans 5% annually	No impact on overall collection budget as budget will be sourced from reductions in other collection areas
3.2 Maintain the openness, accessibility, and	3.2.1 Catalogue usage increases by 5% annually	No impact on overall budget No impact on overall collection budget as budget will be sourced

inclusiveness of our collection	3.2.3 1,750 items digitised annually 3.2.4 25,000 titles catalogued annually 3.2.5 85% of new titles are on the shelves within seven working days from delivery 3.2.6 Content related to First Nations, CALD, and LGBTQIA+ communities to increase by 5% annually in our library's collections, subject to publication 3.2.7 Inclusive and accessible content in our library's collections to increase by 5% annually, subject to publication	from reductions in other collection areas
3.3 Our collections are financially and environmentally sustainable	3.3.1 Turnover of stock is greater than 3.0 annually 3.3.2 100% of library materials budget is expended annually 3.3.3 Implement resource recycling, end of life disposal and purchasing decisions by 2026, in line with Wollongong City Council's Sustainable Wollongong 2030 Strategy	No impact on overall collection or operational budget
3.4 Preserve and promote the Local Studies Collection	3.4.1 1,000 items added to the collection annually from donations and other sources. 3.4.2 Digitise 500 local studies items annually.	Digitisation will impact IT storage capacity and will increase data storage costs. IT has advised budget impact will be for WCL not IT.
4.4 Plan and deliver library infrastructure that meets the needs of the community	4.4.1 Deliver afterhours access at Helensburgh Library in 2025 4.4.3 Deliver Southern Suburbs Community Centre and Library in 2026-2027 4.4.4 Continue planning for Helensburgh Community Centre and Library 4.4.5 Deliver a refurbishment at Dapto Library in 2026-2027	4.4.1 After-hours access will require additional IT hardware and software components. This is to be considered in the scope for planned renewal at Helensburgh library. It will also increase the operational costs for the facility. 4.4.3 & 4.4.4 Collection and resources will be included in the scope considerations for Southern Suburbs and Helensburgh Libraries. 4.4.5. The timing of the refurbishment is to be considered under the building asset management plan. There is unlikely to be any significant impact on the library collection and resources at this location.

12.12.2.1 Future Impacts

The following future impacts were identified in the delivery stream report for Library Services relating to library resources. The strategic response as it relates to library resource assets, and the consequences of not funding the impact is summarised below.

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Future Impacts	Strategic Response	Consequences of Not Funding
The Discover, learn and connect Wollongong City Libraries Strategy 2024-2028, will replace the previous Wollongong City Libraries Strategy, setting new directions and aspirations for Wollongong City Libraries.	The actions from the updated strategy relating to library resources are listed above with an assessment of the impact on the library resource assets.	Wollongong City Libraries will face challenges in providing a contemporary collection and library service to the community
Libraries were impacted significantly through the Covid-19 pandemic and are re-building program participation and physical visitation. The surge in e- and web-based participation and access to library resources that was evident during the pandemic has remained high, while demand for physical materials has continued to grow back to pre-pandemic levels.	Visitation numbers have increased, and this factor is no longer considered an impact	N/A
Continually evolving technologies and media for engagement with the community will create pressures to respond and to stay ahead of the game, in terms of knowledge and resources.	Whilst this was considered a future impact, there is minimal impact at this stage and does not require a strategic response	N/A
The role of libraries in promoting social inclusion and social justice will continue to become more critical, as social inequality becomes more pronounced. The role of libraries in offering a safe, welcoming, and inclusive space, where diverse views and identities are encouraged and where services are free, will also become more critical. At the same time, working with people who have experienced trauma and who face ongoing life challenges demands new ways of working and new capabilities for the WCL team.	Develop partnerships to deliver more social services	Additional funding may be required to provide this level of service
The planning, design, and construction of new libraries at Warrawong and Helensburgh, within the context of a multipurpose Community Centre and Library will require ongoing focus and commitment of resources over the next five years.	Continue to work with WCL and external organisations to plan, resource and equip the new facilities	Not providing commensurate level of service to these communities
The impact of the West Dapto land release and development and growth of new communities in the southwest of the city will demand further consideration regarding provision of libraries social infrastructure and planning for future service delivery.	Plan for new library to service the growing population in this area	Not providing commensurate level of service to these communities

12.12.2.2   Future Demand

The Places for People – Wollongong Social Infrastructure Planning Framework 2018-2028 identified the likely changes to our community in the future and the implications of population context. These implications

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will create changes in demand that influences our planning associated with library resources, as summarised below:

Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
Population growth -	Wollongong LGA growth by 55,000. During the next 20 years, several of Areas will evolve from 'sub district' sized populations of less than 30,000 people to areas hosting 'district' level populations of more than 30,000 people.	Need for increased floorspace and resources (collection, IT, furniture & fittings) to support growth		
Increased Residential Density	Increased residential density in some of the district hubs within the LGA, such as Corrimal, which will impact on local social infrastructure resources			
Population Ageing	The average age of the population is increasing, and the proportion of people aged 75+ increases.	increased need to create environments that are accessible for people with vision or auditory impairment; increase in Home Library Services membership		
Newly Arrived Communities – Migration and Sea Change		Increased demand for CALD community resource content	Increase CALD communities' content in our library's collections to increase by 5% annually, subject to publication	No impact on overall collection budget as budget will be sourced from reductions in other collection areas
Culture and Diversity		Demand for more diverse and inclusive resource content	First Nations communities' content in our library's collections to increase by 5% annually, subject to publication Content representing people in the LGBTQIA+ community in our	No impact on overall collection budget as budget will be sourced from reductions in other collection areas

			library's collections to increase by 5% annually, subject to publication	
			Inclusive and accessible content in our library's collections to increase by 5% annually, subject to publication	

12.12.2.3   Library Provision

Libraries are considered as part of the Foundation social infrastructure facilities intended for wide community use daily with provision for community spaces for a variety of activities. The following table provides a summary of hierarchy from the Social Infrastructure: Future Directions Plan and resource offerings for each of the library service locations:

Hierarchy	Location	Features
Local	• Unanderra • Helensburgh • Bong Bong*	Facilities offering a smaller collection of resources. Bong Bong Library and Community Centre has been identified in the Places for the Future Social Infrastructure – Future Directions plan. The library is proposed to support the planned growth areas of West Dapto.
Sub-District	• Dapto • Warrawong	Dapto and Warrawong - have large collections of books, films, music, and magazines, with free technology and internet access. Dapto is located on level one of the Ribbonwood Centre. Warrawong is currently located on level one of a retail complex on the corner of King and Hoskins Streets, just south of Darcy Wentworth Park playing fields.
District	• Corrimal • Thirroul	A large collection of books, films, music, and magazines, with free technology and internet access. Thirroul is the largest library in Wollongong's northern suburbs is home to an extensive collection of resources.
Regional	• Wollongong	Wollongong Library is spread over two floors of the Wollongong City Council building. The library boasts an extensive collection of books, movies, music and journals, free technology, and internet access, and is home to the region's largest local studies collection.
Street Libraries	• Gwynneville • Bulli • Wollongong • Corrimal • Port Kembla • Warrawong • Keiraville	The collection is not managed by Council and is not included in the value of the resources. The service operates on a charitable basis, with books donated and the service managed by community.

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12.12.3 Asset Snapshot

Asset Register – Office/Other Assets

Financial Reporting Group: Library books

Valuation Information: – These assets are recognised at depreciated historical cost as an acceptable substitute for fair value because any difference between fair value and depreciated historical cost is unlikely to be material.

Description	Financial Reporting Group	Useful Life (Yrs)	Carrying Value	Annual Dep	Current Asset Cost
			($,000) @ 30 June 2024		
Library books	Library Books	6yr & 8mth	5,021	1,337	10,074
Weblinks Library		33	1	0.1	5
Outdoor bookcase	Furniture and Fittings	10	21	6	62
Furniture	Furniture and Fittings	10	14		109
Total			**5,057**	**1,343**	**10,250**

12.12.3.1   Components and attributes

The library resources are currently recorded as single assets on the year of acquisition.

12.12.3.2   Risks and criticality

Critical services are defined as those which have a high consequence of failure causing significant loss or reduction of service to the community as outlined in Section 9.1.5. A review of the Library Service identified that it is not a critical service, and consequently, does not have critical assets.

As part of the arrangements for the Illawarra Local Emergency Management Plan, community centres collocated within Libraries may be identified as evacuation centres or places of refuge during emergency response and disaster recovery phases. This is considered a critical service and will impact on the operation of the library service as the activation of the centre will require library team members involvement. The assets required to support the critical service of Emergency Management are addressed in the Building section of the asset management plan. This critical service does not require library resource assets.

12.12.3.3   Depreciation and degradation curves

Library Resource assets and component use a straight-line depreciation.

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12.12.4   Roles and responsibilities

Service Manager: Manager Libraries + Community Facilities (table relates to library collection and resources only – not the library building)

Role	Function	Responsible	Collaborate	Activities
Service Management	Service Planning	Manager Libraries + Community Facilities	Strategic Planning Infrastructure Strategy & Planning	Ensure service linkage to CSP Define service needs Determine service hierarchy Analyse capacity and demand Summarise service-related legislative requirements Establish customer levels of service Determine asset requirements for service delivery
	Service Operations	Manager Libraries + Community Facilities	Customer + Business Integrity	Act as customer liaison for service Provide website information and communications Initiate notifications for service interruptions Undertake functional assessment Monitor and manage service and asset utilisation
	Asset Acquisitions and Disposals	Manager Libraries + Community Facilities	Customer + Business Integrity (Procurement)	Develop plan for acquisitions and disposals of assets Arrange relocation or transition of service Arrange establishment or termination of agreements (distribution)
Asset management	Asset Planning	Manager Libraries + Community Facilities		Complete condition and performance assessment Assess asset related legislative requirements Asset review Renewal planning
	Asset Data	Manager Libraries + Community Facilities		Administration of asset register Updates for capital improvements Initiate asset disposal system process Prepare asset management plan Coordinate asset reporting data
	Asset Financials	Manager Libraries + Community Facilities		Revaluation Unit rates Estimates

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		Finance (reval)		Monitor expenditure
Project Delivery	Asset Concept	Manager Libraries + Community Facilities	Manager City Works	Define the problem/need Options assessment Feasibility Lifecycle costing Funding strategy Business case/proposal
	Asset Design	Manager Libraries + Community Facilities		Ensure design solutions align with strategy Options analysis Concepts Design development Cost estimating Complete safety in design report Approvals process
	Asset Delivery	Manager Libraries + Community Facilities		Cost estimate Procurement Oversee project commissioning and handover
Maintenance and Operation Management	Asset Maintenance	Manager Libraries + Community Facilities		Complete maintenance inspections Work management triage and scheduling Establish maintenance procedures Undertake maintenance works
	Asset Operations	Manager Libraries + Community Facilities		Catalogue

12.12.5 Performance

We monitor the performance of our library resource assets by:

- Condition – the actual physical and technical state of the asset.
- Functionality – the ability of the collection to meet service needs.
- Capacity – the ability of the collection to meet demand.

Library resources are inspected on an on-going basis as the collection is circulated through the library network. The library strategy identified key focus areas for updating the collection.

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12.12.5.1 Community Satisfaction Survey

Council's most recent Community Satisfaction Survey shows a high level of satisfaction with the provision of library services survey achieved satisfaction ratings as follows:

- District Library and Community Centres Satisfaction 79% Rating 4.3 / 5.0
- Wollongong City Library Satisfaction 85% Rating 4.3 / 5.0
- Local Branch Libraries Satisfaction 68% Rating 3.9 / 5.0

12.12.5.2 Legislative Requirements

Wollongong adopted the Library Act 1939 0n 28 November 1947.

Section 10 of the *Library Act 1939* sets out requirements that local authorities (councils) must comply with in the operation of a public library. These requirements are:

- free membership
- free access
- free loans
- free delivery
- free basic reference service

The *Library Regulation 2018* outlines the conduct of users, determination of populations for funding purposes and the authority of local councils to make rules for use of their library.

12.12.6 Future Investments

12.12.6.1 Acquisition and Upgrade Plans

We anticipate upgrade to the library resources collection during the 10-year period of this plan to coincide with changes to facilities at Warrawong and Helensburgh.

12.12.6.2 Decommissioning and Disposal Planning

We review customer need through regular customer survey. Where we identify that library resources are no longer valued or utilised by customers, by analysing loan statistics. Library resources that are no longer being regularly borrowed are removed from the collection.

As part of our annual cycle of replacing library resources, we plan disposals when the asset has been damaged or is no longer being borrowed. We anticipate that part of the collection may be disposed following the decanting and relocation from current facilities in Warrawong and Helensburgh to new locations.

12.12.6.3   Future investment plan – Library Collection and Resources

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Depreciation	1,343,000	1,369,999	1,397,588	1,425,843	1,454,692	1,454,692	1,454,692	1,454,692	1,454,692	1,454,692	1,454,692
Operating expenditure	1,343,000	1,369,999	1,397,588	1,425,843	1,454,692	1,454,692	1,454,692	1,454,692	1,454,692	1,454,692	1,454,692
Renewal works	1,167,687	1,193,187	1,222,014	1,247,676	1,503,100	1,467,135	1,501,672	1,537,038	1,573,252	1,610,335	1,647,419
Upgrade works	206,062	210,562	215,649	220,178	-	-	-	-	-	-	-
Expansion works	-	-	-	-	-	-	-	-	-	-	-
New works	-	-	-	-	-	-	-	-	-	-	-
Capital expenditure	1,373,749	1,403,749	1,437,663	1,467,854	1,503,100	1,467,135	1,501,672	1,537,038	1,573,252	1,610,335	1,647,419
Totals	2,716,749	2,773,748	2,835,251	2,893,697	2,957,792	2,921,827	2,956,364	2,991,730	3,027,944	3,065,027	3,102,111
Renewal and upgrade as a % of depreciation	102%	102%	103%	103%	103%	101%	103%	106%	108%	111%	113%

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12.12.7 Library Resource Asset Improvement Program

The following opportunities have been identified through the preparation of this asset management plan that will assist in improving future asset management planning outcomes:

Item	Issue	Description	Responsible	Timing
12.1	Asset review	The asset register includes Weblinks, book stands for Street Libraries and specialised furniture items as library assets. These assets should be reviewed to monitor condition and plan for future requirements.	ML+CF	2026
12.2	Future demands	Review future demands to determine impact on the library resources and collection assets	ML+CF	2026
12.3	Condition and Useful life	The network requires assessment of condition and remaining useful life.	ML+CF	2027

12.13 Information Management & Technology

Our Information Management and Technology (IM&T) service includes the service delivery of information management; information technology program and strategy; cyber security and technology support services.

The purpose of Information Management is maintaining Council information and information for use to inform Council decision-making and community service provision and protect and preserve information from malicious use or misconduct.

The service of Information Technology Programs and Strategy defines how technology and Information Technology processes are used to align with Council's business goals. The service ensures that Council's Information Management and Technology capability and capacity is aligned to its business objectives thereby maximising return on investment.

The cybersecurity function views the risks facing the Council and put in place the necessary information security technology and processes to minimise these risks.

Council relies heavily on Information Technology to support its business processes. Technology and support services assist in protecting Council from cyber-attacks and reduce the risk of systems unavailability.

12.13.1 Profile

Community Strategic Plan Goal: Support Services

Service: Information Management and Technology (IM&T)

This service delivers digitally enabled, information driven and secure services that empower our customer community. Council relies on effective information and communication technology to enable its business functions, increase efficiency and to achieve our purpose of creating an extraordinary Wollongong. Effective information management and technology is critical to the operation of Council and for the delivery of services that it provides for residents, rate payers, visitors, and businesses.

With significant change in system architecture over the last 5 years as part of our Cloud Transformation Program, there has been a significant reduction in the traditional server and storage hardware and increase in intangible assets. Intangible assets such as information, enterprise platforms and applications still require lifecycle management, with associated actions and expenditure throughout the useful life of the asset. This plan focuses on the management of fixed (physical) assets, which includes the hardware infrastructure such as network devices and end user equipment including laptops, monitors, and other peripheral devices.

12.13.2 Strategic priorities

The Information Management and Technology service is guided by our Information Management & Technology Strategy 2022-2024 that forms part of the Resourcing Strategy.

The following table summarises the strategic focus areas and actions from the IM&T strategy and relationship to assets:

Asset Management Plans

IM&T Focus Area	Action Description	IM&T Asset Impact
Customer Value	Action 1.1 - Cloud Transformation Program	• Decommissioning of existing data centres and asset • Introduction of new software services
	Action 1.2 Artificial Intelligence Interactive Signage	• Potential digital signage • Alternate – data hosting and public access to information
	Action 1.3 Digital Screen Interoperability	• Network cabling • Renewal of screens
	Action 1.4 Customer Relationship Management	• Procure and commissioning new service
	Action 1.5 Virtual Telephony	• Redundancy of desktop telephony hardware • Acquisition of headsets
Smart City Optimisation	Action 2.1 Smart City Condition Auditing	• Acquisition of hardware • Procurement of service agreement
	Action 2.2 Smart City Recreation	• Procurement of hardware and service
	Action 2.3 Storm Water Management	• Procurement of hardware and service
	Action 2.4 Smart City Parking Meter	• Renewal of hardware and service • Upgrade of service to provide additional functionality
	Action 2.5 Smart City Waste Management	• Acquisition of sensor • Monitoring program
Improved Productivity	Action 3.1 Review of Council Bookings	• Decommissioning of legacy systems • Commissioning of new service
	Action 3.2 Information Flow Program	• Integration service
	Action 3.3 OneCouncil	• Decommission legacy systems • Commission new services
	Action 3.4 Upgrading of Audio-Visual Equipment	• Renewal of existing assets • Acquisition of additional assets
	Action 3.5 Fleet Management	• Acquisition of hardware • Service acquisition and development for analytics
Insightful Information	Action 4.1 Enabling Smart Monitoring and Decision Making	• Renewal of CCTV infrastructure
	Action 4.2 Big Data	• Decommission legacy systems • Commission new systems
	Action 4.3 HR Analytics	• Implementation of business intelligence service
	Action 4.4 Data Stream Project	• Acquisition of data stream platform

Asset Management Plans

Secure Information	Action 5.1 Identity Access Management Program	• Procurement and commissioning of new service
	Action 5.2 Cyber Fraud Control	• Procurement and implementation of new service.
Proactive Planning and Governance	Action 6.1 Consolidation of Council's Networks	• Upgrade of network switching and cabling

12.13.2.1   Future Impacts

Future Impacts	Strategic Response	Consequences of Not Funding
Council is well progressed in relation to the electronic management of records	Although the management of unstructured data (records) is quite mature the management of structured data is not. Future digital strategies will include programs to improve the management and quality of Council data.	Council has significant stores of structured data, which if mined to assist greatly in Council decision making. Currently the data is dispersed and of poor quality. Without a significant effort the organisational benefits of this data will not be derived.
The requirement to support staff in their use of the electronic document management system is significant as is the compliance requirement to ensure correct record-keeping practices.	Council is legislated to comply with the State Records Act (1998).	Information Management training and on-going monitoring is required to ensure compliance with the State Records Act (1998).
There is an increasing demand for the scanning services and presently the demand cannot be met.	Council supports a repository of paper-based documents. The cost of sustaining this repository is substantial and on-going. So too is the risk of maintaining Council's records in hardcopy.	The risk of not funding on going digitalisation of aged records is that Council will continue to be tied to the records repository for the storage of hardcopy records.
The continued progression to mobile application-based working, as opposed to traditional paper-based methods will help address this challenge. A present and future challenge is disposal of documents in the digital environment.	Data storage has historically been a hidden cost. On-site storage limited Council's agility and flexibility. Storage in the cloud is scalable and agile but is transparent as a cost to doing business.	Council needs to understand the value of its information assets and store this information in accord to its value.
Increasing use of modelling, particularly in emergency management is driving demand in spatial services.	Location intelligence provides predictive insights into where and when Council needs to provide services improving organisational efficiency and effectiveness.	The provision of services will be less efficient and less than optimal.
Proactively plan and respond to constant changes in technology and Council's legislative obligations within Council's resources.	Newer technologies if appropriate and well deployed provide opportunities to better meet the needs of the Community.	Opportunities will be lost if the newer technologies, such as Artificial Intelligence are not exploited.

Asset Management Plans

Increasing digitalisation to enable Council to improve the delivery of information and services to the community; ensuring Council exploits opportunities provided by emerging technologies.	Information Technology in the past was a back-office function. However, with the advent of cloud computing, and the availability of digital service at anytime, anywhere and on any device, information technology and digital have become "the way" of doing business.	The provision of services will be less efficient and less than optimal.
Customer demands for digital services are increasing. Digital natives are reaching adulthood, it is their expectation that they can self-serve council services at any time, on any device from any place	Information Technology in the past was a back-office function. With the advent of cloud computing, and the availability of digital service at anytime, anywhere and on any device, information technology and digital have become "the way" of doing business.	Customer expectation will not be met, and the provision of services will be less efficient and less than optimal.
The cyber threat continues to escalate, and Council will need to continue to respond to the continued threat and the associated changes to legislation.	Council can reduce the risk of cyber-attack and reduce the financial impact of an attack if it does occur by investing cyber security	The required safeguards for the community's data will not be in place. It will not be possible to ensure that sensitive data remains confidential, secure, and only accessible to authorized individuals.
Cyber Security as a risk to Council is increasing particularly in response to global events.	Council can reduce the risk of cyber-attack and reduce the financial impact of an attack if it does occur by investing cyber security	The required safeguards for the community's data will not be in place. It will not be possible to ensure that sensitive data remains confidential, secure, and only accessible to authorized individuals.
Continue to develop the knowledge and skills of our team to maintain a contemporary and customer focused service.	The technology landscape is constantly evolving. To support this landscape Council needs a knowledgeable and skilled workforce.	Council will not be able to implement and support contemporary technology solution to enhance service delivery.
Manage the transition to cloud based technologies inclusive of storage, compute, and network re-architecture.	Cloud computing will bring with it cost efficiency, scalability, flexibility, and agility	Customer expectation will not be met, and the provision of services will be less efficient and less than optimal.
Support the growth of an increasing mobilised workforce and mobile enabled business processes.	To garner the efficiencies derived from near real time responsiveness a mobilised workforce is essential	Paper based processes which inherently include duplication of data entry will pervade, limiting the efficiency possible from our workforce.
Digital transformation requiring more secure 24 x 7 online services.	With the advent of cloud computing, and the availability of digital service at anytime, anywhere and on any device, information technology and digital	Customer expectation will not be met, and the provision of services will be less efficient and less than optimal.

	have become "the way" of doing business.	
A rapidly changing data security threat environment.	Council can reduce the risk of cyber-attack and reduce the financial impact of an attack if it does occur by investing cyber security	The required safeguards for the community's data will not be in place. It will not be possible to ensure that sensitive data remains confidential, secure, and only accessible to authorized individuals.
Upgrading Council's audio and visual capability	Improving communication and consultation is key to delivering customer focused services	Information silos will continue. Customer and staff engagement will be compromised.
Reviewing and enhancing business applications.	Our community has told us that they want more modern ways to interact with Council. Reviewing and enhancing business applications will break down the silos and mitigate the need for duplicating data entry.	Information silos will continue. Customer and staff engagement will be compromised.

12.13.2.2   Future Demand

The following demand drivers have been identified for this service:

- The requirement to support staff in their use of the electronic document management system and records compliance requirements.

- Increasing demand for the scanning services and presently the demand cannot be met.

- Progression to mobile application-based working. A present and future challenge is disposal of documents in the digital environment.

- Increasing use of modelling, particularly in emergency management is driving demand in spatial services.

- Proactively plan and respond to constant changes in technology and Council's legislative obligations within Council's resources.

- Increasing digitalisation to enable Council to improve the delivery of information and services to the community; ensuring Council exploits opportunities provided by emerging technologies.

- Customer demands for digital services are increasing. Digital natives are reaching adulthood, it is their expectation that they can self-serve council services at any time, on any device from any place

- The environment around cyber security continues to change and Council will need to continue to respond to the environment and changes to legislation.

- Cyber Security as a risk to Council is increasing particularly in response to global events.

- Continue to develop the knowledge and skills of our team to maintain a contemporary and customer focused service.

- Manage the transition to cloud based technologies inclusive of storage, compute, and network re-architecture.

- Support the growth of an increasing mobilised workforce and mobile enabled business processes.

Asset Management Plans

- Digital transformation requiring more secure 24 x 7 online services.

- A rapidly changing data security threat environment.

- Upgrading Council's audio and visual capability

- Reviewing and enhancing business applications.

Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
Electronic management of records	Increase or decrease ARMAT	Managing upgrades as require	Contractual -yearly	State Records and Archives Authority

12.13.2.3   IM&T Provision

IM&T provides a range of assets to support service delivery including:

Asset Class	Tangible / Intangible	Features
CCTV	Tangible	Requires the implementation of a software as a service and network connectivity
Data Centre Infrastructure	Tangible	Reducing requirement due to the implementation of As a Service, however some hardware will remain on premise by the nature of the business requirements
Desktop Technology	Tangible	On-going and increasing demand due to the changes of business need. Include tablets, laptops, desktop computers and all in ones.
Imaging / Scanning	Tangible	
Library Technologies	Tangible	Various needs
Mobile Technology	Tangible	On-going and increasing demand due to the changes of business need. Include tablets, laptops, desktop computers and all in ones. Smart phones are included.
Network	Tangible	Due to technology improvements life span of network equipment is decreasing. Includes cabling switching and firewall appliances.
Printers	Tangible	Council has a wide array of print services supporting various business functions. From large format printing in the Print Room to handheld printers for Rangers. Print services are constantly being reviewed to determine if alternate digital mechanism would better serve the community.
Telephony / Conferencing	Tangible	Headsets and handsets only. Telephony being delivered as a service.

Asset Management Plans

12.13.3 Asset Snapshot

Asset Register – Office/Other Assets

Valuation Information: – These assets are recognised at depreciated historical cost as an acceptable substitute for fair value. Any difference between fair value and depreciated historical cost is unlikely to be material.

Row Labels	Count of Asset	Average of Useful Life (Years)	Sum of Current Asset Cost	Sum of Current Annual Depreciation as at 30 June 2024	Sum of Carrying Value
Accessories	5	3	537,612	121,062	447,259
Cameras	7	9	1,117,265	57,954	185,908
Computer Units, Laptops/Hybrids, and Tablets	16	4	3,237,438	456,889	1,193,198
Dongles and Hotspots	1	5	25,106	0	0
Miscellaneous	17	6	2,659,973	53,790	191,191
Monitors and Screens	4	5	126,740	0	0
Network Infrastructure	57	9	1,974,774	325,304	547,989
Phones and Headsets	5	4	255,245	14,402	21,435
Printers	8	5	705,505	61,742	223,071
Scanners	2	5	78,854	0	0
Servers and Storage	3	6	184,999	2,146	10,725
Specialist Library Infrastructure	1	5	194,127	0	0
Virtual Assets	37	6	4,488,753	0	0
Grand Total			**15,586,392**	**1,093,290**	**2,820,776**

12.13.3.1 Components and attributes

The IM&T assets are currently recorded as single assets on the year of acquisition.

12.13.3.2 Risks and criticality

Critical services are defined as those which have a high consequence of failure causing significant loss or reduction of service to the community as outlined in Section 9.1.5.2. A review of the IM&T identified that it provides critical services, with the following critical assets:

- OneCouncil
- Office 365
- Azure Active Directory
- Telecommunications network

12.13.3.3   Operation and maintenance requirements

The IM&T assets require the following operation and maintenance

- Regular upgrading of software services
- Upgrading of virtualised services
- Regular upgrading of firmware on telecommunications equipment (switches, firewalls, and networks)
- Software patching and package management on peripheral devices (laptops, tablets, smartphones)
- On-going break-fix service offered through the Service Desk
- Review and maintenance of Wireless Access Points
- Cyber Security testing and upgrades
- photocopier maintenance
- Support and maintenance of the CCTV camera fleet
- Support and maintenance of radios

12.13.3.4   Depreciation and degradation curves

IM&T assets use a straight-line depreciation.

12.13.4   Roles and responsibilities

Service Manager: Chief Digital and Information Officer

Role	Function	Responsibility	Collaborators	Activities
Service Management	Service Planning	Chief Digital and Information Officer	Service Manager*	Ensure service linkage to CSP Define service needs Determine service hierarchy Analyse capacity and demand Summarise service-related legislative requirements (Service Manager) Establish customer levels of service Determine asset requirements for service delivery
	Service Operations	Chief Digital and Information Officer	Customer + Business Integrity	Act as customer liaison for service Provide information and communications to customers Initiate notifications for service interruptions Undertake functional assessment Monitor and manage service and asset utilisation

Asset Management Plans

Asset management	Asset Acquisitions and Disposals	Chief Digital and Information Officer	Customer + Business Integrity	Develop plan for acquisitions and disposals of assets aligned to service plan and demand forecast Engage with stakeholder on acquisition and disposal plan Arrange or transition of service and data migration Arrange establishment or termination of agreements
	Asset Planning	Chief Digital and Information Officer	Service Manager*	Complete performance assessment Assess asset related legislative requirements Coordinate scope preparation Asset review Renewal/upgrade planning
	Asset Data	Chief Digital and Information Officer	Nil	Administration of asset register Updates for capital improvements Initiate asset disposal system process Prepare asset management plan Coordinate asset reporting data
	Asset Financials	Chief Digital and Information Officer	Chief Financial Officer	Revaluation Unit rates Estimates Monitor expenditure
Project Delivery	Project Sponsor	Director Corporate Services		Capital expenditure review (OLG) Approval project governance framework Approve and monitor project plan
	Asset Concept	Service Manager	Chief Digital and Information Officer	Define the problem/need Options assessment Feasibility Lifecycle costing Funding strategy Business case/proposal
	Program Management	Chief Digital and Information Officer		Oversee project as part of program Responsible for managing overall program costs, risks, progress

Asset Management Plans

	Asset Design and System Architecture	Chief Digital and Information Officer		Ensure design solutions align with strategy Options analysis Proof of concepts Cost estimating Approvals process
	Asset Delivery	Chief Digital and Information Officer		Procurement strategy Contract management Project management User acceptance testing Oversee project commissioning and handover
Maintenance and Operation Management	Asset Maintenance	Chief Digital and Information Officer	Service Manager*	Complete maintenance inspections and testing Helpdesk triage and scheduling Establish maintenance protocols and procedures Undertake maintenance requests Oversee updates and user acceptance testing Develop test scripts
	Asset Operations			Help desk Vendor management Business continuity planning and desktop testing

*IM&T Projects are often generated by a Service Manager to support the needs of their business. The relevant Service Manager will be a key stakeholder.

12.13.5 Performance

We monitor the performance of our assets by:

- Condition – the actual physical and technical state of the asset.
- Functionality – the ability of the physical infrastructure to meet service needs including social, technological, environmental, and economic performance.
- Capacity – the ability of the physical infrastructure to meet demand and be compatible with the ICT environment.
- Compatibility with the Enterprise Architecture (Application Portfolio Model, Information architecture, and Infrastructure Portfolio Model)
- Alignment with the IMT Principles – as outlined in the Enterprise Architecture

Asset Management Plans

Technology also presents opportunities for Council's community facing business units to improve their efficiency or effectiveness. Technological innovations are often disruptive and will radically change how the business delivers its services.

By undertaking regular assessments, we determine which assets meet our levels of service and which require capital intervention – renewal, upgrade, or expansion – to meet service level thresholds.

12.13.5.1   Customer Satisfaction Survey

IM&T are committed to providing quality services and provide customer survey with helpdesk requests.

12.13.5.2   Legislative Requirements

The following legislation is associated with IM&T service provision:

- NSW State Records Act (1998)
- Surveillance Devices Act 2007
- Privacy Act 1988
- Privacy and Personal Information Protection Act 1998
- Workplace Surveillance Act 2005
- Radiocommunications Act 1992
- Radiocommunications Legislation Amendment (Reform and Modernisation) Act 2020

12.13.6   Future Investments

12.13.6.1   Acquisition and Upgrade Plans

ICT assets have a technological lifespan. Assets reach end of life when they are no longer satisfy our risk appetite. Assets present a risk when they are no longer contemporary, and when they are no longer interoperable with the remainder of Council's ICT landscape. Alternatively, if they cannot be patched to mitigate a cyber security vulnerability.

The following IM&T assets are forecast for acquisition during the 10-year period of this plan:

Asset Classification	Description
CCTV	CCTV cameras and supporting infrastructure
Radios	Two-way communications for areas of no network connectivity
Laptops and Tablets	Desktop, laptop, and tablet computing devices including docking stations, headsets (wired and wireless) and monitors etc.
Printers and scanners	Large and small printers and scanners including handheld printers, desktop, and standalone printers
Telecommunications networking	Cabling, switches, wireless access points appliances
Servers	On premise servers
Telephony	Handsets, smart phones, mobile phones, desktop handpieces

Asset Management Plan |

Audio Visual Equipment	Video screens, conferencing equipment, audio visual equipment, camera equipment

12.13.6.2 Decommissioning and Disposal Planning

IM&T review the service provided with Service Managers to identify the need for decommissioning of assets. This review is influenced by service contracts and vendor's application road maps.

Unforeseen decommissioning may result where applications road maps indicate end of support and development.

The following assets have been identified for decommissioning:

Asset Classification	Description	Timing	Alternate Service
Data Centre Infrastructure	Data centre	TBD	SaaS, PaaS and/or IaaS

Asset Management Plans

12.13.6.3 Future investment plan – Information Management and Technology

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Depreciation	1,093,290	1,096,411	1,099,357	1,102,865	1,106,372	1,109,879	1,109,879	1,109,879	1,109,879	1,109,879	1,109,879
Operating expenditure	1,093,290	1,096,411	1,099,357	1,102,865	1,106,372	1,109,879	1,109,879	1,109,879	1,109,879	1,109,879	1,109,879
Renewal works	1,107,850	1,258,000	800,000	950,000	883,000	1,307,954	1,307,954	1,307,954	1,307,954	1,307,954	1,307,954
Upgrade works	187,650	100,000	50,000	50,000	-	-	-	-	-	-	-
Expansion works	44,500	42,000	50,000	50,000	50,000	-	-	-	-	-	-
New works	-	-	-	-	-	-	-	-	-	-	-
Capital expenditure	1,340,000	1,400,000	900,000	1,050,000	933,000	1,307,954	1,307,954	1,307,954	1,307,954	1,307,954	1,307,954
Totals	2,433,290	2,496,411	1,999,357	2,152,865	2,039,372	2,417,833	2,417,833	2,417,833	2,417,833	2,417,833	2,417,833
Renewal and upgrade as a % of depreciation	118%	124%	77%	91%	80%	118%	118%	118%	118%	118%	118%

12.13.7 Information Management & Technology Asset Improvement Program

Item	Issue	Description	Responsible	Timing
13.1	Review and update the asset register	Review the definitions and descriptions to improve consistency of asset attributes. Consider developing a data dictionary.	Chief Digital and Information Officer	2026

12.14 Artworks, Antiquities and Memorials

Council manages over 3,000 pieces of art, antiquities, and memorials on behalf of the community. These pieces contribute to the cultural fabric of the community. This section of the asset management plan focusses on the collection of antiques, public art, artworks, and memorials in open space.

12.14.1 Profile

Community Strategic Plan Goal: Goal 3: We foster a diverse economy, and we value innovation, culture, and creativity

Service: Cultural Services

Provide direction for the creative sector, support and grow creative industries and support community participation in creative life and celebrate our unique places and spaces. Participate in strategic planning for Wollongong heritage collections, implement strategies from Creative Wollongong 2024-2033 and Animating Wollongong Public Art Strategy 2022-2032. Facilitate the Lower Town Hall as a creative low-cost artist's studios. Manage the annual Small Cultural Grants program and community cultural festivals and events.

Showcase Wollongong's unique strength and character through a dynamic and respectful public art approach that values and supports the city's creative communities and sparks collective imaginations. Deliver strategies identified in Animating Wollongong 2022-2032, ensuring public art is a key consideration in the development of Council's assets across the Local Government Area. Championing a culture that recognises public art as an intrinsic element in the aesthetics and placemaking of the city. This includes coordination of the annual Public Art Maintenance program.

The Wollongong Art Gallery has a key role in the history of Wollongong and is a current civic centre for creative and cultural events and exhibitions. Deliver an annual program of exhibitions, educational and community participation opportunities at the Wollongong Art Gallery. Manage the Wollongong Art Gallery collection, including acquisition of new works.

12.14.2 Strategic priorities

The key supporting documents that inform decisions relating to artwork and antiquities are:

- Animating Wollongong - Public Art Strategy
- Creative Wollongong
- Wollongong Art Gallery Strategic Plan
- Major Events Strategy

12.14.2.1 Future Impacts

The following future impacts were identified in the delivery stream report for cultural services relating to public art and Wollongong Art Gallery:

- Animating Wollongong Public Art Strategy 2022-2032 will continue to influence the future delivery of the Public Art Program.
- The program will also be impacted by various Council major projects and ongoing maintenance of existing public art works.

- The Gallery is committed to providing an important cultural service to community and is actively engaged in shaping its program to better serve the evolving demographics of the region.
- 'Framing Our Future' - Wollongong Art Gallery Strategic Plan 2020 - 2025 guides the strategic direction of the Wollongong Art Gallery.

There are currently 22 memorials on public open space across the Wollongong local government area. The history and management arrangements for these memorials is not currently well defined. This can lead to issues when artifacts degrade over time and require action to repair or restore the item. It is recommended that a policy and strategy that addresses memorials on public land be considered to provide greater direction and guidance on this group of assets.

12.14.3 Asset Snapshot

Asset Register – Office/Other Assets & Assets (Memorials only)

Valuation – The Heritage Collections was revalued in 2023

Valuation Information: – These assets are recognised at depreciated historical cost as an acceptable substitute for fair value because any difference between fair value and depreciated historical cost is unlikely to be material.

Row Labels	Financial Reporting Group	Count of Asset	Average of Useful Life (Years)	Sum of Current Asset Cost	Sum of Current Annual Depreciation as at 30 June 2024	Sum of Carrying Value
Antiques	Heritage Collections / Other	101	801	469,620	0	469,620
Artworks	Heritage Collections / Other	3284	831	16,896,238	30,736	16,420,354
Memorials	Other Open Space/Recreational Assets	22		225,030	4,501	211,909
Public Art	Heritage Collections / Other	10	16	602,320	12,931	494,930
Grand Total				**18,193,208**	**48,168**	**17,596,813**

12.14.3.1 Components and attributes

Assets are currently recorded as single asset with a description of the piece, artist name and other information where known.

12.14.3.2 Risks and criticality

Critical services are defined as those which have a high consequence of failure causing significant loss or reduction of service to the community as outlined in Section 9.1.5. A review of the artworks and antiquities identified that it is not a critical service, and consequently, does not have critical assets.

Whilst the service did not meet the criteria for critical service, it is noted that assets under this category are typically unique pieces and warrant appropriate management to mitigate risk of damage and/or loss.

12.14.3.3   Operation and maintenance requirements

The collection requires a range of activities to monitor condition of assets including:

- routine inspections
- scheduled maintenance and cleaning
- humidity control
- mould/microbial removal
- Selective application of anti-graffiti coating for public art

12.14.3.4   Depreciation and degradation curves

Artworks and antiquities are non-depreciable assets. Memorials and public art use a straight-line depreciation and degradation curves.

12.14.4   Roles and responsibilities

Service Manager: Manager Community Culture and Engagement

Role	Function	Responsibility	Activities
Service Management	Service Planning	Manager Community Culture and Engagement	Ensure service linkage to CSP Define service needs Determine service hierarchy Analyse capacity and demand Summarise service-related legislative requirements Establish customer levels of service Determine service requirements
	Service Operations	Manager Community Culture and Engagement	Act as customer liaison for service Provide website information and communications Initiate notifications for service interruptions Undertake functional assessment Monitor and manage service utilisation
	Asset Acquisitions and Disposals	Manager Community Culture and Engagement	Develop plan for acquisitions and disposals of assets aligned to service plan and demand forecast Engage with stakeholder on acquisition and disposal plan Arrange relocation or transition of service Arrange establishment or termination of agreements (utilities)
Asset management	Asset Planning	Manager Community Culture and Engagement	Complete condition and performance assessment Assess asset related legislative requirements Coordinate scope preparation

		Manager Infrastructure Strategy and Planning (ISP) (Monuments and Memorials)	Asset review Renewal planning
	Asset Data	Manager Community Culture and Engagement Manager ISP (Monuments and Memorials)	Administration of asset register Updates for capital improvements Initiate asset disposal system process Prepare asset management plan Coordinate asset reporting data
	Asset Financials	Manager Community Culture and Engagement Manager ISP(Monuments and Memorials)	Revaluation Unit rates Estimates Monitor expenditure
Project Delivery	Project Sponsor	Manager Community Culture and Engagement	Approval of project plan Oversee business proposal Capital expenditure review (OLG)
	Asset Concept	Manager Community Culture and Engagement	Define the problem/need Options assessment Feasibility Lifecycle costing Funding strategy Business case/proposal
	Program Management	Manager Community Culture and Engagement	Oversee project as part of program Responsible for managing overall program costs, risks, progress
	Asset Design	Manager Community Culture and Engagement	Ensure alignment with strategy Options analysis Concepts Design development Cost estimating Complete safety in design report Approvals process
	Asset Delivery	Manager Community Culture and Engagement	Cost estimate Value engineering Procurement strategy Contract management Procurement Project management Oversee project commissioning and handover
Maintenance and Operation Management	Asset Maintenance	Manager Community Culture and Engagement Manager ISP (Monuments and Memorials)	Complete maintenance inspections Work management and scheduling Establish maintenance procedures Undertake maintenance works
	Asset Operations	Manager Community Culture and Engagement	Catalogue

12.14.6 Performance

Council's most recent Community Satisfaction Survey shows a high level of utilisation and satisfaction with the provision of the Wollongong Art Gallery with a summary of the utilisation of the facility included in the survey is shown below:

FACILITIES	2010	2012	2014	2017	2019	2021	2023	SIGNIFICANT CHANGE SINCE 2021
Wollongong Art Gallery	3.9	4.0	4.2	4.2	4.1	4.2	4.1	☐

The community survey also indicated a consistent utilisation of the facility over a few years, as indicated in the summary below:

FACILITY USAGE RATE	2017	2019	2021	2023	CHANGE SINCE 2021
Wollongong Art Gallery	20%	15%	24%	25%	**+1**

We do not currently monitor community satisfaction with the other services and asset types included in this asset grouping.

12.14.6.1 Legislative Requirements

The legislative requirements associated with these assets includes:

- Copyright Act 1968
- Heritage Act 1977

12.14.6.2 Acquisitions, Upgrade and Decommissioning Plans

A review of our approach to the management of public art is currently underway. This work will review our approach to acquisition and decommissioning of public art. There are no formal plans for major acquisitions, upgrades, or decommissioning of the collection.

12.14.7 Future investments – Artworks, Antiquities and Memorials

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Scheduled and reactive maintenance	54,028	55,649	57,318	59,038	60,809	62,633	64,512	66,448	68,441	70,494	72,609
Depreciation	48,168	48,442	48,724	49,015	49,314	49,579	49,844	50,108	50,373	50,638	50,903
Required maintenance and operational works	155,759	155,759	155,759	155,759	155,759	155,759	155,759	155,759	155,759	155,759	155,759
Operating expenditure	102,196	104,091	106,042	108,053	110,123	112,212	114,356	116,556	118,814	121,132	123,511
Renewal works	103,500	106,600	109,800	113,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Upgrade works	-	-	-	-	-	-	-	-	-	-	-
Expansion works	-	-	-	-	-	-	-	-	-	-	-
New works	-	-	-	-	-	-	-	-	-	-	-
Capital expenditure	103,500	106,600	109,800	113,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Totals	205,696	210,691	215,842	221,053	210,123	212,212	214,356	216,556	218,814	221,132	223,511
Renewal and upgrade as a % of depreciation	215%	220%	225%	231%	203%	202%	201%	200%	199%	197%	196%

12.14.8 Artworks, Antiquities and Memorials Asset Improvement Program

The following opportunities have been identified through the preparation of this asset management plan that will assist in improving future asset management planning outcomes:

Item	Issue	Description	Responsible	Timing
14.1	Asset register	Review the operational and corporate asset registers to validate data	MCC&E	2026
14.2	Mapping of Public Art	Continue with the current program of mapping public art installations. Consider linking through to public maps.	MCC&E	2026
14.3	Memorials	Prepare a policy and strategy to provide direction and guidance on the provision and future management of existing and proposed memorials on public land. Identify key stakeholder groups for memorials and clarify the ownership and management arrangements.	MCC&E, MCO+P, MISP	2027
14.4	Required maintenance	Develop a program of required maintenance to support the asset grouping	MCC&E	2027
14.5	Renewal	Review the requirement for renewal investment for the asset group.	MCC&E	2027
14.6	Level of Service	Develop Level of Service indicators and target performance for asset group	MCC&E	2030

12.15 Waste Management

The waste management plan documents the strategic context and service provision to manage and reduce waste going to landfill through prevention, education and the use of innovative practises and technologies.

This is provided through delivering high quality, value for money, customer focused municipal waste services to the Wollongong community in the form of waste facilities and collection services. The service includes community education programs, waste collection and recycling, operation of the Wollongong Waste and Resource Recovery Park, and public domain waste collection. Domestic waste collection, recycling, on-call household clean-up and organics collection contracts. We also provide education activities for the community on Council's services and environmentally focused values.

A significant part of this service includes the operation of Wollongong Waste and Resource Recovery Park at Kembla Grange and management of former landfill sites.

12.15.1 Profile

Community Strategic Plan Goal: Goal 1: We are a sustainable and climate resilient city

Service: Waste Management

Our current global rate of consumption of non-renewable resources is not sustainable and it's crucial that we look at alternatives to non-renewable resources and enhance our efficiency managing and recovering existing resources. We need to do this in a way that minimises environmental impacts and maximises the value of recovered materials to ensure we are caring for country and protecting our environment.

The assets in this section of the plan are primarily to support the resource recovery and landfill operations at Whyte Gully. These assets provide waste disposal and resource recovery services to the Wollongong community whilst incorporating best practice environmental management, operations, facilities and techniques. A provision is also included for Whytes Gully for the estimated cost to remediate the site at the end of the waste and resource recovery park useful life.

The facility accepts and processes municipal and commercial solid waste produced within the Local Government Area. Environmental controls are implemented to meet and exceed compliance with the sites Environment Protection Licence, Development Consent and Environmental Management Plan including lined landfill cells, leachate management and control, and a rigorous environmental monitoring regime. This facility includes operation of inbound and outbound weighbridges, a reuse and revolve facility, a small vehicle transfer station, a recycling centre and garden organics processing area. A Community Recycling Centre oversees the diversion of recyclable materials including steel, paper and cardboard, timber from the transfer station.

This section of the plan does not include the buildings and sealed internal road networks at Whytes Gully – these are listed in the respective sections of the plan.

12.15.2 Strategic priorities

Waste management is guided by the Wollongong Waste and Resource Recovery Strategy 2024-2034 which identifies the following four goals:
1. Reduce Waste to Landfill
2. Transition to a Circular Economy
3. Reduce our Waste Related Emissions
4. Improve our Waste Management

Table 12.15.2 below summarises the actions from the strategy relating to waste management assets:

Table 12.15.2 – Supporting Document Actions

Strategy Reference	Action	Infrastructure Impact
1.2	Investigate technologies and partnerships for increased diversion of waste - Continue to seek partnerships and explore the market for emerging technology to increase waste diversion	Impacts will be dependent on outcomes of the investigations.
1.4.2	Investigate options to implement soft plastic collection through the domestic recycling collection service	These actions require a review of the site masterplan to identify space to accommodate the service. The outcomes of the review may require capital investment for the modification or expansion of existing facilities, or potentially the provision of new facilities to support the service. This is not currently included in the plan and will require a business plan and life cycle costing to demonstrate the benefits.
1.5.1	Design and construct a new transfer station area that allows for greater source separation and diversion	
1.5.2	Explore an alternate transfer station in the northern part of the city to assist with source separation	
2.2.1	Increase the number of accepted materials at the CRC, including polystyrene, textiles and other household items with end markets	
2.2.2	Investigate the introduction of a circular economy repair/repurposing hub within the CRC	
2.2.3	Invest in key infrastructure and partnerships within the CRC to improve functionality and appeal to the community	
2.4.2	Continue to pursue recycling solutions for problem waste, e.g. textiles, vapes, solar panels, nappies and polystyrene	
3.1.1	Review the master plan for the WWARRP to maximise the utilisation of Council's waste assets	
3.2.1	Consider increased screening options and future recycling opportunities to increase diversion at the WWARRP	
3.2.3	Trial available emerging technologies to reduce waste to landfill and collection emissions	These actions may require projects to be considered in addition to the current 10-year plan, depending on outcomes of business proposals for the options.
3.3.1	Continue to expand gas capture infrastructure as practically possible	
3.3.2	Develop future cell design with consideration for maximum gas capture efficiency	
4.2.1	Effectively rehabilitate the former Helensburgh Waste Disposal site	Rehabilitation works at Helensburgh are included in the 10-year plan.

4.5.1	Explore innovative waste processing technologies, e.g., alternative waste treatment systems and waste to energy	A review of the capital investment plan may be required in response to emerging technology that presents opportunities to enhance efficiency and environmental outcomes.
4.6.1	Continued improvement of our leachate management	Projects are included in the 10-year plan to fund capital improvements to contribute to these actions.
4.6.2	Continued improvement of our stormwater management	
4.6.3	Continued improvement of capping of landfill areas	

12.15.2.1   Future Impacts

The following future impacts were identified in the delivery stream report for Waste Management. The strategic response as it relates to waste management assets, and the consequences of not funding the impact is summarised below in Table 12.15.2.1.

Table 12.15.2.1 – Future Impacts on Waste Management Assets

Future Impacts	Strategic Response	Consequences of Not Funding
Alternative waste technologies which minimise percentage of waste material to landfill.	Innovation in the waste and resource recovery sector will drive the need to be agile in response to emerging technology that presents opportunities to enhance efficiency and environmental outcomes. This may result in a need to review the capital investment plan as technologies enable us to meet the objectives of our Community Strategic Plan and Waste and Resource Recovery Strategy.	Not pursuing innovative technology to minimise the percentage of waste to landfill will result in a faster rate of cell utilisation. This results in the need for significant investment in additional cell creation and reduces the life of the Whytes Gully park site.
Continued focus on maximising organics diversion from landfill via the FOGO service.	The reduction of food organics garden organics in landfill has several environmental, operational and financial benefits including recycling, reducing the rate of land fill utilisation, and reducing odour and future gas generation in landfill.	Whilst FOGO has been rolled out, investment is required to maintain the service, including on-going education and performance monitoring. Failure to fund these aspects is likely to lead to contamination of FOGO and inability to recycle the material. This leads to increasing diversion of material to landfill.

Rehabilitation of Helensburgh Waste Disposal Depot	Council has a commitment and responsibility to remediate and manage former landfill operations.	Not funding the required remediation may result in regulatory non-compliance.
Power generation as a result of landfill gas extraction is a priority in meeting Council's net zero emissions targets.	Landfill gas, resulting from the decomposition of waste, was identified as generating 85% of the total emissions from Council's operations in the Sustainable Wollongong 2030 – A Climate Healthy City Strategy. Capture, cleaning and reuse of the gas for generation of power will reduce the volume of emissions.	Council will not achieve targets for the reduction in emissions if treatment of landfill gas is not funded.
Environmental compliance particularly with the rapid urban expansion at Kembla Grange, and the ability to safely operate during ever increasing extreme weather event	Increased urbanisation and growth in the vicinity of the Whytes Gully facility places a greater need to meet the environmental standards for operating the facility, particularly for dust, noise and odour control.	Not adequately investing in mitigation measures for environmental impacts may lead to increased community complaint and potential regulatory sanctions.

12.15.2.2   Future Demand

The Local Strategic Planning Statement identifies the likely changes to our community in the future and the implications of population context. These implications will create changes in demand that influences our planning associated with waste management, as summarised below in Table 12.15.2.2:

Table 12.15.2.2 – Future Demand for Waste Management Infrastructure

Demand Drivers	Demand Forecast	Demand impact on assets	Demand management plan	Asset programs to manage demand
Population growth – and urban densification	Wollongong LGA growth by 55,000. During the next 20 years, several of Areas will evolve from 'sub district' sized populations of less than 30,000 people to areas hosting 'district' level populations of	The growth will place additional pressure on the provision and management of waste and resource recovery. Increased density will create additional demand and capacity issues for	The main area of growth in Wollongong is situated in West Dapto. The Wollongong Waste and Resource Recovery Strategy recognises the forecast growth and the need to support a more sustainable	Community recycling centre, community recycling stations, waste education, FOGO bins, recycling bin

| | more than 30,000 people.

Increased residential density in some of the district hubs within the LGA. | existing waste infrastructure. | approach to the management of waste. | |
|---|---|---|---|---|

12.15.3 Asset Snapshot

**Asset Register – **Assets

Financial Reporting Group: Other; Plant and Equipment; Tip Remediation Assets

Last comprehensive revaluation: 30/06/2021

Valuation Information: – Other Assets includes Waste Assets such as Cell Development and Liners. Valuation Technique - Other Assets are recognised using the cost method.

Tip Remediation Asset Valuation Technique – Council's Tip Remediation Asset is measured using the cost method.

Fair Value Hierarchy – Whytes Gully Waste Disposal Depot will require remediation, and restoration works to be carried out during and at the end of its useful life. The cash outflows relating to these remediation and restoration works have been modelled and recognised as an asset in Note C1-8 of Council's statements. Key unobservable inputs were the discount rate, cost escalation rate, timing of costs and future environmental management requirements. As such the level of valuation input for Council's tip asset was considered Level 3.

The tip remediation asset was adjusted in line with changes to the remediation provision. During 2019-2020, the remediation provision was reduced to by an amount greater than the carrying value of the tip remediation and as a result this asset now has a carrying value of zero.

Financial Reporting Group	Qty	Av Useful Life (Years)	Carrying Value	Annual Depreciation	Current Asset Cost
			($) @ 30 June 2024		
Other	43	22	33,555,640	1,241,002	48,101,688
Plant and Equipment	4	16	1,259	1,737	141,671
Waste Remediation Assets	1	62	8,176,293	199,422	17,586,571
Grand Total			**41,733,192**	**1,442,161**	**65,829,930**

12.15.3.1 Components and attributes

Waste management assets have a single level asset classification structure, which each asset identified by number and description.

12.15.3.2   Risks and criticality

Critical services are defined as those which have a high consequence of failure causing significant loss or reduction of service to the community as outlined in Section 9.1.5.2. A review of the Waste Service identified that it is a critical service, with waste facility assets identified as critical assets.

12.15.3.3   Operation and maintenance requirements

Routine inspections and maintenance actions are required to keep the waste assets functional and to ensure they remain serviceable to meet the expected useful life, including those listed below:

- routine inspections
- water sampling
- compaction
- spreading
- dust control
- weighbridge servicing and calibration
- lifting equipment
- filtration
- gas collection

Depreciation and degradation curves

Waste assets use a straight-line depreciation and a straight-line degradation profile.

12.15.4   Roles and responsibilities

Service Manager: Manager Open Space and Environmental Services

Role	Lifecycle	Function	Responsibility	Activities
Service Management	Planning	Service Planning	Manager Open Space and Environmental Services (MOS&ES)	Ensure service linkage to CSP Define service needs Determine service hierarchy Analyse capacity and demand Summarise service-related legislative requirements Establish customer levels of service Determine asset requirements for service delivery
	Operation	Service Operations	MOS&ES	Act as customer liaison for service Provide website information and communications Initiate notifications for service interruptions Undertake functional assessment Monitor and manage service and asset utilisation
	Planning and End of Life	Asset Acquisitions	MOS&ES	Develop a plan for acquisitions and disposals of assets aligned to service plan and demand forecast

		and Disposals		Engage with stakeholder on acquisition and disposal plan
				Arrange relocation or transition of service
				Arrange establishment or termination of agreements (utilities)
Asset management	Planning	Asset Planning	MOS&ES	Complete condition and performance assessment
				Assess asset related legislative requirements
				Coordinate scope preparation
				Asset review
				Renewal planning
		Asset Data	MOS&ES	Administration of asset register
				Updates for capital improvements
				Initiate asset disposal system process
				Prepare asset management plan
				Coordinate asset reporting data
		Asset Financials	MOS&ES	Revaluation
				Unit rates
				Estimates
				Monitor expenditure
Project Delivery	Delivery	Project Sponsor	Director Infrastructure + Works	Approval of project plan
				Oversee business proposal
				Capital expenditure review (OLG)
		Asset Concept	MOS&ES	Define the problem/need
				Options assessment
				Feasibility
				Lifecycle costing
				Funding strategy
				Business case/proposal
		Program Management	MOS&ES	Oversee project as part of program
				Responsible for managing overall program costs, risks, progress
		Asset Design	Manager Project Delivery	Ensure design solutions align with strategy
				Options analysis
				Concepts
				Design development
				Cost estimating
				Complete safety in design report
				Approvals process
		Asset Delivery	Manager Project Delivery	Cost estimate
				Value engineering
				Procurement strategy
				Contract management
				Procurement
				Project management

Maintenance and Operation Management	Maintenance	Asset Maintenance	MOS&ES	Oversee project commissioning and handover
				Complete maintenance inspections
				Work management triage and scheduling
				Establish maintenance procedures
				Undertake maintenance works
	Operation	Asset Operations	MOS&ES	Weighbridge
				Facility operations

12.15.5 Performance

We monitor the performance of our waste assets by:

Condition – the actual physical and technical state of the asset.

Functionality – the ability of the collection to meet service needs including social, environmental, and economic performance.

Capacity – the ability of the collection to meet demand.

By undertaking regular assessments, we determine which assets meet our levels of service and which require capital intervention – renewal, upgrade, or expansion – to meet service level thresholds.

12.15.5.1   Community Satisfaction Survey

Council's most recent Community Satisfaction Survey includes results relating to waste management as part of the direct services questions. The results of the community survey indicate a high satisfaction with the services related to waste management, with the top four of the eighteen overall services provided by council relating to waste management. The results are also indicating a consistency in the rating over time. The services are linked to the waste management assets, in that the assets at Whytes Gully park are required to support the circular economy of waste management and resource recovery. The indicator most directly aligned to the assets is the *Waste disposal depot facilities.*

Table 12.15.5.1 below provides a summary of community satisfaction with the direct services relating to waste management:

Table 12.15.5.1 – Community Satisfaction Survey

DIRECT SERVICES	2010	2012	2014	2017	2019	2021	2023	CHANGE SINCE 2021
Green waste, including the food organics collection service (FOGO)	-	-	-	-	-	4.5	4.4	⇔
Domestic waste collection service (i.e., red bin)	4.1	4.2	4.2	4.0	4.1	4.4	4.4	⇔
Recycling waste collection service	-	-	-	-	-	4.3	4.3	⇔
Waste disposal depot facilities	3.4	3.4	3.4	3.6	3.7	4.0	3.8	⇔
Public bin collection	-	-	-	-	-	3.9	4.0	⇔

12.15.5.2 Criteria for levels of service

Key Performance Measure	Level of Service	Performance Measures / Indicators	Performance Target	Current Performance
Customer Levels of Service				
Safety	Waste facility assets are safe for use	Number of claims alleging injury or damage associated with condition of assets	Assets condition not found to have contributed injury or damage.	
Function	Waste assets are fit for purpose	No restrictions that unreasonably limit usability of the waste facility	Down time of waste facility from service less than 5% of available hours	
Serviceability	Waste assets are available for use	Assets in serviceable condition.	No assets unserviceable, except those identified for decommissioning	
Utilisation	Waste facility is being utilised by the community			
Satisfaction	The community is satisfied with the services provided by Council supported by this asset group	Community survey for direct services - *Waste disposal depot facilities*	No significant decrease in average satisfaction results to previous survey	The results for 2023 indicated a minor decrease from 2021, from 4.0 to 3.8. This is still on target. Target achieved 😊
Technical Levels of Service				
Condition Inspection	Level 1 condition assessment	Annual	75% compliance	
	Level 2 condition assessment	4-yearly	75% compliance	
Amenity Management	Odour Control	offensive odour impacts must not occur at off-site locations	The assessment should be prepared in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (NSW DEC, 2005) and Assessment and Management of Odour from Stationary Sources in New South Wales: Technical	

			Framework and Technical Notes (NSW DEC, 2006b)	
	Dust Control	emission of nuisance dust and other particulate matter beyond the landfill boundaries must be minimised	The assessment should be prepared in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (NSW DEC, 2005). The assessment should demonstrate that cumulative off-site levels of deposited dust, particulate matter as PM10, and total suspended particulates will comply with the impact assessment criteria given in Table 7.1 of Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales.	
	Noise Control	excessive noise must not be generated by activities at the site	noise monitoring should be conducted in response to complaints.	
	Litter and debris control	local amenity must not be degraded by litter from the landfill or by mud or litter attached to vehicles leaving the landfill	• apply daily cover to the waste and continuously compact the waste • install litter fences and inspect and clear litter from all fencing daily, or as required • retrieve all litter that leaves the site as soon as practicable	
	Fire prevention	the risk of fire at the site must be minimised and the site must be adequately prepared in the event of fire.	Landfill staff should be trained in fire-prevention and fire-fighting techniques.	

Water quality maintenance	Detect any pollution of off-site surface water and groundwater	ensure that appropriate sampling and analysis methods are used in accordance with Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (NSW DEC, 2004a) and other recognised guidelines for matters not covered by the Approved Methods		
Leachate management	Leachate barrier installed and maintained	Pollutants with the potential to degrade the quality of groundwater must not migrate through the strata to any point beyond the boundary of the premises or beyond 150 metres from the landfill footprint, whichever is smaller		
	Leachate storage and disposal	Collected leachate must be stored in appropriately sized dams or tanks and disposed of so as not to cause environmental harm.		
Gas management	Minimise emissions of untreated landfill gas to air and through sub-surface strata and services			
Landfill licence	Council holds the appropriate licence to operate a landfill	Licence is current and the operation is in accordance with the licence.	Current licence and 100% compliance with requirements	
Weighbridge functionality	Weighbridge accurately measures the material entering the facility	Weighbridge calibrated	100% compliance	
Risk	Waste assets are maintained within a tolerable risk profile.	Risk assessment of assets to be undertaken.	All waste management assets managed in accordance with the infrastructure risk appetite statement	

12.15.5.3 Asset Resilience

The natural and non-natural hazard exposure categories for the City of Wollongong are identified through the Local Emergency Management Committee. The hazards identified as part of the Local Emergency Risk Management Study, that may impact waste infrastructure are summarised below:

Hazard	Risk Description	Likelihood	Consequence	Risk
Earthquake	Earthquake of significant strength (> Magnitude 7) that results in localised or widespread damage.	Rare	Major	High
Landslip / Mudflow / Rockfall	Landslip/mudflow/rockfall resulting in localised or widespread damage.	Likely	Moderate	High
Severe Storm	Severe storm with accompanying lightning, hail, damaging winds, and/or rain that cause severe damage and/or localised flooding.	Likely	Major	Extreme

The local emergency management plan covers the preparedness and response plans for the events listed above. Post incident, Council will instigate the appropriate inspection program to review any waste infrastructure impacted by the event.

The key climate hazards identified through the Climate Change Adaptation Plan (CCAP) as most relevant to waste assets are bushfires and storms. A summary of the actions from the CCAP and relation to pools is provide below.

Priority Actions		
Hazard	**Climate Change Adaptation Plan Action**	**Action**
Bushfire	Proactively maintain fire trails and other bushfire related infrastructure to be fire ready e.g. hazard reduction.	Maintain the asset protection zones at Whytes Gully.
Storms	Identify Council's business continuity plans (BCPs) and review and updated as required to address increase the likelihood of storm and extreme weather events.	BCPs may identify critical services and associated assets. Any changes to critical assets will be listed in revisions of the asset management plan, and appropriate management plans developed.

12.15.5.4   Legislative Requirements

- Protection of the Environment Operations Act 1997
- Protection of the Environment Operations (Waste) Regulation 2014
- The Public Health Act 2010 and Public Health Regulation 2022
- Environmental Planning & Assessment Act 1979
- National Parks and Wildlife Act 1974
- Threatened Species Conservation Act 1995
- Native Vegetation Act 2003
- Contaminated Land Management Act 1997

12.15.6   Future Investments

12.15.6.1   New, Upgrade and Renewal Plans

The provision of additional waste cells and associated infrastructure is required to maintain capacity to cater for ongoing demand. We monitor utilisation and demand through a model that analyses rates of fill and forecast demand. This model is used to monitor the life of the cell, which we use to forecast future asset requirements.

Our 10-year Outlook – Waste Management Assets section below identifies the new, upgrade and renewal works planned over the next 10 years. New works includes cell construction, access roads, stormwater diversion, capping and sewer upgrades.

The former Helensburgh landfill will be the subject of significant planned upgrade in addition to major renewal works at Greenhouse Park to continue with rehabilitation of these sites. Minor renewal works are planned at Whytes Gully on drainage systems.

A more detailed assessment of the waste asset portfolio is recommended to develop a more comprehensive investment plan for future versions of this plan.

12.15.6.2   Decommissioning and Disposal Planning

There are no current plans for decommissioning and disposal of waste assets.

12.15.6.3   Future investment plan – Waste Management

Item	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35
Depreciation	1,442,161	1,716,551	1,716,551	1,716,551	1,716,551	1,716,551	1,716,551	1,716,551	1,716,551	1,716,551	1,442,161
Operating expenditure	1,442,161	1,716,551	1,716,551	1,716,551	1,716,551	1,716,551	1,716,551	1,716,551	1,716,551	1,716,551	1,442,161
Renewal works	325,000	260,000	500,000	575,000	5,850,000	-	-	-	-	-	325,000
Upgrade works	125,000	300,000	6,090,000	11,260,000	7,620,000	15,900,663	9,602,737	9,541,556	459,525	176,292	125,000
Expansion works	-	-	-	-	-	-	-	-	-	-	-
New works	12,525,000	5,050,000	400,000	350,000	10,500,000	-	-	-	-	-	12,525,000
Capital expenditure	12,975,000	5,610,000	6,990,000	12,185,000	23,970,000	15,900,663	9,602,737	9,541,556	459,525	176,292	12,975,000
Totals	14,417,161	7,326,551	8,706,551	13,901,551	25,686,551	17,617,214	11,319,288	11,258,107	2,176,076	1,892,843	14,417,161
Renewal and upgrade as a % of depreciation	31%	33%	29%	33%	341%	0%	0%	0%	0%	0%	31%

12.15.7 Waste Management Infrastructure Improvement Program

The following opportunities have been identified through the preparation of this asset management plan that will assist in improving future asset management planning outcomes:

Item	Issue	Description	Responsible	Timing
15.1	Asset Register Structure	The current asset register structure is flat, with only one level of classification. A review is recommended to ensure the current data structure remains fit for purpose prior to undertaking a full class revaluation.	MOS&ES	2026
15.2	Data Dictionary	To support the structure of the asset register, prepare a data dictionary to provide guidance and consistency in classification, description, and attributes.	MOS&ES	2026
15.3	Review condition, remaining useful life and valuation	At the completion of the asset register review, the condition and remaining useful life of assets should be determined. Due to the specialist nature of landfill operations, it is recommended that a detailed assessment be undertaken. A full class valuation should be undertaken on the revised asset register, with consideration of the condition and remaining useful life.	MOS&ES	2026
15.4	Renewal requirements	Determine the requirement for renewal of waste related infrastructure. Some assets are temporary and are decommissioned at end of life.	MOS&ES	2026

13 Infrastructure Asset Management Improvement Plan

An improvement plan specific to each group of assets has been provided at the end of each plan. In addition to these actions, there are improvements that apply globally or to asset management practices. The following table summarises these actions to continue a path of asset management maturity.

Item	Issue	Description	Responsible	Timing
16.1	Condition profile	Develop a target distribution of condition per asset class that informs technical levels of service. This desirable distribution of condition will enable performance monitoring of investment and interventions plans.	MISP	2028
16.2	Asset Management Plans	Document Asset Management Plans for the following asset types, including outputs and financial impacts, from service plans • Waste management assets • Marine assets • Office equipment • Cemeteries	MISP	2027
16.3	Maintenance and operating costs	Develop and document maintenance and operational costs for asset categories to form part of future plans. This will define, quantify, and document current technical levels of service, and costs of providing the current levels of service	MISP, MCW, MOS&ES	2026
16.4	Supporting documents	Prepare a template for supporting documents that includes an assessment of the impact on asset demand. Provide a lifecycle cost assessment on any proposals for new / expanded assets.	CFO (template) Service Manager (lifecycle cost)	2025
16.5	Resource Plan	Align and integrate plan with long-term financial plan, workforce, and IM&T plan	MISP, CFO, MP+C	2025
16.6	Capital Works	Establish and implement an end-to-end process for capital works planning that aligns with community strategic goals, asset management principles and supporting documents for optimal investment in capital works. This will cover handover processes and checklists for deliverables, project capitalisation guidelines, project governance, in consistent formats providing for financial recognition of assets and stakeholder engagement on initial project scoping.	MISP, MPD, CFO, MCW	2026
16.7	Project Evaluation Model	Develop a project evaluation model for capital works aligned to the Community Strategic Plan goals, and risk appetite statement. Evaluation process should include consideration of asset lifecycle costs and funding strategy. Appropriate governance structures	CFO, MISP	2027

		should be established to provide oversight to process application.		
16.8	Service Levels	Confirm levels of service as part of reviews of supporting documents through community consultation process.	Service managers	2028
16.9	Enterprise Asset Management System	Continue asset management information systems development to capture lifecycle cost information, maintenance, and operational activities associated with assets.	MISP / MPD / CD&IO	2026
16.10	Asset Recognition	Embed the Project Management Framework to ensure that the required asset management data is collected from project inception to completion of capital works and recorded in the Asset Management and GIS systems.	MPD, MISP, MCW	2026
16.11	Project Lifecycle Management	Continue project lifecycle management development to ensure integration with asset management systems.	CD+IO, MISP, MPD	2025
16.12	Education	Prepare and implement an internal education program to increase organisational awareness and capability of asset management.	MISP	2026
16.13	Resourcing	Ensure appropriate resourcing is allocated to continue implementation of the actions in the improvement plan.	All Managers	Ongoing
16.14	Delivery plan	The timing of works delivery for West Dapto is forecast to grow significantly in the following 10-year period between 2036-2045. This will create challenges for resourcing the program, from internal workforce to contractors to undertake the works. This should be considered in the review of the Workforce Plan.	MP+C	2026
16.15	2023/24 Results	This first draft of the asset plan was prepared prior to the finalisation of the results for the 2023/24 Financial Year. The final version should be amended to include the results of the 2023/24 Year.	MISP	2025
16.16	2023/24 Revaluations	The asset plan was prepared in parallel with revaluations on several asset classes, including buildings, other structures, artworks, and antiquities. The valuations had not been finalised at the time of publishing the first draft of this asset plan. The final version of the plan should be amended to incorporate the revised asset valuations.	MISP	2025
16.17	2024/25-2027/28 IDP	This plan was prepared using the public exhibition version of the Infrastructure Delivery Program (IDP) 2024-2028. The final version of the IDP is likely to be amended prior to adoption to reflect feedback from the community. The final version of this plan is to be amended to reflect the adopted version of the IDP.	MISP	2025

Infrastructure Asset Management Improvement Plan

16.18	2027/28 Year	Review the capacity to bring forward works from proceeding years to help smooth workflow.	MISP, MPD	2025
16.19	Annual register validation	Develop and implement an annual review of the asset register to ensure registers are complete and accurate. Annual activities include review of works in progress to ensure commissioned works are capitalised; review of assets disposed within the year; review of assets created in the year; verification of contributed assets; regular check-in with Maintenance Managers to identify any assets removed from service due to damage/failure.	Asset Managers	2025
16.20	Asset groupings	Review current infrastructure asset register to consider grouping similar assets across current structure (eg retaining walls, furniture, lighting)	MISP	2026
16.21	Utilisation	Consider procurement of third-party utilisation monitoring data to inform decision making on a range of asset types.	MISP	2026
16.22	Maturity Assessment	Finalise independent review of asset maturity assessment and include priority improvement actions in a future version of the Asset Management Plan	MISP	2026

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14.1 Appendix A: Asset Management Policy

ADOPTED BY COUNCIL: [TO BE COMPLETED BY GOVERNANCE]

PURPOSE

Council is the custodian of community and corporate assets worth over $7B. The value and number of assets will change in response to service demand and population growth. This Policy outlines the responsibilities and accountabilities for the sustainable and coordinated management of existing and new assets.

POLICY INTENT

The intent of this Asset Management Policy is to:

- Outline why asset management is important through defining asset management principles.
- Establish a strategic asset management framework.
- Define the key roles and responsibilities for asset management; and
- Promote sustainability and support inter-generational equity.

OUR WOLLONGONG OUR FUTURE 2035 GOALS AND OBJECTIVES

The Community Strategic Plan (CSP), *Our Wollongong Our Future 2035,* outlines goals and objectives to achieve the vision for Wollongong. The CSP identifies Council's services that will help us achieve our targets under each goal. Each of these services requires assets to support service delivery associated with the following four goals:

Goal 1 - We are a sustainable and climate resilient city

Goal 2 - We have well planned, connected and, liveable places

Goal 3 - We value culture and the arts, and foster an innovative and diverse economy

Goal 4 - We are a healthy, respectful and inclusive community

POLICY

For all assets under Council's control, we will:

- Manage assets in accordance with the five asset management principles of this Policy.
- Implement the Strategic Asset Management Planning Framework for the management of assets.
- Comply with the Integrated Planning and Reporting mandatory requirements and essential elements for asset management planning.
- Account and plan for all assets under our control.
- Consider the possible effects of climate change on assets.
- Ensure resources are responsibly and sustainably allocated to implement effective asset management practices.
- Develop and implement a continuous improvement plan.
- Implement a governance model for Council's asset management framework.

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ASSET MANAGEMENT OBJECTIVES

Council will apply a strategic approach to asset management guided by the following five core objectives:

1 - Asset management is considered as a key element of our integrated planning

- The Community Strategic Plan sets the community vision.
- Asset management planning identifies assets and related resources required to deliver the community vision.
- Asset planning will consider relevant supporting documents.
- Asset Management Plans align with organisational priorities and the long-term financial plan.

2 - Assets provide value by supporting Council services

- Services are the main driver for assets.
- Asset management decisions consider the impact on the service supported by the asset.
- Asset planning is informed by service plans and supporting documents.
- Assets no longer required for a particular service will be considered for adaptive reuse, repurpose and/or recycling or disposal.

3 - Council is responsible in its control and management of assets on behalf of the community

- Short, medium, and long-term plans consider current and future Wollongong generations.
- Asset management roles and responsibilities are clearly defined and understood.
- Council officers have the appropriate training, knowledge, and skills to deliver their responsibilities.
- Continuous improvement forms part of asset planning.

4 - Asset management decisions are balanced

- Asset decisions will balance risk, cost, and service outcomes.
- The enterprise risk management framework will be applied to the management of assets.
- Council will comply with legislative and regulatory obligations.
- Asset management actions demonstrate alignment with value principles.

5 - Lifecycle management informs recommendations and decisions

- Assets provide service over the life of the asset from acquisition/delivery to decommissioning.
- Decisions will consider costs and impacts of operations, maintenance, renewal, upgrade, expansion, and disposal over the life of the asset for long-term financial sustainability.
- Non-asset solutions will be explored and considered as part of the decision-making process.
- Co-location of services and asset sharing will be considered for more efficient asset utilisation.
- High priority maintenance, operating and renewal expenditure is given preference to the creation or expansion of assets to accommodate increased service provision.

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STRATEGIC ASSET MANAGEMENT PLANNING FRAMEWORK

Council's Asset Management intent and principles are to be achieved through the implementation of the Strategic Asset Management Planning Framework as shown in Figure 1.
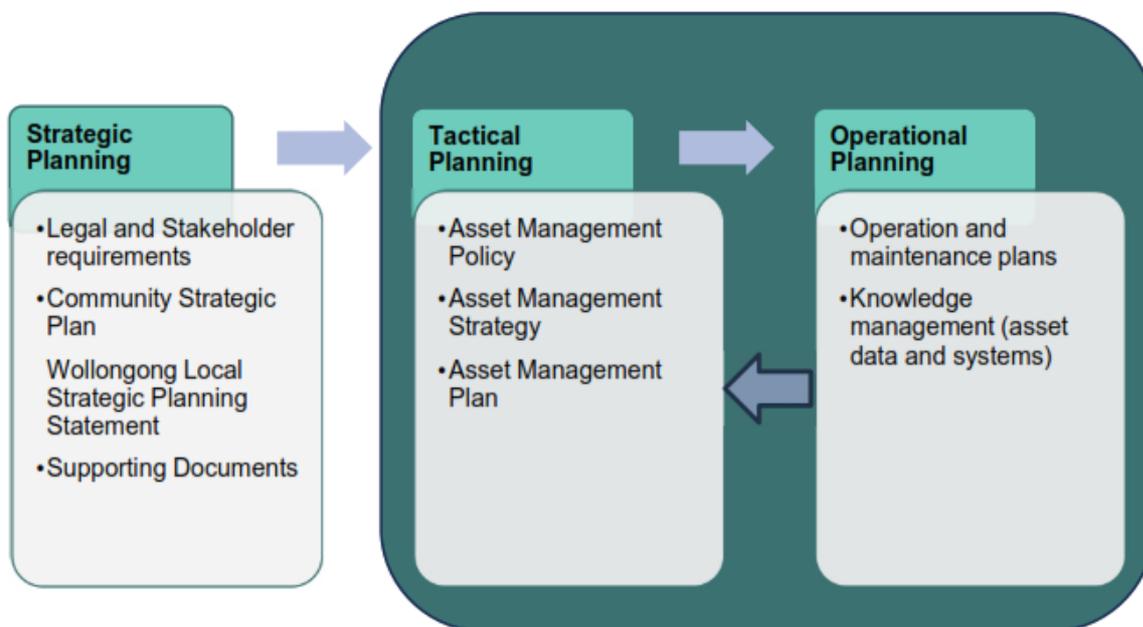
Strategic Planning

- Legal and Stakeholder requirements
- Community Strategic Plan

  Wollongong Local Strategic Planning Statement
- Supporting Documents

Tactical Planning

- Asset Management Policy
- Asset Management Strategy
- Asset Management Plan

Operational Planning

- Operation and maintenance plans
- Knowledge management (asset data and systems)

Figure 1: Strategic Asset Management Planning Framework

LEGISLATIVE REQUIREMENTS

Chapter 3 – *Principles for Local Government* of the Local Government Act 1993 applies to asset management and as specified in Sections 403 and 406 of the Act.

Specific legislation and standards that relate to each asset class are listed in the relevant Asset Management Plan.

REVIEW

This Policy will be reviewed a minimum of once every term of Council, or more frequently as required.

REPORTING

Information on assets is reported as part of the annual report and financial statements, in accordance with the Local Government Code of Accounting Practice and Financial Reporting, including condition assessment, renewal and maintenance expenditure.

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ROLES AND RESPONSIBILITIES

Role	Responsibility	Who
Wollongong Community	• Elect Councillors to represent and make decisions on behalf of the community (residents). • Utilise assets responsibly. • Participate in community engagement opportunities relating to assets. • Set the vision for Wollongong through the Community Strategic Plan.	Resident, Business, & Community Stakeholders
Asset Custodian	• Set guiding principles for the Asset Management Policy. • Act as custodians for community assets by ensuring that their decisions represent and reflect the needs of the wider community. • Adopt Council's Resourcing Strategy including the Asset Management Policy, Strategy and Plan. • Delegate authority to the General Manager to undertake required responsibilities. • Provide sufficient resources to maintain community assets to agreed levels of service as outlined in this Policy.	Lord Mayor, Deputy Lord Mayor, and Councillors
Executive Asset Governance	• Championing asset management. • Foster and support a multi-disciplinary asset management steering committee. • Enable appropriate management arrangements, ownership, control, accountability, and reporting requirements. • Review and monitor asset performance and asset management improvement actions. • Delegate authority and accountability for implementation of this Policy. • Ensure alignment of the Asset Management Policy with other policies and business processes of Council. • Oversee compliance with Council's legal obligations.	General Manager and Executive Management Committee
Asset Management Steering Committee	• Oversight of major decisions and direction of Strategic Asset Management practice within Council. • Monitor and review the implementation of Council's Asset Management System. • Monitor and evaluate the progress of improvement actions set out in Council's Asset Management Plan.	Cross-functional group of Council officers
Service Management	• Develop and regularly review Service Plans which identify community levels of service and the associated asset requirements necessary to support service. • Assess non-asset solutions to support service delivery. • Monitor utilisation and identify opportunities for asset consolidation. • Explore opportunities to share assets and co-locate services for more efficient utilisation. • Identify new/expansion works for assets to support service delivery. Develop a business proposal to seek approval and funding. • Identify asset related impacts of statutory requirements relating to service delivery. • Ensure service plans is aligned with adopted strategies.	Refer to Service Plans in the Delivery Program for Service Managers

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Role	Responsibility	Who
	• Consider land use planning strategies and plans when assessing service demand, growth, density, land use and future needs assessment. • Work with the Asset Managers to specify requirements for the delivery of works in asset management plans.	
Project Delivery	• Ensure alignment of design solution to project objectives and requirements. • Ensure designs achieve objectives in adopted strategies. • Safe and sustainable delivery of projects identified and assigned in Council's Infrastructure Delivery Program to quality standards. • Consideration of asset management principles in the design and delivery phase of the project delivery. • Commissioning and handover of appropriate assets and related data.	Refer to asset management plans
Asset Management	• Develop and apply Council's strategic asset management framework. • Lead development, monitoring and review of the Asset Management Policy, Strategy and Plans and supporting procedures. • Develop, implement, monitor, and report on a continuous asset management improvement plan. • Lead technical asset management practices. • Develop the Infrastructure Delivery Program linked to the supporting document roadmap. • Collect and regularly review condition data to support asset management planning. • Resource and administer the Enterprise Asset Management System and related tools to support decision making, accountability and improvement. • Identify asset related impacts of statutory requirements relating to provision and operation of the asset. • Monitor and report on asset management performance. • Develop and maintain whole of life costings.	Refer to asset management plans
Maintenance and Operation Management	• Develop and implement a system to manage effective and efficient maintenance practices. • Apply the asset management principles in the delivery of maintenance services. • Provide technical advice and support to Service and Asset Managers. • Identify asset related impacts of statutory requirements relating to maintenance and operating service delivery.	Refer to asset management plans
Information Technology Asset Management	• Develop and maintain roadmap for Enterprise Asset Management (EAM) system. • Embed and optimise enterprise resource platform. • Review and enhance EAM business applications. • Implement EAM Information Technology governance. • Improve Information Technology Asset Management.	Chief Digital and Information Officer
Responsible Accounting Officer	• Lead long-term financial planning and collaborate to ensure integration with asset management plans. • Lead the preparation of financial statements on assets.	Chief Financial Officer

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Role	Responsibility	Who
	• Champion Asset Accounting Policy and Procedures to align with the requirements of the Australian Accounting Standards. • Establish and monitor appropriate accounting controls to provide assurance over accounting records relevant to asset management.	

RELATED POLICY AND PROCEDURES

- Asset Accounting Policy
- Risk Management Framework
- Financial Sustainability Policy
- Management of Community Halls, Community Centres, Senior Citizens Centres and Neighbourhood Centres
- Wollongong City-Wide Development Contributions Plan
- West Dapto Development Contributions Plan

DEFINITIONS

Term	Definition
Asset	All non-financial assets recognised by the Council in accordance with the Australian Accounting Standards Board's Accounting Standards and Council's Asset Accounting Policy. Includes infrastructure, property, plant and equipment, Artwork and antiquity collections, library collections, and ICT systems.
Asset Management	Systematic and coordinated activities and practices of an organisation to deliver on its objectives through cost-effective lifecycle management of assets.
Asset Management Strategy	A high-level strategic plan that gives effect to this Policy.
Asset Management Plan	Documented information that specifies the activities, resources or timescales required for an individual asset or grouping of assets, to achieve the organisation's asset management objectives.
Whole of Life Cost	The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation, and disposal costs.
Service	Activity as defined in the Delivery Program and undertaken to meet the needs of the community or the administrative support.
Level of Service	Defines the asset performance targets in relation to reliability, quality, quantity, responsiveness, safety, capacity, environmental impact, acceptability, accessibility and cost.

APPROVAL AND REVIEW	
Responsible Division	Infrastructure Strategy and Planning
Date/s adopted	Council xx 2025
Date/s of previous adoptions	June 2022; June 2017; April 2014; June 2005
Date of next review	June 2028

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14.2 Appendix B: Council Supporting Documents

High Level Strategies

Goal 1 — We are a sustainable and climate resilient city	Goal 2 — We have well planned, connected, and liveable places		Goal 3 — We foster a diverse economy, and we value innovation, culture, and creativity		Goal 4 — We have a healthy, respectful, and inclusive community	
Sustainable Wollongong 2030	Local Strategic Planning Statement	Draft Integrated Transport Strategy	Economic Development Strategy 2019-2029	Creative Wollongong 2024-2033	Places for People Wollongong Social Infrastructure Planning Framework 2018-2028	Resourcing Strategy 2025-2035

Local Government Area Focused Strategies

Urban Greening Strategy 2017 – 2037 Illawarra Escarpment Management Plan 2015 Illawarra Biodiversity Strategy Wollongong Waste and Recovery Strategy 2024-2034	Lake Illawarra Coastal Management Program 2020-2030 Coastal Zone Management Plan 2017 Climate Change Mitigation Plan 2023-2030	Climate Change Adaptation Plan 2022 Urban Heat Strategy 2023	Wollongong Housing Strategy 2023 Wollongong Industrial Lands Review 2023 Wollongong Retail and Business Centres Strategy 2023 Tourism Accommodation Strategy Wollongong Heritage Strategy 2023-2027

| Wollongong Cycling Strategy 2030
City of Wollongong Pedestrian Plan 2017-2021 | Destination Wollongong Major Events Strategy | Cultural Tourism Strategy 2018
Animating Wollongong Public Art Strategy 2022-2032 | Reconciliation Action Plan 2021-2023
Disability Inclusion Action Plan 2020-2025
Play Wollongong Strategy 2014-2024
The Future of Our Pools Strategy 2014-2024
Sportsgrounds and Sporting Facilities Strategy 2023-2027 | Places for the Future: Social Infrastructure Future Directions 2023-2036
Discover Learn and Connect Wollongong City Libraries Strategy 2024-2028
Wollongong Community Safety Plan 2021-2025
Public Toilets Strategy 2019-2029
Beach and Foreshore Access Strategy 2019-2028 | Long-Term Financial Plan 2025-2035
Asset Management Strategy 2025-2035
Workforce Management Strategy 2025-2029
Digital Strategy 2025-2029 |

Location Specific Strategies

Floodplain Risk Management Plans	West Dapto Vision 2018 West Dapto Social Infrastructure Needs Assessment 2023 Wollongong City Centre Urban Design Framework **Town and Village Plans** Corrimal Town Centre Dapto Town Centre Figtree Town Centre Helensburgh Town Centre Plan Port Kembla 2505 Revitalisation Plan Unanderra Town Centre Warrawong Town Centre South Wollongong Future Strategy	**Plans of Management** Council owned Community Land 32 Crown Reserves Beaton Park Coledale Beach Reserve – Judbooley Parade Windang Mount Keira Summit Park Sandon Point and McCauleys Beach Stanwell Park Reserve and Bald Hill Lookout Wollongong Botanic Garden Draft Wollongong City Foreshore Helensburgh Park Crown Reserves Draft Hill 60 Crown Reserve	Draft City Centre Movement and Place Plan Inner City Parking Strategy 2010-2026 Keiraville Gwynneville Access and Movement Strategy 2020

| Tourist Parks Improvement Strategy & Master Plan 2017-2022 | Framing Our Future Wollongong Art Gallery Strategic Plan 2020-2025 | **Masterplans**
Beaton Park
Blue Mile
Botanic Garden and Plan of Management
Bulli Showground
Corrimal Heated Pool
Cringila Hills Recreation
Draft Bellambi Foreshore
Figtree Oval
Grand Pacific Drive
Hill 60
Kembla Grange Cemetery
King George V Oval
Memorial Gardens
Stuart Park
JP Galvin Park | Draft Asset Management Plans |

Informing Documents

Reports – Feasibility Assessments – Floodplain Studies – Bushfire Risk Management Plans – Planning Studies Legislation   Studies – Reviews – Conservation Management Plans – Engagement Frameworks – Deign and Technical Manuals

Asset Management Plan | Appendices

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14.3 Appendix C: Risk Appetite Statement

Below are the Risk appetites and tolerance levels determined for Wollongong City Council. Our risk appetites and our risk management framework support our decision making and ensures Council makes appropriate and informed decisions.

Risk Category	Context	Risk Appetite Rating	Risk Tolerance Levels	
			Council will tolerate	**Council will not tolerate**
Our People and Safety	We support a safe and healthy workforce that treats everyone fairly. Council has minimal appetite for work practices, actions or inactions that compromise the wellbeing and safety of people including staff, contractors, volunteers, and community.	**Minimal**	• Minor unforeseen incidents or injuries that arise from time to time while undertaking normal activities. • Minor morale issues relating to improving workforce performance. • Minor staff grievances that can be dealt with through normal internal mechanisms. • Practices that are not in line with best practice if safety and duty of care is not compromised. • Minor morale and staff grievances due change within the organisation due to innovation or change management processes leading to more efficient and effective outcomes.	• Actions or behaviours that are deliberate and willingly contravene the Code of Conduct and WHS policies and procedures. • Actions which do not align to WCC values of respect, sustainability, courage, integrity and one team. • Practices that knowingly compromise staff well-being, workplace or community safety (including discrimination, harassment or bullying). • Activities that result in reasonably foreseeable and preventable fatalities, harm, serious injuries or illnesses to our Community, Customers, Councillors or Employees. • Events that occur arising from untrained employees or failed internal processes. • Unsafe infrastructure and work environments

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Risk Category	Context	Risk Appetite Rating	Risk Tolerance Levels	
			Council will tolerate	Council will not tolerate
Infrastructure	Council is committed to continuous improvement in order to provide excellent infrastructure services that provide benefits to our community. Council is open to taking moderate levels of risk to enhance our city's infrastructure.	Open	• Moderate financial and reputational impacts arising from the implementation of new of innovative technologies. • Moderate impacts leading to short term disruption to community due to implementation of construction procedures which provide value for money provided community has been informed • Moderate short-term fiscal impact on capital costs of projects where there are demonstrated long term sustainable gains.	• Failure of third-party contractors to provide services within budget and agreed timeframes. • Non-completion of a significant portion of new or renewal infrastructure projects beyond financial year (or scheduled completion period if project runs across multiple years). • Significant delays to projects that are considered within Council control • Asset failure significantly earlier than the projected lifespan of the asset • Failure to administer and manage contracts appropriately
			• Moderate impacts to infrastructure due to implementation of new technology, innovation initiatives or projects. • Unforeseen interruptions of up to 2 days to critical infrastructure from uncontrollable events where Council responds and communicates promptly to impacted stakeholders. • Minor unforeseen and unavoidable cost variations in capital projects within the • established contingency allocated to each project	• Significant foreseeable variations in contract price due to aspects of the project within the control of Council • Failure to escalate critical infrastructure damage or issue within 2 hours. • Failure to develop plans to respond to a disruption and ensure continuity of operational infrastructure. • Activities that result in reasonably foreseeable and preventable fatalities, harm, serious injuries or illnesses to our Community, Customers, Councillors or Employees.

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Risk Category	Context	Risk Appetite Rating	Risk Tolerance Levels	
			Council will tolerate	**Council will not tolerate**
Service Delivery	Council delivers a range of community services, events and facilities which contribute to our city. Council is open to creativity and innovation and is willing to take some level of risk to deliver efficiencies, enhance capabilities and provide a service to be proud of to our community. Council is open to taking moderate risk to enhance service delivery.	**Open**	• Unforeseen interruptions of up to 2 days to critical business functions from uncontrollable events where Council responds and communicates promptly to impacted stakeholders. • Unforeseen interruptions of up to 7 days to less critical business functions from uncontrollable events where Council responds and communicates promptly to impacted stakeholders. • Moderate reputational impact from community complaints relating to service quality or new initiatives to deliver enduring benefits to our community. • Moderate impacts to service delivery due to implementation of new technology, innovation initiatives or projects. • Moderate impacts arising from innovations and ideas that contribute and encourage creating a flexible workforce.	• Failure to significantly meet our service commitments and community expectations • Failure to demonstrate a commitment to delivering quality services to our Community, Councillors, Customers and Employees/ • Failure to document and follow policies and procedures that impairs the quality-of-service delivery or results in service interruptions. • Failure to develop plans to respond to a disruption and ensure continuity of critical business functions. • Failure to escalate a critical business function outage within 2 hours.

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Risk Category	Context	Risk Appetite Rating	Risk Tolerance Levels	
			Council will tolerate	**Council will not tolerate**
Environmental	Council recognises the importance of conserving and enhancing our environment and understands that sustainability considerations in all council decisions is important. Council has a cautious appetite for environmental impacts arising from normal business activities, however, is open to innovative practices for the betterment of the environment.	Cautious	• Environmental impacts offset by other activity resulting in a net environmental benefit. • Minor environmental impacts from uncontrollable or unforeseen events or to deliver enduring benefits to our community well into the future. • Changes to procedures and practices to accommodate improved environmental outcomes • Minor cost impacts in the selection of products, services that have a significant positive impact on the environment	• Decisions that do not appropriately consider the principles of ecologically sustainable development or the Council value of Sustainability. • Failure to minimise significant impacts on biodiversity and reduce our ecological footprint. • Decisions, activities, and practices that result in long term or irrevocable environmental damage or negative climate impacts, threatens biodiversity, including extinction of flora and fauna, or is hazardous to human life. • Activities and practices that knowingly compromise the environment, are reasonably foreseeable and preventable. • Failure to meet environmental commitments or legal requirements resulting in EPA fines or penalties.

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Risk Category	Context	Risk Appetite Rating	Risk Tolerance Levels	
			Council will tolerate	**Council will not tolerate**
Financial	Council recognises the financial risks involved in delivering a wide range of services, programs, and capital projects. Council has a cautious appetite for variation in financial performance as long as long-term financial sustainability is not threatened	Cautious	• Minor unforeseen and unavoidable budget variations of up to 4% favourable and 2% unfavourable for divisional budgets • Minor unforeseen/unavoidable variations in capital projects within established contingency allocated to each project • Short Term (less than 12 months) negative performance from commercial business aspects if core services are not affected • Minor losses, or capital outlays, attributable to new processes or innovation to improve services to meet community needs. • Calculated financial risks to deliver infrastructure, improve service delivery or promote ecological sustainability. • Minor cost impacts of the implementation of • weighted scoring in procurement to benefit local competent suppliers.	• Financial activities and/or investment practices that contravene legislated or policy requirements • Failure to maintain or implement effective systems, processes and controls which adequately protect Council from fraudulent activity • Fraudulent or corrupt financial transactions • Actions that have a significant negative impact on long term financial sustainability. • Available funds below target over a five-year period • A three-year average operating deficit.
			• Capital expenditure budget delivered within 5% variance in a single year and a 2% average over a 3-year period	

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Risk Category	Context	Risk Appetite Rating	Risk Tolerance Levels	
			Council will tolerate	**Council will not tolerate**
Information Technology	Our assets (including information) are vital in maintaining our business practices and therefore Council has a cautious approach to safeguarding from both external and internal threats, misuse, modification, and unintended damage. Council's aim is to protect our assets contained within our ICT systems and services. We will be successful through the application of appropriate internal controls, a cyber aware workforce, effective governance, timely remediation of identified control weaknesses, persistent review of the external threat landscape and consistent management of our third-party providers. Council has an open appetite for risks associated with	Cautious	Cyber Security • Some cyber threats which if they were successful would have a minor or limited impact upon Council's business because they do not compromise the integrity, confidentiality or availability Council information or assets • Timely remediation of identified cyber security control weaknesses	Cyber Security • Cybersecurity threats that could have been prevented through judicious application of technical and behavioural controls. • An unprepared response in the event of an external cyber attack • Significant threats to assets arising from external malicious attacks • Misuse, inappropriate distribution, or loss of sensitive or confidential council information due to the actions of staff
		Open	IMT Systems and Services • Scheduled outages that are agreed to by the business owners and are regarded as part of normal business activities • Implementation of new technologies which create new opportunities for business improvement and innovation of systems which also could involve some minor to moderate risk.	IMT Systems and Services • Prolonged unplanned outages of critical Council systems and services • Failure to maintain systems and services which adequately protect Councils data and information and maintain adequate audit trails • A lack of diligence in relation to information security the procurement and implementation of ICT systems and services • Data loss due to inappropriate data management processes • Poor information governance processes

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Risk Category	Context	Risk Appetite Rating	Risk Tolerance Levels	
			Council will tolerate	**Council will not tolerate**
	Information Technology Systems.			• Failure to maintain recovery plans in place and test plans on a regular basis

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Risk Category	Context	Risk Appetite Rating	Risk Tolerance Levels	
			Council will tolerate	**Council will not tolerate**
Governance	Council is committed to good governance and meeting legislated and regulatory requirements in a consistent and fair manner. Council has minimal appetite for significant breaches of legal obligations or contractual agreements that result in fines, penalties, or reputational damage. Council will seek innovative approaches to governance practices subject to compliance with legislation and protection of our interests	Minimal	• Decisions made on merit in accordance with Council values that are not in line with professional advice. • Minor technical breaches that have been considered by Council. • Temporary non-compliance due to unrealistic regulatory timeframes. • Risks which may give rise to isolated complaints that are incidental to normal business activities despite best efforts to avoid or mitigate • Streamlined governance processes subject to effective controls remaining in place	• Corrupt or fraudulent conduct by staff, councillors, or contractors • Unreasonable delays when reporting, investigating, or correcting any fraudulent, improper, unethical, or corrupt conduct. • Any instances where Council Officials knowingly break the law, fail to comply with legal obligations or recklessly breach internal policies. • Material breaches of legislation or the Code of Conduct • Failure to consider expert / professional legal advice. • Unauthorised release of confidential information. • Any behaviour which gives rise to extensive litigation and indictable offences. • Failure to comply with Government Directions or orders

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Risk Category	Context	Risk Appetite Rating	Risk Tolerance Levels	
			Council will tolerate	**Council will not tolerate**
Reputation	Council recognises the importance of protecting its reputation. Council does however understand that negative publicity may occur where there is competing priorities and interests in the Community. Council has a cautious appetite for significant impacts on Council's reputation.	**Cautious**	• Moderate adverse local media and social media scrutiny or a number of complaints relating to action which delivers longer term benefits to the community. • Isolated minor incidents, concerns and complaints that can be resolved by management.	• Improper, unethical, corrupt, unprofessional behaviour or failure to exercise respect and duty of care in accordance with our Council values and policies. • Material breaches of the Code of Conduct. • Failure to uphold the probity of council decision-making. • Any failure to avoid or appropriately manage conflicts of interest. • Failure to act in a fair, honest, transparent, and accountable manner. • Decision-making that is not open, honest, and transparent and reflects the long-term interests of the community. • Failure to notify Executive of significant incidents that may impact Council reputation in less than • 24hrs of the incident occurring.

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14.4 Appendix D: Example Building Service Level Framework

A service level framework can be applied for all asset categories. A framework is partially implemented for roads using a similar approach to the recommended model for buildings. The recommended framework includes:

1. Define and assign **use categories** to each building.

2. Establish facility **service levels** associated with use categories and define performance measures relating to condition, renewals, and maintenance intervention.

3. Develop a matrix of **operational and maintenance activities** and assign standards and frequency linked to the facility service level.

4. Develop a **prioritisation and resource allocation model** for capital works on buildings.

5. Integrate and align service level descriptions between **supporting documents** and asset plans.

6. Use service levels to assign operating hours, desirable facility provision, risk management, and a range of other functions.

Note that the following example framework is not currently implemented and is provided as a guide only. It is not to be used to measure current service levels.

14.4.1.1 Use Category

Buildings accommodate a wide variety of uses and services, some with specific requirements in terms of facility management. To ensure the model addresses the variability, it is recommended that a use category be assigned to the building. The number of use categories should be limited by grouping similar types and providing a definition that captures the main requirements of the group. Buildings can have mixed uses, and they can have multiple categories assigned to the one building. The assigned use category will influence the operational and maintenance activities and planning decisions for future capital works.

Use Category	Code	Use Category Definition
Community Facilities	CF	Buildings that are primarily provided to support service provision to members of the community. Includes community halls, community centres, libraries, senior citizens,
Commercial Facilities	CO	This group of buildings are operated by a user group or tenant under a formal agreement with council that includes kiosks, cafes, parking station, clubs, tourist park, etc.
Emergency management	EM	This group of buildings provides facility for emergency service and search and rescue type support agencies.
Operational	OP	These buildings provide workspace for council staff. They may provide a customer service function; however the main purpose is to support back-of-house functions such as administration, depot, workshops, nursery, and alike.
Public Pools	PP	Buildings associated with pools including toilets, change facilities, plant room, administration, kiosk/café, gym, spectator areas and alike.

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Leisure Centre	LC	Facility that provides indoor space for multi-use recreation and supporting a range of activities. Typically includes combinations of courts, gym, fitness rooms, pool, spectator areas, kiosk/café and alike.
Cultural Facilities	CU	Facilities that provide space for cultural arts and display and storage of artifacts.
Children and Youth Facilities*	CY	Facility that provide for specific and direct services to children and young people.
Park and Public Amenities	PA	Buildings that primarily provide for toilet, change, shower, minor storage, and combination of these facilities. Typically located in association with parks, reserves, beachfront, town, and village centres.
Utility	UT	Buildings primarily provided for the purpose of storing or housing plant, equipment, materials, pumps, electrical distribution boards, etc. Not intended to provide space for regular working by people.

* Wollongong City Council is committed to becoming a Child Safe Organisation. We aim to create an environment where children's safety and wellbeing is at the centre of thought, values, and actions that apply across all buildings and facilities. The unique function of the Children and Youth Facilities is that the primary use of the space is catering for services to children and young people, as opposed to other facilities that cater to a range of demographics.

In addition to the use category there are inherent attributes about the building that may impact the management of the facility. Building attributes may influence the risk and criticality rating of the building and have associated legislative requirements that impacts management actions. Examples of the attributes include heritage significance and/or hazardous materials (e.g. lead and/or asbestos).

The use category needs to be checked against the National Construction Code (NCC) building classification and land use zoning. The intended use category must be compatible with the NCC classification of the building and permissible use associated with the land use zoning. This is a requirement that applies equally to all building owners, not specific to Council.

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14.4.1.2   Facility Service Level Category

A facility service level is an indication of the criticality or importance of the facility in supporting the services provided from the location. It is not sustainable to manage all buildings to the same service level. There are buildings that support services with high usage, or that have higher risk profile that should receive priority service over those that are less frequently used and/or have a lower risk profile. The table below is provided as a sample to demonstrate how service levels can be assigned based on the use category. Technical levels of service have also been provided to inform the performance monitoring for the "cost to satisfactory'.

Facility Service Level					
Service Level	**Service level description by use category**				
	Generic	Community Facility	Commercial facility	Operational Facility	Technical Levels of Service
Level 1	S1G Unavailability of the asset prevents delivery of a service to many of our service customers. Impact to service customer is immediate. Building aimed to serve a wider section of the community including those from outside of the LGA. Planned outage requires back-up, service transfer, and/or long-term planning	S1CF Regional Asset is critical to providing service at a regional level (attracts customers from across the LGA and beyond). Provides service to 100,000 – 1,000,000 people/yr. Catchment radius >15km. Travel time >45mins drive, >75min cycle (est av. Drive @20km/h, cycle @12km/hr, walk @4km/h).	S1CO High income generating facility. Exposure to significant liability due to business interruption and loss of trade by tenant. Tenant is an emergency service or search and rescue type provider (SES, RFS, other). Massive financial impact due to unavailability >$500k.	S1OP Council is the main provider of the operational service to the majority of the LGA (e.g. Waste). Asset houses original organisational information – data and/or document storage. Accommodate >50 workers. Building is likely to have regular visitors to the site	Average network condition less than or equal to 3.5 and with less than 10% of stock in condition 4; and less than 5% of stock in condition 5. Assets will not have a backlog or components in condition 5. Priority defects will be issued in accordance with maintenance standards. Critical components associated can be in a condition 3, however any identified to be in a condition 4-5 will be rectified as a priority. Regular preventative maintenance will be

	and notification to customers. Legislated requirement to provide access.	Specific purpose infrastructure. Primary users are vulnerable to impacts by loss of availability of service – aged care, childcare, healthcare.		Examples: Administration building, main depot. Value of stored items >$500k.	conducted in accordance with service standards.
Level 2	S2G Service requires continuous availability, although short disruption or outages are not catastrophic to service. Impact of service interruption creates significant inconvenience to many users. Interruption to service is noticeable within a few days. Contributes to a significant part of the service. Disruptions to availability result in moderate	S2CF District Asset is critical to providing service at a district level (attracts customers from across the LGA). Provides service to 20,000 – 100,000 people/yr. Catchment radius 5-15km. Travel time 18-45mins drive; 25-75min cycle.	S2CO Major financial impact due to unavailability >$50k - $500k.	S2OP Asset houses back-up organisational information – data and/or document storage. Accommodate 30-50 workers. Buildings providing space for repairs, maintenance, production, fabrication, plant propagation and growth, and alike (e.g. mechanic workshop, nursery). Value of stored items >$50k - $500k.	Average network condition less than or equal to 3.5 and with less than 5% of stock in condition state 5. Assets will not have a backlog or components in condition 5. Priority defects will be issued in accordance with maintenance standards. Critical components associated within an asset can be in a 3 condition, however any identified to be in a poorer condition will be rectified over the next 3 months. Regular preventative maintenance will be conducted in accordance with service standards.

	inconvenience to service customer. Interruption to service is noticed within a week. Alternative options available relatively easily.			
Level 3	S3G Contributes to a significant part of the service. Disruptions to availability result in moderate inconvenience to service customer. Interruption to service is noticed within a week. Alternative options available relatively easily.	S3CF Sub-district Provides service to 20,000 – 30,000 people. Catchment radius 5-15km. Travel time 18-45mins drive; 25-75min cycle.	S3CO High financial impact due to unavailability >$5k - $50k.	S3OP Accommodate 10-30 workers. Value of stored items >$5k - $50k.	Average network condition less than or equal to 3.5 and with less than 10% of stock in condition 5. Assets will be allowed to have a proportion of backlog – however any critical component or any defect with a safety risk will be addressed as a priority. It is acceptable for critical components to reach a condition 4; however, they should be identified and included for renewal within the next 6 months once they reach this condition grading. Regular preventative maintenance will be

				conducted in accordance with service standards.
Level 4	S4G Is important to the service, however disruptions to availability result in minor inconvenience to service customer. Service customers notice impacts. Alternative options available within a reasonable additional distance.	S4CF Local Provides service to 5,000 - 20,000 people. Catchment radius 1-5km. Travel time 3-18mins drive; 5-25min cycle or 15 – 75min walk.	S4CO Minor financial impact due to unavailability >$1k - $5k.	S4OP Accommodate <10 workers. Value of stored items >$1k - $5k.	Average network condition less than or equal to 3.5 and with less than 10% of stock in condition 5. Assets may have a proportion of backlog – however critical components or any defect with a safety risk will be addressed as a priority. Critical components can reach condition 4; however, they should be identified for renewal within the next 12 months once they reach this condition grading. Regular preventative (cyclic) maintenance will be conducted on 'plant & equipment' and 'emergency services' components. Other maintainable components maintained as per maintenance standards.
Level 5	S5G	S5CF	S5CO	S5OP	Average network condition less than or equal to 4 and

| | Disruptions to availability result in minor inconvenience to service customer. Alternative options available relatively easily.

Service interruption may go unnoticed for extended periods due to limited impact.

Impact very localised. | Neighbourhood

Provides service to 1,000 - 5,000 people.

Catchment radius 1km.

Travel time less than 15min drive or cycle or walk. | Disruption in service has a limited exposure to loss of business claim.

Low financial impact due to unavailability <$1k. | Buildings not intended for to accommodate regular working – i.e.. Temporary work <4hrs/day. | with less than 10% of stock in condition 5.

Assets may have a proportion of backlog – however any critical component or defect with a safety risk will be addressed or made safe as a priority.

Temporary closures have low impact.

Critical components can reach a condition 5; however, they should be identified to be renewal within the next 12 months once they reach this condition grading.

Regular preventative maintenance will be conducted in accordance with service standards. |
|---|---|---|---|---|---|

Appendices

14.4.1.3   Service Frequency

The identification of use category and service level category can be used to establish a schedule of activities and target service intervals.

Frequency	Other	Daily	Weekly	1m	3m	6m	1yr	2yr	3yr	4yr	5yr	6yr+
Asset Operational Services												
Asset Inspection – Level 1				S1	S2	S3	S4-S5					
Asset Inspection – Level 2							S1-5					
Asset Inspection – Level 3								S1			S2-S5	
Cleaning – general (vacuum, toilets, mop tiled areas)		S1-S3	S4-S5									
Sanitary Waste				All								
Toilet cleaning (additional servicing)	PA1 – Twice daily in summer	S1-S3										
Deep cleaning (carpet shampoo, windows)						S1, S2	S3	S4, S5				
Waste removal		S1, S2	S3-S5									
External cleaning							S1	S2				

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Landscaping / Yard					S1, S2		S3-5					
Irrigation							Test and flush					
Painting (internal)											S1-2	7yrs S3-5
Painting (external)												10yrs S1-5
Pest Control and termite inspection					S1	S2	S3-5				Termite inspect S3 - S5	
Gutter cleaning					Significant tree cover	Moderate tree cover/ box gutters	Inspect					
Solar Panel Clean							All facilities within 1km of the coast			All others		
Gas appliance							Inspect and test					
Electrical Appliance							Inspect and test					

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HVAC service				S1		S2-5						
Water cooling towers				Inspect	legionella testing							
Water tank							S1-5					
Plant registration							S1-5					
Automatic Doors					Inspect and service		Register					
Water treatment							All					
Elevator and platform lift				Inspect and service			Register					
Heat recovery systems							All					
Air ventilation					Minor service		Major service					
Drinking water chiller						All						
Grease trap							All					
Waterless urinal					All							
RCD and Electrical Distribution Board							All					
Thermostatic Mixing Valve						Inspect and test					Replace cartridge	
Backflow device							All					
Sewer pump							All					

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Essential Fire Services				Test as required	Test as required	Test as required	Test and register	Replace backup battery				
Automatic toilets (exeloo)							Inspect and service					
Height safety							Inspect and service					
Cooling tower	Test per standard						Registration					
Reactive Maintenance												
All categories	Refer defect management standards											
Graffiti	Removal – 5 days											
Audio visual										inspect		10yr
IM&T fitout										inspect		
Furniture *												15yrs
Minor appliance renewal (kettle, fridge, etc) *	Tag and test per AS3760											10yrs
Signage *												As required
Other components	Building components – in accordance with renewal plans based on condition and remaining useful life.											

* Non-financial assets – not listed in the asset register

Appendices

14.4.1.4   Operating Hours

The framework can be used to document a consistent approach to operational hours of facilities.

		Sun	Mon	Tue	Wed	Thu	Fri	Sat	Public Holidays	Winter	Summer
Community Facility	CF 1-2		9am-8:30pm	9am-8:30pm	9am-8:30pm	9am-8:30pm	9am-6pm	9am-5pm	Closed		
	CF4		9am-5pm	9am-5pm	9am-5pm	9am-5pm	9am-5pm		Closed		
	CF 4	N/A	9am-3pm	9am-3pm	9am-3pm	9am-3pm	9am-3pm	N/A	Closed		
	CF5		10am-1pm			10am-1pm			Closed		
Pools	PP1	7am - 2pm	6am - 6pm	6am - 6pm	6am - 6pm	6am - 6pm	6am - 6pm	7am - 2pm	7am - 2pm		
	PP2	6am - 2pm		6am - 2pm	6am - 2pm	6am - 2pm	6am - 2pm	6am - 2pm	Closed		
	PP3								Closed	Closed	
Public amenities	PA1	24hr	24hr	24hr	24hr	24hr	24hr	24hr			
	PA2-5		6am-6pm	6am-6pm	6am-6pm	6am-6pm	6am-6pm		Closed		

14.4.1.5   Facility Provision

The service level framework can be used to provide guidance on the typical inclusions for different services and facilities. This creates an opportunity to standardise the provision of equipment and fit out associated with differing service levels. A standardised schedule of inclusions assist in managing the asset in terms of maintaining and specifying upgrades and future provisions.

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14.5 Appendix E: Example Building Defect Management Framework

To complement the service level framework, a defect management framework can be considered. The model essentially allocates a priority linked to the facility use, risk and severity of the defect. It assists in assigning resources, determining appropriate response times, and planning works.

The framework assigns a score to the defect and the score indicates a target response time. The lower the score, the higher the priority and shorter response times. Some issues, such as safety hazards, may trigger the same response time regardless of facility use.

The framework is outlined below as an example. It is not a complete solution for implementation, it requires the customisation and identification of defects based on the asset components. The defect type and severity can be customised to a course or fine-grained detail depending on how work is coordinated. It is recommended to have defect types for each component to enable appropriate work order allocation to the asset component level.

14.5.1.1   Facility Score

Assign a facility score based on identified service level. This will provide a weighting to the overall score relative to the use of the facility.

	S1	S2	S3	S4	S5
Facility Score	1	2	3	4	5

14.5.1.2   Defect Type and Severity Score

Develop a matrix of defect types by asset component and allocate a defect score that identifies the relative risk of the issue identified. The granularity will be determined by a collaborative decision based on how work is to be coordinated, and the level of information sort for asset management purposes.

Asset Component	Defect Code	Location	Defect Type	Severity	Description	Severity Score
All	SHA1	Any	Safety Hazard	All	Flooding, electrical trip, storm damage, fire, vandalism resulting in hazard. Defect resulting in the building being unable to be secured.	1
Structure	SWC1	External walls	Cracking	Minor	Superficial cracking <2mm	20
	SWC2			Moderate	2 - 5mm	10
	SWC2			Major	Separation, settlement, and displacement cracking >5mm	4
	SWH1		Hole	Small	<50mm	15
	SWH2			Large	>50mm	5
	SSN1	Stairs	nosing	All	Nosing dislodged or broken	5
	SCS1	Columns	spalling	Minor	Staining, cracking, and minor loss of concrete	8
	SCS2			Major	Significant loss of concrete	2
Roof	RSF1	Roof sheeting	Fixings	Minor	Fixings showing signs of corrosion, sheets still fixed, less than 10% of fixings affected	10

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	RSF2			Major	Fixings showing significant signs of corrosion, sheets not adequately fixed, more than 10% of fixings affected	2
	RSS1		Sheet	Minor	Roof sheeting corroded – no signs of water ingress	10
	RSS2			Major	Roof sheeting corroded – visible signs of water damage to areas below	3
	RST1		Tiles	Minor	Tiles cracked – no signs of water ingress	10
	RST2			Major	Tiles cracked – visible signs of water damage to areas below	3
	RPA1	Parapet	All	Minor	Cracking, no signs of displacement or rotation	10
	RPA2			Major	Significant cracking, signs of displacement or rotation, separation of render	2
Fitout	FCA1	Cabinetry	All	Minor	Signs of wear and tear, doors or drawers not closing flush	20
	FCA2			Major	Cabinets separating from the wall, missing drawer front or doors	4
Continue for all components						

14.5.1.3   Defect Criticality Score

The defect criticality score is determined by multiplying the defect score by the facility score.

Defect Code	Defect Severity Score	Service Level				
		S1	S2	S3	S4	S5
SHA1	1	1	2	3	4	5
SWC1	10	10	20	30	40	50
SWC2	5	5	10	15	20	25
SWC2	2	2	4	6	8	10
Continue for all defects						

14.5.1.4   Target Response Times

A table of target response times should be prepared to guide resource allocation. It can also be used to program work and determine the cost to complete defect work. It will also enable measurement of actuals against targets to determine if the target response times are achievable given the resource and budget constraints. Consideration should be given to deferring non-urgent works if the repair/service can be scheduled with the next a planned maintenance activity. In some instances, the action may not be to undertake work, but simply to monitor in 12 months for changes in severity for low priority defects.

Target Response Time	Total Defect Score
Less than 4 hours	5
2 days	10
1 week	15
2 weeks	20
1 month	30
3 months	40
6 months	50
12 months	100

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14.6   Schedule of Amendments and Version Control

14.6.1   Schedule of Amendments

Section & Page	issue for review	Comment	Document Amendment	Date of Amendment
12.7.1.2 Pg 218	Suggestion to include the word "actively" into sentence	Include amendment	the active management of approximately 286ha of natural area	16 June 2025
12.7.1.2 Pg 218	Clarification on management area of asset protection zones	Include amendment	Include additional wording in bold: "46ha of asset protection zones under Council care and control **(actively worked by hand/bush regeneration contractors and does not include slashed/mown sites)"**	16 June 2025
12.7.1.2 Pg 218	Change in number of bushcare, dunecare and fireready groups from 72 to 68	Update to reflect current group number	Replace 72 with 68	16 June 2025
12.10.5.2 Pg 303	Permissible Use – clarification on Plan of Management and Land Use Zone	Wording requires inclusion of correct refences to land use zones and community land/Crown community land to align with relevant Legislation.	Include reference to Community Land and Crown Community Land, and Land Use Zone	16 June 2025
14.4.1.1 Pg 403	Limited reference to tourist parks.	The asset management plan focusses on grouping and management of similar asset types rather than planning by place. All infrastructure within particular place, whether tourist parks, cemeteries, botanic gardens or alike, are grouped under the relevant asset group (eg. pathways, roads, buildings, etc). Service levels and hierarchy can be allocated to use type/category within asset groups to ensure appropriate levels of service can be determined with performance measures. It was identified as an improvement opportunity in playgrounds as tourist park do not comfortably fit the description in the Play Wollongong strategy.	Include a reference to tourist parks (and other example commercial facilities) in the definition of Commercial Facilities in Section 14.4.1.1 of Appendix D: Example Building Service Level Framework	16 June 2025

Asset Management Plan **|** Appendices

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Various	Timing of improvement actions	Drafting of the Asset Management Plan commenced in 2024. Forecast dates for completion of original dates require review to enable actions to undertaken post-adoption of the plan	Update dates	16 June 2025

14.6.2   Version Control

Version	Author	Comment	Date
0.3	Jeremy Morgan	Final Draft for Exhibition	6 May 2025
0.4	Jeremy Morgan	Amended draft post exhibition – referred for Council adoption	16 June 2025
1.1	Jeremy Morgan	Adopted Asset Management Plan - Version 1	30 June 2025