

RESOURCING STRATEGY

ASSET MANAGEMENT

2022 - 2032



SOUTH
WINDSOR
SHIRE

At Sutherland Shire Council we do more than serve our community - we are our community.

We understand that our natural landscapes - the bays, beaches and bush - and our love of outdoor living gives us a unique energy that sets us apart from anywhere else.

This translates into an active community, and a living energy, that propels us forward.

To align our culture to our community, we are active, evolving, respectful and collaborative in everything we do. From having a can-do attitude, to embracing opportunity and change, being people-centred and working together as one.

That's why Sutherland Shire is a place for life; its vibrancy brings people to life and makes it a place they want to stay forever.

It's our role to enhance the spirit of our area and its people.

Prepared by
Sutherland Shire Council
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Acknowledgement of Country

Sutherland Shire Council acknowledges the Dharawal people as the Traditional Custodians of the land within Sutherland Shire. We value and celebrate Dharawal culture and language, and acknowledge Dharawal people's continuing connection to the land, the sea and community. We pay respect to the Elders and their families, past, present and emerging, and through them, to all Aboriginal and Torres Strait Islander peoples.

INTRODUCTION





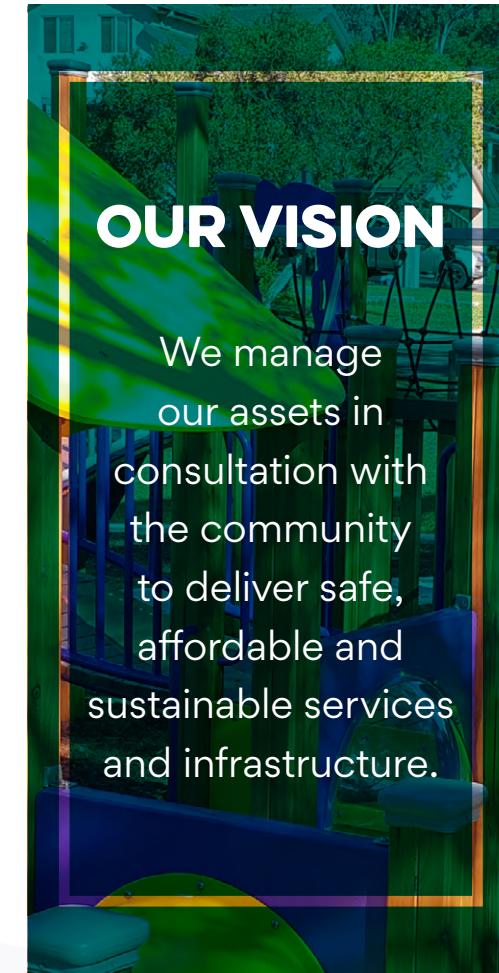
The Asset Management Strategy and Asset Management Plans describe how Council will provide, and care for, the assets that support Council services and contribute to our enviable quality of life.

As a component of Council's Integrated Planning and Reporting framework, the Asset Management Strategy and Asset Management Plans are directly aligned to the community's aspirations as described in our Community Strategic Plan and realised through the Delivery Plan and Operational Plan.

The Strategy considers the different types of assets - physical (built and natural), financial, skills and knowledge - needed to deliver and support infrastructure, facilities and services.

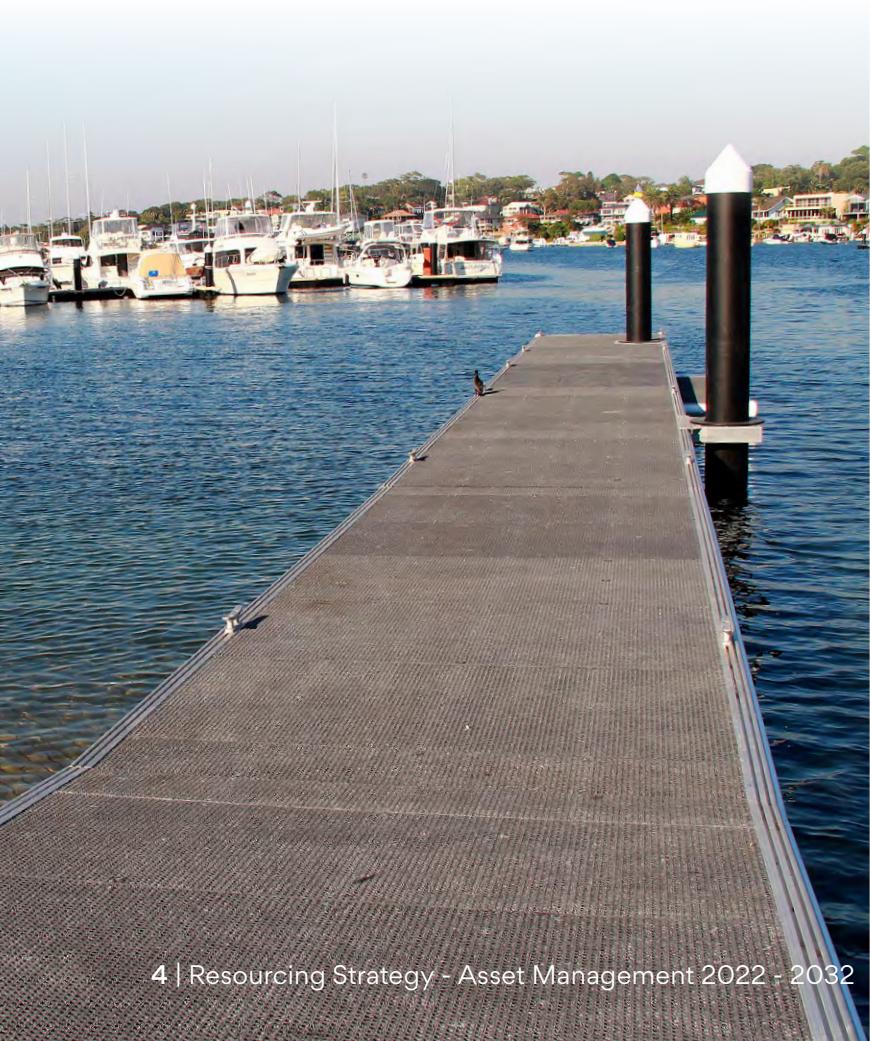
The Strategy outlines three areas of focus: optimal levels of service; asset for now and the future; and asset risk and resilience.

Our ongoing planning and implementation of the Strategy is based on a collaborative approach between service, asset, and operations managers, informed by ongoing consultation with our community.



OUR ASPIRATIONS

Our community's aspirations for the Shire feature in the Community Strategic Plan as six outcomes. We can link these outcomes to the benefits derived by the community, the services we provide and our associated assets:



COMMUNITY STRATEGIC PLAN OUTCOME	Benefit			
	Leadership	Environmental	Social	Economic
Strong civic leadership trusted by an informed and engaged community	✓			
A beautiful, protected and healthy natural environment		✓		
A creative, caring and healthy community that celebrates culture and diversity			✓	
A prosperous, well-educated community with a diverse range of economic opportunities			✓	✓
An active community that enjoys safe, accessible and diverse open places and spaces	✓	✓		
A high quality urban environment, supporting a growing and liveable community			✓	✓
SERVICE AND ASSET EXAMPLES				
Art & Culture – Entertainment Centre, Hazelhurst Art Gallery			✓	
Transport - Roads, Paths, Bus Stops		✓		✓
Public Domain - Town Centres		✓		✓
Open Space - Parks, Sport Fields, Playgrounds, Reserves, Beaches	✓	✓		
Stormwater & Waterways - Drainage	✓			
Libraries, Community & Council Facilities	✓		✓	
Leisure & Aquatic Facilities			✓	

OUR ASSET MANAGEMENT PRINCIPLES

Our principles guide our decision-making and are the basis against which we test, review and update our management strategies and plans. These principles also form part of our Asset Management Policy and are derived from the international standard for asset management (ISO 55000).

VALUE

Assets exist to provide value to the community and stakeholders by supporting equitable and sustainable services now and in the future.

ALIGNMENT

Asset management translates the aspirations of the community into technical and financial decisions, programs, and activities.

LEADERSHIP

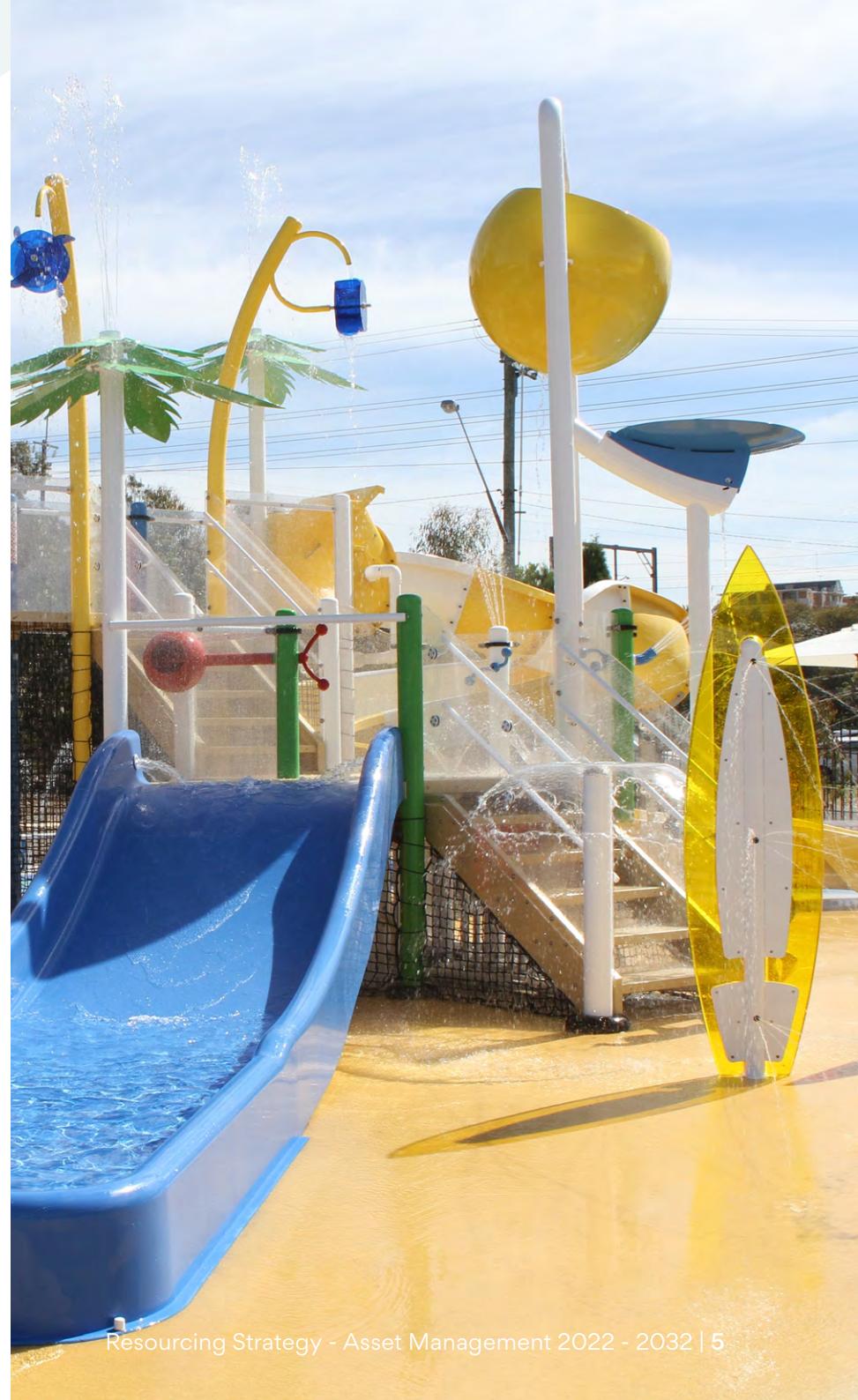
Leadership and commitment from all of Council is essential to establishing and improving asset management capability and performance.

ASSURANCE

Governance, performance monitoring and continual improvement in asset management ensures the required services are effectively meeting the community's expectations.

AGILITY

We are responsive to change by promptly considering options, effectively collaborating with stakeholders and modifying services with minimal disruption to the community.





OUR ASSET MANAGEMENT STRATEGY

BACKGROUND

Council prepared its first asset management strategy in 2013, in response to the introduction of the Integrated Planning and Reporting framework. The strategy was substantially improved in 2017. In 2020 an internal Strategic Asset Management Plan was completed. In 2021 all asset class Asset Management Plans were revised.

Following the completion of an internal audit on asset management performance, we consulted with Council officers to develop our vision, principles, focus area and service delivery approaches. Further workshops were then held to develop this Strategy and Management Plan. Prior to adoption by Council, this strategy shall be placed on public exhibition and all feedback considered for inclusion.

The actions and initiatives in this strategy are largely drawn from existing strategies and plans including the Strategic Asset Management Plan (2020), Asset Management Improvement Plan (2021), Asset Management Training Plan (2020) and Asset Class Management Plans (2021).

CURRENT ASSET MANAGEMENT POSITION

Our 2017 strategy emphasised the need to develop a culture of asset management centred on the alignment of asset and financial plans, systems and data. Every two years Council arranges for an external audit to verify our asset management maturity and to identify key areas for improvement. This audit is undertaken in keeping with the International Infrastructure Management Manual.

Council have continued to evolve and develop its approach to asset management in keeping with the findings of this audit, and substantial improvements have been achieved. Presently Council's asset management maturity is at a Core to Intermediate standard.

Since 2017, some key improvements made by Council include:

- Collection of detailed inventories for our open space and building infrastructure asset classes.
- Introduction of external revaluations for each asset class.
- Establishment of Asset Management Plans to sector best practice standards for each asset class.
- Competency assessment and associated professional development program for asset managers.
- Commitment to a new centralised information system that will have a single source of inventory data, maintenance and capital management, advanced asset costing, forecasting and analytic capabilities.

In 2019 our capital renewal investment increased substantially as a result of a Special Rate Variation approved by IPART. This has enabled Council to consistently meet its asset renewal requirements and ensure we do not create a backlog of works that would be needed to be unreasonably funded by future generations.

Council continues to make improvements to our asset management approach, and this is overseen by the Audit and Risk Improvement Committee and an internal Asset Management Steering Committee. Improvements are tracked on an Asset Management Improvement Plan.



Area of Focus

1

Optimal Service Levels

Our service provision will balance the community's expectations and its willingness to fund them. These expectations will be clear and effectively translated into operating service requirements. We will continue to monitor service risk and performance, consider improvements and ensure we are optimising funding.

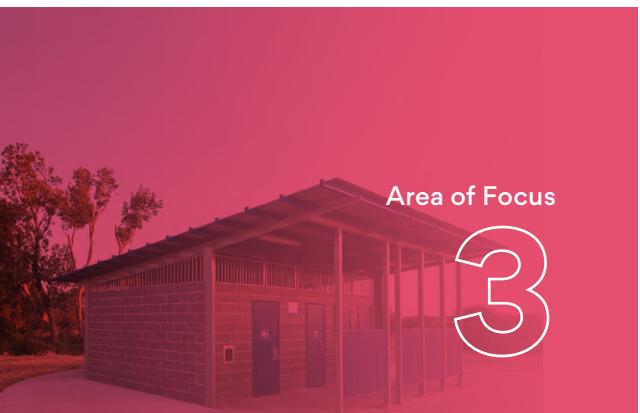


Area of Focus

2

Assets for Now and the Future

We consider the short and long term consequences of asset decisions for current and future stakeholders. Assets are designed to be resilient and cater for current and future users. The heritage and environmental value of our assets will continue to be protected.

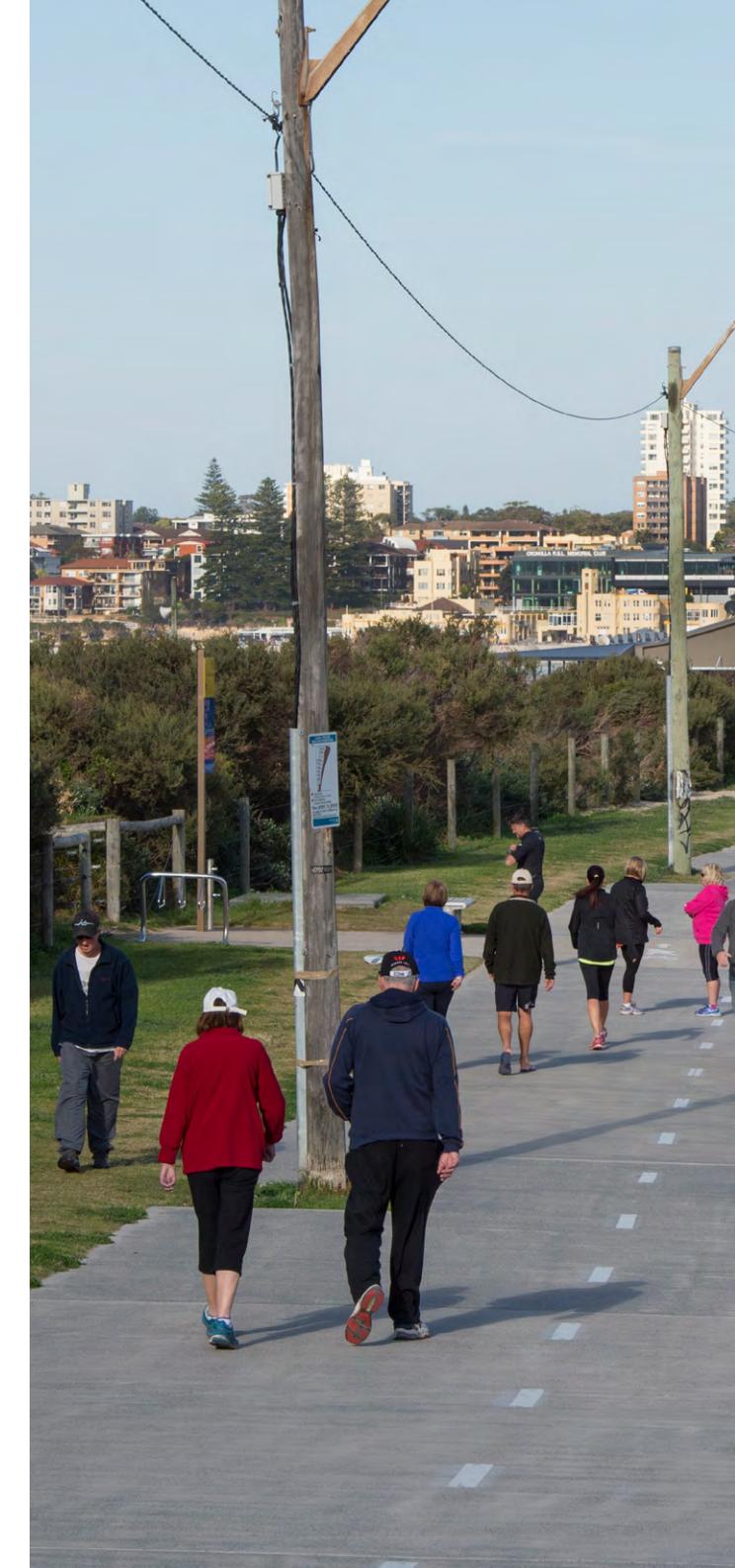


Area of Focus

3

Asset Risk and Resilience

We understand risk associated with our assets and how they impact on our services. We consider and address asset resilience at all stages of the asset lifecycle.





DELIVERY

INTEGRATION

This Asset Management Strategy and Plan will integrate with our four year Delivery Program and annual Operational Plans, supporting our delivery of Sutherland Shire's Community Strategic Plan.

IMPLEMENTATION

The delivery of the Strategy will be guided by the Strategic Actions contained within it. The Strategic Actions are grouped under Areas of Focus each include a timeframes and responsibility for delivery.

EVALUATION

Monitoring and evaluating our delivery of the Strategy will be ongoing. The effectiveness of the actions will be evaluated using several methods:

- self-assessment against one or more asset management maturity assessment frameworks
- internal audits and reviews
- community surveys (where applicable)

REPORTING

We will report on the delivery of this Strategy in the following ways:

- Half Yearly reporting to Council
- Annual Report
- Major review in 2026 prior to the development of the next Asset Management Strategy and Plan.

RESOURCING

Most of the actions in this Strategy will not require additional funding and will be included as part of our everyday work. Some actions will require additional funding, and these will be considered as part of Council's annual budget and planning process.

Implementation will be overseen by the Asset Management Steering Committee and the Asset Management Improvement Working Group.

STRATEGY OBJECTIVES AND MEASURES

WE AIM TO	WE WILL TRACK OUR PROGRESS AGAINST
Remain agile in our asset management approach	<ul style="list-style-type: none">The number of asset management plans reviewed each year
Continually improve our asset management maturity	<ul style="list-style-type: none">The asset management maturity rating
Optimise and meet our agreed service levels	<ul style="list-style-type: none">The number of service levels reviewedThe number of service levels met
Provide a risk managed approach	<ul style="list-style-type: none">Infrastructure risk assessments and plans reviewed and updated annually

CONTEXT

COUNCIL SERVICE PLANNING

Local governments provide services to their communities that contribute to their quality of life. As well as essential services (such as waste collection, residential planning, drainage and local transport networks), Councils provide community facilities and services such as sports facilities, aquatic centres, childcare services, arts and entertainment venues, and social services.

All services rely on a combination of assets:

- Physical and natural assets such as roads, footpaths, buildings, open spaces, waterways, beaches, trees, landscaping and bushland
- Skills and knowledge assets – Councillors, staff, and stakeholders all bring a range of experience and expertise to the decision-making process
- Social assets – service providers, community groups, clubs, schools and other groups that use our services and contribute to our planning and decision-making processes
- Financial assets – funding from revenue, grants, contributions and other sources
- Technological assets – devices, hardware and applications that collect, create and share information about assets and services to understand performance and support decision making.

This strategy addresses how Council uses an internationally recognised asset management framework to manage our physical assets and support services over their lifecycle.



DEFINITION OF AN ASSET

An asset is anything that has actual or potential value to Council. Assets typically operate in combination each with other, as a system or network, to deliver services.

This is broader than the financial definition of an asset which is centred on the cost of the asset and whether that cost is capital or operational.

OUR INFRASTRUCTURE ASSETS

Council has four classes of infrastructure assets each with its own asset management plan:

- Traffic and Transport
- Stormwater and Waterways
- Buildings
- Open Space

Council's assets are routinely inspected and are generally in good function and condition.

OUR NON-INFRASTRUCTURE ASSETS

Non-infrastructure assets are capital items that are not considered to be infrastructure, but may be used to deliver the services. This includes:

- Library books
- Artworks
- Kitchen appliances
- Security and access systems
- Vehicles

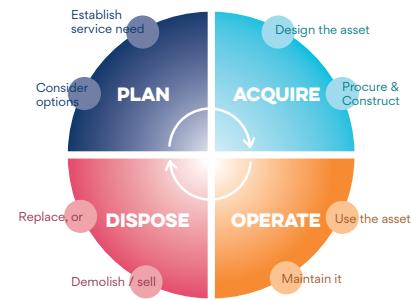
Non-infrastructure assets tend to be of lower value, are mobile or portable, and have a shorter useful life.

OUR NATURAL ASSETS

Most of our infrastructure and facilities are built. Council does own and manage an extensive portfolio of natural assets including bushland, our tree canopy, sand dunes, beaches and waterways. Customer surveys show these assets are highly valued by the community. Natural assets require far less human intervention than built assets and are not recognised as financial assets. We do though manage them as assets to ensure they are delivering the outcomes desired by the community.

THE ASSET LIFECYCLE

We manage assets from the planning stage, where an asset exists as an idea, or on paper, through to disposal, where an asset is taken out of service permanently. A typical asset lifecycle progresses through four stages, being plan, acquire, operate and dispose.



OUR ASSET TEAMS AND PEOPLE

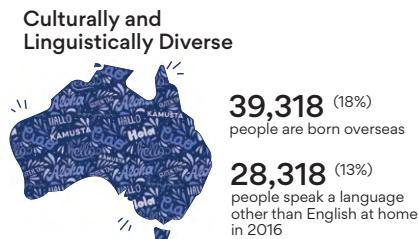
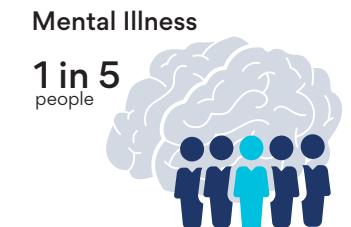
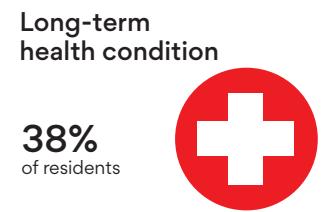
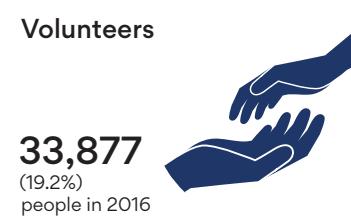
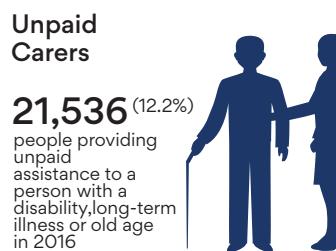
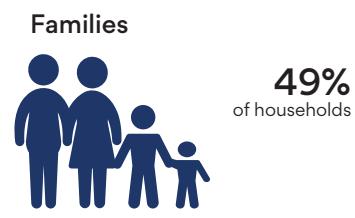
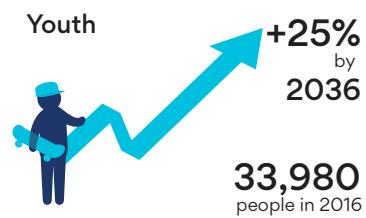
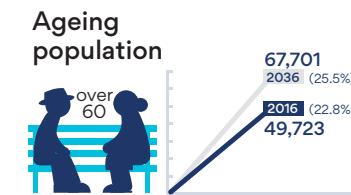
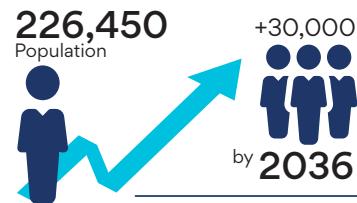
Our asset teams include engineering and financial professionals with many decades of collective experience managing assets in both local government and other sectors, public and private.

Asset management is a recognised profession and is the subject of an International Standard, ISO 55001:2014. Many of our staff have completed recognised asset management training and have achieved local and international asset management credentials.

OUR COMMUNITY AT A GLANCE

Demand for asset and service provision varies with the demographic profile of the community. When planning what we consider how the community will change in the future in terms of age, health, wealth, education, family structure.

The following figures describe our community and some of the changes we are experiencing.



OUR ASSETS AT A GLANCE

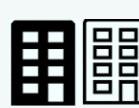
Value and Annual Renewal Spend

Open Space



\$263m
Value \$9m
Annual
Renewal

Buildings



\$457m
Value \$7m
Annual
Renewal

Transport



\$1,302m
Value \$11m
Annual
Renewal

Stormwater



\$910m
Value \$0.3m
Annual
Renewal

Open Space

Open Space



36,873
Hectares 1,780
Hectares
Council Managed

Open Space Per Person

121 m²
115 m²
in 2036

Parks & Reserves



552
Parks &
Reserves
55%
of the Shire is
Open Space

Bushland



20,357
Hectares
Total 1,252
Hectares
Council Managed

Skate



6
Skate Parks

Playgrounds



143
Play Spaces

Cycling



1
Criterion
Track 2
Mountain
Bike Park
1
Pump
Track

Dog Exercise



6
Dog Leash
Parks 1700km
Footways

Sport



82
Sport
Venues 100+
Sportsfields

Foreshore



19
Boat
Ramps 8
Wharfs

Pools



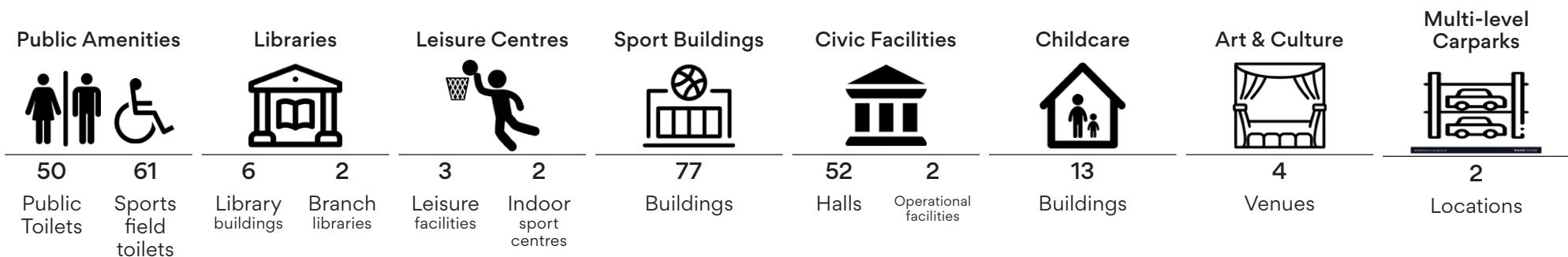
8
Tidal Baths and
Ocean Pools

Small Watercraft

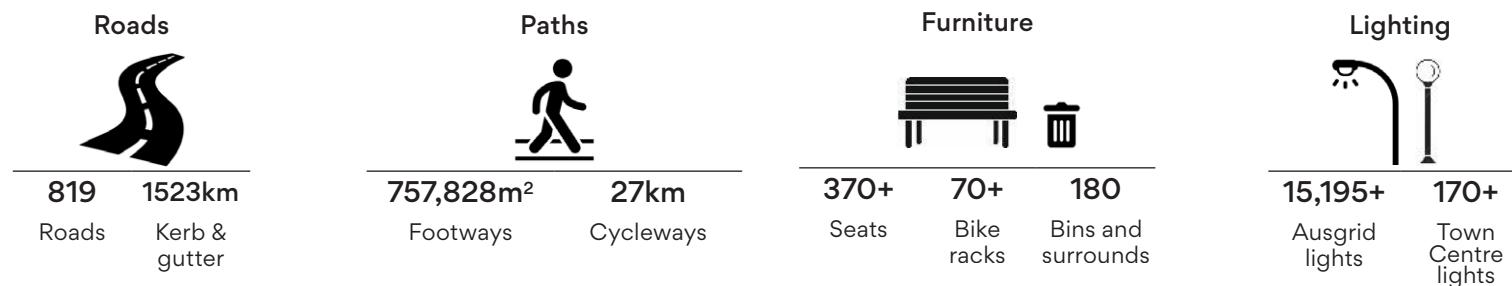


12
Launch Facilities

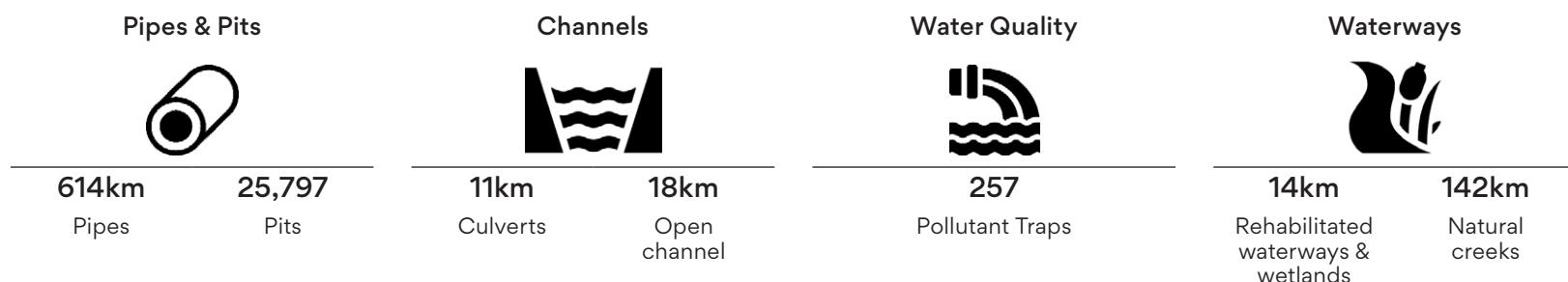
Building Assets



Transport and Town Centres



Stormwater and Waterway Assets





AGENCIES AND STAKEHOLDERS

Our asset portfolio is supported by and supports a wide range of agencies and stakeholder groups.

These include:

- NSW Government agencies, including Department of Planning, Industry and Environment, Crown Lands, Transport for NSW, Office of Sport & Recreation, Ausgrid
- Federal Government agencies
- Industry Institutes
- Community organisations, associations and clubs
- Business owners and operators
- Developers and property owners
- Community members, including residents, visitors and tourists

CONSULTATION

Council has extensively consulted with the Sutherland Shire community in recent years and this feedback has contributed towards the development of this strategy. This includes Government, inter-agencies, committees, reference groups, and community organisations.

COMMUNITY SATISFACTION CONSULTATION

Every two years Council seeks input from the community regarding their satisfaction with the services we provide. This satisfaction is closely linked to the quality and performance of our assets. Respondents provided the following satisfaction levels related to some of our key assets in 2021:

- 99% - Hazelhurst Regional Gallery
- 95% - Ovals and sportsgrounds
- 94% - Leisure centres
- 93% - Parks and playgrounds
- 92% - Suburb appearance
- 94% - Beaches and waterways
- 91% - Local Bushland
- 89% - Stormwater Drainage
- 87% - Community Buildings and Halls
- 87% - Sutherland Entertainment Centre
- 87% - Shopping Centre Streetscapes
- 78% - Local Footpaths
- 78% - Local Roads
- 69% - Public Toilets

Council has relied upon these satisfaction levels, the community's view on importance and how these ratings compare to other local government providers to inform the setting and review of service levels.

INFORMING STRATEGY CONSULTATION

We have conducted a series of consultation programs for each informing strategy we prepare. In recent years this has included strategies for Integrated Transport, Stormwater and Waterways, Open Space, Play, Sport, Business & Community, Libraries and Leisure Centres. Feedback received includes information regarding existing asset condition and aspirations for new or improved assets.

These consultations have included the establishment of customer service standards for our assets. We have used this information to set customer service levels defined in these informing strategy documents. These service levels then form the basis of operating service performance standards such as response times, scope and work quality.

TECHNICAL SERVICE LEVEL CONSULTATION

Technical service levels are set by asset managers and documented in Service Level Agreements. When customer service standards are set and adopted by Council, internal consultation proceeds to define the proactive and reactive service performance requirements. This consultation includes Service Managers, Asset Managers, Maintainers and Operators of assets.



DRIVERS OF CHANGE

There are a number of emerging trends, challenges and opportunities as we plan for the future of our assets and services and the way we manage them:

SOCIAL

Planning Standards

The Greater Sydney Commission's Sydney Region Plan and South District Plan (which include Sutherland Shire) highlight the importance of infrastructure in achieving a more liveable Sydney. The plans contain directives aimed at improving the provision of quality open space within walking distance of homes.

Population Growths

Sutherland Shire is predicted to grow by 25,500 people by 2036, with growth mainly located in and around our major centres. Residents of these areas will require improved access to a range of parks and recreation opportunities within walking distance of their homes.

Ageing Population

It is expected by 2036 that over a quarter of the Shire's population will be aged over 60 years.⁸ An ageing population has different service needs to a younger population and typically requires a greater focus on accessibility.

Trends in Housing

The trend towards more compact forms of housing means that many activities that traditionally took place in private backyards (e.g. children's birthday parties, BBQs or vegetable gardening) will shift to the public realm, placing added demands on our parks and surrounding infrastructure.

Trends in Sport

Organised sport is evolving. Participation rates in sport are changing. Some sport codes are growing in popularity, while others are in decline, with corresponding changes in demand for facilities and fields.

Trends in Recreation

There are noticeable trends towards lifestyle and adventure sports and the growth of individual recreation activities⁹ such as personal fitness and exercise with dogs. The challenge is how to best support our diverse recreation needs with diverse open spaces.

ECONOMIC

State and Federal Agency Impacts

State agencies own and operate services in the Shire such as the train and bus network, state and arterial roads, and energy distribution.

These services have a direct effect on some Council assets for example:

- Ausgrid – street tree pruning, electrical power lines and substations
- Sydney trains – commuter car parking, active transport routes
- Transport for NSW – F6 corridor land currently used as open space

Funding

The size and breadth of infrastructure networks requires significant funding to maintain. Council is experiencing tighter financial conditions as a result of rate capping, likely changes to developer contributions, and reduced revenues due to COVID-19.

ENVIRONMENTAL

Changing Climate

In the face of overwhelming evidence for anthropogenic warming and associated climate change, we face adverse effects on ecosystems and populations. We must arrest the effects of climate change or adapt to the consequences. These consequences will be environmental, social, political and economic. Asset management addresses the environmental impact and performance of assets as well as designing assets to suit changing environmental conditions.

Urban Heat and Green Cover

Parts of the Shire are vulnerable to urban heat - they become substantially warmer than surrounding areas because there is less green cover and more hard surfaces, which hold and radiate heat. Planting more trees within our open spaces can help reduce the effects of urban heat and lead to cleaner air, more shade and cooler, more beautiful places.

Biodiversity Impacts

The biodiversity and integrity of our bushland and natural areas is under threat from unlawful clearing and encroachments, illegal dumping, feral animals, polluted stormwater, weeds and unmanaged activities and trails.

CIVIC LEADERSHIP

International and Local Standards

The International Standard ISO 55001 was published in 2014 and sets out the requirements organisations must meet when implementing asset management. Although Council is not currently required to be certified to ISO 55001, it is considered international best practice, and Council should be conforming or aligning to it.

Sustainable Development Goals 2030

The United Nations Sustainable Development Goals (SDGs) are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. Australia is one of 193 countries that committed to the goals in September 2015 as part of the 2030 Agenda for Sustainable Development.

There are 17 SDGs which aim to increase global well-being through addressing some of society's key challenges including climate change, economic and gender inequality, sustainable consumption and innovation. Many of the goals are relevant to local governments. Goal 11, to "Make cities and human settlements inclusive, safe, resilient and sustainable", is particularly relevant to local government planning.

Professionalisation of Asset Management

Asset management professionals can receive local and international credentials. The ISO 55001 requires that organisations demonstrate awareness and competence in asset management. The development, recruitment and retention of qualified asset management personnel is an essential and ongoing priority for Council.





Optimal Service Levels

Our service provision will balance the community's expectations and its willingness to fund them. These expectations will be clear and effectively translated into operating service requirements. We will continue to monitor service risk and performance, consider improvements and ensure we are optimising funding.

To do this we will:

- Align service strategies with the asset management framework
- Measure service costs, revenues and performance
- Continue to develop Council's asset management maturity and capability

Why it matters

We are required under the Local Government Act to provide services in a way that represents best possible value for money. This generally means providing the right service, at the right level, at the right price. The real cost of providing an asset, facility or service is not always easy to calculate, but is necessary for meaningful engagement with the community.

IMPLEMENTATION PLAN

What it achieves

CSP outcomes and strategies	Quadruple bottom line: Sustainable development goals					
1.1 Support the lifestyle and environment to which we aspire						
1.3 Demonstrate good governance and be trusted by the community						

Implementation Actions	Delivery Stream	Collaboration	Year						Ongoing
			22/ 23	23/ 24	24/ 25	25/ 26	5+ Yrs		
Align service strategies with the asset management framework									
1.1.1 Document and communicate customer levels of service to the community	Asset Services	Service Managers							<input checked="" type="checkbox"/>
1.1.2 Document technical levels of service to inform service level agreements, intervention levels, and works prioritisation	Asset Services	Operations Units							<input checked="" type="checkbox"/>
1.1.3 Integrate service strategy development with asset management planning	Asset Services	Service Managers	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					

Implementation Actions	Delivery Stream	Collaboration	Year					Ongoing
			22/ 23	23/ 24	24/ 25	25/ 26	5+ Yrs	
Measure service costs, revenues, and performance								
1.2.1	Use available tools and technologies to estimate current asset and facility costs and revenues	Asset Services	Shire Services, Finance, Operations					✓
1.2.2	Establish and maintain Service Level Agreements for all asset types	Asset Services	Operations Units	✓	✓			
1.2.3	Explore opportunities for partnership in service provision	Asset Services	Shire Services	✓	✓			
Continue to develop Council's asset management maturity and capability								
1.3.1	Assess Council's asset management maturity on a regular basis	Asset Services	Corporate Governance		✓		✓	
1.3.2	Consider opportunities to align Council's asset management framework with the requirements of ISO55001	Asset Services	Finance, Operations Units, Services			✓		
1.3.3	Investigate new and emerging technologies to collect, process and share asset information	Asset Services	Operations Units					✓
1.3.4	Continually assess staff capability and review the Asset Management Training Plan	Asset Services	People and Culture					✓

Assets for Now and the Future

We consider the short and long term consequences of asset decisions for current and future stakeholders. Assets are designed to be flexible and cater for current and future users. Heritage and environmental values are balanced with inclusion and equity.

To do this we will:

- Optimise lifecycle costs
- Manage demand now and in the future
- Protect our heritage and environment

Why it matters

The majority of assets have a service life greater than ten years. Decisions made now have financial implications for future generations. To get the best possible value from new and replaced assets we need to consider location, design, materials and other factors. We also need to recognise that some facilities and assets cannot be replaced at end of life.

IMPLEMENTATION PLAN

What it achieves

CSP outcomes and strategies

- 1.3 Demonstrate good governance and be trusted by the community



- 2.4 Environment and climate risks and impacts are understood and managed



- 5.3 Provide welcoming and accessible places and spaces



Quadruple bottom line: Sustainable development goals

Implementation Actions	Delivery Stream	Collaboration	Year				
			22/23	23/24	24/25	25/26	5+ Yrs
Optimise lifecycle costs							
2.1.1 Ensure that long term operational costs of new assets are considered when projects are selected and designed	Asset Services	Project Services	✓	✓			
2.1.2 Develop capability to model future scenarios and compare lifecycle costs for different investment options	Asset Services	Information Management & Technology (IMT)		✓			
2.1.3 Consider materials, treatments and technologies to reduce lifecycle costs	Asset Services	Operations Units					✓
2.1.4 Review depreciation methodology	Finance	Asset Services	✓				

Implementation Actions	Delivery Stream	Collaboration	Year					Ongoing
			22/ 23	23/ 24	24/ 25	25/ 26	5+ Yrs	
Manage demand now and in the future								
2.2.1 Consider the longer term demand scenarios, including possible impacts of new and emerging technologies, when planning services	Service Managers	Asset Services	✓	✓				
2.2.2 Develop criteria and a process to rationalise assets where demand has changed or can be met by other means	Service Managers	Asset Services	✓					
Protect our heritage and environment								
2.3.1 Review asset management plans to ensure our costs and systems adequately consider the heritage and environmental attributes of the asset	Asset Services				✓			
2.3.2 Identify opportunities to use natural assets and materials to enhance the environmental performance of spaces and places	Asset Services						✓	

Asset Risk and Resilience

We understand risks associated with our assets and how they impact on our services, so that risk can be properly considered in decision making. We consider the impacts of climate change and other events on infrastructure assets to support community resilience and service continuity. We consider resilience in the planning, design and maintenance of assets.

To achieve this we will:

- Improve the resilience of our infrastructure and assets
- Mitigate and minimise asset risk

Why it matters

In recent years we have experienced and responded to severe weather events, bushfires, and most recently the COVID-19 pandemic. These “shocks” have affected our assets and services and we can expect more events like these in the future. However, we have the ability to plan and design for these changes when we renew or upgrade assets, or when we build new assets.

IMPLEMENTATION PLAN

What it achieves

CSP outcomes and strategies

- 2.4** Environment and climate risks and impacts are understood and managed

Quadruple bottom line: Sustainable development goals



- 5.2** Promote and ensure community safety in our places and spaces

Implementation Actions	Delivery Stream	Collaboration	Year					Ongoing
			22/ 23	23/ 24	24/ 25	25/ 26	5+ Yrs	
Improve the resilience of our infrastructure and assets								
3.1.1 Develop a resilience framework for the asset portfolio.	Asset Services		✓	✓				
3.1.2 Assess the resilience of the asset portfolio to climate change effects	Asset Services	Environmental Science			✓			
3.1.3 Review design standards to ensure resilience is considered	Asset Services				✓			
3.1.4 Investigate opportunities to improve resilience when planning operations and maintenance activities	Operations Units	Asset Services						✓
3.1.5 Ensure emergency management plans consider assets critical to event response, recovery, and service continuity	LEMO			✓				

Implementation Actions	Delivery Stream	Collaboration	Year					Ongoing
			22/ 23	23/ 24	24/ 25	25/ 26	5+ Yrs	
Mitigate and minimise asset risks								
3.2.1 Undertake a detailed risk assessment for each asset class	Asset Services		✓	✓				
3.2.2 Develop an Assets Risk Management Plan	Asset Services				✓			
3.2.3 Integrate asset risk assessment and management with the existing enterprise risk management framework	Asset Services	Corporate Governance	✓	✓				
3.2.4 Update the asset risk profile and regularly review and monitor	Asset Services		✓				✓	
3.2.5 Ensure risk is adequately considered when selecting and prioritising projects	Asset Services						✓	



COSTS OF PROVIDING ASSETS

CAPITAL EXPENDITURE

Capital Expenditure is expenditure that creates value in the form of an asset. This value is recognised on Council's balance sheet and the asset is depreciated over its service life.

*Forecast Ten Year Capital Expenditure at 30 June 2021,
not adjusted for inflation*

Asset Class	Forecast Acquisition	Forecast Renewal
Transport	\$14,510,863	\$119,631,608
Open Space	\$16,432,730	\$93,000,000
Buildings	\$11,978,836	\$76,380,000
Stormwater	\$7,000,000	\$3,000,000
TOTAL	\$49,922,429	\$292,011,608

Capital expenditure is comprised of **acquisition** and **renewal** of assets.

Acquisition refers to new and upgraded assets. A **new** asset provides a service where it didn't previously exist, for example a shared pathway along a busy road to facilitate pedestrian and cycle movement. An **upgraded** asset works on an existing asset that increase the capacity or functionality of the asset. The Sutherland Entertainment Centre project is an example of an upgrade.

The activities involved in an asset acquisition are planning, procurement, construction and commissioning.

New assets represent approximately ten percent of the capital spend each year. The demand for new and upgraded assets is generally from population growth, however other conditions exist that encourage asset acquisitions. These include government stimulus packages and unforeseen events such as the COVID-19 pandemic which saw greater numbers of people exercising in the neighbourhoods and enjoying outdoor services and facilities.

Acquisitions are primarily funded through developer contributions and grants. Acquisitions increase council's annual operations and maintenance expenses by 1-15% depending on the asset class.

Council generally forecasts acquisition costs as projects secure funding and Council approval (for example via capital program, special report, or service strategy). Master plans and developer contributions plans can provide some indicative forecasting.

Asset **Renewal** is the replacement of an asset at the end of its useful life. Playground equipment for example should be replaced about every fifteen years. After this time play equipment is more likely to appear worn or faded, parts are harder to obtain, and other types of play might be more popular. Assets are prioritised for renewal based on age, condition, safety and service priority.

Sometimes, Council decides not to replace an aged asset. This is usually because demand for the service is in decline, alternative locations or facilities can be provided or the location is to be put to alternative use. Asset **disposal** may involve demolition, recycling, or sale.

OPERATIONAL EXPENDITURE

Operational expenditure is recurrent or annual expenditure on activities that keep assets in service.

Operations includes utilities (electricity, water, gas), security, cleaning and waste services.

Maintenance includes inspections, preventive maintenance, reactive maintenance, and replacement of minor components.

The finance system allocates costs to business units and activities, not to assets or asset classes. Forecasts are estimates, based only on budgeted and actual expenditure of operational units in the recent past.

Ten year Projected Operational Expenditure as of 1 July 2021, not adjusted for inflation

Asset Class	Operations and Maintenance Forecast
Transport	\$66,474,405
Open Space	\$138,104,500
Buildings	\$126,026,330
Stormwater	\$40,600,350
TOTAL	\$371,205,585

Council's annual maintenance cost should be between 1 and 15 percent of the total replacement value, depending on the asset class. Operational costs depend on the service.

COSTS OF SUPPORTING ASSET MANAGEMENT

Effective asset management requires people, knowledge and skills, data and information, hardware, software, and other technologies. Costs include:

- Salaries
- Information systems
- Data
- Training
- Memberships
- Subscriptions
- Consultants

Costs are expected to increase over ten years primarily due to:

- increasing compliance and reporting requirements
- Increasing demand for services



APPENDIX A - ASSET MANAGEMENT POLICY

1. PURPOSE

Council owns and is the custodian of a large portfolio of assets including roads, footpaths, stormwater drains, buildings, land, open space and plant and equipment. The purpose of this Policy is to articulate Council's commitment to the establishment of a clear direction and framework for asset management in line with the adopted strategic direction and in order to respond to the needs of our community.

2. APPLICATION

This policy applies to all assets owned, controlled or managed by Council. It shall be applied by Councillors and staff and contractors who conduct activities associated with the creation, acquisition, maintenance, operation, rehabilitation and disposal of assets.

3. PRINCIPLES

No one principle should be applied to the detriment of another. Principles must be collectively considered and applied to the extent that is reasonable and practicable in the circumstances.

3.1 Value: Cost effective assets that meets service needs of current and future generations

- We will only acquire new assets where there is demonstrable need in the community for the service and the lifecycle costs of the asset can be afforded by Council.
- We will align Asset Management Plans and the Long Term Financial Plan and any funding gaps will be addressed by balancing risk, lifecycle cost and service levels.
- Our approach to service delivery is to consider non-asset solutions, including disposal of assets, as an alternative to asset renewal or acquisition.

3.2 Alignment: Community and organisational priorities are considered in all decisions

- We will develop asset management plans informed by relevant Council plans and strategies, including demand forecasts, community surveys and technology changes.
- We will plan, create, operate, maintain, renew and dispose of assets in accordance with community and Council's priorities for service delivery.

3.3 Leadership: Collective leadership and culture determine the realisation of value

- An asset management framework aligned with the requirements of ISO 55001 will be prepared, implemented, monitored and continually improved.
- Council commits to developing capability and capacity of its teams to deliver asset management objectives and responsibilities.
- We will communicate and consult with stakeholders when making decisions about assets.

3.4 Assurance: Confidence in our decision making and our capacity to provide community needs

- We will regularly determine acceptable and affordable service levels in consultation with the community.
- We will apply the principles in Council's risk management framework to ensure community and environmental safety, and asset performance and availability.
- We will plan and prioritise maintenance and renewal expenditure to keep assets in an acceptable condition; and expenditure will be properly planned to minimise increase in renewal backlog.

4. RESPONSIBILITIES

4.1 Responsible Officer

The Director Shire Infrastructure is the Responsible Officer for this policy and is responsible for its currency and communication.

4.2 Council

In accordance with the Local Government Act 1993, Council is responsible for administration of this Policy.

4.3 Chief Executive Officer

Council has delegated the Chief Executive Officer the authority to meet Council's obligations within the Policy.

4.4 Directors

Directors are responsible for ensuring their Division adheres to the requirements of this policy and provide guidance in respect of achievement of the strategic objectives of the policy within their division and the organisation.

4.5 Staff

Staff must adhere to the requirements of this policy and operate within the authorities of their position delegation.

5. MONITORING

Adherence to this policy will be monitored by the Asset Management Steering Committee.

Council will review this policy within four years or at the request of Council or in response to legislative and statutory requirements.

6. RECORD KEEPING, CONFIDENTIALITY AND PRIVACY

Council adheres to and complies with the NSW State Records Act 1998 and Privacy and Personal Information Protection Act 1998 through its Enterprise Content Management Policy and Privacy Policy.

7. BREACHES OF POLICY

Breaches of this policy will be dealt with in accordance with normal disciplinary procedures and will be advised to the Chief Executive Officer and / or relevant divisional Director.

8. RELATED DOCUMENTS

- Resourcing Strategy
- Strategic Asset Management Plan
- Asset Management Plans
- Procurement Policy

9. RELEVANT LEGISLATION, REGULATIONS AND GUIDELINES

- Local Government Act 1993 (NSW).
- State Records Act 1998 (NSW).
- Privacy and Personal Information Protection Act 1998 (NSW).
- Government Information (Public Access) Act 2009 (NSW).

APPENDIX B - ASSET MANAGEMENT PLANS

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Portfolio Asset Management Plan

Introduction

We prepare two types of asset management plan (AMP):

- The portfolio asset management plan including asset class summary plans (this plan)
- Technical asset management plans approved and published internally

The portfolio asset management plan describes the common elements of asset management planning that are applied across all asset classes. It summarises the key costs, risks, opportunities and improvements for each asset class. It is written for a community audience

The technical asset management plans contain a greater level of engineering and financial detail and are used internally to inform the Long Term Financial Plan (LTFP), the Delivery Program and Operational Plans (DP/OP), capital program, service level agreements, and service strategies.

What is an asset management plan?

Asset management plans detail the activities, timeframes and resources required for the lifecycle activities (acquire, operate, maintain, renew and dispose) Council undertakes to ensure assets:

- meet service standards
- are safe to use
- minimise impact on the environment
- are financially sustainable over the long term

Asset management plans contain forecasted asset expenditure (investment) and risk analyses to inform Council's and the community's decisions about assets and levels of service. Forecasts and analyses are updated on an annual basis and will change over the timeframe of this plan. Future works listed in these plans are subject to future budget constraints and opportunities.

The purpose of the forecast in an AMP is to indicate projected trends and changes to asset activities, for example due to population growth, major programmed capital works, or service level change. The forecasts in these plans are presented in current year (2022) dollars, unless otherwise stated.

The projections in the LTFP show the expected **cashflows** - revenue and expenditure – and are adjusted for inflation.

Asset expenditure is funded from rates (“general revenue”), levies, grants, and developer contributions. The funds available in any year may differ from the forecasts in these plans.

The annual capital program, as included in the DP/OP, is formulated and prioritised in accordance with the identified service priorities of the community.

Levels of Service

Council's asset portfolio exists solely to support services and achieve the CSP *outcomes*. The process of developing levels of service involves several steps or levels:

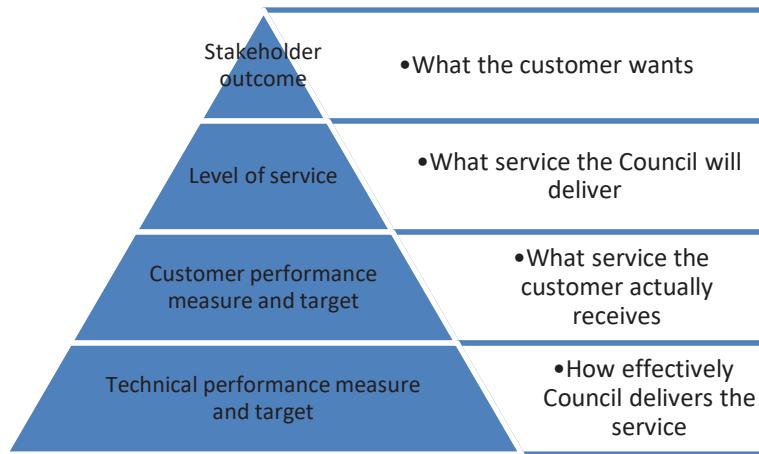


Figure 1: Levels of service (IIMM)

An asset may have different types of customers and therefore may require a level of service for each customer. For example, private motorists, cyclists, pedestrians, freight operators and public transport users are all customers of the road network. Changes to the road, for example addition of a bicycle lane, may increase the level of service for one user group (cyclists) while decreasing the level of service for other user groups (motorists).

The customer level of service can be expressed in terms of safety, quality, quantity, provision, capacity, environmental impact, cost and compliance. Council's service strategies and action plans include Service Statements which summarise the customer levels of service.

SSC has undertaken community consultation and engagement to assess demand for both existing and new services. The outputs of that engagement are referred to as Service Strategies. From these adopted strategies Council is developing Action Plans to meet the identified demand.

Demand Management

Demand management is the process of forecasting the potential number of users of a service over time and developing options to meet that demand.

Possible ways of meeting demand include:

- repurposing or reconfiguring existing, underutilised assets
- partnering with other asset owners (e.g. schools) to give access to facilities
- leaving the service to the private market (e.g. indoor sports centres)
- referring customers to facilities in other areas

If these options are insufficient, for example in areas with higher population growth, or where a new service is to be introduced, asset upgrades or the acquisition of new assets will be considered.

Asset Condition

Asset condition assessment is the process of inspecting an asset and making a professional judgement as to the likely timing of intervention. This in turn provides an indication of the probable remaining life of the asset.

Condition assessments are performed by a mix of Council staff and external contractors, depending on the type and complexity of the asset.

At a minimum, the condition of an entire asset class is assessed during revaluation, typically every three to five years. Routine safety and quality inspections occur throughout the year.

Condition assessments assist us to

- identify and prioritise maintenance needs
- identify and prioritise renewals (replacements)
- analyse deterioration patterns

Condition is reported on a scale of 1 to 5:

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

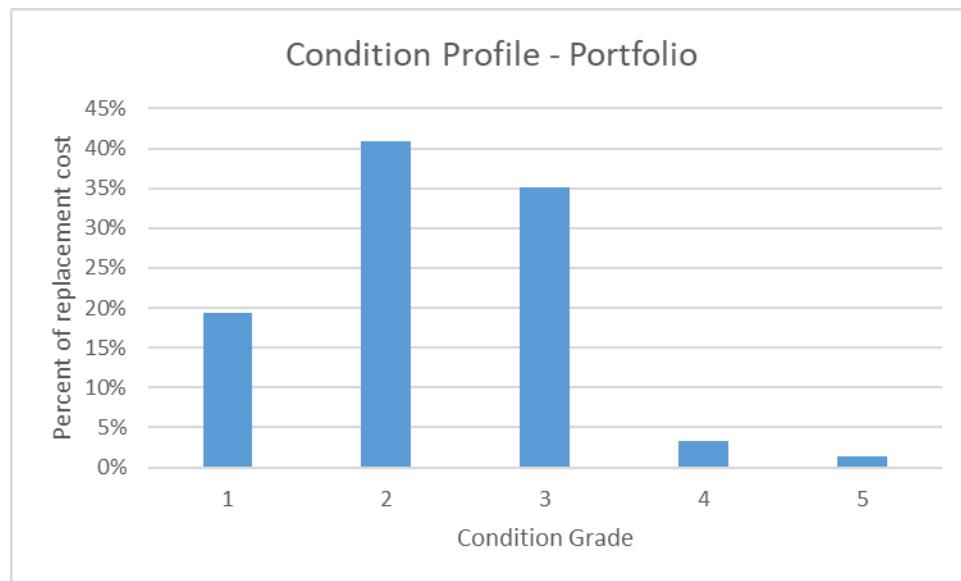
Condition Report 2020/21

Council reports annually on the condition of its assets. As assets age, their condition deteriorates. Conditions 1 to 3 are considered acceptable. An asset in condition 4 or 5 will need to be replaced completely or extensively repaired. The value of assets in condition 4 and 5 forms the basis of the “backlog ratio” indicator.

The table below shows the condition profile of Council's assets as of 30 June 2021, with most assets being in Condition 2 or Condition 3.

Asset type	Replacement Cost (\$,000)	Assets in condition as % of Gross Replacement Cost				
		1	2	3	4	5
All Buildings	457,274	15%	64%	19%	2%	0%
Swimming pool shells	14,915	22%	41%	36%	1%	0%
Sealed Roads	603,760	7%	19%	64%	9%	2%
Bridges	15,248	1%	73%	8%	12%	6%
Footpath	108,407	8%	14%	74%	4%	0%
Other Road Assets	574,307	3%	24%	66%	2%	4%
All transport	1,301,722	5%	21%	65%	5%	3%
All stormwater drainage	909,945	43%	56%	0%	1%	0%
All Open Space	235,518	15%	48%	33%	4%	0%
Other Infrastructure	35,905	19%	37%	40%	4%	0%
Total portfolio	2,955,279	19%	41%	35%	3%	1%

The overall condition profile is shown below:



Lifecycle Management

Capital works planning and management

Capital works include replacing or upgrading existing assets and constructing new assets. Capital works are managed by Council's project services unit and may be delivered internally by operations units or externally by contractors.

The capital works are listed in the annual operational plan and can be viewed on Council's website.

Operations and maintenance planning and management

Operations and maintenance works are mostly planned and managed by Council's operations units. These include routine cleaning, waste removal, proactive inspections, reactive repairs, mowing, street sweeping, painting, tree pruning, pothole repair, and many others. The frequency of activities and the response time to reported issues varies depending on asset location, service priority, safety and risk.

Financial Summary

Asset Accounting

We are required to revalue our assets at least every five years and to assess assets' "fair value" every year. We also have to correctly capitalise replaced, upgraded and new assets throughout the year. This is to ensure we have the correct value on the balance sheet and the correct depreciation expense. The finance team are responsible for asset accounting with considerable input from asset managers.

Long Term Financial Plan

The Long Term Financial Plan (LTFP) is Council's ten year financial strategy that ensures our service delivery, and hence our asset expenditure, is financially sustainable over the long term. Asset managers forecast the capital and operational expenditure required to deliver technical and customer levels of service in current day dollars. The finance team applies various assumptions and scenarios to the forecast so that expenditure is accommodated across the planning period. The level of certainty in both the forecasts and the LTFP is greatest in years 1-3.

Risk Management

Risk management is an essential aspect of asset management. By understanding the types of events that can affect assets and the likelihood of such events occurring, we can put in place measures to prevent or mitigate such events. Managing asset risks provides greater certainty of service delivery and ultimately meeting customer outcomes.

Critical Assets

Critical assets are specific assets that have a high consequence of failure **but not necessarily a high likelihood of failure**. By identifying critical assets and critical failure modes, Council will appropriately target and refine inspection regimes, maintenance plans and capital expenditure plans.

Specific buildings critical to Council's operations are identified and listed in the Council's Business Continuity Plan (BCP).

Critical assets identified in the asset management plans are summarised below.

Critical Asset(s)	Failure Mode	Impact
Traffic and Transport		
Road bridge at Wandella Road, Miranda (Over rail line bridge)	Deterioration of structural elements, collapse of bridge	Critical service loss – denying road and rail access; Fatality/personal injury; Damaged to higher value item; major litigation; effect on reputation
Road Bridges in Sylvania waters – Warrego Ave; Bogan Avenue, Tuross Ave	Deterioration of structural elements, collapse of bridge	Denying an important accessway to a number of residents, personal injury, effect on reputation
Prince Edward Park Pedestrian bridge, Woronora	Deterioration of structural elements, collapse of bridge	Denying the only available road access to number of residents, personal injury, effect on reputation
Bundeena Drive, Maianbar Road (provide only road access to Bundeena and Maianbar suburbs)	Deterioration of pavement surface and base; potholes, rutting, cracks, and deformation	Unserviceable; denying the only available road access to Bundeena and Maianbar suburbs. effect on reputation
All roads	Major pavement failure	Denying access to town centres, effect on reputation, major litigation
All footpaths	Major footpath failure/ cracked, displaced.	Denying access to town centres, effect on reputation, major litigation
Buildings		
Roof	Leaks	Service closure or disruption, safety
Heating, Ventilation and Airconditioning	Not operating	Service closure or disruption
Amenities	Leaks, blockages or water supply issues	Facility closure; user disruption
Roof gutters	Water ingress causing damage	Asset replacement or repair
Power supply	Loss of power / electricity to site	Service closure or interruption
Water and sanitary	Loss of water supply	Service closure or interruption
Fire systems	Must be always compliant	

Critical Asset(s)	Failure Mode	Impact
Open Space		
Parks	Deterioration and failure of structural elements; failure of park assets that contribute to the safety and functionality of the park (i.e. access ways; lighting; fencing); discovery of land contamination (i.e. asbestos)	Prolonged closure of facility or reduced level of service; reputational damage; risk to public safety.
Play Equipment	Deterioration and failure of structural elements and play components	Prolonged closure of facility and subsequent service disruption; reputational damage; injury to children or bystanders
Sports fields	Unplayable surface due to poor condition; deterioration and failure components that contribute to the safety and functionality of the facility (i.e. floodlighting, pitches, synthetic surfaces, fences, cages).	Closure of field Disruption to sports fixtures; reputational damage.
Marine structures	Deterioration and failure of structural elements; deterioration and failure components that contribute to the safety and functionality of the marine structure (i.e. decking, stairs, shark nets).	Prolonged closure of facility or reduced level of service; reputational damage; risk to public safety; disruption to ferry and boat services.
Stormwater and Waterways		
Stormwater pipes/ culverts near buildings or other vulnerable assets OR buildings with above floor flooding	Structural failure resulting in blockage and flooding in public and private property	Risk to life and property damage
Natural watercourses near buildings or other vulnerable assets	Bank failure, soil erosion	Risk to life and property damage Environmental impacts Reduction in recreational value Loss of amenity

Climate Change and Asset Resilience

Climate change risks and asset resilience were introduced in IPWEA's asset management plan template in 2020. This recognises that it is not simply enough to respond to severe weather events, we must strengthen the resilience of our assets to such events, so that we can respond and recover faster, minimise the likelihood of asset damage and reduce the time and cost of any repairs.

Council's ClimateClean 2030 strategy, currently being developed by the Environmental Science team, will address Council's greenhouse gas emissions, including from its asset portfolio.

Asset Management Plan Monitoring and Improvement

Asset Management Plans are reviewed at least annually. AMPs are intended to be living documents that respond to changes in our context, operating environment, financial situation and organisation. As we have seen in the last two years, circumstances can change rapidly, and asset managers must be able to adapt their plans to reflect reality.

Each section of the AMP is in effect a sub-plan, and some sections are more advanced than others. Where there is need to improve an aspect of the asset management plan, it is noted in the AMP's improvement plan. We have an approved Asset Management Improvement Plan that incorporates improvement actions from our maturity review, internal audits, external benchmarking programs, and the asset management plans. A dedicated working group is responsible for implementing and reporting on the Asset Management Improvement Plan.

Asset Management Plan – Transport

The Purpose of the Plan

This plan covers the transport infrastructure assets that provide safe and functional infrastructure for pedestrian, bicycle and vehicular traffic and parking facilities.

The provision of well maintained, safe and integrated transport infrastructure is critical to supporting the Shire community in their residential, business and leisure activities. It facilitates the provision of multiple services by enabling the transportation of goods, materials and people. In the next ten years, and likely beyond, the transport infrastructure will need to support an overall increase in population and a mostly ageing community.

Asset Description

The transport infrastructure asset class includes the following assets:

Asset Group	Asset Component	Qty	Unit	Replacement Value
Road Pavement	Sealed Roads Surface	819	km	\$168,581,000
	Sealed Roads Pavement	819	km	\$430,661,000
Kerb and Gutter	Kerb and Gutter	1523	km	\$291,582,000
Road Structure	Road Bridges, Pedestrian Bridges, Subway	37	No.	\$15,422,000
Footways and Cycleways	Footpath (Asphalt & Concrete)	757,828	Sqm	\$96,662,000
	Premium Paved Areas	55,340	Sqm	\$7,770,000
	Pathways including Stairways	62	km	\$24,509,000
	Cycle ways	27	km	\$7,757,000
Carpark	Carparks (Excl. multi storey and underground – See Buildings AMP)	13,500	Spaces	\$41,447,000
Traffic Facilities	Roundabouts, calming devices, island/median, thresholds, sign & line marking			\$33,468,000
Street Furniture	Seats, Fence, Bin, Street Lighting & Bus Shelter			\$2,295,000
Non-Depreciable	Bulk Earthworks	n/a	n/a	\$152,097,000
Grand Total				\$1,272,251,000

Levels of Service

Desired Levels of Service

Desired community levels of service are developed through the Integrated Transport Strategy and measured through our regular community surveys.

The main objective of this strategy is to achieve a more sustainable, accessible, amenable, equitable, safe and integrated transport and land use system which balances social, environmental, health, economic and strategic objectives;

The action plans developed from this strategy will include detailed service statements.

Technical Levels of Service

Community levels of service are achieved through meeting the technical levels of service, which are developed in the asset management planning process:

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Acquisition	Creation as new / expansion or Upgrading to contemporary requirements	Budget Allocation	Limited by the existing budget	Council's Integrated Transport Strategy report identified the required programs and budget allocations to meet the increasing demand.
Operations and Maintenance	Ensure public safety; maximise the life of the transport asset; and sustain the functional requirements of each road asset components	Service level agreement	Currently reactive to limit of budget	Need to increase due to additional assets being created and donated and the aging of the assets.
Renewal	Replacement of an existing assets to deliver same level of service as the existing the assets	Renewals Programs as required by the Projected renewals by the SMEC modelling	Currently limited by budget Long Term Planned Program matching demand	Timely renewal of high risk and poor condition assets. Significant renewal expenditure is required to address aging asset
Disposal	Disposal of assets no longer in use	As identified in the Integrated Transport Strategy report	Annual amount spent on Activity	Optimal annual amount spent on Activity

Service Hierarchy

Council's road network is classified as Arterial Road, Sub-Arterial Road, Collector Road and Local Road

Road Class	Network Function	Length (km)	Proportion of network (%)
Arterial Roads	Major roads linking State Roads and are expected to carry large volumes of traffic and have a higher speed limit.	6.28	0.77
Sub Arterial Roads	Through roads that are expected to carry large volumes of traffic and have a higher speed limit.	22.70	2.77
Collector Roads	Collector Roads are low-to-moderate-capacity roads which serve to move traffic from the Local Road network to the Regional Road network	147.03	17.94
Local Road	Primarily used to gain access to the property. These roads have the lowest speed limit, and carry low volumes of traffic	643.45	78.52
		819.50	100.00

Future Demand

The main demands for new services are created by:

- High car ownership
- Traffic congestion
- Parking demand
- Increased Road Safety standards to abide by
- Increase in Population density / Ageing Population
- Increased developments and heavy vehicle volume

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

The main demand management practices are:

- Traffic facilities and traffic management
- Encouraging alternate travel modes
- Parking schemes
- Land use planning

Demand is addressed in greater detail in the Integrated Transport Strategy and associated Implementation Plans.

Asset condition

Asset capacity and performance

Council's transport assets are generally provided to meet industry design and safety standards where these are available. From a safety and "fit for purpose" perspective it is considered that Council's Transport assets are meeting appropriate performance requirements.

Council has limited formal information regarding asset capacity, utilisation and service performance. Council will need to identify and collect additional data and information about capacity, utilisation and service performance to develop soundly based levels of service targets in the future.

Road Pavement

Network pavement condition is assessed by visual inspection every 5 years and the data collected is entered into Councils Pavement Management System (SMEC). The last assessment was carried out in 2019 when roughness, rutting, cracking and potholing levels were recorded.

A consultant is engaged to complete a condition survey of entire road network within the Shire for every 5 years. The condition survey involves recording the type and extent of cracking, ravelling, surface texture, potholing, road roughness and rutting. A Network Survey Vehicle (NSV) mounted with digital laser profiler and digital imaging system is used to complete the road condition survey.

Road roughness and rutting is measured using a laser profiler. Pavement video images collected from field are loaded into a database to enable desktop visual assessments to be made. The rated data are converted into a format compatible for data upload to Council's SMEC PMS system.

Road Pavement & Inventory - Defects Inspection Survey

The proactive defect inspection survey takes place every three months for high use areas and 12 months frequency for general use areas.

Reactive inspection is undertaken in response to customer requests (CRs) and is to be resolved within standard service level timeframe.

Development works

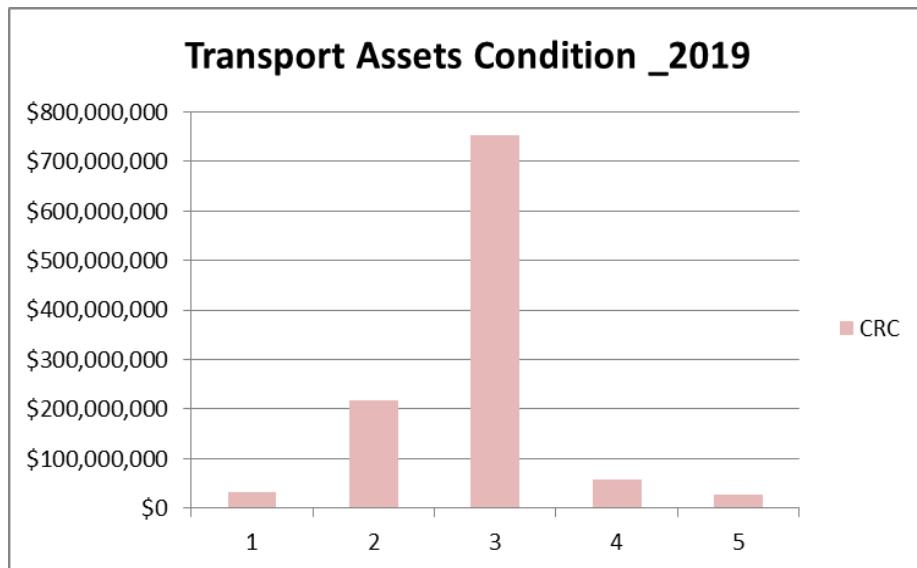
The final inspection and quality testing are conducted for the road frontage works completed by developers to ensure the works are completed as per the Council's technical specifications and standards, prior to take over the new asset.

Condition Profile

Condition is measured using a 1 – 5 grading system:

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

The overall condition profile of the transport network is shown below:



Lifecycle Management Plan

Operations and Maintenance Plan

A key element of asset management planning is determining the most cost-effective mix of planned and unplanned maintenance. We are currently updating our Service Level Agreement (Maintenance of Transport Assets) to obtain mutual agreement for service provision between the Council's Civil Operations Unit and Asset Services business unit.

The Service Level agreement defines the

- inspection frequency for transport infrastructure assets
- response times for attention to defects identified by inspection'
- works to be performed to address defects identified by inspection
- Identify road assets in poor condition to include in Renewal Program

Maintenance activities include all repairs/maintenance which are not classified as renewals e.g.:

- pothole patching
- kerb and gutter repairs
- grinding of footpath slabs or replacement of sections to eliminate trip hazards
- removal of graffiti and repairs as a result of vandalism
- bridge joint and handrail repairs

Renewal and Replacement Plan

Assets requiring renewal/replacement are identified from either the asset register or an alternative method:

- If Asset Register data is used to forecast the renewal costs this is done using the acquisition year and the useful life,
- Alternatively, an estimate of renewal lifecycle costs is projected from our Pavement Management System (SMEC) and may be supplemented with, or based on, expert knowledge.

Asset condition data was used to determine the amount of capital expenditure that is required to be spent on renewal in the next ten years. It is considered that the renewal intervention be at condition 4 to effectively provide the current level of service, mitigate risk and optimise maintenance and renewal expenditure.

Assets requiring renewal for premium paved areas were identified from estimates of useful life and age obtained from the asset register to meet the required functional level of service.

Road Pavement Renewal

The treatment selection model is run periodically in SMEC as an output to the annual Pavement Rehabilitation and Resurfacing Program. The SMEC process predicts pavement life based on traffic, pavement structure, current defects and other condition data. The treatments are assigned based on rules and a comparison of the benefit ratio of analysed road sections.

The SMEC analysis is followed by the field validation. The main objectives of the field validation process are to:

- to review renewal needs in the field
- coordinate these needs with other programmes such as utilities and other Council departments
- determine the final annual Pavement Rehabilitation and Resurfacing Program.

Council's major renewal and replacement programs in the areas of road improvements are:

- Road Pavement Rehabilitation Program
- Road Pavement Preventative Maintenance Program. (Pavement Preservation Treatment)
- Roads to Recovery Program
- Regional Road Rehabilitation Program.

Pavement preservation is an early intervention maintenance treatment that rejuvenates pavement surface to provide a sustainable solution to extend pavement life.

A pavement preservation treatment is more cost effective than the traditional asphaltic concrete overlay. It is designed to extend the service life of pavements without the costly expense of reconstruction. Where the underlying pavement is in relatively sound condition, a service life of 10-12 years is expected.

Acquisition and Upgrade Plan

The Action Plans from the Integrated Transport Strategy (ITS) are being prepared as a major input to the Transport Asset Management Plan. These action plans identify potential new and asset upgrades and their current funding status. Once adopted by Council, the new and upgraded asset needs will be considered in this AMP.

Council's major capital programs in the areas of road and footpath improvements are:

- Roads Construction Program
- Footpath Construction Program
- Traffic Management Program
- Public Domain upgrade (Premium Paved areas)

Council has a Footpath Provision and Management Policy which provides guidance to prioritise candidate projects for inclusion in Council's annual Footpath Construction Program.

Risk Plan

High and Very High risks and their treatment plans are presented in the table below:

Risk Assessment and Treatment Plan

Asset Providing the Service	What can happen	Risk Rating	Risk Treatment Plan	Residual Risk
Road Bridges/Footbridges	Loss or reduction in service	High	Continue to review controls, no further action required at this stage; Maintenance management system e.g. to schedule work, complete work, monitor temporary work etc.	Low
Road Bridges/Footbridges	Safety to pedestrians and motorists should the bridge fail	High	Continue to review controls, no further action required at this stage; Maintenance management system e.g. to schedule work, complete work, monitor temporary work etc.	Low
Footway Network	Not feeling safe or risk of injury/Trip / Fall	High	Continue to review controls - Continue to undertake Condition Assessments -Keep updated records in Maintenance Management System	Low
Footway Network	Community Expectation - Difficult to move around, Expects higher level of service	High	Review Footpath provision Management Plan; Develop Integrated Transport Strategy (Active Transport)	Low
Road Network-Pavement and surface (Regional Roads)	Pavement Failure, traffic accident, Not meeting community needs	High	Continue to review controls; undertake condition inspections; keep asset register up to date	Low
Footway Network	Community Expectation - expects higher level of service	High	Continue to review Footpath Provision Management Policy; Develop ITS (Active Transport)	Low
Road Network - Pavement/Surface (Collector Roads)	Road Pavement Failure	High	Continue to review controls; Continue to carry out condition inspections; Keep asset register up to date	Low
Retaining Structures/Embankments	Failure of assets	High	Undertake inspection of assets to collect data and update asset register	Low

Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions we need to understand our capacity to withstand a given level of stress or demand, and to respond to possible disruptions to ensure continuity of service.

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

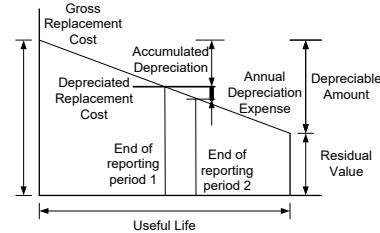
We do not currently measure our resilience in service delivery. This will be included in future iterations of the Asset Management Plan.

Financial Summary

Asset Valuation and Depreciation

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

Current (Gross) Replacement Cost	\$1,272,251,509
Depreciable Amount	\$1,120,154,509
Depreciated Replacement Cost ¹	\$917,518,000
Depreciation	\$13,559,000



Forecast Lifecycle Costs and Long Term Financial Plan

Our forecast lifecycle activity costs as at 2021/22 are shown below:

Financial Year	Acquisition (\$)	Operation (\$)	Maintenance (\$)	Renewal (\$)	Disposal (\$)	Total
2023	7,765,000	647,477	5,822,034	11,471,575	0	25,706,086
2024	7,765,000	652,736	5,867,612	11,148,575	0	25,433,923
2025	7,765,000	657,995	5,913,190	12,832,775	0	27,168,960
2026	7,765,000	663,254	5,958,768	13,004,475	0	27,391,497
2027	7,765,000	668,513	6,004,346	12,832,775	0	27,270,634
2028	7,765,000	673,772	6,049,924	11,861,885	0	26,350,581
2029	7,765,000	679,031	6,095,502	11,429,175	0	25,968,708
2030	7,765,000	684,290	6,141,080	11,643,899	0	26,234,269
2031	7,765,000	689,549	6,186,658	11,643,899	0	26,285,106
2032	7,765,000	694,808	6,232,236	11,643,899	0	26,335,943
Total	77,650,000	6,711,425	60,271,350	119,512,932	0	264,145,707

¹ Also reported as Written Down Value, Carrying or Net Book Value.

(Values are in 2021 dollars).

The outlays forecast for operations, maintenance, renewals and upgrades in this plan are network-wide estimates and are accommodated in the Long Term Financial Plan over the ten year period. Specific projects and programs are selected on a priority basis. The level of accuracy in estimating future works diminishes as the forward planning period is further away. These estimates will be updated in future plan revisions as more data becomes available.

Outlays for new assets will be accommodated on the basis of service priority, confirmation of grant funding or developer contribution.

Asset Management Practices

Sutherland Shire Council's asset management practices are guided by the following industry resources:

- International Infrastructure Management Manual (2020)
- IPWEA practice notes

Our systems to manage assets include:

- Technology One Finance
- SMEC (Snowy Mountain Engineering Corporation) Pavement Management System
- Maintenance management System (MMS – Civil Ops)
- Geocortex - Geographic Information System

These applications will be replaced or upgraded between 2022 and 2024 as part of our OneCouncil implementation project. This will result in better financial data for future forecasts.

Monitoring and Improvement Program

Council has an Asset Management Improvement Plan (2021) which details specific actions to improve our asset management practices and our asset management plans.

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

- Review and update useful lives used in the asset register
- Review and update current replacement costs used in the asset register
- Improve the condition information on high risk areas
- Review and revise customer level of service measures and forecast trends
- Review and revise risk management discussion
- Improving our efficiency in operating, maintaining, renewing and replacing existing assets to optimise life cycle costs and use of recycling material.
- Prioritisation of projects funded in the Capital Expenditure Program based on principles and objectives contained in Council's Community Strategy plan and ITS Plan.
- Review and improve maintenance practices, considering service agreements for maintenance activities and procedures to reduce the potential liability exposures associated with the maintenance of transport assets.
- Seeking additional funding from governments and other bodies to better reflect a 'whole of government' funding approach to infrastructure services.

The plan will be monitored and reviewed annually by Asset Services.

Asset Management Plan – Stormwater and Waterways

The Purpose of the Plan

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

This plan covers the infrastructure assets that provide stormwater and waterway services.

Asset Description

The stormwater and waterway assets network comprises:

Asset Component Group	Asset Classification	Asset Category	Quantity	Unit	Replacement Value (\$)
Stormwater Drainage	Built Grey Infrastructure	Stormwater pipes	614	km	721,800,000
		Stormwater pits	26,797	each	96,000,000
		Stormwater culverts	11	km	57,800,000
		Constructed open channels	18.5	km	53,800,000
		Headwalls	1614	each	1,700,000
Stormwater Quality Improvement Device	Built Green Infrastructure	Stormwater quality improvement devices	257	each	19,800,000
Total					950,900,000

Asset Component Group	Asset Classification	Asset Category	Quantity	Unit	Cost of rehabilitation works (\$)*
Waterways	Built Green Infrastructure	Rehabilitated creeks	14	km	5,650,000
	Existing Natural Green Infrastructure	Existing, un-rehabilitated creeks and wetlands	142	km	27,800,000
Total					\$33,450,000

**The cost of rehabilitation of waterways is the cost of works required to improve/enhance its existing environmental value. The economic value of Shire's waterways has to date not been expressed.*

Levels of Service

Our present funding levels are sufficient to continue to provide existing services at current service levels in the medium term (10 years).

Stormwater drainage is within the top 10 (eighth) highest indicators contributing to overall customer satisfaction with Council.

The value of the stormwater drainage network can be expressed in terms of the economic contribution to reducing flood damages. The value can also be derived on community's willingness to pay for a service or willingness to accept reduction in service such as community's acceptance of level of flood risk.

The value of Shire's waterways has not been expressed to date, but their contribution to property value in terms of views, access and overall amenity is substantial.

Built assets are designed based on hydro-environmental processes to provide a service that will facilitate and sustain urban development. Built grey infrastructure such as pits and pipes usually provide a flood protection, whereas built green infrastructure is more able to provide multiple services such as water quality improvement, improving environmental and recreational value.

Council's stormwater and waterway assets are generally provided to meet industry design standards at that time where these are available, and it is considered that Council's stormwater and waterway assets are meeting appropriate performance requirements.

Council is reviewing the information regarding capacity, utilisation and performance of stormwater assets through flood studies and drainage investigations to inform future asset management planning and decision-making.

Customer Levels of Service

Type of Measure	Asset classification	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Quality – Condition and Serviceability	Built 'grey' assets (pipes, pits, and headwalls)	Asset condition rating of 3 or better	Condition ratings (based on remaining useful life of asset)	About 99% of assets are in condition 1 and 2	Planned budget is adequate to provide current level of service
		Asset serviceability (able to convey stormwater) rating 2 or better	Serviceability ratings are based on combination of desktop analysis, site inspections, CRs	Serviceability rating for pits is recorded as part of ongoing asset data validation around 7% pits are in condition 4 and 5 requires frequent cleaning at the time of	Planned budget is adequate to maintain required serviceability

Type of Measure	Asset classification	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
				inspection.	
	Built 'green' assets (SQIDs)	Asset condition ratings of 3 or better	Condition ratings (based on remaining useful life of asset) Serviceability ratings	About 40% of assets are in condition 5. These ratings are not true representation of asset condition and not used for budget forecast. Currently, SQIDs are cleaned on periodic basis.	Based on cleaning contactors feedback condition of SQIDs is 3 or better and planned budget is adequate to keep the condition at current level
	Existing natural green infrastructure (Waterways)	Asset value (Waterway health)	Asset value ratings (derived from Sutherland Shire Watercourse Assessment)	About 31.5% length of watercourses are rated as 'high value' and are targeted in the current Waterway Management Program to improve its value	With current level of funding, 'high value' rated waterways requiring works will be reduced
Function	All Built Assets ('Grey' and 'Green')	Is a stormwater network installed or not?	Hydraulic modelling showing flood hazard Catchment management studies and plan	Not known.	Trend is towards extending / expanding the existing stormwater network. It is assumed that planned budget will be adequate
Capacity	Built 'grey' assets (pipes, pits, and headwalls)	Adequate capacity to minimise flooding during minor events (1 in 20-year ARI) No risk to life and property during major flooding (1 in 100-year ARI)	Number of capacity related complaints Vs rainfall events in a year Number of flood related property damage claims Vs number of rainfall events in a year Number of high risk	Not known	Planned budget is adequate for current known capacity issues Completion of detailed flood studies for all catchments will provide data which will help in determining deficiency in the system capacity and need for

Type of Measure	Asset classification	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
			assets Vs total number of assets		upgrade Trends are mixed. Capacity could be reduced through increased rainfall intensity and sea level rise however overall service could be improved through revised flood modelling, application of stormwater and flood-related development controls, ongoing capital improvements in increase capacity, etc.
			No visible pollution in waterways Beaches and other swimming locations are regularly swimmable		Planned budget is adequate for current known capacity issues Proposed SQID audit will assess performance ratings and recommend improvements
			Selected estuarine waterways are navigable		Dredging strategy is being developed

Technical Levels of Service

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Acquisition				
New or Upgrade of existing asset	To improve/ enhance the level of service of an existing asset (quality and capacity) OR provide same service by either extending existing network asset or providing a new asset that wasn't there before.	Number or value of asset 'acquired'	Assets are acquired based on existing budget (\$200,000 worth of assets acquired every year) On average, one new SQID is installed every year	Maintain current level until asset upgrade recommended by catchment and floodplain management program.
Assets acquired through major subdivisions			Depends on number of subdivisions	
Operation				
Asset inspection	To develop Operations and Maintenance program	Planned inspection schedule	All pits in the Shire are inspected once a year as per schedule.	Continue current asset inspection
Feasibility Investigations and Studies	To develop capital works program			Continue current level of funding
Waterway inspection	Monitor navigable depths in selected waterways Sustainably manage water quality in waterway	Number of bed level surveys (to determine intervention depth) Number of sites monitored	Major navigation channels are surveyed once a year Water quality monitored at 51 sites in the Shire	Bed level survey for major waterways jointly carried out with NSW State Government and continue current practice. Review of Council's dredging policy
Maintenance				
Maintain condition of built 'grey' and 'green' assets	Maintain structural integrity of assets to perform	Planned maintenance completed in time	Planned maintenance completed on time (100%)	Current planned budget adequate to provide current level of service Include hotspots in the planned maintenance

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
	required level of service Trunk stormwater drainage network and overland flow paths are maintained for safety and serviceability	Reactive maintenance works completed as per service level agreement	CRMS Stats (reactive maintenance)	regime on completion of Shire-wide overland flood study and asset condition assessment. Change the current maintenance requirements to suit outcome of proposed audit of SQIDs
Cleaning of Stormwater Quality Improvement Devices	To reduce the quantity of gross pollutants, sediment load in receiving waterways	Frequency of cleaning of SQIDs Quantity of pollutants removed	All trash racks are cleaned on a 6 weekly and proprietary GPTs on a 12 weekly basis and after every major storm event. Some of the devices such as floating litter trap, filter basket, etc... are cleaned on reactive basis	Current planned budget is adequate Cleaning frequency is expected to change after completion of proposed audit of SQIDs New assets are likely to be added as recommended in the catchment management plans (currently not included in the planned budget as there is no significant increase in demand)
Prioritised rehabilitation of 'high value' rated waterways	Improve environmental health and economic and recreational value of waterways	Length of waterways rehabilitated	At present 14km length of waterways rehabilitated as compared to total length of 156km. (8.9%)	With the current level of funding the length of rehabilitated waterways in 10 years is expected to increase from 8.9% to 26%. Continue current planned budget
Maintenance of watercourses	Maintain waterway health	Length of rehabilitated waterways maintained	All planned maintenance is carried out	Current funding adequate to continue planned maintenance. With continued rehabilitation of waterways, waterway maintenance is expected to increase, and a waterway management program will be developed to address this matter.

Future Demand

The main demands for new services/ assets are created by:

- New development/ redevelopment
- Recommendations from completed/ ongoing/future detailed catchment wide floodplain risk management studies and plans
- Recommendation from planned catchment management plans for individual catchments
- Drainage investigations
- Community awareness and education

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

Asset Condition and Performance

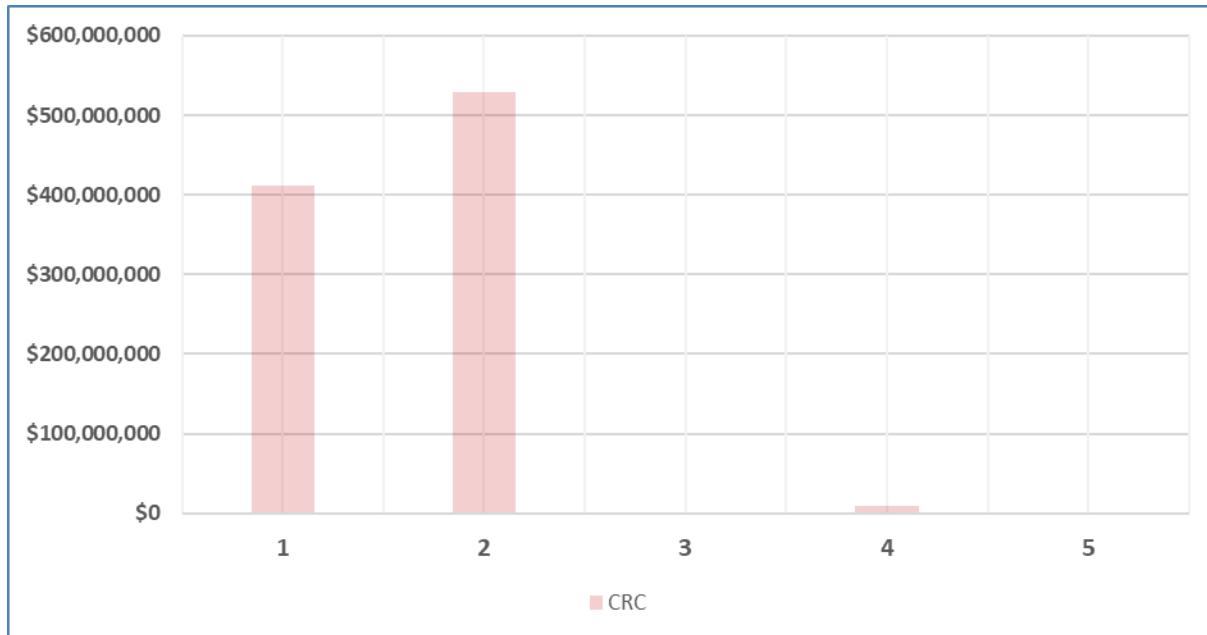
Built Assets

Council is in the process of updating its data on the quality of its built grey and built green infrastructure assets. In the meantime, asset age and remaining useful life have been used as surrogate condition indicators for built assets. This assumes that the closer the asset is to the end of its age the more likely it will be of lower quality requiring renewal.

Condition is measured using a 1 – 5 grading scale:

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

The condition profile of built stormwater infrastructure assets and rehabilitation profile of waterway assets is shown below.



The above figure shows condition profile that is based solely on remaining useful life (age). Over 98% of built grey infrastructure assets could be considered to be of good or very good quality with rating 1 and 2.

Proposed Asset Condition Assessment

Council has recently completed a desktop analysis and assigned preliminary criticality, condition and serviceability ratings to all conduits in the Shire. Using “*Critical Assets and Risk Management Guidelines*”, the preliminary risk ratings have been determined for conduits. About 8% length of conduits are identified as “high” risk conduits. The conduits that are identified as “high” risk are selected for CCTV inspection to confirm preliminary ratings. The CCTV inspection will validate the desktop analysis.

In addition, about 5% length of conduits are selected as representative sample of conduits (not identified as “high” risk) and included for CCTV inspection.

CCTV inspection results will provide condition, serviceability and risk profile for 13% length of conduits in the Shire. A statistical analysis will be used to extrapolate the risk profile for remaining 87% length of conduits in the Shire.

The updated risk profile will be used for asset management planning. The statistical analysis is expected to be completed by end of 2022, which will enable us to update the asset condition information in the asset register.

Natural Green Assets (Waterways):

The quality of natural green infrastructure assets, primarily creeks, was determined differently to ‘built grey’ infrastructure. Asset quality was derived from a Shire-wide assessment of creeks that assigned a “creek health” score to individual reaches of a creek (based on catchment setting, geomorphology, in-stream habitat, riparian vegetation, water quality and fauna). The score reflects both the quality of the creek reach as well as actual or potential problems within that reach.

Natural green infrastructure assets are assumed to exist in perpetuity.

Asset capacity and performance

Assets are generally provided to meet design standards where these are available. However, there is insufficient resources to address all known deficiencies. Known locations where deficiencies in service performance exist are shown below. Source: Flood studies, site inspections and customer complaints.

The above figure shows location which are serviced on a periodic basis i.e. pit in some locations are cleaned once every 12 weeks and others once a year.

Council's stormwater and waterway assets are generally provided to meet industry design standards at that time where these are available. It is considered that Council's stormwater and waterway assets are meeting appropriate performance requirements.

Council is reviewing the information regarding capacity, utilisation and performance of stormwater assets through flood studies and drainage investigations to inform future asset management planning and decision-making.

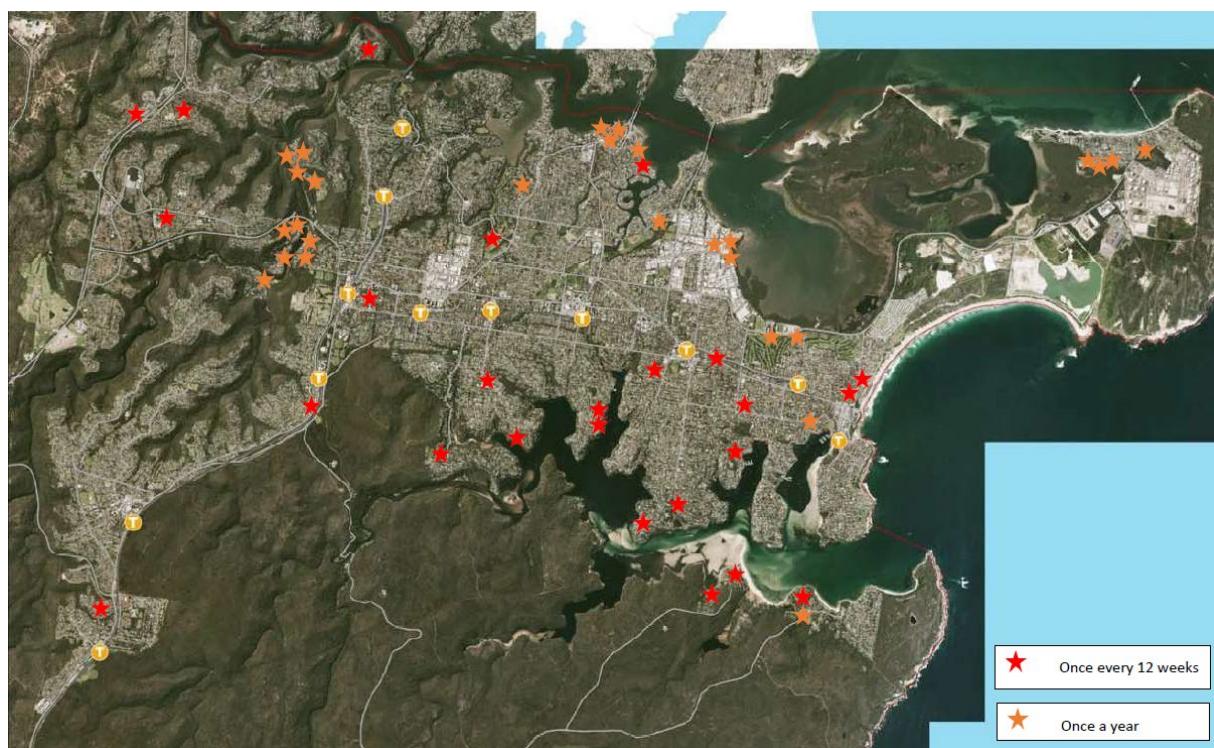


Figure 2: Known "hotspots" requiring more frequent cleaning

Lifecycle Management Plan

Operations and Maintenance Plan

Overview

Operations is the active process of utilising an asset which will consume resources such as manpower, energy, chemicals and materials. This includes asset-related overheads that contribute to providing a service but excludes depreciation and corporate and general overheads. Examples of typical operational activities include feasibility investigations, catchment and floodplain management studies, asset inspection and validation, asset condition assessment, water quality monitoring.

The total planned operations budget includes Civil Operations staff salary but does not include staff salary of Stormwater and Waterway Assets Unit.

Maintenance activities include all actions necessary for retaining an asset as near as practicable to an appropriate serviceable condition but excludes rehabilitation or renewal. Examples of typical maintenance activities include cleaning of pits and pipes, cleaning of stormwater quality improvement devices, pipe repairs, minor repairs to pit/ headwall such as replacement of grate/ lintel/ pit chamber repair and minor repair/ replacement of SQID components such as filter screen, trash rack, access ramp, waterway rehabilitation and maintenance.

Operations Programs

Currently operations budget is based on set of programs that are developed to manage stormwater and waterway assets on catchment level such as:

- Floodplain management program
- Catchment management program
- Waterway management program
- Coastal management program
- Asset inspection and condition assessment
- Water quality monitoring

Maintenance

Currently the budget is based on historical maintenance cost plus relevant indexation. Council is working on improving this process including considering benchmarking with other councils, activities rates review, revaluation, and business changes.

Council's Civil Operations Unit carry out an annual proactive inspection of all stormwater pits on the road, defects recorded, and work carried out within a planned maintenance works program. The inspection frequency and cleaning of identified hotspot locations has been increased to 3-monthly. Other planned maintenance activities are cyclical cleaning of water quality devices.

Similarly, Council's Parks Operations Unit undertakes planned waterway rehabilitation and maintenance of waterways in the Shire.

Renewal

Council's operation and maintenance activities are usually undertaken simultaneously. Current ratio between Planned and Reactive Maintenance is not established but anecdotally it is expected to be around 60:40. Approximately 60% of operational and maintenance activity is proactive based on a regular inspection and cleaning regime. The remaining 40% is reactive arising from internal and external customer requests.

Requirements for ongoing, proactive asset operation and maintenance will be updated based on the risk ratings assigned to all assets. Assets with higher risk ratings (primarily reflecting serviceability and performance issues) will be prioritised for more frequent or intensive operation and maintenance activity to meet desired technical levels of service. This will result in more proactive works and less reactive maintenance activity.

All maintenance activities are currently carried out as per best industry practice, past knowledge and staff experience. The specifications for maintenance activities are generally consistent with Council's "Specifications for Civil Works carried out in conjunction with subdivisions and developments".

Renewal Plan

Typical renewal activities include refurbishment or replacement of major asset components or the entire asset, pipe relining, rehabilitation, pit replacement, replacement of a SQID, creek rehabilitation.

Renewal work can be proactive or reactive. Most of Council's stormwater and waterway assets, primarily stormwater pipes, are renewed reactively in response to customer requests. Some assets, such as stormwater pits and open channels, may however be identified for renewal following regular, proactive visual inspection.

The built 'grey' assets are currently renewed on a reactive basis. Council receives enquiries relating to asset performance, functional or physical failure of an asset, which triggers investigation including CCTV inspection, condition assessment and hydraulic analysis. The decision to renew is based on condition assessment and cost of renewal Vs maintenance. In the absence of data on asset degradation and asset age (refer to Asset age profile in Section 5.1), it is proposed to continue historical expenditure of \$300,000 as planned Budget throughout to cover renewals.

In contrast to built infrastructure, urban creeks are renewed proactively under 'waterway rehabilitation program', based on a list of watercourses that have been identified for rehabilitation in the Sutherland Shire Watercourse Assessment.

Unlike built stormwater network assets, waterways are not assessed for "physical condition". These are assessed for ecological values (using Sutherland Shire Watercourse Assessment methodology). Then these watercourses are put through a multi criteria assessment to come up with the priority list. The criteria used include

- Operating and Maintenance Cost
- Land Ownership
- Presence of Bushcare Group
- Availability of Access
- Benefits to adjoining community

- Benefits to Wider community
- Synergy with other ongoing/ planned works in the vicinity

Acquisition Plan

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

Existing assets can be upgraded to improve their level of service and to reduce risk. Upgrades can involve any of the following:

- improving the performance of the existing asset
- replacing the existing asset with a higher-performing asset
- augmenting the existing asset with additional assets

Typical upgrade works include enlarging existing stormwater pits, extending existing creek bank protection works or replacing one type of SQID with a higher performing SQID.

Asset upgrades will normally only be prioritised ahead of asset operation, maintenance and renewal when the risk of asset under- or non-performance outweighs the risk of structural / geomorphologic / ecological failure, or when it is not cost-effective to continue with the operation, maintenance and renewal of the existing asset. Demands for operation, maintenance and renewal can also potentially be reduced through targeted asset upgrade.

New assets are normally installed to provide a service at a local scale e.g. lot, street, subdivision or precinct, where no service existed previously. New assets may however contribute to improving an existing level of service, particularly when considered on a catchment basis or Shire-wide.

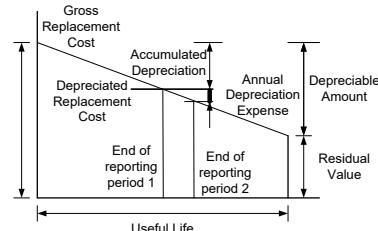
For instance, a new GPT will provide a local water quality benefit (i.e. a new service), but, along with other distributed stormwater quality improvement devices throughout the Shire, will help improve water quality in a downstream receiving waterway (i.e. an upgraded service). Some built green infrastructure such as creek bank protection works, is a new service, but can also be considered as an improvement to the existing ecosystem service provided by the creek.

Financial Summary

Asset Valuation and Depreciation

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

Current (Gross) Replacement Cost	\$984,404,637 **
Depreciable Amount	\$950,951,202*
Depreciated Replacement Cost ²	\$518,962,044
Depreciation	\$10,091,651



*Note: Depreciable amount does not include existing natural green assets (un-rehabilitated and rehabilitated waterways).

**The gross replacement cost include cost of rehabilitation works of prioritised waterways required to improve/enhance its existing condition. The economic value of Shire's waterways has to date not been expressed.

Forecast Lifecycle Costs and Long Term Financial plan

Our forecast lifecycle activity costs as at 2021/22 are shown below:

Year (ending June 30)	Acquisition (\$)	Operation (\$)	Maintenance (\$)	Renewal (\$)	Total (\$)
2023	700,000	519,700	3,680,335	300,000	5,200,035
2024	700,000	519,700	3,680,335	300,000	5,200,035
2025	700,000	319,700	3,680,335	300,000	5,000,035
2026	700,000	319,700	3,680,335	300,000	5,000,035
2027	700,000	319,700	3,680,335	300,000	5,000,035
2028	700,000	319,700	3,680,335	300,000	5,000,035
2029	700,000	319,700	3,680,335	300,000	5,000,035
2030	700,000	319,700	3,680,335	300,000	5,000,035
2031	700,000	319,700	3,680,335	300,000	5,000,035
2032	700,000	319,700	3,680,335	300,000	5,000,035
Total	7,000,000	3,597,000	36,803,350	3,000,000	50,400,350

The outlays forecast for operations, maintenance, renewals and upgrades in this plan are network-wide estimates and are accommodated in the Long Term Financial Plan over the ten year period. Specific projects and programs are selected on a priority basis. The level of accuracy in estimating future works diminishes as the forward planning period is further away. These estimates will be updated in future plan revisions as more data becomes available.

Outlays for new assets will be accommodated on the basis of service priority, confirmation of grant funding or developer contribution.

² Also reported as Written Down Value, Carrying or Net Book Value.

Risk Plan

Risk Assessment and Treatment Plan

Our risk assessment and treatment plan is shown below:

Service objective	Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Primary and secondary contact recreation and amenity	Stormwater pipes and waterways	Oil / chemical spill into system by accidents	M	Review emergency response management system	L	
	Stormwater quality improvement devices	Pollutants not captured if stormwater quality improvement device has not been regularly cleaned	M	Ensure that frequency of cleaning and maintenance adheres to the service level agreement	L	Included in operational budget
	Waterways	Bank failure resulting in erosion and sedimentation downstream	H	Implement waterway rehabilitation and maintenance works as recommended in the Watercourse Assessment	M	Included in capital program
		Illegal dumping in waterways causing pollution	M	Community education plan	L	Included in operational budget

Service objective	Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
		Increase in impervious area if uncontrolled will increase pollutant loads	M	Community education and awareness to retrofit green infrastructure assets on private property through catchment management process	L	
Infrastructure stability and integrity	Stormwater pits and pipes	Damage to public infrastructure caused by development works	M	Ensure development assessment and compliance process provides satisfactory control and leverage	L	
	Stormwater pits and pipes	Structural failure of public infrastructure	H	Regular inspection/assessment of critical drainage assets and mapping of condition assessment	L	Included in planned maintenance budget
	Stormwater pipes	Injury caused by public getting access into large pipes	H	Assess hot spots in the system and plan installation of exclusion bars	L	Included in ongoing asset inspections
	Stormwater quality improvement devices	Structural failure of water quality improvement device due to poor maintenance	H	Regularly inspect all devices and ensure that they are appropriately maintained	L	Included in operational budget

Service objective	Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Waterways		Damage due to vandalism	H	Community education plan	L	
		Redevelopment is occurring on increasingly marginal sites and in close proximity to grey and green infrastructure affecting their stability and integrity	H	Asset renewal and upgrade to be considered as part of the redevelopment process in order to improve existing service levels.	L	Included in capital works program
	Waterways	Bank failure resulting in erosion and sedimentation downstream	H	Implement waterway rehabilitation and maintenance works as recommended in the Watercourse Assessment	M	Included in capital works program
		Damage to waterways such as tree uprooting or blockage by natural debris	H	General preparedness for reactive response and implement prioritised actions identified in the watercourse assessment study	L	Included in regular asset inspections
		Injury caused by public getting access into open channels	H	General public education and providing fencing at critical location	L	

Infrastructure Resilience Approach

The resilience of critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions we need to understand our capacity to ‘withstand a given level of stress or demand’ and to respond to possible disruptions to ensure continuity of service. Resilience is built on aspects such as response and recovery planning, financial capacity, climate change and crisis leadership.

Our current measure of resilience is shown below:

Threat / Hazard	Current Resilience Approach
Flash flooding or flooding in minor events	Flood related controls in DCP require new development to have flood emergency response plan
Major flooding	Flood emergency response management plans prepared as part of detailed floodplain risk management study and plan for individual catchments Flood emergency response management plan will be prepared as part of ongoing Sutherland Shire Overland Flood Study
Impacts of climate change	Review of Council's Sea Level Rise Policy Development of Sea Level Rise adaptation strategy Development of controls for Sea Level Rise Sensitivity analysis for increased rainfall intensity and resulting impacts considered in catchment wide floodplain risk management study and plan
Flooding in tidally affected low lying area	Development of framework for managing stormwater outlets and channels in low lying areas as part of ongoing Shirewide Catchment and Waterway Management Plan

Asset Management Practices

Sutherland Shire Council's asset management practices are guided by the following industry resources:

- International Infrastructure Management Manual (2020)
- IPWEA practice notes

Council staff undertake regular training and continuing professional development to improve their asset management capability.

Our systems to manage assets include:

- Corporate asset management system (CONFIRM)
- Corporate spatial management system (ArcMap)
- Technology One Finance
- Maintenance management system (MMS)

Monitoring and Improvement Program

Council has an Asset Management Improvement Plan (2021) which details specific actions to improve our asset management practices and our asset management plans.

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

- Verification of asset inventory data
- Development of Sutherland Shire catchment and waterway management plan
- Development and implement program of works for managing low lying stormwater assets
- Develop sustainable waterway (watercourse) management program
- Review of remaining useful life of assets and develop asset degradation curves

The plan will be monitored and reviewed by Asset Services annually.

Asset Management Plan - Open Space

The Purpose of the Plan

This plan covers the assets that provide active and passive recreation services in public open spaces such as parks, sports fields and foreshores.

Asset Description

Sutherland Shire Council manages around 1780 hectares of public open space, comprising approximately 552 parks and reserves, 143 playgrounds, 82 sports facilities and 53 marine structures.

There are in excess of 20,000 items of inventory found within these open space areas. Inventory items include:

- Furniture – seats, benches, picnic settings
- Play equipment – swings, slides, climbing structures, water play
- Play surfaces – natural and synthetic softfall
- Shade sails
- Sport playing surfaces – turf, concrete, synthetic
- Sports structures – seating, shelters, storage cages
- Sports lighting
- Exercise equipment
- Skate park structures
- Cycle tracks
- Irrigation systems
- Access paths and trails
- Regulatory and informational signage
- Memorials and monuments

Levels of Service

Customer Levels of Service

The Customer Levels of Service are considered in terms of:

Quality: How good is the service? What is the condition or quality of the service?

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

Capacity/Use: Is the service over or under use? Do we need more or less of these assets?

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Condition	Asset condition ratings of 3 or better	Condition ratings	The majority of assets have a condition rating of 3 or better however approximately a quarter of playground assets are in Condition 4.	As assets continue to deteriorate and renewals are completed based on the planned budget, the number of assets in condition 4 and 5, particularly playground assets, are expected to rise.
	<i>Confidence levels</i>		High (Professional judgement supported by extensive data)	High (Professional judgement supported by extensive data)
Function	Extent to which assets are fit for their intended use	Function ratings; customer surveys; customer requests.	Varies widely across asset types. Limited function data available.	It is expected that as whole of site renewals are completed, the extent to which assets are appropriate for their intended use will improve.
	<i>Confidence levels</i>		Medium (Professional judgement supported by data sampling)	Medium (Professional judgement supported by data sampling)
Capacity	Extent to which assets have the capacity to meet service demand.	Function ratings; customers surveys; customer requests.	Varies widely across asset types. Limited function data available. .	It is expected that as whole of site renewals are completed, the capacity for assets to meet service demand will improve.
	<i>Confidence levels</i>		Medium (Professional judgement supported by data sampling)	Medium (Professional judgement supported by data sampling)

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

Service Hierarchy

The service hierarchy is shown below.

Service Level	Description
CX1	CX1 sites have regional significance and are used heavily by the local community and visitors to the Sutherland Shire. These sites provide a broad range of recreational opportunities to wide range of users. They have a high standard of quality, access, cleanliness and amenity.
CX2	CX2 sites have district significance and are well used by residents in the area and surrounding suburbs. They provide a good level of recreational opportunities focussed on traditional recreational and sporting styles. There is a good level of quality, access, cleanliness and amenity.
CX3	CX3 sites have local significance and are intended for use by local residents. Facilities focus on offering basic recreational opportunities catering to the family group and casual user. They offer standard quality, access, cleanliness and amenity.
CX4	CX4 sites are also of local significance but are not embellished to provide any additional recreational service apart from the provision of open space for informal recreation.

Technical Levels of Service

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

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

Acquisition – the activities to provide a higher level of service (e.g. building a larger playground, installing a shade structure) or a new service that did not exist previously (e.g. a new playground, a new pontoon at a boat ramp).

Operation – the regular activities to provide services (e.g. cleansing, mowing grass, inspections, etc.)

Maintenance – the activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life (e.g. playground maintenance and repairs, sports field turf maintenance, boat ramp algae removal, painting timber wharf structures)

Renewal – the activities that return the service capability of an asset up to that which it had originally provided (e.g. playground replacement, boat ramp replacement, cricket pitch renewal)

Service and asset managers plan implement and control technical service levels to influence the service outcomes.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Acquisition	Construction of a new asset to provide a higher level of service	Construction of new assets	Not prioritised, as the renewal of existing assets are prioritised over the acquisition of new assets.	In accordance with adopted recreation and play strategies.
	Upgrade of an existing facility to increase the capacity and/or enhance its service level.	Expansion/upgrade of existing facilities	The current planned budget is sufficient to deliver identified upgrades nominated within the LTFP	In accordance with adopted recreation and play strategies.
Operation	Safety inspections	Frequency of the service	Council currently undertakes quarterly safety inspections for playgrounds and occasional and reactive inspections for other assets.	Sustain quarterly safety inspections for playground assets. Improve frequency and processes for safety inspections for other assets.
	Condition inspections	Frequency of inspection	Council currently undertakes occasional and reactive inspections	Improve frequency and processes for condition inspections.
Maintenance	To maintain the intended level of service.	The number of maintenance activities necessary to provide their intended level of service.	Generally reactive and accommodated within existing budgets.	Improve planned maintenance to reduce the requirement for increased reactive maintenance and help ensure service continuity.
Renewal	To restore or renew an existing asset to its original service potential.	Number of renewal projects completed. Assessments of service level and demand.	Playground renewals not keeping up with declining condition of assets and customer level of service measures. Other assets stable.	Renewal strategies to be reconsidered now that Council has a full inventory of all asset types per site.
Disposal	Removal of playground services	Number of playground disposals	Disposals have been identified, particularly for playground assets, however they have not been implemented.	It is recommended that assets are rationalised, and sites endorsed for disposal in consultation with Council and the community.

Service Gaps

Council has identified some gaps in asset and service provision. Gaps may be related to the location of the service or the condition and functionality of the assets. Service gaps are being reviewed and addressed as part of service strategies and action plans, capital program development, and maintenance planning.

Future Demand

The main demands for new services are created by:

- Population growth
- The trend towards more compact forms of housing, particularly in growth/town centres
- Changes in customer preferences
- Changing recreational trends, both for organised sports and informal recreation
- Demand for more all-abilities access and more facilities for youth

Demand management approaches include:

- Prioritise renewal of playgrounds in growth areas
- Review service provision and prioritise upgrade/acquisition in growth centres and at regional facilities
- Inform and educate the community about the range of recreational facilities available across the local government area
- Repurpose and reconfigure existing facilities to align opportunities for recreation for a broader spectrum of age groups
- Explore opportunities for partnerships and grants to deliver inclusive recreation facilities and youth precincts

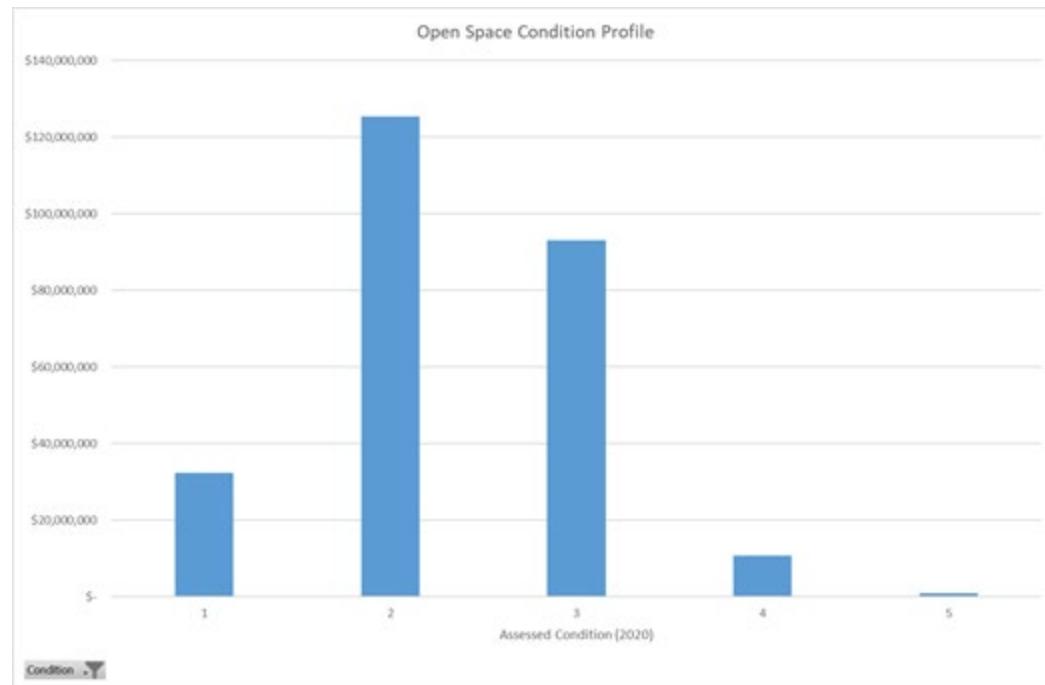
Demand management is addressed primarily through the Open Space and Recreation Informing Strategy and the associated Implementation Plans.

Asset condition

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

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

The majority of Council's open space assets fall within the acceptable condition range between Condition 1 and Condition 3. A small minority of assets fall within the Condition 4 to 5 range. These are primarily playground assets and represent the majority of the open space infrastructure backlog. The condition profile of open space assets based on the 2020 RapidMap asset inventory is shown below.



A comprehensive age profile showing and comparing the relative age of parks, playgrounds, sports assets and marine structures has not yet been developed however this is planned to occur separately with the strategic renewal planning of each asset portfolio.

Lifecycle Management Plan

Operations and Maintenance

Operations include regular activities to provide services. Examples of typical operational activities include cleaning, asset inspection, and utility costs.

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

Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement.

Renewal

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

Assets requiring renewal are identified by the asset manager on a whole of site basis. Council has considered a number of ranking criteria options to determine renewal priority, however it does not currently use a formalised ranking matrix or model. Priorities for the renewal of assets are determined on an annual basis as part of the development of the draft capital budget. Information is gathered from a variety of sources to determine the priority for renewal projects.

The renewal forecast is based on the average annual depreciation of assets in the inventory collected and valued by RapidMap in 2020. The budget is based on Council's adopted LTFP which was a mixture of prioritised proposals/projects and rolling annual programs. A revised approach is being taken to align future programs and projects with the asset inventory data.

Acquisition Plan

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

Proposed upgrades of existing assets, and new assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to Council's needs. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programmes.

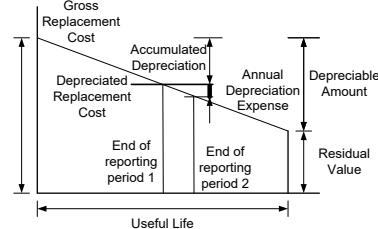
Priorities for new and upgraded assets are being determined following the adoption of the Open Space Strategy and the Play Strategy.

Financial Summary

Asset valuations

The value of assets included in this Asset Management Plan as of 30 June 2020 are shown below. These values are taken from the external data collection and revaluation undertaken by RapidMap and Asset Management and Facilities Consulting.

Current (Gross) Replacement Cost	\$262,965,860
Depreciable Amount	\$262,965,860
Depreciated Replacement Cost	\$206,549,540
Depreciation	\$9,760,130



Forecast Lifecycle Costs and Long Term Financial Plan

Our forecast lifecycle activity costs as at 2021/22 are shown below:

Financial Year (ending June 30)	Forecast Acquisition	Forecast Operation	Forecast Maintenance	Forecast Renewal	Forecast Disposal	Total
2024	0	0	13,810,450	9,300,000	0	23,110,450
2025	0	0	13,810,450	9,300,000	0	23,110,450
2026	0	0	13,810,450	9,300,000	0	23,110,450
2027	0	0	13,810,450	9,300,000	0	23,110,450
2028	0	0	13,810,450	9,300,000	0	23,110,450
2029	0	0	13,810,450	9,300,000	0	23,110,450
2030	0	0	13,810,450	9,300,000	0	23,110,450
2031	0	0	13,810,450	9,300,000	0	23,110,450
2032	0	0	13,810,450	9,300,000	0	23,110,450
Total	0	0	124,294,050	83,700,000	0	207,994,050

The outlays forecast for operations, maintenance, renewals and upgrades in this plan are network-wide estimates and are accommodated in the Long Term Financial Plan over the ten year period. Specific projects and programs are selected on a priority basis. The level of accuracy in estimating future works diminishes as the forward planning period is further away. These estimates will be updated in future plan revisions as more data becomes available.

Outlays for new assets will be accommodated on the basis of service priority, confirmation of grant funding or developer contribution.

Risk Plan

Risk Assessment and Treatment Plan

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *
All assets	Facilities in poor condition may cause injury to people.	M	Maintain an inspection regime; improve the asset condition inspection process; monitor industry changes to anticipate regulatory changes; develop renewal programs; improve operational and maintenance practices; review, update and improve the AMP	L
All assets	Service disruption due to unsafe assets.	M	Increase annual renewal budgets and resources to undertake renewal projects.	L
All assets	Standards not being met may increase Council's exposure to liability	M	As above.	L
All assets	User levels decrease due to facilities not meeting user requirements meaning wasted resources.	M	Update and improve the AMP with reference to service level planning and demand forecasts.	L
All assets	Loss of key staff	M	Upskill staff; ensure good records and databases; ensure good processes.	L
Parks and sports fields	Damage to park surface and amenities through events and uncontrolled access.	M	Asset protection bonds to be taken and access to public open space permits to be supplied.	L
Marine structures	Facilities in poor condition may cause damage to vessels	M	As above for all assets.	L

Asset Risk and Resilience

Climate Change and Adaption

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

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

As a minimum we should consider both how to manage our existing assets given the potential climate change impacts, and then also how to create resilience to climate change in any new works or acquisitions.

Opportunities identified to date for management of climate change impacts on existing assets are shown below:

Climate Change Description	Projected Change	Potential Impact on Assets and Services	Management
Extreme heat	Increased and extreme temperature levels expected for longer periods	Increased community demand for built and natural shade relief at open space assets. Safety concern for sports attendees during hotter months (especially synthetic surfaces)	Tree planting Community education about playgrounds, sun safety and ways to reduce UV exposure
Increased storm intensity	Increase in the number and severity of extreme weather events	Potential for more localised flooding, wind, bushfire, and hail from extreme weather events. Potential for greater damage to assets following storm events.	Undertake safety inspections following extreme weather events
Changing weather patterns	Intensified and longer periods of wet and dry weather	Greater damage to assets due to inability to withstand wet and dry periods, particularly sports fields.	Community education about the impacts of changing weather patterns, and the types of use allowed during wet and dry weather.

Additionally, the way in which we construct new assets should recognise that there is opportunity to build in resilience to climate change impacts. Building resilience will have benefits:

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

Asset description	Potential impact on assets and services	Build resilience in new works
Parks and playgrounds	<p>Increase in the number and severity of extreme weather events may result in more frequent playground closures, for safety reasons or to conduct repairs</p> <p>Increased and extreme temperature levels will make playgrounds too hot to use safely or comfortably</p>	<p>As far as is practical, all renewed park and playground facilities should be constructed to withstand major weather events.</p> <p>In areas of high sun exposure select appropriate materials e.g. timber, aluminium, bark soft fall</p> <p>Ensure shade is assessed and considered as part of all renewal and acquisition of assets and during the design process.</p>
Shade structures	Increased and extreme temperature levels expected for longer periods	It is anticipated that there will be increased community demand for shade structures in public open space. Funding should be prioritised to sites with high sun exposure.
Sports fields	Changing weather patterns may mean intensified wet and dry conditions over longer periods, affecting field availability to users	Modify industry practices to adapt to intensified weather conditions, particularly regarding sports field maintenance and renewal/upgrade specifications.
Marine structures	Damage to structures from more frequent and higher intensity storm events.	Design and build marine structure to withstand higher end estimates of storm surges and wave loading.

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

Asset Management Practices

Our systems to manage assets include:

- Technology One (T1) Finance System
- Confirm Asset Management System
- Geocortex – Geospatial Information Management System
- Yardstick Benchmarking program

These applications will be replaced or upgraded between 2022 and 2024 as part of our OneCouncil implementation project. This will result in better financial data for future forecasts.

Monitoring and Improvement Program

Council has an Asset Management Improvement Plan (2021) which details specific actions to improve our asset management practices and our asset management plans.

The next steps resulting from this AM Plan to improve asset management practices are detailed below. These activities will increase Council's asset management maturity, and better support decision makers understand service levels, risks and consequences to ensure delivery of open space recreational services are financially sustainable.

- Coordination of Open Space Capital Works Program and Operations and Maintenance Budgets
- Lifecycle costing – Improve understanding of lifecycle and service costs
- Develop Renewal and Acquisition Priority Matrix
- Alignment of S94 (7.11 and 7.12) Developer Contributions Plan to Service needs and outcomes identified in the AM Plan and Play Strategy

The plan will be monitored and reviewed by Asset Services annually.

Asset Management Plan - Buildings

The Purpose of the Plan

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

This plan covers Council's buildings and built facilities that provide a variety of services to Council and the community.

Asset Description

The Buildings asset category consists of three service portfolios: Operational Buildings, Leisure Centres, and Childcare Centres.

The following tables contain data from the buildings portfolio valuation performed in 2021. “No.” refers to the total number of buildings and structures valued, including shelters, sheds, and other ancillary structures.

Structure type	Description	No.	GFA (m ²)	Replacement Cost
Building	Enclosed, habitable building for human use or occupation	353	163,280	441,296,771
Shelters, sheds and other structures	Bandstands, boat sheds, towers, stores, carports, swimming pools etc	104	8,674	30,892,960
Grand Total	All buildings listed in 2021 valuation report	457	171,954	472,189,731

Childcare Centres

Service category	Service description	No.	GFA	Replacement cost (\$)
Childcare Centre	Council operated childcare centres	13	5,149	16,795,854

Leisure Centres

Service category	Service description	No *	GFA	Replacement cost (\$)
Aquatic Centre	Caringbah, Engadine and Sutherland Leisure Centres, including swimming pool shells	27	8,766	47,561,854
Indoor Sports	Menai Indoor Sports Centre	1	8,660	21,141,225
Total		28	17,426	68,703,079

Operational buildings vary considerably in purpose, size, replacement value and management responsibility. A summary of operational buildings is shown below:

Service category	Service description	QTY	Approximate GFA (m2)	Replacement cost (\$)
Community Centre	Community halls for hire; buildings or spaces leased to community groups, not-for-profits	52	25,874	68,382,615
Sports Clubhouse	Buildings leased to sports clubs	72	17,710	51,026,080
Arts and culture	Galleries and performing arts facilities	4	7,679	40,237,594
Library	Library buildings	5	9,483	30,651,836
Lifesaving Club	Buildings leased to surf lifesaving clubs	5	8,477	27,260,820
Council Administration	Civic building including Council office space, Council chambers, and customer service areas	1	7,010	26,240,183
Multistorey Car Park	Multistorey or basement car park	2	21,490	26,237,362
Depot	Buildings used to deliver operational services	48	11,267	22,209,738
Emergency Services	Buildings leased to Rural Fire Service and State Emergency Services	18	6,046	16,232,553
Preschool Kindergarten	Buildings leased to preschools or kindergarten services	21	4,345	13,666,036
Indoor Sports	Indoor sports facilities basketball and multipurpose)	2	4,819	10,259,944
Sports facilities	Buildings or structures on ovals (other than clubhouses); tennis courts	49	3,744	10,008,235
Golf Course	Buildings and structures on Council golf courses (leased or outsourced)	14	4,106	8,260,702
Community Service	Buildings leased to other community service organisations	13	3,009	6,562,047
Public Toilet	Public toilet blocks (excludes public toilets in other buildings e.g. clubhouses)	50	1,983	6,465,732
Scout/Guide Hall	Leased to Scouts or Guides associations	22	5,082	6,379,144
Subtotal		378	142,124	370,080,621
Other buildings	Buildings and structures for other purposes	38	7,375	16,610,177
Grand Total		416	149,499	386,690,798

Levels of Service

Customer Levels of Service

The Customer Levels of Service are considered in terms of:

Quality: How good is the service? What is the condition or quality of the service?

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

Capacity/Use: Is the service over or under used? Do we need more or less of these assets?

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

These are measures of fact related to the service delivery outcome e.g. number of occasions when service is not available, condition %'s of Very Poor, Poor/Average/Good, Very Good and provide a balance to the customer perception that may be more subjective.

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Quality	Condition 2 (childcare centres) All other buildings condition 3	Condition ratings	All buildings are at least in a condition 3	Buildings overall are in an acceptable condition, with some components unsatisfactory. Acceptable level of condition does not guarantee customer satisfaction
	<i>Confidence levels</i>		Medium (Professional judgement supported by data sampling)	Medium (Professional judgement supported by data sampling)
Function	Easy to access; fit for intended use	Customer surveys Customer requests	Varies across building category; some not applicable Limited function data collected to date	
	<i>Confidence levels</i>		Medium	
Capacity	Buildings have the capacity to meet demand for the services using them	Usage rates approximate optimum capacity	Many buildings are overused while others are underused.	Capacity issues to be addressed in consultation with service managers
	<i>Confidence levels</i>		Medium	Medium

Technical Levels of Service

Technical levels of service relate to the activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Acquisition	New public toilets in new/upgraded open space areas	Toilets delivered; customer satisfaction	Castelnau reserve; Woolooware Bay	The need for toilet facilities in open space should be considered early in the design/acquisition alongside CX level
	Upgrades of existing facilities	Expenditure over and above renewal to cater for increased visitation and floor space requirements	Upgrade of SEC Upgrade of Sutherland Library	Acquisitions are only included in the lifecycle forecast if an action plan has been adopted from an informing strategy
Operation	Cleaning	Cleaning/ cleansing of facilities for hygiene and aesthetics	Cleaning services occasionally inadequate in peak periods, evidenced by CRs	Increase cleaning in peak periods
	Utilities	Utility consumption and cost	Consumption affected by seasonal and other factors.	Reduce consumption for financial and environmental sustainability benefits
Maintenance	Maintenance services provided by or managed by Building Operations	Refer to Service Catalogue		Reduce reactive maintenance through better timed renewal expenditure and maintenance strategies
Renewal	Replacement of assets at end of life (if disposal not an option)	Renewals identified through asset management planning process	Renewals as per Capital Program	Optimised renewal program targeted at the highest value/highest risk assets
Disposal	Disposal of assets at end of service life	Assets proposed for disposal or decommissioning or demolition	Council rarely disposes of assets	

Service Gaps

Council has identified service gaps related primarily to the age and design of some types of buildings. Service gaps are being reviewed and addressed as part of service strategies and action plans, capital program development, and maintenance planning.

Future Demand

The main demands for new services are created by:

- An increased population, concentrated around higher density centres with good rail transport links
- An ageing population, with greater need for accessible and comfortable facilities

Changes in demographics such that some suburbs with ageing populations are over-serviced with buildings while others with younger populations lack facilities

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

- More flexible building configurations to cater for greater diversity of users
- Leasing policies to optimise building occupancy rates and use

Asset Condition and Performance

Condition is currently monitored annually or two-yearly.

Condition is measured using a 1 – 5 grading system.:

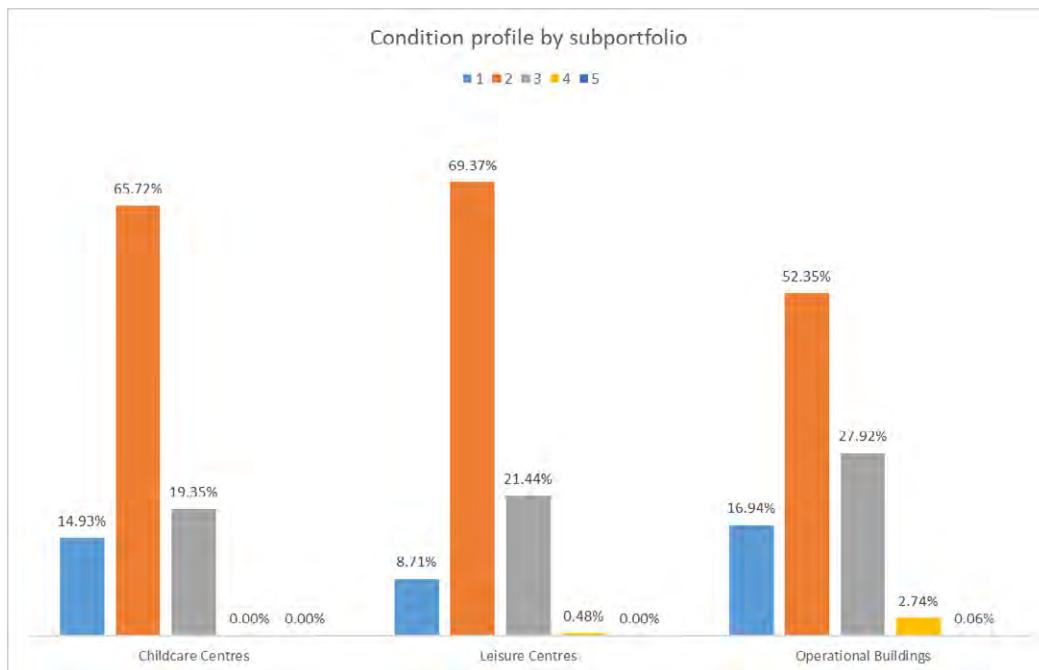
Condition Grading	Description of Condition
1	Very Good: only planned maintenance required
2	Good: minor maintenance required plus planned maintenance
3	Fair: significant maintenance required
4	Poor: significant renewal/rehabilitation required
5	Very Poor: physically unsound and/or beyond rehabilitation

Condition profile by sub portfolio:

2020 AM Plan	0*	1	2	3	4	5	Grand Total
Childcare Centres	0.00%	14.93%	65.72%	19.35%	0.00%	0.00%	100.00%
Leisure Centres	0.00%	8.71%	69.37%	21.44%	0.48%	0.00%	100.00%
Operational Buildings	1.09%	16.75%	51.78%	27.62%	2.71%	0.06%	100.00%
Grand Total	0.89%	15.52%	54.83%	26.42%	2.29%	0.05%	100.00%

*Refers to the community space at Kirrawee Brickpit which is yet to be fitted out and occupied i.e. brand new

The condition ratings above have been based mainly on the actual building assets and have not necessarily included all the criteria from the IPWEA practice note 3.



Lifecycle Management Plan

Operations and Maintenance

Operations include regular activities to provide services. Examples of typical operational activities include cleaning, and utilities costs (water, electricity and gas).

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities planned inspections, cyclical maintenance and reactive maintenance.

Maintenance budget levels are considered to be adequate to meet current service levels. However benchmarking of comparable councils suggests that the required maintenance should be 2.05% of the CRC of the portfolio. The current maintenance budget is approximately 1.2% of the CRC.

Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement.

Reactive maintenance is carried out in accordance with response levels of service in the relevant Service Level Agreement.

Renewal Plan

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

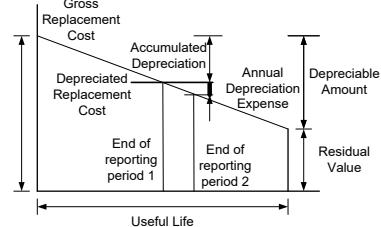
- Asset Register data is used to forecast the renewal costs using the previous survey date and the remaining useful life (acquisition dates are applied to whole facilities only not components),
- Additional estimates of renewal costs are prepared for specific buildings or components as part of the capital program preparation process

Financial Summary

Asset Valuation and Depreciation

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

Current (Gross) Replacement Cost	\$472,189,731
Depreciable Amount	\$472,189,731
Depreciated Replacement Cost	\$291,733,464
Depreciation	\$10,607,790



As a result of the 2021 revaluation Council's annual depreciation expense increased from \$8,216,178 to \$10,607,790.

Forecast Lifecycle costs and Long Term Financial Plan

Our forecast lifecycle activity costs as at 2021/22 are shown below:

Year	Forecast Acquisition	Forecast Operation	Forecast Maintenance	Forecast Renewal	Forecast Disposal	Total
2023	0	5,708,160	6,894,473	7,683,800	0	20,286,433
2024	0	5,708,160	6,894,473	7,683,800	0	20,286,433
2025	0	5,708,160	6,894,473	7,683,800	0	20,286,433
2026	0	5,708,160	6,894,473	7,683,800	0	20,286,433
2027	0	5,708,160	6,894,473	7,683,800	0	20,286,433
2028	0	5,708,160	6,894,473	7,683,800	0	20,286,433
2029	0	5,708,160	6,894,473	7,683,800	0	20,286,433
2030	0	5,708,160	6,894,473	7,683,800	0	20,286,433
2031	0	5,708,160	6,894,473	7,683,800	0	20,286,433
2032	0	5,708,160	6,894,473	7,683,800	0	20,286,433
Total	0	57,081,600	68,944,730	76,838,000	0	202,864,330

The outlays forecast for operations, maintenance, renewals and upgrades in this plan are network-wide estimates and are accommodated in the Long Term Financial Plan over the ten year period. Specific projects and programs are selected on a priority basis. The level of accuracy in estimating future works diminishes as the forward planning period is further away. These estimates will be updated in future plan revisions as more data becomes available.

Outlays for new assets will be accommodated on the basis of service priority, confirmation of grant funding or developer contribution.

Risk Plan

Risk Assessment and Treatment Plan

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Structural inadequacy of building fabric	Building damage or collapse	H	Perform building inspection of footings where possible or areas of the building close to the ground	Medium	To be advised
Water supply	Loss of water to a building	H	Water is provided by the service provider so only water provided by truck will rectify this interruption.	Low	To be advised
Residual Current Devices (RCD's) not installed on switchboards	Residual Current Devices (RCD's) not installed on switchboards causing potential electrocution to users	H	Inspection and testing of electrical switchboards annually as per Australian Standard	Low	\$60,000
Electrical switchboards are overloaded and redundant on many sites, many still have porcelain rewireable fuses and non-working solar PV	Electrical faults or disruptions	VH	Perform regulatory scheduled inspection and testing of all electrical systems as required	Medium	\$90,000

Asset Management Plan – Buildings

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Power Outage	Power Outage	H	For high profile assets look to install sustainable and resilient power options	Low	To be considered across all Council assets after review of power supply issues and Council requirements
Damage from Environmental Factors such as built within Coastal or other extreme environments.	Damage from Environmental Factors such as built within Coastal or other extreme environments.	H	Wash down of buildings and preventatively replace consumable items on buildings	Low	To be advised after building revaluation
Asbestos in buildings	Asbestos found in building	H	Remove damaged asbestos and perform 5 yearly Asbestos Audits	Low	\$90,000 every 5 years
Compliance of the building's assets or components	Building not compliant with the relevant regulatory authority, i.e., Annual Fire Safety Statement, Roof Anchor point certification, Lift registration, etc.	H	Ensure all assets are noted in the Asset Maintenance Management System and any changes are updated. Ensure details are scheduled in the Asset Maintenance Management System	Minor	To be advised after building revaluation

Climate Change and Adaption

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

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

As a minimum we should consider both how to manage our existing assets given the potential climate change impacts, and then also how to create resilience to climate change in any new works or acquisitions.

Opportunities identified to date for management of climate change impacts on existing assets are shown below:

Climate Change Description	Projected Change	Potential Impact on Assets and Services	Management
Storm Intensity	More extreme weather events	Damage to roof, gutter, and external building fabric	Prioritise roof, gutter and drainage renewals and maintenance
Sea level rise	Water level rise; more frequent flooding events	Potential flooding of buildings or surrounds	Identify buildings in flood prone areas
Extreme heat	Heatwaves longer in duration and over a longer season	Increased operation of HVAC systems to keep temperatures and climate safe/comfortable. Closure of services in extreme heat.	Prioritise upkeep of HVAC systems; encourage online/remote service delivery in extreme weather

Additionally, the way in which we plan and design facility upgrades and renewals should recognise that there is opportunity to build in resilience to climate change impacts. Building resilience will have benefits:

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

The table below summarises some asset climate change resilience opportunities.

Asset category	Climate Change impact	Build Resilience in New Works
Leisure centres	Increased demand for aquatic facilities	To be considered in Leisure Centres business plan and strategy
Libraries	Visitation in hot weather	TBC
All Council occupied buildings	Criticality of HVAC systems in hot weather	Specification and installation of new or upgraded capacity
Buildings near beaches	Damage due to extreme surf	Materials selection in design

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

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

The main risk consequences are:

- Facilities unable to be used in extreme weather conditions including heavy rain, heatwave, bushfire causing customer dissatisfaction and reputational damage
- Increasing costs of reactive maintenance resulting in less funding for building improvements (e.g. energy efficiency)
- Continuing performance and quality issues as a result of design and other defects that cannot be rectified only with maintenance

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

- Maintaining a risk register of facilities and components with faults known to affect service levels and ensuring these are considered in the capital planning process

Asset Management Practices

Sutherland Shire Council's asset management practices are guided by the following industry resources:

- 2020 International Infrastructure Management Manual (IIMM)
- IPWEA practice notes relevant to each asset class
- Australian Infrastructure Financial Management Manual

Council staff undertake regular training and continuing professional development to improve their asset management capability.

Asset Information and knowledge

Council has multiple repositories for its asset information. The main repositories for asset management information are:

- Confirm® asset management software
- TechOne Finance
- Project Insight (capital proposals and programs)
- Microsoft Excel (asset component specific registers and programs)
- GIS Systems for locating and viewing sites and assets

Monitoring and Improvement Program

Council has an Asset Management Improvement Plan (2021) which details specific actions to improve our asset management practices and our asset management plans.

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

- Improve condition rating scales to include customer and community responses
- Complete a risk assessment of buildings and components with known, untreated defects
- Develop a comprehensive operations and maintenance plan
- In addition to the business wide improvements identified in the Asset Management Maturity Review (2021)

The plan will be monitored and reviewed by Asset Services annually.