

**Asset Management Planning**

**2018 - 2027**

# **Asset Management Strategy**

# TABLE OF CONTENTS

- GLOSSARY ..... 3
- 1 EXECUTIVE SUMMARY ..... 4
  - 1.1 Foreword ..... 4
  - 1.2 Integration with Newcastle 2030 Community Strategic Plan 2018 ..... 4
  - 1.3 Summary of Council's Asset Services ..... 5
  - 1.4 Service Asset Management Key Strategies ..... 6
  - 1.5 Planned Capital Investment ..... 7
- 2 INTRODUCTION TO SERVICE ASSET PLANNING ..... 8
- 3 THE SERVICE ..... 9
  - 3.1 The Current Level of Service..... 9
  - 3.2 Service User Profile ..... 12
  - 3.3 Integration with Council's Strategic Objectives..... 12
- 4 THE ASSETS..... 14
  - 4.1 Asset Summary..... 14
  - 4.2 Asset Condition Profile ..... 15
  - 4.3 Asset Valuation and Depreciation ..... 15
    - 4.3.1 Asset Valuation and Depreciation Methodology ..... 18
  - 4.4 Critical Assets..... 19
- 5 DESIRED LEVELS OF SERVICE ..... 19
  - 5.1 Community Consultation..... 19
  - 5.2 Demand ..... 22
    - 5.2.1 Changing Demographics and Industry..... 22
    - 5.2.2 Changes in Technology ..... 23
    - 5.2.3 Climate Change..... 24
  - 5.3 Summary of Desired Levels of Service..... 25
- 6 LIFECYCLE MANAGEMENT..... 26
  - 6.1 Roles and Responsibilities ..... 26
  - 6.2 Operations Strategies..... 28
  - 6.3 Maintenance Strategies..... 28
  - 6.4 Renewal Strategies ..... 29
  - 6.5 Upgrade and New Asset Strategies ..... 32
  - 6.6 Asset Disposal..... 34
  - 6.7 Future Capital Works Programs ..... 34

6.8	Environmental Management.....	36
7	THE ASSET MANAGEMENT SYSTEM.....	36
7.1	The Asset Management System and Confidence Ratings .....	36
7.1.1	Asset Registers and Management Systems.....	37
7.1.2	Asset Condition Assessments.....	37
7.1.3	Strategic Planning Capabilities .....	37
7.1.4	Risk analysis .....	38
7.1.5	Lifecycle Costing .....	38
8	FINANCIAL SUMMARY.....	38
8.1	The Current Cost of Service.....	38
8.2	Forecast Lifecycle Costs.....	41
8.3	Funding Sources .....	41
9	ACTION PLAN.....	42
10	STRATEGY REVIEW CYCLE.....	44
11	APPENDICES .....	45
	Appendix 1 - Asset Management Policy.....	45

**Enquiries**

For information about the  
Asset Management Strategy, contact:  
Manager of Assets and Projects  
Phone: 4974 2000

**Published by**

Newcastle City Council  
PO Box 489, Newcastle NSW 2300  
Ph: 4974 2000 Fax: 4974 2222  
Email: mail@ncc.nsw.gov.au  
Web: www.newcastle.nsw.gov.au  
© 2018 Newcastle City Council

## GLOSSARY

Asset	A physical component of a facility, which has value, enables services to be provided and has an economic life of greater than 12 months.
Asset register	A record of asset information considered worthy of separate identification including inventory, historical, financial, condition, construction, technical and financial information about each.
Asset management	The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner.
Consumer Price Index (CPI)	Measure that examines the weighted average of prices of consumer goods and services, such as transportation and food.
Depreciation	The systematic allocation of the depreciable amount (service potential) of an asset over its useful life.
Integrated Planning and Reporting framework	Office of Local Government framework allowing NSW Councils to draw their various plans together, understand how they interact and get the maximum leverage from their efforts by planning holistically and sustainably for the future.
Level of service	The level of asset service as identified by the quality and quantity of its services or output, against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental, acceptability and cost.
Life cycle	The cycle of activities that an asset (or facility) goes through from planning and design to decommissioning or disposal.
Long Term Financial Plan	The Long Term Financial Plan acts as a tool for stakeholders (Council and the community) to use in deciding what resources Council needs to apply to deliver on the outcomes contained within the Community Strategic Plan.
Risk	The effect of uncertainty on objectives. Risk events are events which may comprise the delivery of the organisations strategic objectives.
Risk management	The application of a formal process to the range of possible values relating to key factors associated with a risk in order to determine the resultant ranges of outcomes and their probability of occurrence.
Remaining life	The time remaining until an asset ceases to provide the required service level or economic usefulness. Age plus remaining life is economic life.
Replacement Value	The amount Council would have to pay to replace an asset at the present time.
Service	The actual deliverables that Council provides to the community.
Service Asset Plan (SAP)	A tool to form rational and coordinated decision making about levels of services where resources, funding, people and assets are used through clear links to long term financial planning.
Special Rate Variation	Increase in rates above the maximum set by the NSW State Government in order to increase, develop or maintain community services or regional projects. Increase approved by the Independent Pricing and Regulatory Tribunal (IPART) only when satisfied that a council adequately meets its criteria, including demonstrating a need for the additional revenue; that productivity improvements to reduce overall costs have been undertaken; and the community is aware of the proposal.
Useful Life	The period over which an asset is expected to be available for use by an entity.
Western Corridor	The Western Corridor is an urban release area centred on the localities of Minmi, Fletcher and Maryland in the western part of the Newcastle Local Government Area.
Workforce Management Plan	Outlines how Council will develop and prepare our workforce to meet the changing demands of our community as well as the emerging challenges faced by an ageing workforce.
Written Down Value	Net book value of an asset calculated by deducting the accumulated depreciation from the value shown in the account books (the book value).

# 1 EXECUTIVE SUMMARY

## 1.1 Foreword

Newcastle City Council has a total land area of 187sq kms and connects with the Port Stephens Local Government Area (LGA) in the north, Lake Macquarie LGA in the South, Maitland and Cessnock LGAs in the West. Newcastle is the economic hub of the Hunter Region, accounting for approximately 30% of the Hunter's developed industrial space and 80% of the office space. While Newcastle's industrial sector continues to play an important role, Newcastle is no longer a 'steel city'. A substantial and growing portion of Newcastle's economy is now based around the service sectors.

In 2030, Newcastle will be a Smart, Liveable and Sustainable City. Newcastle will celebrate its cultural heritage and history, protect our natural environment and support our people to thrive and prosper. Newcastle will be a leading lifestyle city with vibrant public places, connected transport networks and responsive built form. Newcastle City Council will manage its assets to ensure sustainable community service expectations are met.

This Asset Management Strategy establishes the framework that determines the nature and direction of Council's asset management. Its objective is to provide a structured set of actions and processes aimed at enabling improved asset management by the organisation.

The Asset Management Strategy is based on service planning; the process of determining the services needed by a community and delivering them in a sustainable manner. Service planning aims to answer five key questions:

- Where are we now?
- Where do we want to go?
- Can we afford it?
- How do we get there?
- How do we know we are there?

Council's Asset Management Strategy operates in conjunction with the Asset Management Policy (AMP) outlining management of Council's infrastructure assets across the organisation. The AMP defines the key principles that underpin asset management for Council. The AMP was adopted by Council in June 2016 and can be seen in Appendix 1.

Council's Service Asset Plans (SAPs) provide detailed asset information prescribing how Council delivers its services and the actions required to ensure sustainable community service expectations are met.

## 1.2 Integration with Newcastle 2030 Community Strategic Plan 2018

The Asset Management Strategy is developed in conjunction with the Newcastle 2030 Community Strategic Plan 2018 (CSP) and is driven by the following CSP community objectives:

- 7.1.a Encourage and support long term planning for Newcastle, including implementation, resourcing, monitoring and reporting;
- 7.1b. Ensure long-term financial sustainability through short, medium and long term financial planning;
- 7.3a. Provide opportunities for genuine engagement with the community to inform Council's decision-making; and
- 7.4b. Provide services that deliver on sustainable community expectations.

### 1.3 Summary of Council's Asset Services

Council manages an asset portfolio of \$1.8 Billion to deliver 20 core asset-based services. The table below demonstrates the level of service which represents the current quality, functionality, capacity, utilisation, location, accessibility and environmental performance of each of the services.

The desired level of service captures the balance between the services provided, the level of service the community expect and what the community is prepared to pay for.

Service	Current Level of Service	Desired Level of Service	Current Asset Replacement Value (\$,000)	Infrastructure Backlog 2016/17 (\$,000)
Aquatic Centres	★★★★☆	★★★★☆ -	38,833	8,951
Arts and Cultural Facilities	★★★★☆	★★★★☆ -	175,553	15,035
Bushland, Watercourses and Public Trees	★★★★☆	★★★★☆ -	4,782	1,625
Car Parking	★★★★☆	★★★★☆ -	13,730	27
Caravan Park	★★★★☆	★★★★☆ -	6,532	-
Cemeteries	★★★★☆	★★★★☆ -	71	-
Child Care	★★★★☆	★★★★☆ -	8,261	5
Coastal, Estuary and Wetland	★★★★☆	★★★★☆ -	31,369	6,571
Community Buildings	★★★★☆	★★★★☆ -	35,946	922
Libraries	★★★☆☆	★★★★☆ ↑	41,980	-
Parks and Recreational Facilities	★★★★☆	★★★★☆ -	108,755	2,303
Public Amenity	★★★★☆	★★★★☆ -	7,146	98
Smart City*	★★★☆☆	★★★★★ ↑	-	-
Stormwater drainage and water quality and flood planning	★★★☆☆	★★★★☆ ↑	264,831	31,160
Support Services - Commercial Property	★★★★☆	★★★★☆ -	16,454	222
Support Services - Fleet and Plant	★★★★☆	★★★★☆ -	36,250	-
Support Services - Information Technology	★★★★☆	★★★★☆ -	8,255	-
Support Services - Operational Buildings	★★★★☆	★★★★☆ -	20,885	678
Transport	★★★★☆	★★★★☆ -	934,406	32,622
Waste Management	★★★★☆	★★★★☆ ↑	50,919	6
			<b>1,804,955**</b>	<b>100,223</b>

\* Smart City is a new initiative implementing infrastructure into the future

\*\*Excludes Airport, Land, Furniture and Equipment \$235M

Table 1: Summary of Services

## 1.4 Service Asset Management Key Strategies

Asset management is the systematic and coordinated activities and practices of an organisation to optimally and sustainably deliver its objectives through the cost-effective lifecycle management of assets.

Council's asset management goals are to proactively manage our assets from a lowest whole-of-life cost perspective in accordance with recognised industry practice whilst meeting agreed levels of service; and to continuously improve our asset management systems.

To guide Council forward, there are 12 service asset management key strategies and actions emerging from the planning process:

Key Strategies	How Council plan to achieve the strategies
1. Service delivery expectations will be aligned with available funding so that the sustainable management of all required supporting assets is achieved.	Council has developed 20 Service Asset Plans (SAPs) which detail service delivery expectations and required levels of funding. The SAPs will be reviewed annually. Council will maintain and utilise the project proposal prioritisation and approval system (PPM) to align the sustainable service delivery expectations with available funding.
2. Identify the levels of funding required to achieve a sustainable capital works program and assess the implications of different funding levels on Levels of Service.	Council will implement strategic asset management software to model asset data which will provide asset lifecycle cost requirements to deliver desired service delivery expectations. Council will utilise the software to model funding versions to adjust service level expectations with available funding.
3. A community consultation process consisting of service outputs, service levels, and sustainable service costs will be developed and implemented.	Community consultation was undertaken in 2017 using a budget simulation tool which allowed the community to align their expected service levels with the funding available. Community consultation will be planned and undertaken again to continue to ascertain and confirm community expected service levels.
4. Service Asset Plans will forecast demand and its effects on service delivery.	Each SAP will continue to forecast demand and detail its effects on the service and on the correlating assets.
5. Adjust resources and invest in building capacity to deliver works programs.	Each SAP will continue to review the delivery of its associated works program and identify issues with resourcing delivery.
6. Future organisational structures should focus on services provided rather than traditional approaches of grouping similar business units.	In May 2015, Council's Executive Management Team endorsed its commitment to be a service focused organisation. Council is currently undergoing an organisational re-design. Discussions have commenced to plan the capture of lifecycle costs against each service in line with the organisational structure.
7. Maintenance required to minimise lifecycle cost is fully funded and reportable by service.	The asset modelling software will provide detailed data on optimised maintenance and renewal expenditure which will inform the Long Term Financial Plan (LTFP) and allow funding to be planned.
8. Renewal required to reduce and maintain the infrastructure backlog is fully funded and reportable by service.	
9. New services and/or assets will only be approved where the full lifecycle cost of doing so has been evaluated and appropriate supporting budget allocations made.	The Portfolio and Program Management (PPM) project proposal software will engage staff in whole of life costing for assets on new services before the project is prioritised.
10. Assets will be disposed if they are not required to support service delivery.	Assets that are no longer required will be identified through the detailed development of the SAPs and will follow the asset review process to enable disposal.
11. Asset data and service information will be captured and improved.	Service Unit Managers have reviewed their asset data and developed a data improvement plan within each SAP.
12. Planning for future delivery of services will incorporate environmental sustainability.	Each SAP will continue to detail sustainable environmental measures required for the service.

Table 2: Key Strategies

## 1.5 Planned Capital Investment

The future capital works program forecast is \$108M per annum on average over the next 10 years including capitalised and operational project expenses and CPI.

To achieve a reduced asset backlog by 2030 while maintaining the asset condition profile to deliver on desired levels of service, an average of \$65M per annum is forecast for renewing assets. An average of \$27M per annum is for the renewal of transport infrastructure including road rehabilitation and resurfacing, pedestrian infrastructure, roadside furniture, bridges and retaining walls. Stormwater drainage, water quality and flood planning infrastructure renewals average \$7M per annum.

Other large renewal investment forecasts include \$9M for the renewal of Lambton pool infrastructure, \$6M for the renewal of Newcastle Ocean Baths, \$12M for the remediation of Astra St, Shortland closed landfill and \$7M for the Summerhill Waste Management Centre site rehabilitation.

Council has forecast an average of \$44M per annum on providing upgraded or new asset services to deliver on desired levels of service. An average of \$16M per annum is forecast for providing upgraded or new transport infrastructure including cycleways, local centre upgrades, bridge upgrades, coastal revitalisation, local area traffic management and pedestrian and mobility infrastructure. An average of \$5M per annum is forecast for upgrading stormwater drainage, water quality and flood planning infrastructure.

Council has resolved to continue developing planning for a staged upgrade of Lambton pool which is forecast to cost \$28M in upgrade/new expenditure over 10 years. Significant upgrade works at Stockton for coastal protection are required given exceeded shoreline retreat projections, with \$8M forecast over 10 years. However, the estimated total for the coastal protection works totals to \$40M with funding sources currently undetermined. Works are continuing on the new Solar Farm at Summerhill with \$7M forecast for next year.



## 2 INTRODUCTION TO SERVICE ASSET PLANNING

Newcastle City Council exists primarily to serve its community by providing a range of services to its residents and visitors. The majority of these services depend on Council's infrastructure, therefore effective management of these assets and associated infrastructure costs are essential to Council's service delivery outcomes. Council's assets exist to support service delivery as Council's Service Asset Plans demonstrate.

Through defining and evaluating the services that Council provides, we can evaluate the requirements of the asset portfolio to support these services. Through the specific details of each service we can identify asset dependency and determine characteristics required of the supporting assets in terms of location, capacity, functionality, quality and quantity.

Council is in the process of transitioning from a traditional Asset Management Plan approach to a focus on service based asset plans in response to an increase in community expectations for Council to provide a broad range of services. Transitioning to service based asset plans provides the platform to articulate levels of services and cost options available to the community to allow informed decision making on the levels of service and what they are prepared to pay for. To support this, Council is transitioning from asset class based capital project programs into a service based approach to support service delivery funding.

The diagram below demonstrates the context that the Asset Management Policy, Asset Management Strategy and Service Asset Plans fit within the Integrated Planning and Reporting framework. The Community Strategic Plan represents the highest level of strategic planning. All other plans developed by Council as part of the Integrated Planning and Reporting framework must reflect and support the implementation of the Community Strategic Plan. The long term projections within the SAP's drive and support the Long Term Financial Plan and Workforce Plan.

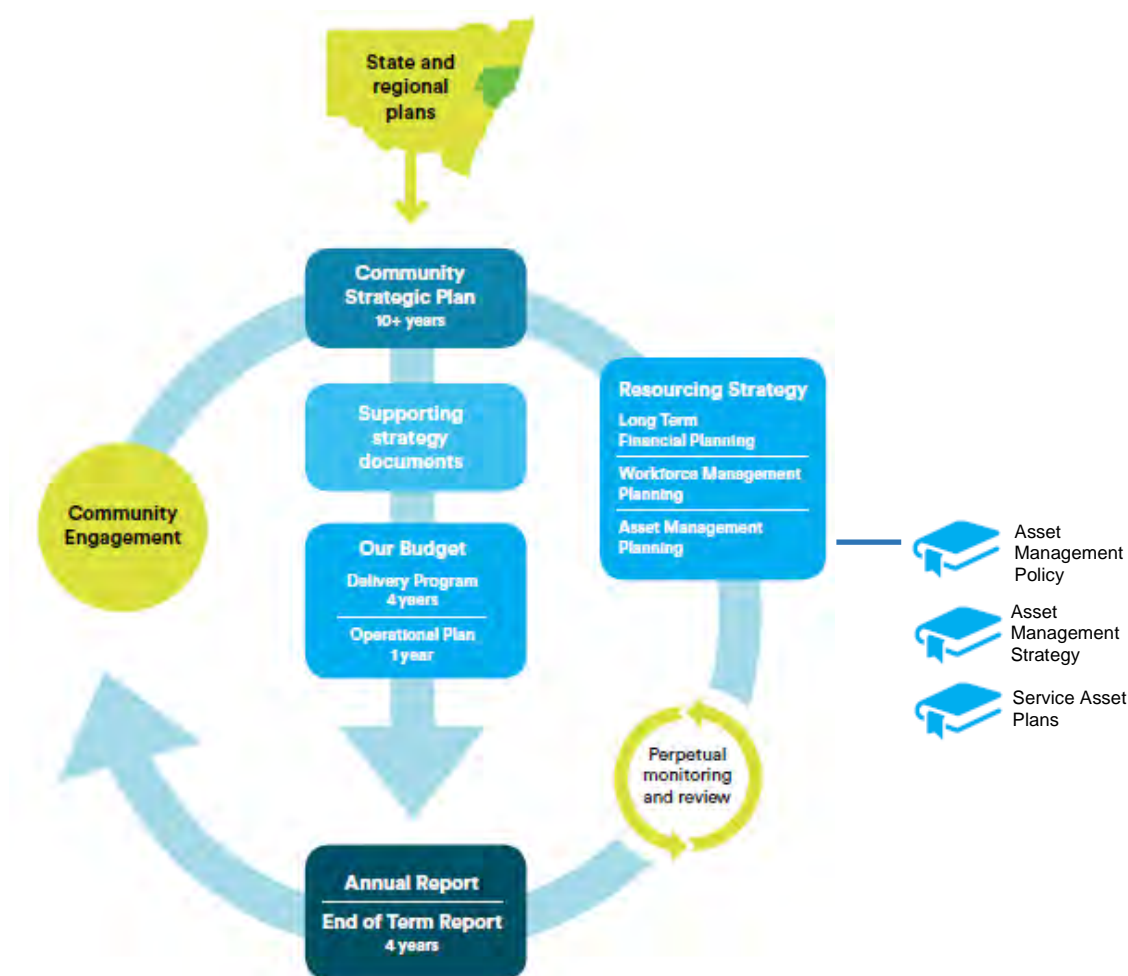


Diagram 1: Asset Management Strategy Context

A SAP is a tool to form rational and coordinated decision making about levels of services where resources, funding, people and assets are used through clear links to long term financial planning. A SAP has been developed for each of the services referred to in Table 4. Each Plan:

- Identifies the needs of the community and is clear about the services provided by Council to its present and future customers;
- Recognises that the management of the asset is directed at providing services to the community;
- Defines measureable levels of service;
- Promotes good quality decision making on service provision;
- Details the financial impacts of the services provided now and in the future;
- Promotes and demonstrates financial sustainability and good management practice;
- Applies full lifecycle analysis and costing;
- Ensures appropriate asset use and functionality of assets within the plan;
- Optimises service potential (and potential decline in service);
- Defines clear responsibilities for all elements of the assets within the plan including accountability and reporting;
- Outlines an improvement program; and
- Will be reviewed annually.

**Key Strategy 1 - Service delivery expectations will be aligned with available funding so that the sustainable management of all required supporting assets is achieved.**

### 3 THE SERVICE

#### 3.1 The Current Level of Service

In an asset management context, the level of service refers to a defined rating against which service performance can be measured. Levels of service generally relate to quality, quantity, functionality, capacity, utilisation, location, accessibility, and environmental factors.

Levels of service provide the link between higher level corporate objectives, asset management objectives and more detailed technical and operational objectives.

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

Council's current average levels of service are represented using a general 1-5 star rating system. The star ratings used are shown in the table below:

Star Rating	General standard of Key Service Attributes
1 Star	Poor quality standards. Low level customer service provided. Maintained and presented in poor condition. Poor location and accessibility.
2 Star	Average quality standards and customer service levels. Maintained and presented in good condition. Location and accessibility are inconsistent or low.
3 Star	Very good quality and acceptable standards. Good customer service level provided. Maintained and presented in good condition. Good location and acceptable accessibility.
4 Star	Excellent quality standards. High level customer service provided. Maintained and presented in good condition. Good location and accessibility.
5 Star	Exceptional quality standards. High level customer service provided. Maintained and presented in pristine condition. Very good location and high accessibility.

Table 3: Star rating Levels of Service

Each Service Asset Plan details assessments for each service output which are collated to form a current average community level of service below:

Service	Description	Current Level of Service Star Rating	Quality / Condition	Functionality / Fit for Purpose	Capacity / Utilisation
			Star Rating		
Aquatic Centres	Provision of inland and ocean bath aquatic facilities for safe recreational, competitive and/or educational experiences which are accessible to all.	★★★★☆	★★	★★	★★★
Arts and Cultural Facilities	Provision of cultural facilities, activities and artworks that are accessible to all and available for cultural, performance and event purposes. Enhancement of public spaces through the provision of public art, fountains and monuments.	★★★★☆	★★★	★★★	★★★
Bushland, Watercourses and Public Trees	Provision of a desirable urban environment which enhances amenity, liveability and civic pride through a landscaped or vegetated "green belt". Council protects bushland reserves to maintain environmental biodiversity and health and water quality of creeks.	★★★★☆	★★	★★	★★
Car Parking	Provision of on-street, off-street and undercover parking spaces for the short-term storage of vehicles. Car parking enables motorists parking for participation in life's opportunities including work, education, health, social and recreational activities.	★★★★☆	★★★	★★★	★★★
Caravan Park	Provision of affordable accommodation for tourists to the Newcastle Local Government Area by providing a range of accommodation types and associated amenities and recreational facilities.	★★★★☆	★★★★	★★★★	★★★
Cemeteries	Provision of an open space environment for burials, internments and reflective remembrance.	★★★★☆	★★	★★★	★★
Child Care	Provision of centre based childcare in accordance with accreditation principles and State Government regulations. Child care incorporates and facilitates the design and implementation of child development programs, together with maintaining the continued development of the centre as an environment conducive for each child to reach their potential.	★★★★☆	★★★	★★★	★★★
Coastal, Estuary and Wetland	Coast, estuary and wetland services enable the psychological and physical health and wellbeing of the community through safe, active and passive recreational pursuits, direct economic returns in tourism and industry, whilst ensuring the protection, enhancement and amenity of salt and freshwater habitats across the city.	★★★★☆	★★★	★★★	★★★
Community Buildings	Provision of facilities which provide opportunities for social interaction, activities, recreation and meeting spaces.	★★★★☆	★★★★	★★★	★★★
Libraries	Libraries lead the discovery of community learning, leisure and knowledge. Libraries are important place-making centres, attracting the community to their locations throughout the suburbs within the municipality. Libraries provide the community with access to a large lending collection of books, magazines, DVDs, CDs, newspapers, maps, object and e-books, e-audio and e-magazines and act as community providers of free access to the internet.	★★☆☆☆	★★★	★★	★★

Service	Description	Current Level of Service Star Rating	Quality / Condition	Functionality / Fit for Purpose	Capacity / Utilisation
			Star Rating		
Parks and Recreational Facilities	Provision of recreation and sporting opportunities to the Newcastle region. The service supports informal recreation, exercise, relaxation, sports competition and training, commercial activities, social gatherings, and community and commercial events - both large and small scale.	★★★★☆	★★★★	★★★	★★★
Public Amenity	Provision of facilities of comfort and amenity that are accessible to the whole community through Council owned public toilets across the city.	★★★★☆	★★★	★★★★	★★★
Smart City	Increasing the digital experience of residents and providing the means to use data and technology to improve the way we deliver services.	★★☆☆☆	★★	★★	★★
Stormwater drainage, water quality and flood planning	Provision of the collection, treatment, conveyance, reuse and disposal of stormwater. This limits risk to public and private property and public health from frequent flooding and inundation, and protects downstream environments.	★★☆☆☆	★★★	★★★	★★
Support Services - Commercial Property	Acquisition of land and buildings required for the potential future use by Council along with providing income/investment to Council.	★★★★☆	★★★	★★★	★★★
Support Services - Fleet and Plant	Provision of vehicles and plant to enable a wide range of services to be delivered to the community such as waste collection, park maintenance, road construction and road maintenance, etc.	★★★★☆	★★★★	★★★★	★★★
Support Services Information Technology	Delivery of IT support, security of the Council systems, Geospatial Services and IT related project delivery across Council. The service is also responsible for managing Council's network, internet access, email and telephone system.	★★★★☆	★★★★	★★★	★★★
Support Services - Operational Buildings	Provision of facilities to support the services delivered by Council to the Community.	★★★★☆	★★★	★★★	★★
Transport	Connection of people and places throughout the City via public roads, bridges, footpaths, cycleways for use by multiple types of transport vehicles. Provision for the physical pursuits of walking and cycling. Facilitate safe access to the public transport network.	★★★★☆	★★★	★★★	★★★★
Waste Management	Provision of domestic and commercial solid waste collection, disposal and recycling services.	★★★★☆	★★★	★★★	★★

Table 4: Current Community Levels of Service

At this time, no agreed indicators have been developed for the non-asset based service outputs. The non-asset based services are shown in the table below:

Service Output	Description
Community Policy and Development	Researching, planning and developing sustainable community infrastructure including networks, organisations, facilities, grants, programs and services.
Customer Service	Provision of information and advice directly to the customer on a wide range of subjects including rates, animal registrations, planning and development (building), trees, traffic enquiries, residential parking permits.
Democracy	Representation of community interests to develop public policy.
Development Assessment	Assessment of development and building applications against statutory requirement.
Economic Development	Promotion of the city as a vibrant enterprise centre. Support, facilitate and encourage investment in the city and participate in regional development initiatives and partnerships of economic significance. Supporting management and operations of all Tourism Industry Advisory Boards and Events of Major Economic Significance.
Emergency Management	Management of the potential adverse effects of unplanned events.
Policy Enforcement and Statutes	Regulation of local laws and environmental health.
Shared Council Services	Provision of internal services supporting Council operations including governance, managing Council's finances, health & safety promotion, office furniture and organisational excellence.
Strategic Planning	Provision of statutory and non-statutory medium to long term planning responses to the social & economic needs for the LGA.

Table 5: Non Asset Based Services

### 3.2 Service User Profile

A service user is anyone who uses the service, is affected by it, or has an interest in it either now or in the future. The service user profile outlines the group of people who will define the expectations on Council for the level of service. Council's service user profile includes:

- Ratepayers, residents and community groups;
- Industry and local business;
- Users and tenants of Council buildings and facilities;
- State and Federal government agencies and departments;
- Tourists and other visitors to the LGA;
- Councillors; and
- Internal Customers.

Each SAP specifies the users along with their relationship with the specific service.

### 3.3 Integration with Council's Strategic Objectives

The Asset Management Strategy is developed in conjunction with the Community Strategic Plan. Each SAP demonstrates the actions to deliver on the long-term aspirations for Newcastle outlined in the CSP. Table 6 contains the CSP strategic objectives and the relating SAPs.

Strategic Direction	Community Objectives	Service Asset Plan delivering
Integrated and Accessible Transport	1.1 Effective and integrated public transport	- Transport
	1.2 Linked networks of cycle and pedestrian paths	- Transport
	1.3 Safe, reliable and efficient road and parking networks	- Transport - Car Parking
Protected Environment	2.1 Greater efficiency in the use of resources	- All Services
	2.2 Our unique natural environment is maintained, enhanced and connected	- Coast, Estuary and Wetlands - Bushland, Watercourses and Public Trees - Parks and Recreational Facilities
	2.3 Environment and climate change risks and impacts are understood and managed	All Services - notably Stormwater Drainage, Water Quality and Flood Planning
Vibrant, Safe and Active Public Places	3.1 Public places that provide for diverse activity and strengthen our social connections	- Parks and Recreational Facilities - Coast, Estuary and Wetlands - Bushland, Watercourses and Public Trees - Libraries - Arts and Cultural Facilities - Community Buildings
	3.2 Culture, heritage and place are valued, shared and celebrated	- Arts and Cultural Facilities
	3.3 Safe and activated places that are used by people day and night	- All Services
Inclusive Community	4.1 A welcoming community that cares and looks after each other	- All Services
	4.2 Active and healthy communities with physical, mental and spiritual wellbeing	- Libraries - Parks and Recreational Facilities
Liveable Built Environment	5.1 A built environment that maintains and enhances our sense of identity	- All Services
	5.2 Mixed-use urban villages supported by integrated transport networks	- Transport
	5.4 Sustainable infrastructure to support a liveable environment	- All Services
Smart and Innovative	6.1 A vibrant diverse and resilient economy built on educational excellence and research	- Smart City - Libraries
	6.2 A culture that supports and encourages innovation and creativity at all levels	- Smart City - Libraries - Arts and Cultural Facilities
	6.3 A thriving city that attracts people to live, work, invest and visit	- All Services
Open and Collaborative	7.1 Integrated, sustainable long-term planning for Newcastle and the Region	- All Services
	7.2 Considered decision-making based on collaborative, transparent and accountable leadership	- All Services
	7.3 Active citizen engagement in local planning and decision-making processes and a shared responsibility for achieving our goals	- All Services
	7.4 A local government organisation of excellence	- All Services

Table 6: Integration with the Community Strategic Plan



## 4 THE ASSETS

### 4.1 Asset Summary

Newcastle City Council currently manages an asset portfolio of \$1.8 Billion to enable service delivery. A summary of the quantity of assets relating to each Service is provided below:

Service Output	Asset Stock	
Aquatic Centres	5 Aquatic Centres 2 Ocean Bath Facilities	
Arts and Cultural Facilities	1 Museum Facility including collections 1 Art Gallery Facility including collections 1 City Hall Facility 1 Civic Theatre Facility	1 Fort Exhibition Facility 1 Historic Fort 147 Public Art, Fountains and Monuments
Bushland, Watercourses and Public Trees	88 Bushland Parcels totaling 4.8Mill sqm 97,428 Street and Park Trees 607 Creek Reaches totaling 79km	42 Inland Cliffines totaling 20,444 sqm 45,269m of tracks and trails 106 Nest Boxes
Car Parking	1 Parking Station	108 Off Street Carparks
Caravan Park	1 Holiday Park	
Cemeteries	3 Cemeteries	
Child Care	11 Child Care Centres	
Coastal, Estuary and Wetland	12 Beaches (6 Main) 4.5 km Dunes 3 Lifeguard Facilities 3 Boat ramps	63 Wetlands covering 187ha 21 Coastal cliffines totalling 3.6km 29 sea and river walls totalling 1.1km 9 Rock platforms totalling 3.3km
Community Buildings	3 Senior Citizen Facilities 9 Community Centres 7 Community Halls	8 Surf Clubs 1 Neighbourhood Centre 7 Scout/Guide Halls
Libraries	9 Library Facilities including collections	
Parks and Recreational Facilities	54 Sporting Amenities Facilities 116 Playgrounds 15 Grandstands 18 Kiosks 15 Animal Enclosures 115 Shade and Shelter Structures	8 Skate facilities 65 Support Buildings e.g. clubhouses and sheds Support structures e.g. fencing, flagpoles, scoreboards, lighting
Public Amenity	39 Public Toilet Facilities	
Smart City	-	
Stormwater drainage, water quality and flood planning	19,371 Pits 453km Pipes 19.2km Culverts	352 Stormwater Quality Devices 836 Headwalls
Support Services - Commercial Property	24 Commercial Buildings	
Support Services - Fleet and Plant	560 Fleet and Plant Vehicles	
Support Services Information Technology	1,292 Computers 1,501 IT Peripheral 1,328 Mobile Devices 286 Network Devices	5 Network Storage 242 Software 54 Software Licenses
Support Services - Operational Buildings	2 Civic Administration buildings 21 works depot buildings	3 works depot supporting structures
Transport	764km local roads 38km state roads 48km regional roads 1,489km kerb and gutter	972km Pathways 120 Bridges 127 Transport Shelters
Waste Management	1 Waste Facility 11 Support Buildings	Weighbridges, gates etc.

Table 7: Summary of Assets

## 4.2 Asset Condition Profile

The following diagram displays the representation of the age of the asset base as a percentage of the assets written down value versus the replacement value. This demonstrates the condition the overall infrastructure asset base is in, and the remaining time before the assets would no longer be able to be used to provide a service to the community unless capital investment is applied. For example, transport assets overall have consumed 40% of their useful life.

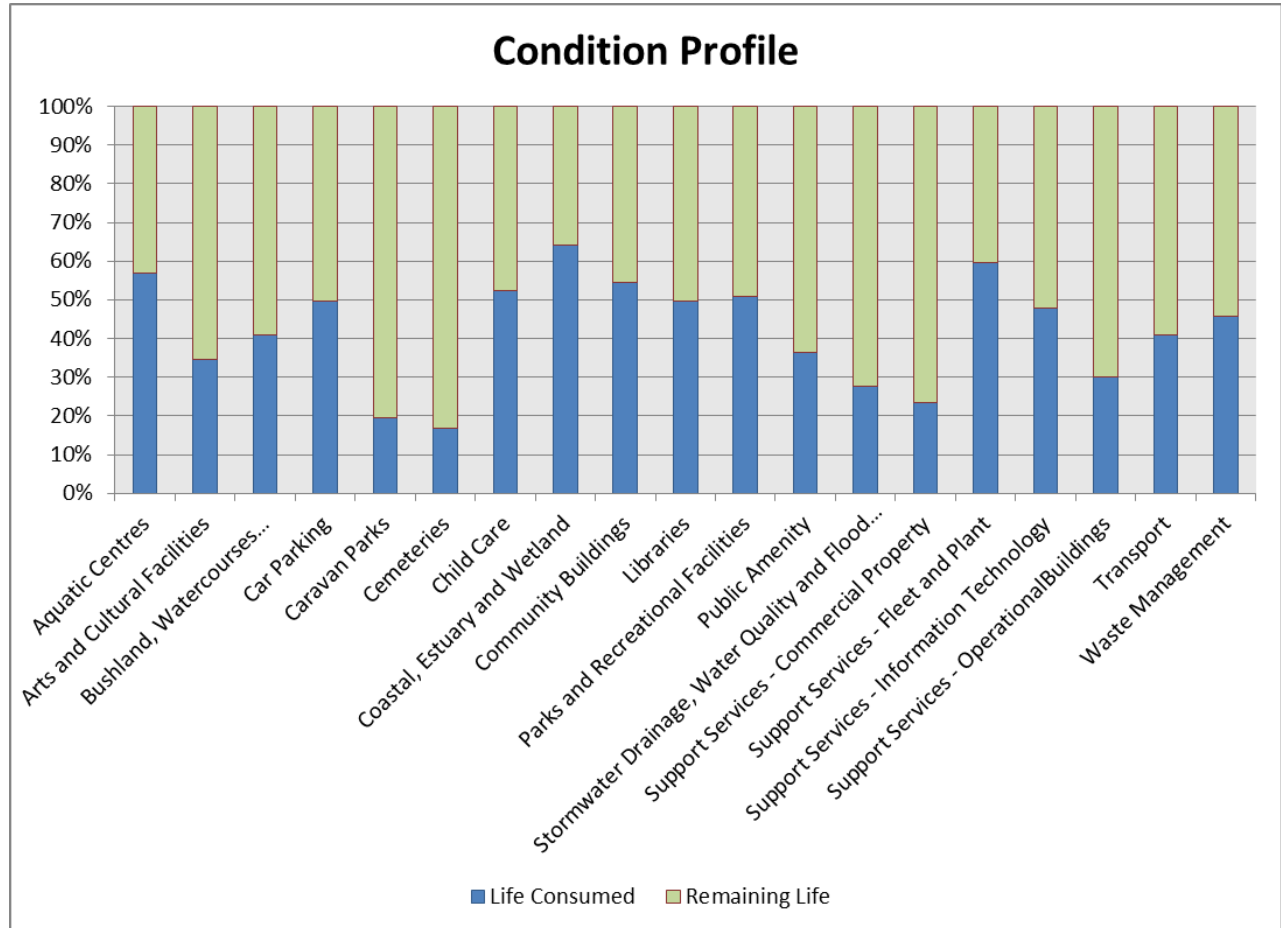


Diagram 2: Asset Condition Profile

## 4.3 Asset Valuation and Depreciation

Council's assets are valued using Replacement Value; the cost that Council would incur to acquire an equivalent new asset at the time the replacement value is reported. Council uses the Modern Engineering Equivalent Replacement Asset (MEERA) approach to asset valuation, i.e. the lowest cost of replacing the economic benefits of the existing asset on the basis of design and construction using modern technology. The Greenfield valuation method is also applied to infrastructure assets such as roads, bridges and drainage; the value of components that are expected to have an unlimited life such as earthworks are also valued under these methods but are not depreciated.

Council manages an asset portfolio of \$1.8 Billion to deliver the 20 core asset-based services. Diagram 3 shows the replacement value at June 2017 of the supporting assets across each service.



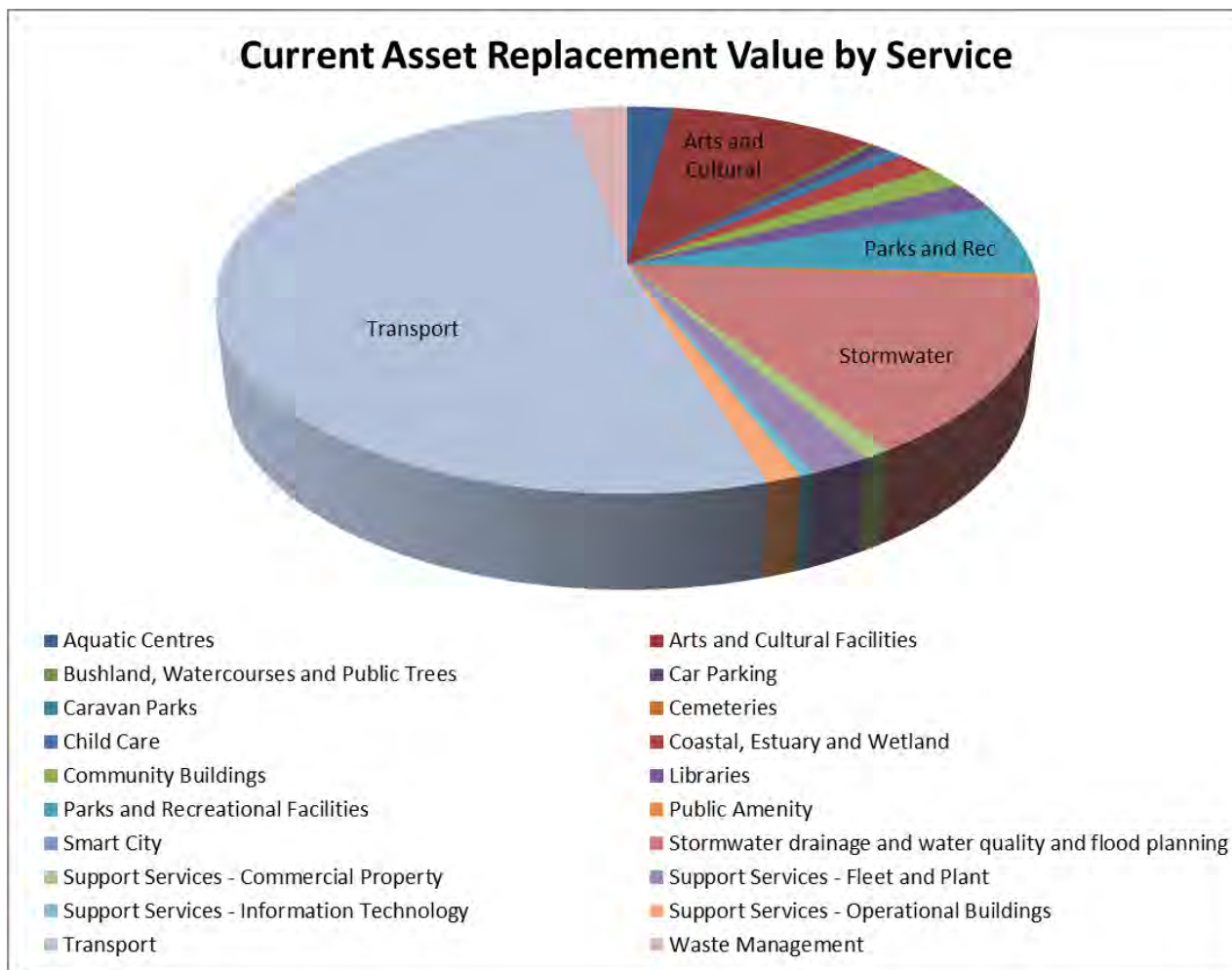


Diagram 3: Asset Replacement Value By Service

In addition to the capitalised infrastructure assets, Council owns and manages a significant value of natural assets. Both capitalised and natural assets represent asset management investment demands required to deliver effective community service levels. The estimated value of assets by service can be seen in Table 8.

Newcastle City Council's Special Schedule 7 2016/17 reports that Council has an estimated infrastructure backlog of \$100.2M - the estimated cost to bring assets back to the agreed level of service set by Council. Council's goal is to reduce the infrastructure backlog to 2% of the Written Down Value of its assets. This goal would be reached through fully funding backlog renewal in the capital works programs.

There is additional estimated backlog for the value of natural assets that have breached their condition intervention levels. The current estimated backlog at 30 June 2017 is demonstrated by service in Table 8.

Service	Current Infrastructure Replacement Value (\$,000)	Current Natural Asset Estimated Value (\$,000)	Written Down Value (\$,000)	Annual Depreciation (\$,000)	Estimated Infrastructure Backlog 2016/17 (\$,000)	Estimated Natural Asset Backlog 2016/17 (\$,000)
Aquatic Centres	38,833	-	16,738	757	8,951	-
Arts and Cultural Facilities	175,553	-	114,706	2,984	15,035	-
Bushland, Watercourses and Public Trees	4,782	269,562	2,819	35	1,625	38,677
Car Parking	13,730	-	6,923	865	27	-
Caravan Park	6,532	-	5,250	124	-	-
Cemeteries	71	-	59	2	-	-
Child Care	8,261	-	3,928	222	5	-
Coastal, Estuary and Wetland	31,369	98,818	11,272	430	6,571	15,187
Community Buildings	35,946	-	16,357	920	922	-
Libraries	41,980	-	21,111	1,578	-	-
Parks and Recreational Facilities	108,755	-	53,255	3,197	2,303	-
Public Amenity	7,146	-	4,549	118	98	-
Smart City*	-	-	-	-	-	-
Stormwater drainage, water quality and flood planning	264,831	-	191,629	2,695	31,160	-
Support Services - Commercial Property	16,454	-	12,592	142	222	-
Support Services - Fleet and Plant	36,250	-	14,610	4,909	-	-
Support Services - Information Technology	8,255	-	4,314	1,351	-	-
Support Services - Operational Buildings	20,885	-	14,585	423	678	-
Transport	934,406	-	552,969	15,376	32,622	-
Waste Management	50,919	-	27,639	2,629	6	-
	<b>1,804,955,781**</b>	<b>368,380</b>	<b>1,075,305</b>	<b>38,757</b>	<b>100,223</b>	<b>53,864</b>

\*Smart City is a new initiative implementing infrastructure into the future

\*\*Excludes Airport, Land, Furniture and Equipment \$235M

Table 8: Asset Valuation, Depreciation and Estimated Backlog

### 4.3.1 Asset Valuation and Depreciation Methodology

In accordance with Council's Financial Statements and Significant Accounting Policies, depreciation on non-current Council assets (assets other than land and excavation) is calculated using the straight line method to allocate the cost of the asset, net of residual value, over the assets estimated useful life.

Depreciation expense recognises that non-current assets each have limited useful lives and that this expense accounts for the decrease in future economic benefits, as well as the consumption and decline in service potential of the asset over its useful life.

The useful lives for depreciation of Council asset classes are:

• Office equipment	3 - 5 years
• Computer equipment	5 years
• Furniture and fittings	10 years
• Motor vehicles	4 - 5 years
• Other plant and equipment	5 - 20 years
• Library books	3 - 100 years
• Buildings	20 - 100 <sup>1</sup> years
• Other structures	5 - 200 <sup>2</sup> years
• Sealed roads - surface	19 - 80 years
• Sealed roads - pavement	120 years
• Sealed roads - kerb and gutter	80 years
• Unsealed roads - surface	30 years
• Footways	30 - 50 years
• Roadside furniture	20 years
• Drainage	20 - 100 years
• Bridges - substructure, superstructure	75 - 100 years
• Bridges - handrail, guardrail	50 - 100 years
• Swimming pools	50 - 100 years
• Other open spaces/recreational assets	7 - 60 years
• Other infrastructure	15 - 100 years
• Newcastle Airport - plant and equipment	5 - 37 years
• Newcastle Airport - leasehold improvement	2.5 - 30 years

<sup>1</sup> 100 year life is only applicable to Building Shell on 4 culturally significant buildings.

<sup>2</sup> 200 year life is only applicable to one Leading Light Tower.

Council's assets are revalued every five years (unless there has been a material difference) whereby all non-current asset classes have a re-set of the accumulated depreciation expense that has been assigned to those revalued assets based on updated condition assessments.

Over time this data is used to reassess the useful lives and depreciation rates used by Council to ensure that the annual depreciation expense is the best reflection of the pattern of consumption of the assets service potential.

When a non-current asset incurs a depreciation expense the following assumptions for the asset class are made:

- The assets are constructed in the same way - with consideration given to different construction materials and the attributable differences in useful life;
- The assets are utilised in the same way - aside from road assets which have differing useful lives based on road use (i.e. bus routes);
- The assets reduce in value evenly over their useful life;
- The assets are maintained appropriately throughout their life;
- The assets are no longer serviceable at the end of their life; and
- The assets are able to last their stated life.

However, in real terms non-current assets:

- Vary in construction materials, methods and quality over time;
- Vary in their level of use;
- Decline sharply in value (service potential) towards the end of their useful life;
- Often may still continue to provide some functionality even after they have 'failed'; and
- Will only achieve their design life under the conditions they were designed for.

Each asset revaluation aims to improve in the accuracy of the assets value by using more detail on the construction materials, methods, and use.

Council's annual depreciation expense within Special Schedule 7 (buildings, other structures, roads, stormwater, open space/recreational assets/other infrastructure) has been used as a proxy to measure how much Council should be spending on the renewal of its assets.

In order to reduce Council's infrastructure asset backlog, Council has increased the level of spending on infrastructure assets to reflect an annual renewal spend equivalent to the asset class's depreciation expense.

Council is taking a more advanced approach to renewal investment of non-current assets by endeavouring to identify the actual renewal required to achieve asset strategies that support an agreed level of service by the community in conjunction with the reduction of Council's infrastructure asset backlog.

The estimated depreciation is approximately \$38M across Council's service infrastructure assets valued at \$1.8 Billion at June 2018.

## 4.4 Critical Assets

Critical assets are defined as those which have a high consequence of failure. They are likely to result in a more significant financial, environment and social cost in terms of impact on organisation objectives. Newcastle Council does not have any critical assets as Council does not provide utility networks or sewer supply. Council has high risk assets which have a high consequence of failure in their effect to service delivery, such as the Works Depot and the Road network.

Individual Service Asset Plans identify those assets deemed high risk and demonstrate the methodology used to minimize potential impact on the achievement of Asset Management objectives.

By identifying high risk assets Council will be able to target and refine investigative activities, maintenance plans and capital expenditure plans at the critical areas. This information is fed into the asset modelling software to target investment on the high risk assets to reduce the risk.

## 5 DESIRED LEVELS OF SERVICE

### 5.1 Community Consultation

One of the core principles of service based asset management is to balance community expectations with affordability. This requires a balance between the services provided, the services the community expect and the level of service they are prepared to pay for. Finding that balance requires community consultation.

**Key Strategy 3 - A community consultation process consisting of service outputs, service levels, and sustainable service costs will be developed and implemented.**

Contributions from the community through consultation, engagement and feedback play an important role in Council understanding the needs of the community. Consultation and engagement is undertaken through:

- Community forums/meetings;
- Sustainability, concept and feasibility studies;
- Community surveys;
- Focus groups;
- Information sessions;
- Community workshops;
- Drop in sessions; and
- Newsletter and Council News.

In 2017, a community consultation was undertaken to link customer desired levels of service to the cost of provision for more informed decision making. The consultation defined and informed the outcomes to be achieved in relation to balancing Council's service delivery and the affordable service levels that will best achieve those outcomes.

The consultation used Council's current level of service and cost of service, and gave the community opportunity to increase or decrease the level of service. A higher level of service may cost more to deliver than a lower level of service. The community were required to balance their budget, i.e. if one service increased its service level, another was decreased to fund the change.

A summary of responses can be seen in Diagram 4.

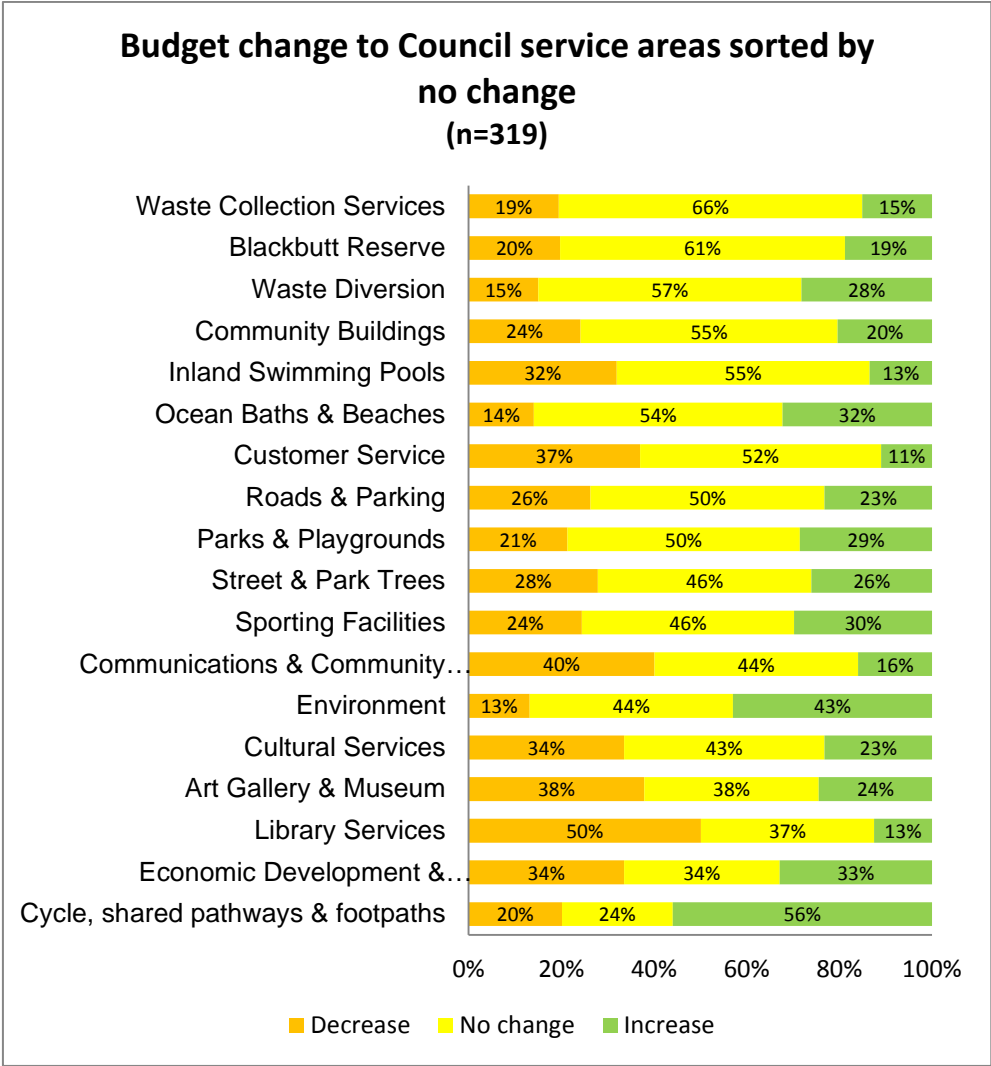


Diagram 4: Summary of 2017 Budget Simulator community consultation responses

The engagement worked alongside the community strategic engagement which forms the basis of the CSP 2018. The community identifies the top challenges facing Newcastle are Transport, Building and development, economy, changing demographics and population size, governance and leadership and environmental sustainability.

The CSP engagement included a service priorities dot poster where the community was asked to indicate which services they would like to receive greater investment. These were used at community workshops, events and engagement hubs in the libraries. A summary of the service priority rankings can be seen in Diagram 5 below with comparison to the budget simulator engagement. The community have clearly prioritised the services: Cycle, shared pathways & footpaths; Environment; Ocean baths & beaches; and Parks & playgrounds.

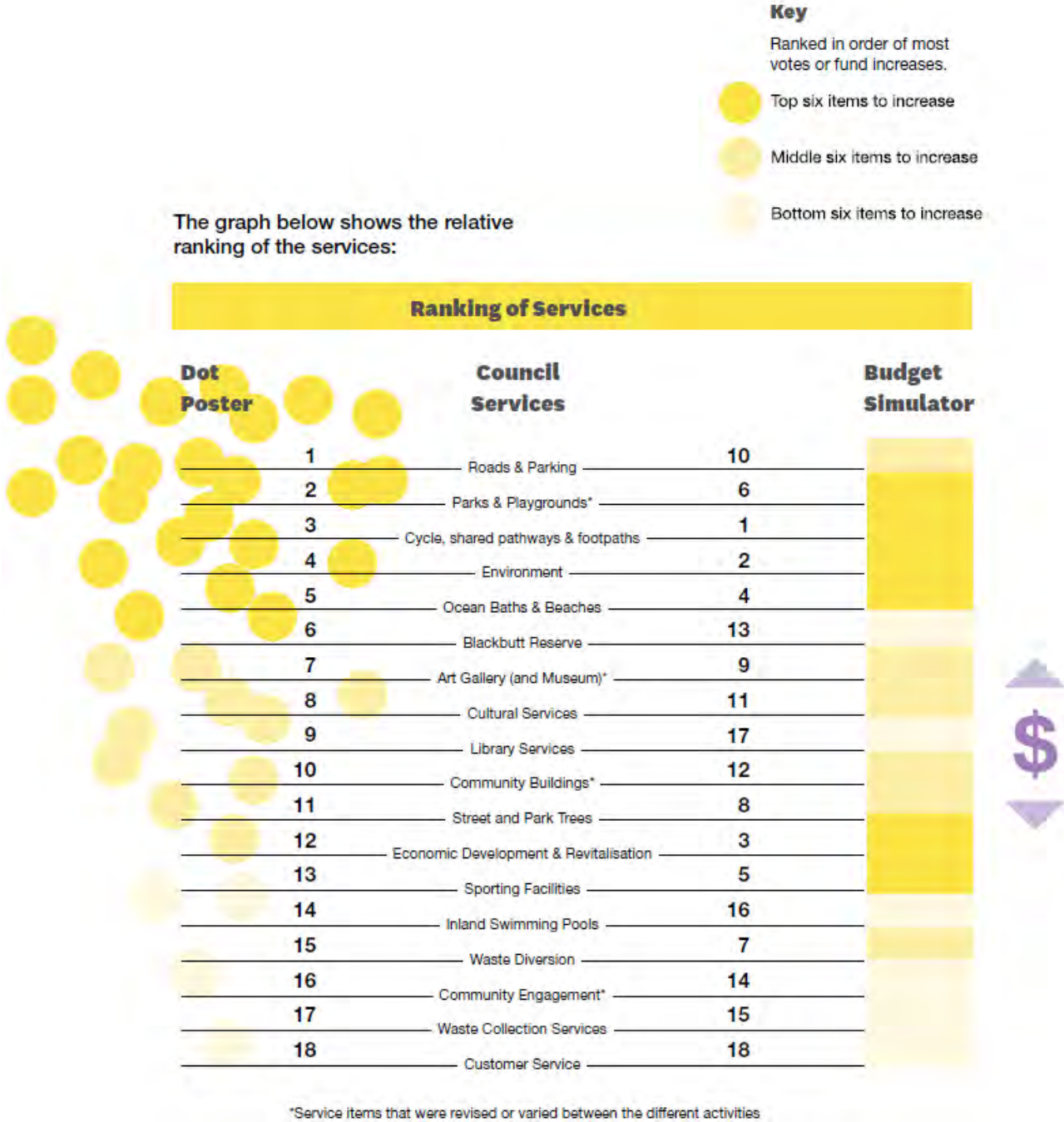


Diagram 5: Summary of Dot Poster service priorities with Budget Simulator community consultation responses



## 5.2 Demand

Demand traditionally is influenced by factors such as population change, leisure trends, sustainable strategies and economic growth or decline.

As well as growth in population, each SAP investigates and addresses predicted future demand on its service, and in turn the demand on the assets.

**Key Strategy 4 - Service Asset Plans will forecast demand and its effects on service delivery.**

### 5.2.1 Changing Demographics and Industry

Over the past decade Council's population has risen with significant growth in Newcastle's western corridor. 'Newcastle's future population is predicted to increase by 16% steadily over the next 25 years. The largest proportional population increases are forecast to be among its residents aged 70-74 years and within the 20-34 years age groups as tertiary education opportunities continue to expand. It is estimated that 12,900 new dwellings will be required to accommodate an additional 11,900 households by 2036 (The City of Newcastle Social Strategy Demographic Summary 2016-2019). Increased growth largely results in an increased demand on services and the growth in the western corridor will result in demand increases in this area in particular.

Increased growth and ratepayer numbers are significant contributors to the gap between available capital funds and increased demand. Section 7.12 infrastructure plans are a legislated mechanism for local government to secure funding from developers to fund the delivery of required infrastructure required to support growth. While the plans have been developed for the primary purpose of securing contribution funding, they create an expectation within the community and the development industry that the identified works nominated in the plans will actually be delivered in a timely manner.

Notable demographic demand forecasts include:

- Expected growth of 3,300 new dwellings in the western part of the Newcastle LGA in the next 20 years. Transport assets will be constructed by developers but will likely be transferred to Council, which will increase future transport maintenance and renewal costs;
- With increased population growth there is pressure to release additional land for urban development. As well as residential development, the Hunter catchment represents a popular location for industrial and commercial uses, with the advantage of the transport corridors, the Newcastle airport and proximity to Sydney and the Port of Newcastle. Development within the estuary catchment is a major threat to estuary health. Urban development contributes to erosion, runoff and pollution through increased hardstand areas, tree clearing, industrial discharges, etc;
- Cemeteries capacity, in terms of space for new burials, will become an issue at both Wallsend and Stockton cemeteries. Estimated time to full capacity is difficult to project due to changing trends in burial practices, however on current trends and projected mortality rates Wallsend will reach capacity in 2028 and Stockton by 2033;
- From a library perspective, increased housing density, increased life expectancy and increased digital connectivity all lead to the same outcome - increased demand for safe accessible public spaces. People living in smaller dwellings will be looking for other places like cafes and libraries where they can spend social and recreational time. As people live longer there are likely to be more single person households and more people looking for opportunities and places to meet and connect to overcome social isolation. Similarly, many who spend a large amount of time working, socialising or playing online will also want access to active people places. This trend was reflected in the community conversations where the need for accessible places and spaces was frequently raised;
- An increasing population will result in increased use of existing recreation facilities and demand for additional facilities. The move to medium and higher density development will place increased pressure on public recreation areas. Capacity of existing facilities and new

opportunities will need to keep pace with population and employment growth. There is potential for overuse of facilities resulting in increased maintenance expenses. Parks will also need to be multi use and provide flexible programming of spaces to respond to changing recreation trends over time; and

- Growth in the west of Newcastle's LGA will mean additional stormwater, water quality and potentially flood mitigation assets, resulting in increased maintenance and replacement or renewal in the long term. Urban development creates increased stormwater run-off due to increases in impervious land area. This results in increased demand for stormwater services such as drainage and treatment capacity, flood protection, and mitigation of the effects of stormwater in waterways.

### 5.2.2 Changes in Technology

Council has recently endorsed the actions associated with the pilot project to develop Newcastle as a creative Smart City. The Newcastle City Council Smart City Strategy 2017-2021 has adopted the below strategies relating to infrastructure which will affect service delivery:

- Deploy information communication technology initiatives that collect and leverage data supporting integrated transport;
- Deploy and leverage city technology and digital platforms to enhance the delivery of cycleway and walkable city infrastructure;
- Develop and deliver strategy and infrastructure to enable the adoption and integration of future modes of transport and mobility;
- Adopt digital technologies and service platforms across the city to improve Council planning, asset management and service delivery;
- Create and adopt policy frameworks, open standards and information technology platforms to make appropriate city datasets accessible and available to increase productivity and growth;
- Develop partnering frameworks that create opportunities for city and industry stakeholders to partner effectively and efficiently with Council across a range of initiatives;
- Develop and deploy city-scale technology infrastructure to improve the amenity of the city and the lives of its residents and visitors;
- Deploy interactive technologies into a high quality public domain to create well loved, active, safe places of interest, education and discovery;
- Invest in digital applications to improve planning processes, infrastructure delivery and maintenance and citizen engagement;
- Deliver technology interventions that enhance sustainability in urban places, parks, waterways and building management;
- Use technology and data to encourage sustainability in resource use, and improve the efficiency of waste collection and processing;
- Pilot and deploy technologies that improve energy and resource sustainability across Council and the broader community;
- Provide access to digital technologies to reduce the digital divide, improve digital literacy and ensure equitable community access;
- Provide access to city digital platforms to support creative industries and broaden audiences for culture supporting local cultural production;
- Build capacity in understanding, engagement and interaction with emerging technologies to enable communities to participate meaningfully;
- Actively develop the regional innovation ecosystem's capacity to nurture businesses, artists, creatives and innovators and generate economic growth in key industry sectors; and
- Develop a model of collaborative industry led innovation to fast-track research, development and deployment of technology prototypes and solutions.

Other notable demands on service resulting from changes in technology include:

- It is proposed that Council introduce payment by mobile phone as another alternative along with cash and credit card;
- World oil reserves are limited and have been predicted to have peaked; therefore the future cost of bitumen is expected to rise. Alternatives to bitumen will be required in the long term



for all transport modes. Technological advances in the development of construction materials may increase life of assets or make them less expensive to build;

- Increased efficiency in information sharing such as the use of online bookings systems, virtual tours of facilities, improved asset management systems etc; and
- The reality of lifelong and online learning and working means that libraries will experience increased demand to provide individual and shared learning and working spaces with high levels of digital connectivity.

### 5.2.3 Climate Change

The majority of Council's current infrastructure was designed, built and maintained on the basis that climate conditions in the future would be similar to the past. However, Newcastle's climate is changing as demonstrated by recent flood storm surges and increasing warmer weather.

Sound evidenced based decision-making is important in a rapidly changing environment with constant advances in technology. Council must leverage opportunities to ensure the most efficient, climate-adapted assets are in place to meet the city's future service needs. Studies are currently underway to gain a better understanding of these challenges and possible response strategies.

Currently the expected impacts of climate change scenarios locally will include:

- Sea level rise;
- Increased frequency of extreme events leading to storm inundation and infrastructure damages, both private and public;
- Disrupted wetting and drying cycles with wetland habitat losses;
- Increased coastal services usage with increases in average temperatures particularly for coastal zone assets; and
- Hazard lines and impacts on retreat, defend, and adapt responses.

The Strategic Position Paper for Low Lying Areas of Newcastle was adopted in 2017 and identifies practical and timely measures that can be initiated to ameliorate flood risk as the predicted impacts materialise. The timing for implementation will be subject to sea level benchmarks referred to as triggers. The strategic position paper provides a base to guide future decisions of Council, in particular those related to planning policy and the maintenance and renewal of public infrastructure, including funding requirements.

Estuarine environments are recognised as particularly vulnerable to sea level rise. Climate change is likely to modify the hydrodynamics of the Hunter Estuary through an elevated half tide level, altered rainfall and flooding patterns, tidal penetration, wind waves and ocean wave energy. This will impact wetlands, channel alignment and water levels, and potential lifecycles of native flora and fauna.

Changes to flood patterns along with vegetation clearance have led to estuary bank destabilisation and erosion. Once vulnerable, wind erosion becomes an issue. During large floods, large volumes of sediment are washed into the river from the catchment. To mitigate this, Council has a proactive approach to implementing erosion and sediment controls in conjunction with other Hunter Councils. Remediation of the riparian vegetation is a priority to improve stability and decrease sediment inputs.

The most reactive impacts will occur within the coastal zone, for example Stockton will continue to see recession of the shoreline with every future large erosive event. This points to the need for innovative, adaptive responses across the range of agency and stakeholders involved in collaborative solution identification, funding and delivery.

Each SAP outlines assets at risk of the effects of climate change.

### 5.3 Summary of Desired Levels of Service

The desired level of service captures the balance between the services provided, the level of service the community expect and what the community is prepared to pay for. Table 3 outlines the desired level of service for each service using the 1-5 star rating system.

Service	Overall Desired Level of Service Star Rating	Notes
Aquatic Centres	★★★★☆ -	Planned upgrades of Lambton Pool and Newcastle Ocean Baths will increase their service rating from 2 to 3.
Arts and Cultural Facilities	★★★★☆ -	-
Bushland, Watercourses and Public Trees	★★★★☆ -	Unpredicted species decline and biosecurity issues related to projected climate change impacts may see a higher level of service demanded by the community for natural area protection involving creek lines, bushland, habitat trees, street and park trees and recreational access.
Car Parking	★★★★☆ -	-
Caravan Park	★★★★☆ -	-
Cemeteries	★★★★☆ -	Increase capacity and improved environmental management of sites.
Child Care	★★★★☆ -	Improvements to be made to the use of clean energy solutions and targeting the reduction of reactive maintenance.
Coastal, Estuary and Wetland	★★★★☆ -	Coastal erosion related to projected climate change impacts will see a higher level of service demanded by the community for coastal protection.
Community Buildings	★★★★☆ -	Key issues to be addressed relate to accessibility and functionality in terms of upgrading of facilities and the availability of facilities.
Libraries	★★★★☆ ↑	Increase in level of service. Transforming the service to meet the community expectations of a modern library of the 21 <sup>st</sup> century - key locations providing a 5 star facility.
Parks and Recreational Facilities	★★★★☆ -	There is a need to enhance current asset practices in relation to a number of service outputs, particularly for District and Regional facilities and for underperforming assets.
Public Amenity	★★★★☆ -	Improved disability access to be provided with renewed, upgraded and new assets where practical.
Smart City	★★★★☆ ↑	-
Stormwater drainage, water quality and flood planning	★★★★☆ ↑	Increase in level of service. Continual infrastructure improvements to work towards Australian Rainfall and Runoff 2016 (AR&R) guidelines, while increasing focus on water quality and flood planning.
Support Services - Commercial Property	★★★★☆ -	The environmental impact of the current building assets to be improved where appropriate.
Support Services - Fleet and Plant	★★★★☆ -	-
Support Services Information Technology	★★★★☆ -	Improvements to be made to information technology projects delivered as specified and within timeframe of delivery and budget.
Support Services - Operational Buildings	★★★★☆ -	Improvements to be made in business continuity and utilisation through the move of the current Civic Precinct operational buildings to Stewart Avenue, Newcastle West.
Transport	★★★★☆ -	Resources to be allocated to new and upgrade works to address the community's wishes for expanded networks of cycle and pedestrian paths.
Waste Management	★★★★☆ ↑	Increase in level of service to increase both the range and quality of waste services provided.

Table 9: Desired levels of service

## 6 LIFECYCLE MANAGEMENT

### 6.1 Roles and Responsibilities

Currently there are multiple approaches for managing Council's assets across Council which can vary between Service Units and their areas of responsibility. The Asset Management Policy, Strategy and SAPs provide a framework for a uniformed approach to asset lifecycle management.

**Key Strategy 6 - Future organisational structures should focus on services provided rather than traditional approaches of grouping similar business units.**

The responsibility for the service output delivered by assets is spread across Council.

Role	Responsibilities	Internal Responsibility
Service Unit Management	<ul style="list-style-type: none"> <li>• Coordination, resource allocation, service asset plan implementation, project submissions.</li> <li>• Planning for future service required including the level of service.</li> <li>• Provide information for establishing, monitoring and reviewing level of service to assist ongoing development of SAPs.</li> <li>• Assets managed in accordance with legislative requirements and standards.</li> </ul>	Manager of: <ul style="list-style-type: none"> <li>• Finance</li> <li>• Legal</li> <li>• Regulatory and Assessment</li> <li>• Information Technology</li> <li>• Major Events and Corporate Affairs</li> <li>• Corporate and Community Planning</li> <li>• People and Culture</li> <li>• Depot Operations</li> <li>• Civil Construction and Maintenance</li> <li>• Property and Facilities</li> <li>• Civic Services, Art Gallery and Museum</li> <li>• Libraries and Learning</li> <li>• Customer Services</li> <li>• Waste Services</li> <li>• Parks and Recreation</li> </ul>
Service Planning	<ul style="list-style-type: none"> <li>• Development and implementation of SAPs.</li> <li>• Providing support and guidance to Service Units in preparing SAPs and strategies.</li> </ul>	Manager of: <ul style="list-style-type: none"> <li>• Corporate and Community Planning</li> <li>• Managers of responsible Services outlined in Table 11</li> </ul>
Asset Design	<ul style="list-style-type: none"> <li>• Designs and specifications, adherence to and application of relevant standards and legislative requirements.</li> </ul>	Manager of: <ul style="list-style-type: none"> <li>• Assets and Projects</li> </ul>
Asset Construction	<ul style="list-style-type: none"> <li>• Delivery and project management of construction programs, adherence and application of design and required specifications, budgeting and estimating.</li> </ul>	Manager of: <ul style="list-style-type: none"> <li>• Assets and Projects</li> <li>• Civil Construction and Maintenance</li> <li>• Property and Facilities</li> <li>• Parks and Recreation</li> </ul>
Asset Renewal Scheduling	<ul style="list-style-type: none"> <li>• Planning, scheduling and reporting on asset renewal activities</li> </ul>	Manager of: <ul style="list-style-type: none"> <li>• Assets and Projects</li> </ul>
Asset Maintenance and Operations	<ul style="list-style-type: none"> <li>• Planning, implementing and managing reactive and proactive maintenance and operational activities.</li> <li>• Implementing cyclic/ periodic/ programmed maintenance and operational programs in consultation with Assets and Projects.</li> <li>• Carry out approved asset related maintenance and operation work.</li> </ul>	Manager of: <ul style="list-style-type: none"> <li>• Civil Construction and Maintenance</li> <li>• Property and Facilities</li> <li>• Parks and Recreation</li> </ul>

Table 10: Roles and Responsibilities

Table 11 demonstrates the Service Unit responsible for managing the delivery of the service outputs and developing the SAP, acknowledging that the organisation redesign process is ongoing for implementation in July 2018. The table outlines any Service Units critical in assisting the responsible Service Unit, and the shared services across Council that support the asset based

service delivery. Due to the alignment of the organisational structure, there are many services where more than one unit contributes to the overall delivery of the services. As an example, both Assets and Projects and Parks and Recreation contribute to the delivery of the public amenity service to the community.

	Assets and Projects	Depot Operations	Property and Facilities	Parks and Recreation	Civil Construction and Maintenance	Waste Services	Finance	Information Technology	People and Culture	Customer Services	Major Events and Corporate Affairs	Regulatory and Assessment	Corporate and Community Planning	Civic Services, Art Gallery and Museum	Libraries and Learning	Legal
Aquatic Centres	A	A	A	R	A		S	S	S	S	S	S	S			S
Arts and Cultural Facilities	A		A		A		S	S	S	S	S	S	S	R		S
Bushland, Watercourses and Public Trees	R	A	A	A	A		S	S	S	S	S	S	S			S
Car Parking	R	A	A		A		S	S	S	S	S	S	S			S
Caravan Park	A	A	R		A		S	S	S	S	S	S	S			S
Cemeteries		A	R		A		S	S	S	S	S	S	S			S
Child Care	A		A		A		S	S	S	S	S	S	A		R	S
Coastal, Estuary and Wetlands	R	A	A	A	A		S	S	S	S	S	S	S			S
Community Buildings	A		R		A		S	S	S	S	S	S	A			S
Libraries	A		A		A		S	A	S	S	S	S	S		R	S
Parks and Recreational Facilities	A	A	A	R	A		S	S	S	S	S	S	S			S
Public Amenity	A		A	R	A		S	S	S	S	S	S	S			S
Smart City	A	A	A		A		S	S	S	S	S	S	R		A	S
Stormwater drainage, flood planning and water quality	R	A	A		A		S	S	S	S	S	S	S			S
Support Services - Commercial Property	A	A	R		A		S	S	S	S	S	S	S			S
Support Services - Fleet and Plant		R					S	S	S	S	S	S	S			S
Support Services - Information Technology			A				S	R	S	S	S	S	S			S
Support Services - Operational Buildings	R	R	A		A		S	S	S	S	S	S	S			S
Transport	R	A	A	A	A		S	S	S	S	S	S	S			S
Waste Management	A	A	A		A	R	S	S	S	S	S	S	S			S

Legend: R: Responsible Service Unit      A: Assists responsible Service Unit      S: Shared Support Services

Table 11: Service Unit responsibility by Service

## 6.2 Operations Strategies

Operations are the regular business activities to provide a service to the community. In asset management terms, the operations can be split into two major components; the cost associated with the delivery of the service, and the cost associated with the operations of the asset that supports the delivery of the service. Both of these costs assume that corporate overheads are already allocated to these areas.

Actual associated asset costs have not traditionally been aligned with the service being delivered and as such, the cost of actual service provision has not been accurately recorded. Council is addressing this to allow better communication with customers and a greater understanding of what desired service levels will actually cost.

## 6.3 Maintenance Strategies

Maintenance refers to the regular day-to-day work required to ensure the asset achieves its useful life. Examples include pothole patching, road resurfacing and painting of building assets.

Maintenance strategies vary across Council with many areas still operating in a reactive environment. Some parts of the organisation have moved to a more proactive approach by implementing preventative maintenance schedules, monitoring condition and scheduling servicing. There is a mix between internal and external labour, and this has been determined based on organisation experience and past performance.

The appropriate mix of maintenance and capital spend to minimise the actual lifecycle cost of the asset is not yet fully recognised. Increasing maintenance spend will often reduce the capital investment required over the life of the asset. To determine optimal lifecycle funding, Council should implement strategic asset management software to enable the modelling of maintenance and renewal scenarios. The optimised lifecycle funding requirements will inform the SAPs to allow funding to be scheduled in the Long Term Financial Plan. SAPs aim to demonstrate that assets are managed from a lowest whole-of-life cost perspective in accordance with recognised industry practice whilst meeting agreed levels of service.

The majority of services have implemented maintenance strategies to minimise lifecycle costs. The maintenance of building facilities are managed through Service Level Agreements with Council's Building Trades Services for both reactive and scheduled maintenance. Maintenance of leased assets are managed as per their lease agreements.

Maintenance of Council's roads, pathways, public trees and stormwater drainage is undertaken in accordance with Council's City Wide Maintenance Procedure 2017 which outlines the roles and responsibilities and maintenance processes for these assets. At-grade car parks have been identified in the Car Parking Service Asset Plan to be included in the City Wide Maintenance Procedure to allow a consistent approach to the maintenance of car parks. Previous maintenance of car parks has been ad-hoc with no identified maintenance budget. The required annual maintenance costs for at-grade car parks is \$244,100 per annum, an average of \$2,260 per car park.

The maintenance expenditure for roads assets under the transport service has previously not increased to reflect the required maintenance for new or gifted assets. An average of 2.3km is gifted to Council per year, resulting in an additional operational budget of \$15,621 and \$36,471 for maintenance per annum.

**Key Strategy 7 - Maintenance required to minimise lifecycle cost is fully funded and reportable by service.**

The forecast maintenance expenditure for the next 10 years including CPI assumptions is shown in Diagram 6. The top three services consuming maintenance expenditure are Transport (29% of the total maintenance forecast), Parks and Recreational Facilities (25%) and Bushland, Watercourses and Public Trees (10%).

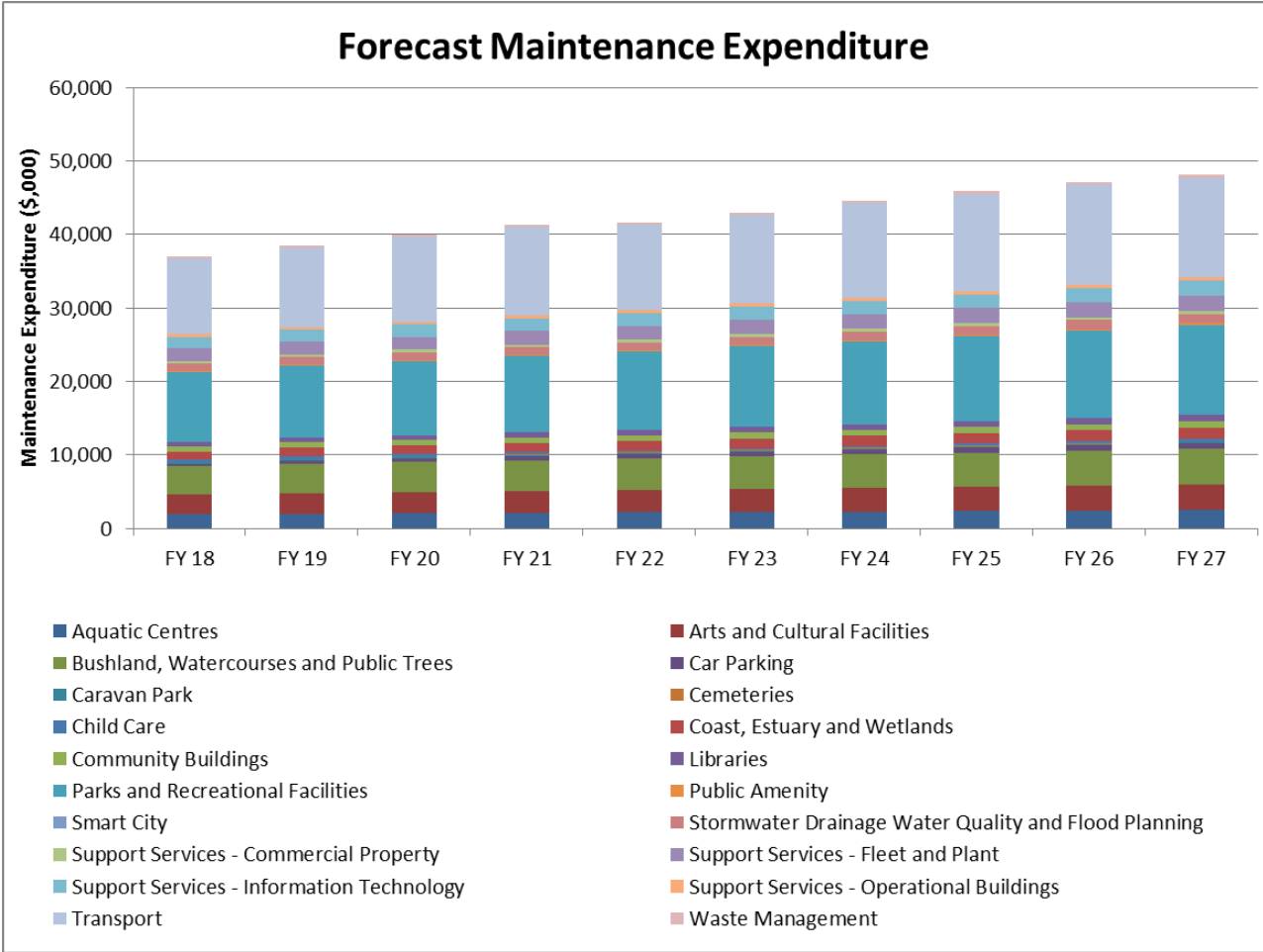


Diagram 6: Forecast Maintenance Expenditure by Service

### 6.4 Renewal Strategies

Renewals refer to the restoration, rehabilitation or replacement of an asset to its original or required service capacity. Major renewal works are funded through the capital works programs.

Council's current estimated infrastructure backlog of \$100.2M has increased the required annual renewal for major asset classes in the transport and stormwater drainage, water quality and flood planning services. Diagram 7 demonstrates the value of infrastructure backlog by service. The majority of backlog is in the sealed roads and stormwater drainage asset categories.



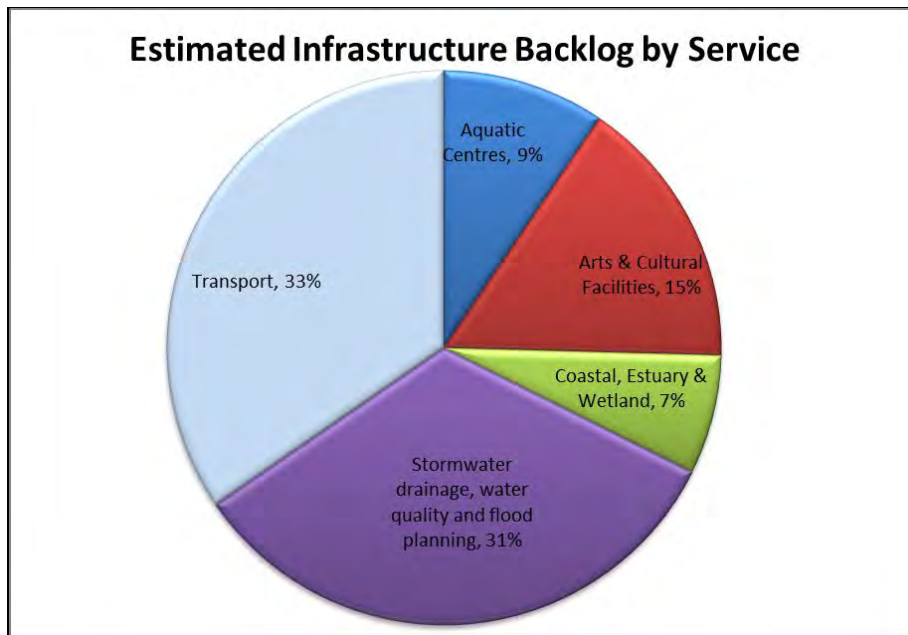


Diagram 7: Estimated Infrastructure Backlog by Service.

In addition to the Infrastructure backlog, there is an estimated \$53M of natural asset backlog which has increased the required annual renewal expenditure for the: coast, estuary & wetlands; and bushland, watercourse & public trees services.

Each SAP reviews the assets that are determined to be in the current backlog, establishing whether the asset meets its current service level. The required renewal to reduce the backlog and maintain the remaining asset condition profile will then be planned to allow funding to be scheduled in the Long Term Financial Plan.

Due to the current focus of addressing long standing issues within the: transport; and stormwater drainage, water quality and flood planning services; achieving a 2% backlog by 2022 is unachievable. The renewal strategy for transport and stormwater is to address the infrastructure backlog by 2030, changing the current focus from new and upgrade projects which are to address long standing issues, to targeting renewal of backlog assets.

Asset modelling has been undertaken for Council's road assets which showed the optimised schedule of renewal to reduce the backlog by 2030 and maintain the assets at their current service level using optimised lifecycle costs across multiple treatment types.

The required annual renewal cost, where estimated, is shown below:

- Transport: \$26.88M, comprising of:
  - Roads: \$18.45M;
  - Pathways: \$5.24M;
  - Roadside Furniture: \$2.09M;
  - Bridges: \$0.6M;
  - Retaining Walls: \$0.5M;
- Stormwater drainage, water quality and flood planning: \$7.29M;
- Bushland, watercourses and public trees: \$6.5M; and
- Coast, estuary and wetlands is \$3M.

**Key Strategy 8 - Renewal required to reduce and maintain infrastructure backlog is fully funded and reportable by service.**

There are significant planned renewal projects across the asset based Services. In aquatic centres \$9M is forecast for the renewal component of the upgrade of Lambton pool due to the age of the infrastructure. An additional \$6M is forecast over two years for the renewal/upgrade of Newcastle Ocean Baths, which requires a significant upgrade to improve the current level of service.

Transport services forecasts \$7.9M in renewal funding for village centres at Beresfield, Stockton, Merewether and Wallsend over 10 years.

Waste Management has forecast \$12M over six years for the remediation of Astra Street, Shortland closed landfill and \$7M for the Summerhill Waste Management Centre site rehabilitation.

Renewal estimates include a portion of operational costs for works such as demolish/disposal, other remedial works to reinstate or renew any assets located nearby which may be negatively impacted by the asset replacement, e.g. public utility investigations and items that are not directly attributable, e.g. traffic control. The estimated portion of operational expenditure on a capital renewal project is seen in the table below by capital works program:

Portfolio	Program	Operating Expense % applied to Capital Projects
Buildings, Structures and Places	Aquatic Centres	15%
	Blackbutt Reserve	15%
	Buildings - Council Support Services	15%
	Caravan Parks and Commercial Properties	15%
	Cemeteries	15%
	City Centre Revitalisation	45%
	Coastal Revitalisation	45%
	Community Buildings	5%
	Cultural Facilities	15%
	Libraries	15%
	Public Toilets	15%
	Recreation Parks, Sporting Facilities and Open Spaces	5%
	Retaining walls	15%
Environment	Bushland and Watercourses	100%
	Coast, Estuary and Wetlands	30%
	Street and Park Trees	100%
	Waste Management	5%
Fleet	Fleet Replacement	0%
Information Technology	Implementation and Upgrade of Applications	By Project
	IT Infrastructure Improvements	By Project
	IT Strategic and Systems Analysis	By Project
Roads	Bridges	35%
	Footpaths	25%
	Road Rehabilitation	50%
	Road Resurfacing	30%
	Roadside Furniture	20%
Stormwater	Flood Planning	40%
	Stormwater System	35%
Strategic	Economic Development	100%
	Smart City	By Project
	Strategic Plans	100%
Transport	Cycleways	30%
	Local Area Traffic Management (LATM)	45%
	Parking Infrastructure	50%
	Pedestrian Access and Mobility Plan (PAMP)	45%

Table 12: Estimated Operational Expense portion on Capitalised Projects



The forecast future renewal profile including capital and operational renewal expenses and CPI assumptions is shown in Diagram 8. The top three services consuming renewal expenditure are Transport (43% of the total renewal forecast), Stormwater drainage, water quality and flood planning (11%) and Support Services - Fleet and Plant (10%).

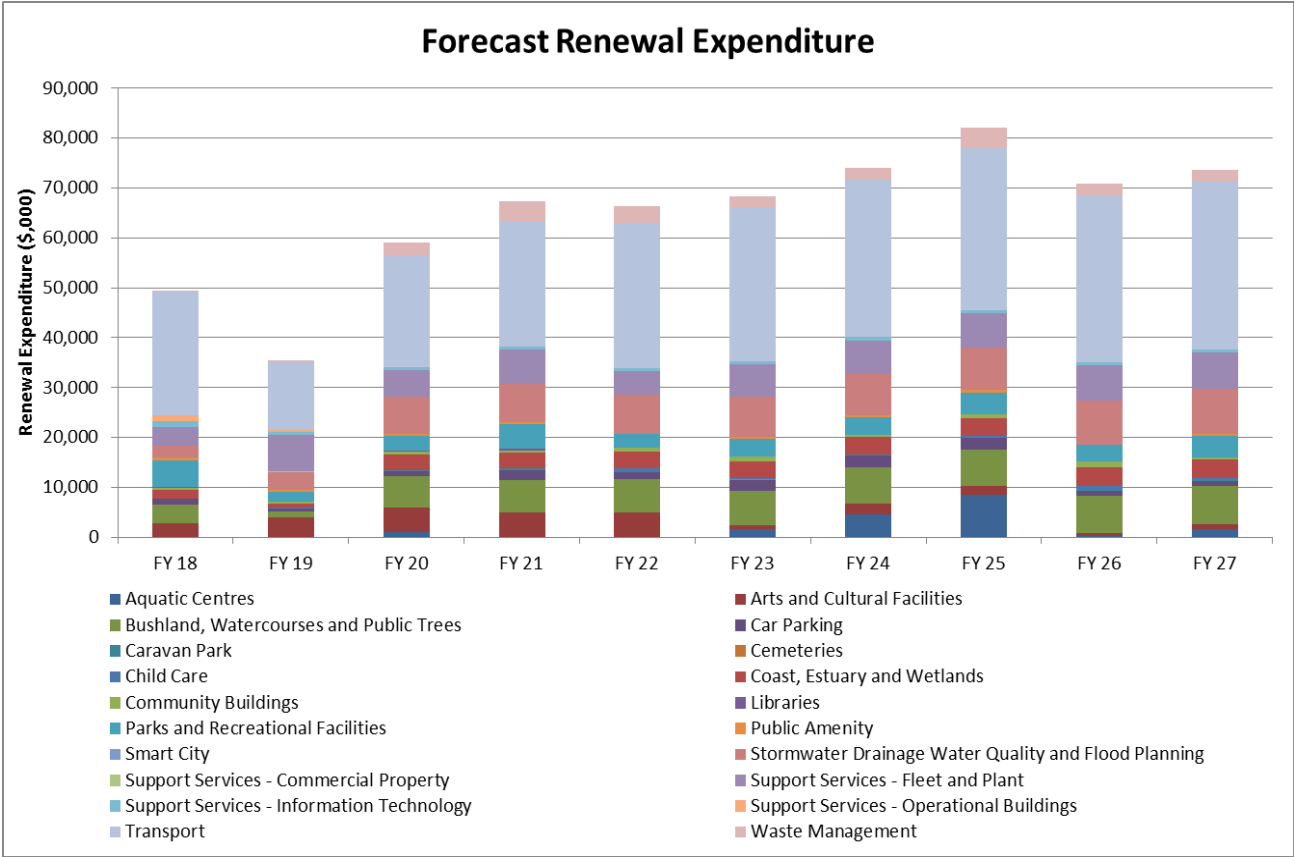


Diagram 8: Forecast Renewal Expenditure by Service

### 6.5 Upgrade and New Asset Strategies

Investment or new works are recognised as the creation or acquisition of a new service or asset. Upgrade works are defined as the significant enhancement of an existing service or asset.

Demand investment is addressed in each SAP as the effects of forecasted future demand on an asset are understood in more detail.

Council currently does not adequately provide whole-of-life service costing when proposing a project for a new or upgraded service. This is a contributing factor to demand on maintenance and renewal resources. Council has recently implemented a long term infrastructure planning software module (PPM) which will enable more rigorous benefit analysis on new and upgrade projects as it is utilised into the future. Each new/upgrade asset related project will be reflected in the relevant SAP to drive future funding in the Long Term Financial Plan in all asset lifecycle cost categories.

**Key Strategy 9 - New services and/or assets will only be approved where the full lifecycle cost of doing so has been evaluated and appropriate supporting budget allocations made.**

Aquatic centres are focusing on upgrade works over the next 10 years. Council has identified the need to prioritise the upgrade of the inland pools including a major upgrade of Lambton pool due to the age of the infrastructure and the need to address risk and to improve the current level of service, consistent with a regional facility. Council has resolved to continue developing planning for a staged upgrade of Lambton pool over 10 years, commencing 2018/19. The forecast cost is \$28.4M over the 10 years excluding CPI.

For coast, estuary and wetlands, there is significant upgrade works required at Stockton for coastal protection given anticipated climate change impacts and exceeded shoreline retreat projections, with some infrastructure now in immediate risk zones. Currently, there is \$8M planned to be spent on the Stockton coastal works over the next 10 years on primarily new assets and associated disposal, however the estimated total coastal protection works totaling \$40M with funding sources currently undetermined.

Stormwater drainage asset upgrades are usually associated with upgrade of other road reserve infrastructure as an integrated project delivery to minimise disruptions for residents and gain economies of scale in project delivery. There are significant planned stormwater upgrade works at Cooks Hill, Mayfield East and Merewether totaling \$15.8M over seven years.

Similarly, transport road upgrade projects are usually associated with upgrade of other infrastructure such as stormwater and addressing tree issues. There are significant planned road projects at Carrington, Newcastle, Waratah and Wallsend over the next four years, totaling \$13M. Wallsend Commercial Precinct bridges are being upgraded to increase the available open area for stormwater under the bridges to meet future stormwater flow strategies, totaling an estimated \$15.4M over eight years.

New and Upgrade works to cycleways are prioritised with works programmed for the next four years to achieve a connected cycleway network including linking key activity centres. There are significant forecasted new and upgrade cycleway projects at Broadmeadow, Hamilton North, Adamstown to Newcastle West, Mayfield and Merewether to Newcastle City totaling \$6.9M over the next four years.

The coastal revitalisation program is continuing with Bathers Way being upgraded to provide comfortable pedestrian and cycle paths, including wider shared pathways, more shade and seating, and viewing areas at an estimated forecast of \$15.4M over five years.

Council's support service - fleet and plant averages at a new and upgrade profile of \$5.7M per annum. There is an estimated \$7M forecast for support services - operational buildings for the move of staff to the leased building at 12 Stewart Avenue, Newcastle West. Works are continuing on the new Solar Farm at Summerhill with \$7M forecast for next year.

Capitalised upgrade/new projects include a portion of operational expense for works such as demolition. The estimated portion of operational expenditure can be seen in Table 12.

The forecast upgrade/new expenditure for the next 10 years including CPI assumptions is shown in Diagram 9. The top three services consuming upgrade and new expenditure are Transport (37% of the total upgrade and new forecast), Stormwater Drainage, Water Quality and Flood Planning (11%) and Support Services - Information Technology (10%).

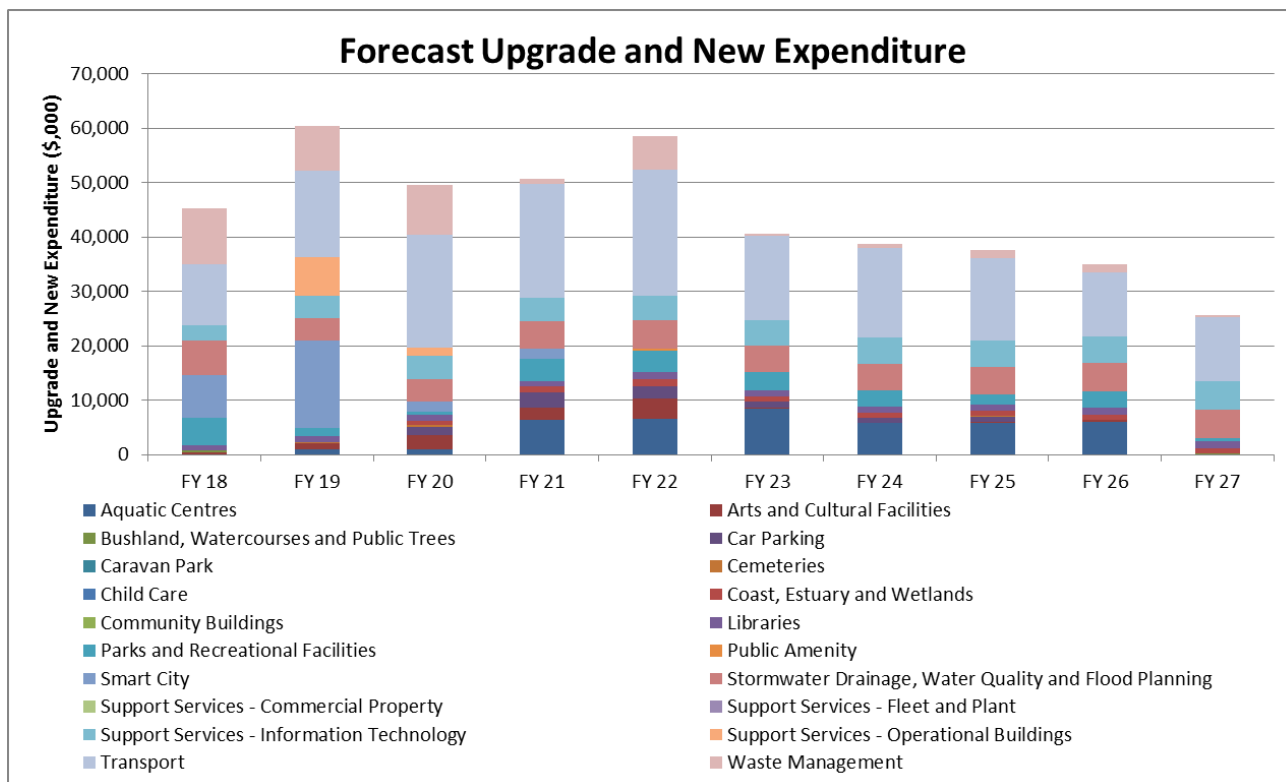


Diagram 9: Forecast Upgrade and New Expenditure by Service

## 6.6 Asset Disposal

Disposal is the closing, decommissioning or sale of an asset or service. Each SAP considers alternative methods of delivering the service which may result in the nomination of assets to be disposed. Consideration needs to be made to alternative use by other services before any disposals are actually undertaken. Levels of service must be also taken into account when considering asset disposal.

Over the past few years Council has disposed of a large number of deteriorated building assets which resulted in a reduction of the infrastructure backlog.

**Key Strategy 10 - Assets will be disposed if they are not required to support service delivery.**

## 6.7 Future Capital Works Programs

The SAPs will inform the capital works programs and integrate with the Long Term Financial Plan.

The forecast future capital works program for financial year 2019 is based on a capped budget for financial sustainability. The forecast years from financial year 2020 reflect required capital lifecycle expenditure. The roads and transport portfolios increase their expenditure gradually over four years to allow resource planning and capacity building. The forecast capital works portfolios are to be modelled in the Long Term Financial Plan model to ascertain sustainability levels to facilitate decision making

The diagram below shows the future capital works forecasts by capital works portfolio. The capital works profile below excludes programs that are in Council's corporate program management system but are not asset related such as Strategic Planning and Economic Development.

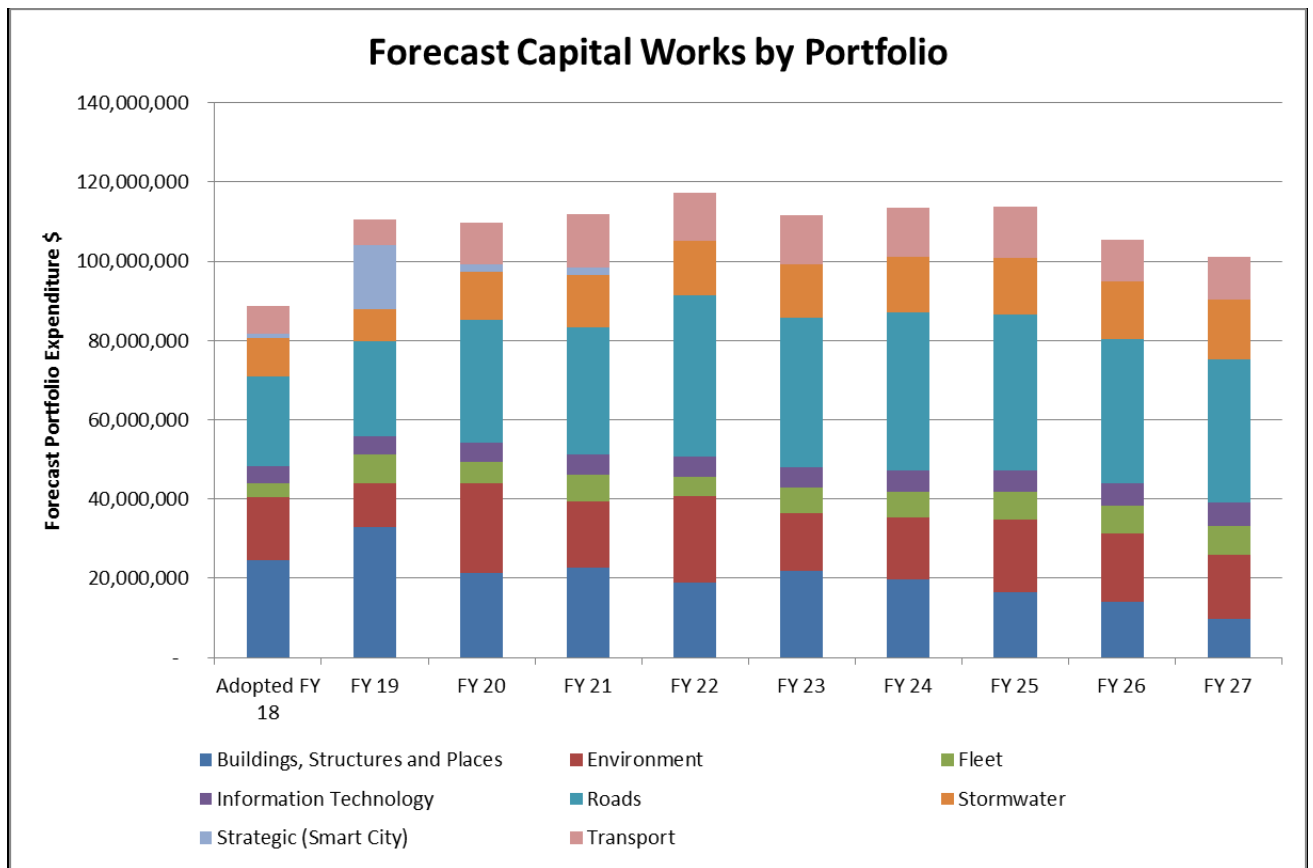


Diagram 10: Forecast Future Capital Works Programs

Capital funding needs to be sustained at levels required to fund the optimal service lifecycle costs.

**Key Strategy 2 - Identify the levels of funding required to achieve a sustainable capital works program and assess the implications of different funding levels on levels of service.**

Historically, Council delivers approximately 80% of its planned capital works program. Delivering the capital works program has faced the following challenges:

- Under resourcing and staff turnover in critical asset planning and delivery teams;
- Previous programs were centralised removing responsibility from service business areas;
- Diversion to delivering the 2012 Special Rate Variation (SRV) projects;
- Staff restructures;
- External resource constraints; and
- Delivery resources not accounted for in program construction - the LTFP drives the capital program budgets.

The future capital works programs include a high level of new/upgrade works, potentially diverting resources from the prioritised renewal programs.

Council has recently implemented new Portfolio and Program Management (PPM) project proposal software which aims to improve project delivery through the capture of detailed project objectives and deliverables.

Council is currently undertaking a review of the infrastructure program management. An external consultant is auditing the current processes including project planning, defining project scopes, defining resources, cost estimating, quality control and communications.

This review will be completed in 2018 and will identify actions required to improve infrastructure program management and delivery including which resources will need adjusting to better build capacity to deliver work programs.

**Key Strategy 5 - Adjust resources and invest in building capacity to deliver works programs.**

## 6.8 Environmental Management

Council is responsible for the delivery of services and infrastructure for a significant portion of the Newcastle region. As such, there is a need to protect biodiversity and waterways and to adopt environmentally sustainable practices to reduce emissions, water, waste and materials consumption across Council and the area, in line with Council's environmental policies and sustainability plans.

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

**Key Strategy 12 - Planning for future delivery of services will incorporate environmental sustainability.**

## 7 THE ASSET MANAGEMENT SYSTEM

### 7.1 The Asset Management System and Confidence Ratings

The asset management system refers to both the information technology systems used to manage assets and the set of people, processes and tools involved in the delivery of the services. Key components include the asset registers and management systems, asset condition assessments, strategic planning capabilities, predictive modelling, deterioration modelling, risk analysis and lifecycle costing.

The confidence in the asset management system components has been assessed using the Confidence Rating System in Table 13.

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

Table 13: Confidence Rating System (Source: International Infrastructure Management Manual (2015) - IPWEA)

Each Service Asset Plan assesses the confidence in both the financial and asset processes.

Low confidence in the asset system limits the ability of Council to use the data for high level business decisions and option analysis. The asset management system and SAPs provide the structure for asset performance monitoring, with each SAP outlining an action plan for improving the asset data.

### **Key Strategy 11 - Asset data and service information will be captured and improved.**

#### **7.1.1 Asset Registers and Management Systems**

Council is currently in the process of implementing a corporate wide Enterprise Resource Planning (ERP) software system which includes the implementation of a combined financial and operational asset register (Works and Assets). Works and Assets also includes the capture of maintenance and capital costs against the assets, however operational costs are not captured at this point in time. These implementations will improve and maintain the accuracy of the asset register. Action is required to add services as an attribute of individual assets in the asset registers to improve analysis and reporting. Council recognises that it must continually invest in maintaining and improving asset data and knowledge in order to demonstrate good governance, and make well-informed asset management decisions to sustainably meet community needs.

The Confidence Rating in the asset data utilised in the Asset Management Strategy and SAPs ranges between B-Reliable and C-Uncertain. Many of the asset registers require improvement, including process establishment for future data capture, improved integration with the Geographical Information System (GIS), and further roll-out of asset classes into Works and Assets.

Each SAP details the required actions for asset register and management system improvements.

#### **7.1.2 Asset Condition Assessments**

The majority of Council's asset condition assessments are undertaken in line with the valuation timeframes, i.e. five yearly. Many of the facilities services such as aquatic centres and caravan parks have undertaken condition assessments through external contractors, and the assessments require integration with Council's Works and Assets.

Condition assessments for transport assets are undertaken more frequently in accordance with the City Wide Maintenance Procedure 2017.

Stormwater drainage asset register and condition inspections are incomplete and much is extrapolated from a limited sample. The condition has been collected for approximately 46% of the pipe and culvert data. By 2020, it is planned that 100% of the network will have been inspected and have condition data captured and recorded in the asset register.

Parks and recreational assets have previously not had sufficient resources for managing the asset management systems. Parks and recreational facilities require a gap analysis of existing data, detailed condition reporting and development of maintenance and renewal plans.

#### **7.1.3 Strategic Planning Capabilities**

Councils' ERP software includes a Strategic Asset Management module which will enable Council to model asset data to gain an optimised view of the asset lifecycle costs of its assets and inform service levels, Service Asset Plans and the Long Term Financial Plan. This however has not yet been implemented and the timeline for implementation is currently unknown.

The Asset Management Strategy and Service Asset Plans will integrate with Council's Long Term Financial Plan to allow predictive modelling and deterioration modelling of assets. The forecast future lifecycle costs demonstrated in this Strategy have not been modelled in the Long Term Financial Plan. This is required to ascertain sustainable funding limits and inform decision making on the future focus of Council's services.

#### 7.1.4 Risk analysis

Council's risk assessment process is outlined in its Risk Management Practice Guideline 2014. There are two key high level risks to Council in relation to asset management:

- The risk of not quantifying the relationship between agreed service levels and the quantity/quality of the assets required to support the delivery of those services; and
- Not investing the required maintenance and renewal budgets to minimise the cost of asset ownership over the full lifecycle of the asset.

Council is mitigating the first risk by creating SAPs that clearly link the agreed service levels to the asset. The second risk will be addressed through modelling of different asset investment levels (maintenance and capital) to identify the optimum level of investment to maintain the asset in the condition required to support the agreed level of service whilst minimising the assets whole of life cost.

SAPs demonstrate a risk management approach to asset management across the entire life of the asset.

#### 7.1.5 Lifecycle Costing

The overall confidence level for the financial data in this SAP is assessed as C - uncertain. Council's current budget format does not allow for consistent reporting on service costings by asset lifecycle categories. Future plans will work towards more consistent alignment to improve service costing by lifecycle categories. Analysis of work order history to inform lifecycle costing is required, with potential improvements identified for better capturing asset information on work orders.

## 8 FINANCIAL SUMMARY

### 8.1 The Current Cost of Service

The definition of the lifecycle expenditure categories include:

Lifecycle Category	Description
Operations	Recurrent expenditure, which is continuously required to provide a service, e.g. power, fuel, staff, plant equipment.
Maintenance	All actions necessary for retaining an asset as near as practical to an appropriate service condition, including regular ongoing day-to-day work necessary to keep assets operating.
Renewal	Expenditure on an existing asset or on replacing an existing asset, which returns the service capability of the asset up to that which it had originally.
Upgrade/New	Upgrade - expenditure which enhances an existing asset to provide a higher level of service or expenditure that will increase the life of the asset beyond that which it had originally. New - expenditure which creates a new asset providing a service/output that did not exist beforehand, including planning, design, construction and acquisition.
Disposal	Expenditure on activities necessary to dispose of decommissioned assets.

Table 14: Asset lifecycle expenditure categories. Source: Australian Infrastructure Financial Management Manual 2015

The cost of service is the annual recurrent expenditure required to continue to provide the service at the current level, including the lifecycle cost categories operations, maintenance, depreciation and overheads.

Renewal and upgrade are not included as depreciation covers the cost of renewal, and the cost of upgrade will be reflected in future depreciation.



Diagram 11 and Table 15 illustrate the current cost of service for each of the services, noting that the current cost of service excludes income including user fees and charges. The effects of excluding user fees and charges income can be seen in waste management, 43% of the cost of waste management is the NSW State Government Waste Levy, and the income received from tipping fees is not included to offset this cost.

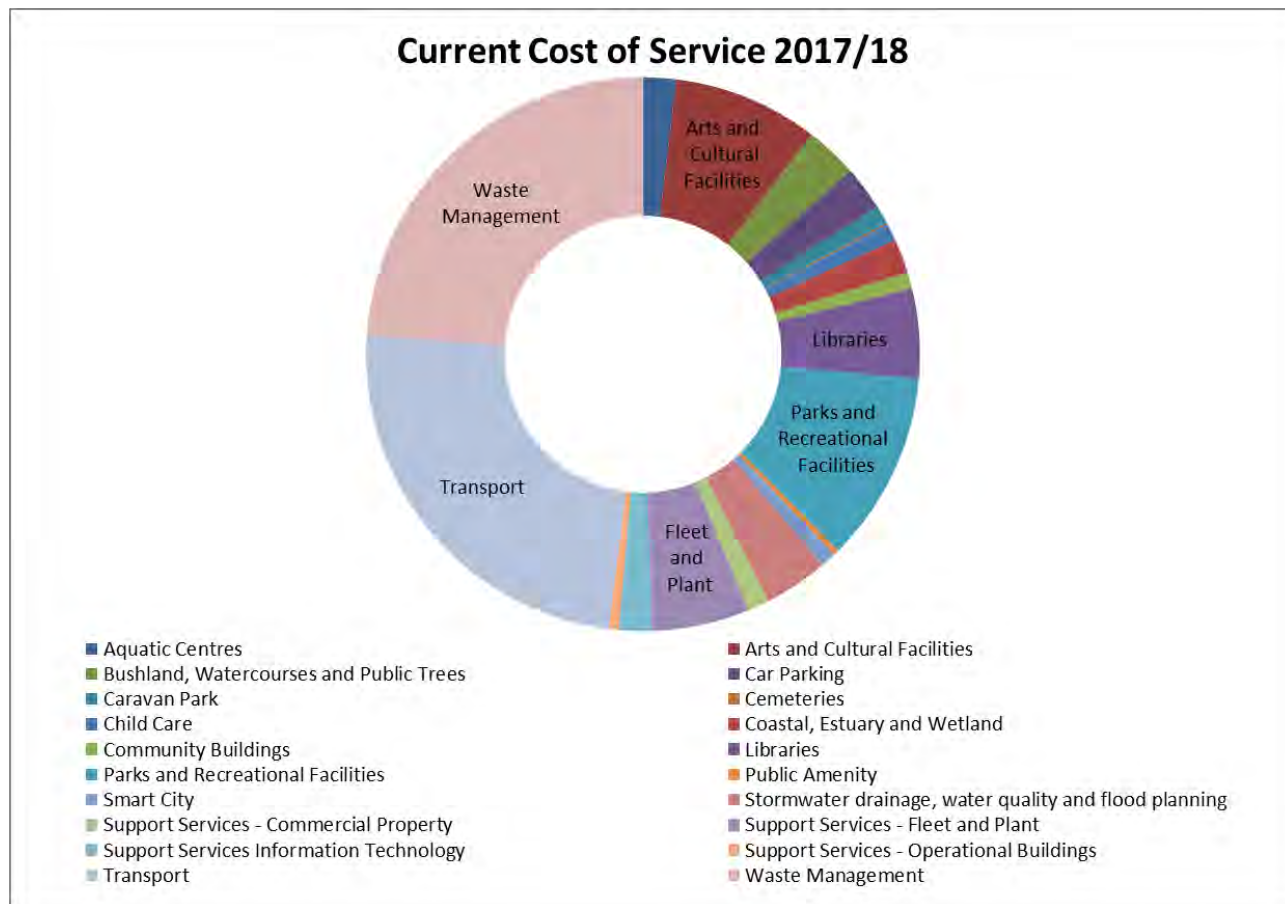


Diagram 11 - Cost of Service



Service	Current Cost of Service (COS) 2017/18	COS Per Head of Population (160,919)	COS Per Ratepayer: Residential and Business (68,197)
Aquatic Centres	\$4,361,310	\$27	\$64
Arts and Cultural Facilities	\$19,225,944	\$119	\$282
Bushland, Watercourses and Public Trees	\$6,893,973	\$43	\$101
Car Parking	\$5,825,099	\$36	\$85
Caravan Park	\$2,428,504	\$15	\$36
Cemeteries	\$201,968	\$1	\$3
Child Care	\$2,292,203	\$14	\$34
Coastal, Estuary and Wetland	\$4,516,464	\$28	\$66
Community Buildings	\$2,177,899	\$14	\$32
Libraries	\$11,830,329	\$74	\$173
Parks and Recreational Facilities	\$25,115,307	\$156	\$368
Public Amenity	\$752,091	\$5	\$11
Smart City	\$2,021,523	\$13	\$30
Stormwater drainage, water quality and flood planning	\$8,453,365	\$53	\$124
Support Services - Commercial Property	\$2,931,843	\$18	\$43
Support Services - Fleet and Plant	\$12,874,433	\$80	\$189
Support Services Information Technology	\$4,301,354	\$27	\$63
Support Services - Operational Buildings	\$1,319,658	\$8	\$19
Transport	\$54,436,902	\$338	\$798
Waste Management	\$54,136,076	\$336	\$794

Table 15: Current Cost of Service 2017/18

## 8.2 Forecast Lifecycle Costs

The forecast lifecycle costs summarises the planned expenditure across all services to achieve the desired level of service. This informs the Long Term Financial Plan and will be modelled for financial sustainability.

Lifecycle Category	FY 18 \$,000	FY 19 \$,000	FY 20 \$,000	FY 21 \$,000	FY 22 \$,000	FY 23 \$,000	FY 24 \$,000	FY 25 \$,000	FY 26 \$,000	FY 27 \$,000
Operational	156,790	161,903	166,132	170,857	175,454	180,453	185,315	190,540	195,668	201,188
Maintenance	36,987	38,404	39,931	41,349	41,650	42,869	44,524	45,824	47,147	48,068
Renewal - Operational Expenditure	16,330	9,904	26,046	28,153	27,363	26,565	29,146	32,164	27,559	28,928
Renewal - Capital Expenditure	33,171	25,619	33,075	39,180	38,882	41,750	44,782	49,943	43,392	44,745
Upgrade and New - Operational Expenditure	15,979	20,111	19,228	20,139	21,360	15,657	15,008	14,418	13,167	10,474
Upgrade and New - Capital Expenditure	29,380	40,307	30,394	30,497	37,166	24,958	23,797	23,259	21,821	15,236
Disposal - Proposed Asset Sale	-	-	-	-	-	-	-	-	-	-
Disposal - Other	10	350	483	688	586	759	574	649	581	598
<b>Total</b>	<b>288,647</b>	<b>296,598</b>	<b>315,289</b>	<b>330,863</b>	<b>342,461</b>	<b>333,011</b>	<b>343,146</b>	<b>356,797</b>	<b>349,335</b>	<b>349,237</b>

Table 16: Forecast Lifecycle Costs

The following assumptions are applied to the future cost forecasts and have been extracted from the Newcastle City Council Long Term Financial Plan (LTFP) model:

	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27
CPI	2.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Rate Increase	8.00%	8.00%	8.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Fees & Charges	2.90%	2.70%	2.70%	2.80%	2.90%	2.90%	2.90%	2.90%	2.90%	2.90%
Labour Index	3.05%	3.05%	3.05%	3.05%	3.05%	3.05%	3.05%	3.05%	3.05%	3.05%
Materials & Contracts	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%	2.60%
Blended Labour & CPI	2.53%	2.78%	2.78%	2.78%	2.78%	2.78%	2.78%	2.78%	2.78%	2.78%

Table 17: Financial Assumptions LTFP. Source - Long Term Financial Plan FY17

## 8.3 Funding Sources

Council resources its capital works for infrastructure assets through various funding sources which are generated from its operating activities such as rates, Section 7.12, special rate variation (SRV) and grants.

In previous years, the required capital program exceeded the amount of funding available. Council applied for a SRV in 2012 which allowed Council to focus on delivering nine specific community projects, the majority of which focused on upgrading or creating new assets.

The 2012 SRV addressed the communities demand for increased infrastructure services, leaving a backlog of renewal investment requirements outstanding. In May 2015, a SRV was approved by IPART which increased Council's revenue over 5 years to 2019/20. This additional revenue is critical to ensuring Council is able to accelerate the completion of its priority projects as well as making substantial reductions to the infrastructure backlog whilst maintaining financial sustainability.

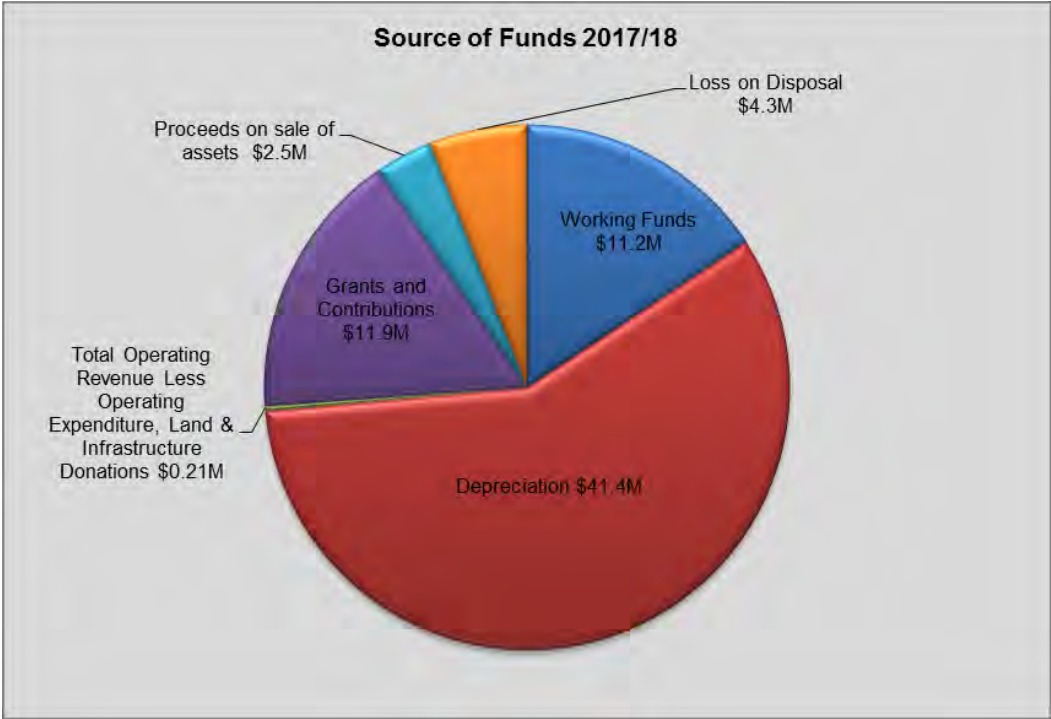


Diagram 12 : Capital Funding Sources. (Source - 2017/18 Budget)

## 9 ACTION PLAN

The action plan below demonstrates how Council will implement its Key Strategies. Each of the actions will be reported on in the next iteration of this Strategy with a summary of progress.

Key Strategies	Action	Responsibility
1. Service delivery expectations will be aligned with available funding so that the sustainable management of all required supporting assets is achieved.	1.1 Model the required lifecycle cost forecasts in the Long Term Financial Plan to ascertain sustainability levels to facilitate decision making.	Corporate and Community Planning / Finance
2. Identify the levels of funding required to achieve a sustainable capital works program and assess the implications of different funding levels on levels of service.	2.1 Develop and annually revise required levels of funding in each SAP.	Corporate and Community Planning / Finance
	2.2 Implement Asset Modelling software to enable asset deterioration modelling and optimized lifecycle cost funding.	Information Technology / Corporate and Community Planning / Assets and Projects
3. A community consultation process consisting of service outputs, service levels, and sustainable service costs will be developed and implemented.	3.1 Biennially engage the community in service level decision making to gather expected levels of service.	Corporate and Community Planning / Major Events and Corporate Affairs
4. SAPs will forecast demand and its effects on service delivery.	4.1 Review and update demand forecasts within the Service Asset Plans annually, including growth in population as well as predicted trends in future service usage and its effects on the correlating assets.	Corporate and Community Planning / Service Unit Managers

Key Strategies	Action	Responsibility
5. Adjust resources and invest in building capacity to deliver works programs.	5.1 Continually review the delivery of works programs and identify issues with resourcing delivery to inform Workforce Management Planning.	Corporate and Community Planning / Assets and Projects / People and Culture / Finance
6. Future organisational structures should focus on services provided rather than traditional approaches of grouping similar business units.	6.1 Review implications of the new organisational structure on Service Asset Planning.	Corporate and Community Planning
	6.2 Review capital works programs to align programs to services.	Corporate and Community Planning / Assets and Projects / Finance
	6.3 Align services to financial cost centres.	Corporate and Community Planning / Finance
	6.4 Refine responsibilities for assets where responsibilities are not clear.	Corporate and Community Planning / Service Unit Managers
7. Maintenance required to minimise lifecycle cost is fully funded and reportable by service.	7.1 Utilise asset modelling software to optimize maintenance funding levels (dependency with action 2.2).	Corporate and Community Planning / Service Unit Managers / Information Technology
	7.2 Report required levels of maintenance funding to Council to obtain approval for optimised maintenance funding.	Corporate and Community Planning / Finance / Maintenance Providers
8. Renewal required to reduce and maintain infrastructure backlog is fully funded and reportable by service.	8.1 Utilise asset modelling software to obtain required renewal funding levels (dependency with action 2.2).	Corporate and Community Planning / Service Unit Managers / Information Technology
	8.2 Maintain, update, improve and utilise the project proposal approval system project system to align the sustainable service delivery expectations with available funding.	Assets and Projects / Corporate and Community Planning
	8.3 Maintain, update and utilise the project work order system (Works and Assets) to allow accurate asset lifecycle cost reporting.	Assets and Projects / Finance / Information Technology
	8.4 Report current renewal levels to the Executive Leadership Team and Council to raise awareness of renewal funding levels and effects on asset deterioration through the Long Term Financial Plan.	Finance
9. New services and/or assets will only be approved where the full lifecycle cost of doing so has been evaluated and appropriate supporting budget allocations made.	9.1 Engage and train staff in whole-of-life costing for assets on new/upgrade projects before the project is approved via the Portfolio and Program Management System (PPM).	Assets and Projects / Finance
10. Assets will be disposed if they are not required to support service delivery.	10.1 Identify assets that are no longer required and follow the asset review process to enable disposal.	Service Unit Managers
11. Asset data and service information will be captured and improved.	11.1 Align services to Works and Assets.	Corporate and Community Planning / Assets and Projects
	11.2 Update Works and Assets with assets not yet migrated to the corporate asset register.	Information Technology / Asset Custodians
	11.3 Update Works and Assets where asset data is outdated.	Information Technology / Asset Custodians
	11.4 Develop and document processes for capturing asset data in Works and Assets.	Assets and Projects
	11.5 Review the assets listed in the infrastructure backlog calculations.	Service Unit Managers
12. Planning for future delivery of services will incorporate environmental sustainability.	12.1 Continually improve the level of detail of sustainable environmental measures required for each service.	Service Unit Managers

Table 18: Action Plan

## 10 STRATEGY REVIEW CYCLE

The Asset Management Strategy will be reviewed and updated every two years to ensure the key drivers, key strategies and asset management direction accurately reflects the current climate. This will require an update of the below items:

Description	Responsibility
Current Levels of Service	Service Managers / Corporate and Community Planning
Asset Summary	Service Managers / Corporate and Community Planning
Financial information	Service Managers / Corporate and Community Planning / Finance
Impact of budget	Service Unit Managers
Key Issues	Service Unit Managers
Action Items	Service Unit Managers

*Table 19: Strategy Review Timeframes*

## 11 APPENDICES

### Appendix 1 - Asset Management Policy

#### Purpose

Asset Management is the systematic and coordinated activities and practices of an organisation to optimally and sustainably deliver on its objectives through the cost-effective lifecycle management of assets.

This policy supports Newcastle City Council's commitment to:

- Ensuring assets and infrastructure are safe, reliable, sustainable and remain available for the benefit of our rate payers and the community;
- A core asset management system that aligns asset management to corporate goals and strategic context; and
- Accountability, sustainability, risk management, service management and financial efficiency in asset management.

#### Scope

The policy applies to all Newcastle City Council owned and managed assets.

#### Principles

Newcastle City Council will sustainably manage its assets to ensure community service expectations are met.

Newcastle City Council recognises that sustainable asset management involves managing the performance, risk and expenditure on infrastructure assets in an optimal and sustainable manner throughout their lifecycle.

Newcastle City Council will apply the following principles to asset management:

- Maintaining an up to date and accurate register and asset management plan for each of its assets;
- Assets proactively managed from a lowest whole-of-life cost perspective in accordance with recognised industry practice whilst meeting agreed levels of service;
- A risk management approach to asset management across the entire life of the asset;
- The use of suitable performance indicators linking the customer service standards to the cost of provision for more informed decision making;
- Measuring and monitoring the performance of assets to drive continuous improvement;
- Social, economic, cultural and environmental evaluations integrated into asset management processes;
- Innovative and cost effective processes and technologies identified and implemented to enhance operational efficiency, asset performance and reliability;
- Appropriately resourced, documented and maintained Asset Management Strategy (detailing systems and processes); and
- Assets managed in accordance with legislative requirements and standards.

These principles will be embedded into the development and maintenance of consistent asset management practices within Newcastle City Council.

This Policy is supported by an Asset Management Strategy and Asset Management Plans. All Newcastle City Council Managers are responsible for understanding, implementing, maintaining and continuously improving this Policy and the Asset Management Strategy and suite of Asset Management Plans.

**[newcastle.nsw.gov.au](http://newcastle.nsw.gov.au)**