ASSET MANAGEMENT STRATEGY

ADOPTED 14 JUNE 2022

www.camden.nsw.gov.au

Contents

Executive Summary

Councils are complex organisations providing many and varied services to their communities. Much of these services are supported by a wide range of assets which may contribute to one or many of the services provided which requires effective management process and plans.

The IIMM2006[1] defines Asset Management as:

> *'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'.*
>
> (Source: *IIMM 2006 Version 3, the Association of Local Government Engineering New Zealand Inc and the Institute of Public Works Engineering Australia (IPWEA), 2006)*

Austroads (the association of Australian and New Zealand road transport and traffic authorities) provides the following definition for Asset Management:

> *'A comprehensive and structured approach to the long-term management of assets as tools for the efficient and effective delivery of community benefits. The emphasis is on the assets being a means to an end, not an end in themselves.'*[2]
>
> (Source: *Austroads 1997 Strategy for Improving Asset Management Practice*)

Camden Council has adopted the terminology of Asset Management as:

> *'A systematic approach to guide the planning; acquisition; construction; operation; maintenance; renewal and disposal (lifecycle) of physical assets. The objective of undertaking Asset Management is to maximize service delivery potential, supported by physical assets, and to manage related risks and funding requirements over the assets useful life'.*
>
> (Source: Adopted Asset Management Strategy 2009 & 2011)

The principal components of good asset management involve a combination of an asset register, maintenance management system, condition assessment and defined levels of service to establish alternative treatment options and long-term funding requirements.

Camden Council recognises the importance of asset management planning to deliver agreed levels of service to our community.

The purpose of this Asset Management Strategy is to identify key issues, and to enable Council to continue to improve our asset management systems and practices. The goal of asset management is to ensure that services are provided:

- In the most cost effective manner;

- Through the creation, acquisition, maintenance, operation, renewal and disposal of assets; and
- To provide for present and future communities.

The objective of the Asset Management Strategy is to establish a framework to guide the planning, construction, maintenance and operation of the infrastructure essential for Council to continue to provide services to the community.

Camden Council has a dedicated Asset Management Team managing over $2b in Infrastructure Assets.

Council has undertaken an Asset Maturity review to identify improvements. The following improvements have been implemented increasing our Asset Management capability:

- Implementation of cyclic condition assessments of all Assets over a three-year cycle
- Development of a resourcing strategy
- Benchmarked and reviewed Asset Class life expectancies
- Implemented improved revaluation cycles
- Establishment of Levels of Service for Council assets

Asset Management Plans have been established and adopted by Council. These plans are reviewed in accordance with the Integrated Planning and Reporting framework during each term of Council.

Council is strongly committed in delivering high quality services to the community and to comply with NSW legislative requirements.

Introduction

1.1 Background

Council recognises its obligations under the Principles for Local Government (Section 8 – 8C of the NSW Local Government Act 1993) as they pertain to asset management:

- Council should manage lands and other assets so that current and future local community needs can be met in an affordable way
- Council should invest in responsible and sustainable infrastructure for the benefit of the local community considering the long term and cumulative effects of actions on future generations.
- Council should have effective financial and asset management, including sound policies and processes for the following:
    - performance management and reporting,
    - asset maintenance and enhancement,
    - funding decisions,
    - risk management practices.

The compliance with the Principles and the Act ensures that all NSW councils can 'provide directly, or on behalf of other levels of Government (State & Federal), services and facilities for the community'.

Council acknowledges the importance of asset management planning and considers the ongoing review of this asset management strategy as part of a continuous improvement. The planning and review process assist Council with its asset management system and sustainably managing the community's assets for the next generation. The process also provides a guide to Council in meeting the Principles as well as addressing its duty of care to the wider community in providing infrastructure assets of serviceable condition.

Typically, all councils utilise infrastructure assets to provide services to the community which include the following:

- Roads & Transport assets provide the community with access and transport services;
- Stormwater Drainage systems protect properties and roads from flooding and control water runoff quality and quantity;
- Open Space assets provide recreation facilities and enhance and protect the built and natural environment (eg parks; natural areas; sporting grounds; courts and play equipment); and
- Building assets provide the Council with administrative and depot facilities; and the community with places to meet; learn and play (eg administration; community halls; libraries; and recreational facilities and change rooms etc).

Like most councils, a majority of the Camden LGA's existing infrastructure was built to 'keep-up' or maintain essential services for a steady population growth.

However, more recently, growth within the Camden LGA has accelerated significantly, creating additional demands on the organisation to manage this growth, and plan for the future maintenance and renewal of the new assets being created.

This Asset Management Strategy formalises the process of providing a framework to guide the financial and physical requirements for the performance of Council's infrastructure assets into the future. The strategy outlines how Council will manage its infrastructure assets. It does not contain detailed technical information, but rather seeks to provide an overview of Council's assets and their sustainable provision. This strategy provides key resource information for users and will be regularly reviewed and updated to improve its data quality and to ensure the accuracy of information.

The overall purpose of asset management is to:

- Manage all assets in a sustainable manner;
- Develop and maintain an integrated asset management system;
- Minimise adverse impacts on asset users; and
- Maintain assets in a cost-effective manner to meet community expectations.

This Asset Management Strategy forms part of a group of documents that assists Council in managing its assets on behalf of the community. These include:

- Asset Management Policy
  Camden Council's Management Policy has been developed to underpin the organisation's Community Strategic Plan with respect to Asset Management.

- Asset Management Plans
  Camden Council has prepared four separate Asset Management Plans covering the typical infrastructure asset base that Council manages. These are:
    - Roads & Transport (Bridges & Culverts; Carparks & Driveways; Footpaths & Cycleways; Kerb & Gutter; Road Furniture; Road Structures, Road Pavement and Road Surface);
    - Stormwater Drainage (Channels; Flood Mitigation; Headwalls; Pipes; Pits and Stormwater Quality Improvement Devices);
    - Open Space (Parks & Natural areas; Sportsgrounds; Playing Courts; Play Equipment; Reserves, Specialised Parks, Fire Trails, park lighting and other Structures); and
    - Buildings (Administration & Depots; Aquatic Centres; Commercial Buildings; Community Facilities; Libraries; RFS/SES facilities and Toilet Blocks).

- Asset Improvement Plans
  Camden Council will sustainably manage and review its operational systems and procedures to:
  - Continually improve the knowledge of the assets the Council owns and manages;
  - Minimise risk through a co-ordinated approach to asset management;
  - Develop a capital works program; and
  - Develop maintenance programs.

  The primary drivers for operational improvement will be the further collection of financial and asset data to enable infrastructure / asset renewal programs to be developed, as well as gaining a more detailed understanding of the resources required to manage the assets over their various lifecycles.

These Plans are being progressively updated, with the latest versions prepared in conjunction with this strategy.

1.2 Objectives of this Strategy

The specific purpose of this strategy is to:

- Define and articulate how the asset categories will be managed to achieve the organisation's objectives;
- Identify current asset management status and issues, including future funding decisions
- Manage risk of asset failure;
- Achieve savings by optimising whole of life (Lifecycle) costs; and
- Support long term financial and other resource planning.

1.3 Key Stakeholders

The key stakeholders that have an interest in Council's assets and how they are managed, are identified below.

Key Stakeholders

Stakeholder	Role Description
Council Officers	Council officers play a role in setting standards and levels of service that meet the needs and service expectations of both residents and visitors to the area. Council officers implement components identified in the asset management plans
Elected Councillors	This stakeholder group includes Councillors and the Mayor for the Council. They are primarily responsible for ensuring that their decisions represent and reflect the needs of the wider community
Residents	Residents are the core users of assets. Their needs, wants and service expectations are conveyed to the Council, which should be reflected in the desired levels of service
Visitors	Visitors are the second largest users of assets, due to their frequency of use. Visitors' wants, needs and service expectations drive development in areas of the highest usage and also commercial areas
Insurers	Insurers have an interest to drive the implementation of systems, which would allow Council to have better knowledge of the condition of assets. This should be reflected in the number of claims made against the asset groups and premium levels.
State Government / State Government Agencies	This stakeholder group also contributes to the setting of service levels and the provision of funding for asset maintenance programs. Representatives of this stakeholder group includes; Roads & Maritime Authority (RMS); Emergency Services; Sport & Recreation; and Utilities Authorities such as Sydney Water and Integral Energy
Federal Government	This stakeholder group contributes to the setting of service levels and the provision of funding for asset maintenance and capital works programs. Representatives of this stakeholder group include; Australian Department of Infrastructure and Regional Development, etc.

1.4 Relationship with Other Plans

The Asset Management Strategy is one of the components of the Resourcing Strategy, linking with the following plans and documents in accordance with the State Government's Integrated Planning and Reporting (IPR) Framework (diagram below).

- Community Strategic Plan
    - Resourcing Strategy
        - Long Term Financial Plan (LTFP)
        - Workforce Management Strategy
        - Asset Management Strategy

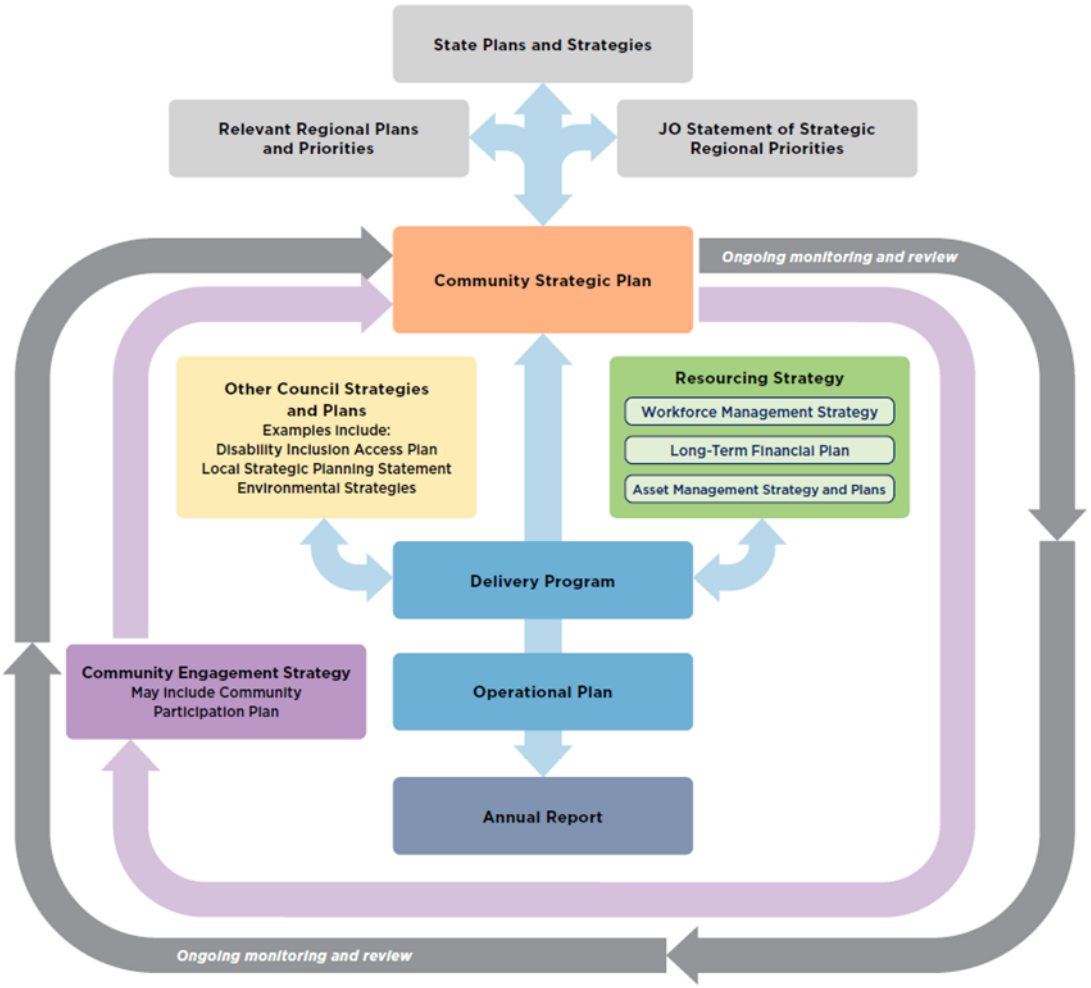


***Figure 1**: The Integrated Planning and Reporting Framework*

Future Demand

1.1 Introduction

Factors impacting on assets include; population growth; changes in demographics; seasonal factors; social and economic factors; agricultural practices; environmental awareness and technological changes. Population growth is not the sole driver for the Council to provide assets. However population growth can create demand for urban expansion and the need for supporting infrastructure and therefore creates a larger number of assets, such as roads, stormwater devices, recreation parks and buildings.

Predicting the annual growth of the LGA in any given year will be difficult and current methods of calculating the growth rely on census data from the past. However, Camden is one of the fastest growing areas in NSW and has grown from 54,000 population in 2011, to a population of over 80,000 (2016), with an estimated growth in population to over 225,000 by 2036. A key objective of demand forecasting is to identify possible locations where future assets may be required given current area trends. Demand forecasting aims to identify factors influencing the demand for an asset, and the associated impact on managing assets, and the utilisation of assets.

1.2 South West Growth Centre

Sydney's North West and South West Growth Centres have been defined as areas which will accommodate 181,000 new dwellings and land for employment for around half a million new residents over the next 25 to 30 years. The South West Growth Centre is within the LGA boundaries of Camden, Campbelltown and Liverpool. Comprising 18 Precincts, it is approximately 17,000 hectares and will focus on the Major Centre of Leppington, be serviced by the South West Rail Link and has capacity for around 110,000 new dwellings.

The following figure (*taken from the NSW Department of Planning's Growth Centre Commission website*[3]) shows the 18 precincts within the South West Growth area.

[3] http://www.gcc.nsw.gov.au/home-3.html

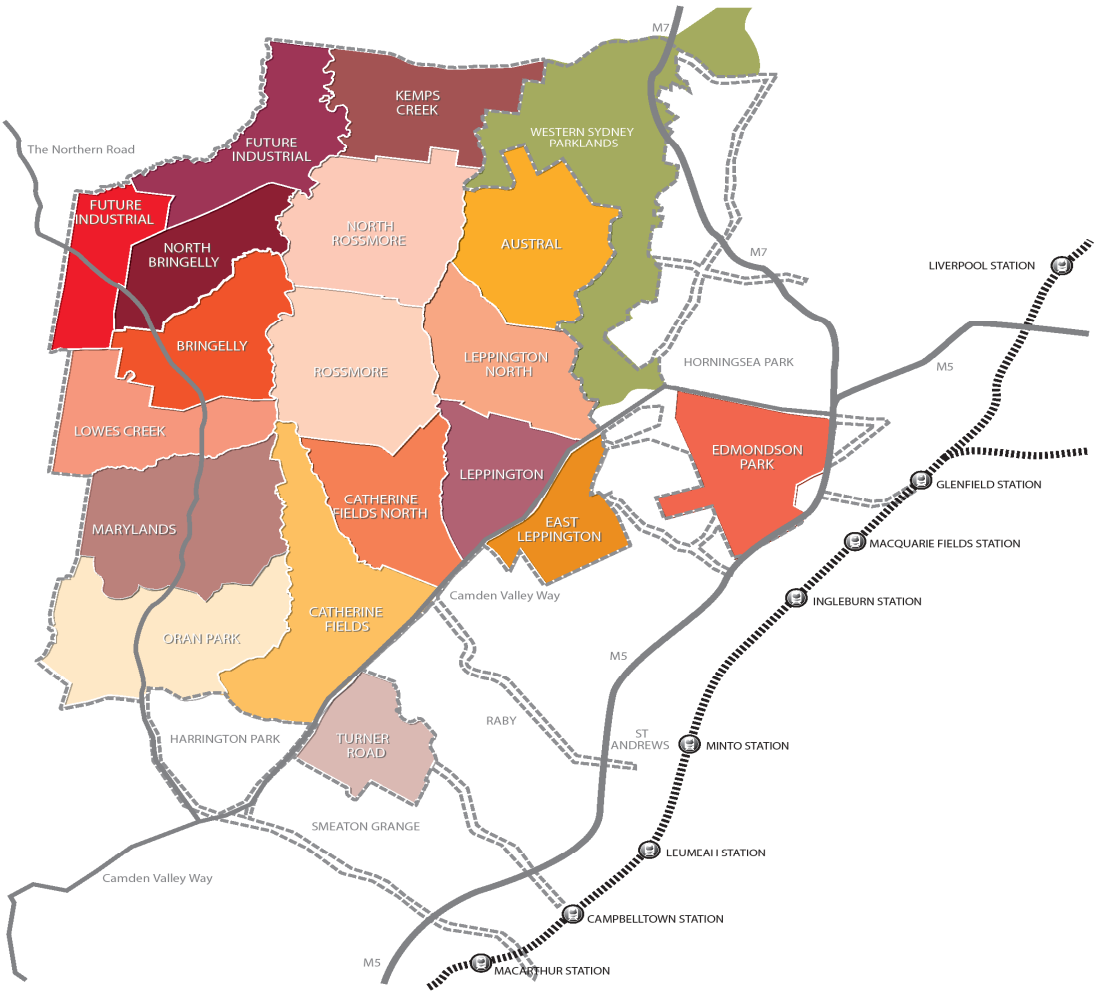


Figure 2: The South West Growth Centre Map

With urban development and population growth of this scale, the Camden LGA faces significant challenges in maintaining its rural character and lifestyle, accommodating this growth and creating a sustainable environment, community and economy for the benefit of our current and future populations.

1.3 Impacts of Trends

The expected growth in population, residential, business and commerce has a direct impact on the demand for services and ultimately the number and size of assets to support those services. Some of the challenges facing Camden Council include:

- The need to maintain our urban fabric – both public infrastructure and older private (heritage) housing / commercial properties;
- Maintenance and rehabilitation of ageing infrastructure;
- Ensuring our town centres provide a strong focus for business and community life;

- Ensuring the ability of public facilities to meet growing demands;
- Increased traffic congestion and associated pollution – key dependence on the motor vehicle;
- Overcrowded or insufficient public transport options;
- Maintain the quality of our environment, including open space and rural settings;
- Appropriate levels of services to the community; and
- Different standards of assets – new versus ageing assets may create perceived 'inequalities' between areas.

The projected increase in population will have a significant impact on the existing and proposed assets of Council. The most obvious impacts will be in the form of increased usage commensurate with the increase in population. The less obvious challenges of future growth demand on assets will be ensuring that the asset base is appropriate and necessary to meet the demands and requirements of the changing LGA profile. These challenges will not only centre on the capacity of the asset but also its appropriateness to provide a service to the community.

The challenges of growth will be managed through a systematic approach of monitoring and coordination.

- Monitoring – the maintenance and renewal needs of the community's infrastructure including impacts of works, accuracy of financial modelling and customer requests &
- Coordination – Coordinating these works with new and upgrade works delivered under Councils Strategies t

1.4 Existing Infrastructure

Camden Council currently manages assets that support an array of Council and community services throughout the LGA, catering for the needs of the existing population and visitors to the LGA. Some of these assets have been planned to cater for part of the growth within the LGA. However in some cases it is neither possible nor practical to expand the existing asset base to cater for the future population and as such demand management measures may need to be put in place.

1.4.1 Funding Gap/Backlog

The Camden LGA is experiencing rapid population growth, changing the area from a predominantly rural Council on Sydney's fringe, to a blend of both urban and rural. This means Council's services and facilities are also changing and expanding to meet the needs of a larger and more urbanised population.

As the Camden area has grown over time, Council has become responsible for an increasing number of community infrastructure items. Council's total asset base has grown by 26% in the past three years, increasing expenditure demands on the maintenance of this infrastructure.

As any kind of physical item ages, it reaches a point where it needs to be renewed in order to operate at an acceptable level. This involves restoring an item back to the condition in which it will function as it was intended, and to extend its life. Asset renewal is different from maintenance in that maintenance is about keeping an item in a satisfactory condition, whereas renewal restores it to a 'good' or 'better' condition once it has deteriorated over time. Asset renewal is also different from asset upgrade or improvement, whereby an asset is improved to a state greater than its original (eg expanding the size of Mount Annan Leisure Centre).

1.5 New Infrastructure

New infrastructure assets will be required to meet the rapid expansion of growth in the Camden LGA. As each new release area and development comes on line, Council requires the installation and/or contribution to the delivery of infrastructure assets located within the 'development' area. Acquiring these assets will require ongoing funding for operational and maintenance expenses over the life of the asset. These future costs need to be identified and considered in developing future operating and maintenance budgets.

Road & Transport and Stormwater Drainage assets are an essential part of each new release / development area, providing roads and stormwater control. Open Space and Buildings assets, are also essential as they provide the 'sense of place' and enable the community to grow and become more 'connected', with people having a sense of belonging.

Camden Council has identified the following provision rates for various infrastructure assets:

Provision Rates – Community and Recreation Facilities

Asset Area	Provision Rate (Est. 3 persons/lot)	Additional Assets*
Footpath & Cycleway	20.00m^2/lot	1,969,231m^2
Kerb & Gutter	16.67m/lot	1,641,026m^2
Road Pavement	58.33m^2/lot	6,564,103m^2
Road Surface	58.33m^2/lot	6,564,103m^2
Stormwater Pipes	8.33m/lot	1,083,077m
Stormwater Pits	1/5 lots	355,556
Open Space (Half active and passive)	2.83 hectares / 1,000 population	724Ha
Sports Grounds	1 / 1,850 population	138
Outdoor Courts (Netball, tennis, basketball)	1 / 1,075 population	238
Athletics track	1 / 75,000 population	3
Leisure Centre	1 / 37,500 population	7
Youth Recreation Facility	89m^2 / 1,000 population	22,784m^2
Multi-purpose Community Centre	42m^2 / 1,000 population	10,752m^2
Community Resource Space (District community centre space)	22m^2 / 100 population	56,320m^2

Branch Library (plus 20% loading for circulation space)	39m^2 + 20% / 1,000 population	11,981m^2

*Based on estimated population growth of 256,000 by 2040
Roads and Stormwater Assets calculation based on typical subdivision in Spring Farm.

1.5.1 Road & Transport Assets

The road network environment has changed significantly in the last several years. With the announcement of the second Sydney Airport at Badgerys Creek by the Federal Government, has allocated $3.6 billion towards road infrastructure improvements servicing the future airport. Within Camden, this has focused on Bringelly Road and The Northern Road upgrades, and grant funding received by Council on the Camden to Narellan road corridor.

Additionally, the State government has been progressing road network improvements on Camden Valley Way and Narellan Road, while the South West Rail Line has been completed to Leppington Station, providing additional commuter access to the Sydney Rail network.

Other major road improvements are being delivered by developers within the new release areas to service the growing population.

Other major traffic and transport infrastructure under consideration include the Outer Sydney Orbital (a combined road and freight corridor), and the extension of the rail network to the future airport and Narellan.

Generally, there will be an increase in terms of footpaths, cycleways, roads and other road infrastructure associated with ongoing growth.

Throughout the life of the strategy the need to recognise the increase in assets such as these will help ameliorate the likely increase in traffic congestion on the road network.

1.5.2 Stormwater Drainage

The major redevelopment areas within the LGA will impact heavily on the Nepean River, Upper South Creek and related tributaries. Development of the Oran Park; Catherine Field and Leppington areas will result in substantial increases in the volume of stormwater runoff generated. However, the intensity and value of development funds a higher standard of stormwater servicing to be implemented than presently exists in older areas.

Council's existing DCPs encourage the recycling of stormwater within development sites (eg. for watering), there will still be a need to substantially upgrade the area's existing stormwater drainage facilities to provide a level of service suitable for the development that is likely to occur. Hence, the demand for new and augmented stormwater management facilities in the area is created solely by the desire to carry out redevelopment. The works for which contributions would be paid include drainage infrastructure,

acquisition of land for drainage reserves and riparian corridors and the provision of pollution control devices.

The Council is also progressing Floodplain Risk Management Plans for the Nepean and Upper South Creek catchments to assess current and future flood risks and identify further improvements.

1.5.3 Open Space

Camden Council currently has over 800 hectares of parks, reserves and sporting facilities. The provision of additional open space facilities is meeting the additional demand generated from expected population increases to the year 2040. In order to ensure the present level of provision of facilities to meet the needs of the incoming population, Council uses the following approach:

- Strategic planning and acquisition of land that contributes to the network of open space currently provided; and
- Continued embellishment of the existing parkland and improvements to the existing public domain (including embellishment of open space land and acquisitions).

The Section 7.11 developer contribution plans, and in particular the work schedule details, identify the major improvement and expansion of parks assets. Whilst these works are not all the future works planned for the parks, they include all major acquisitions to the park network to cater for the future demand needs of the community. Further consideration will need to be given to the mix of active and passive recreational assets particularly given the current demand for sporting fields.

1.5.4 Building Assets

As mentioned above the projected increase in population will have a significant impact on the existing and proposed assets of the Council. Quite often a majority of assets are buildings that either serve the community directly or provide a means for the Council to serve the community. The first types of building above are those classified as community halls; amenity buildings at sporting fields; toilet blocks at parks and libraries in town centres etc.

1.6 Demand Management Strategies

Demand management strategies provide alternatives to the creation of new assets. To meet future demand, the strategies look at ways of modifying customer demands in order to maximize utilization of existing assets. Council will need to review a range of strategies to manage the impact of future demand on the existing assets. These strategies are broken down into the various asset categories.

1.6.1 Road & Transport Assets

Transport strategies include:

- Promote public transport as an alternative mode of transport;
- Encourage non-motorized transport use, such as cycling, walking;
- Improving accessibility to public transport services;
- Supporting and lobbying the State Government to expand the public transport capacity and improve the service frequency and route choice for local residents;
- Conducting community education to promote non-motorised transport as sustainable modes;
- Providing walking and cycling access to public transport interchanges;
- Include simple and easily understood public transport information on the Council's web site
- Support limiting opportunities for through-traffic to invade local roads;
- Support creating more bus lanes and cycle lanes along main roads;
- Promote walking as an alternative method of travel to shops, schools and employment centres;
- Implement the State Government funded projects such as Black Spot, Repair and Rehabilitation Program to reduce traffic accidents and maintain regional roads respectively;
- Increase intensity of development around public transport interchanges.

1.6.2 Stormwater Drainage

Stormwater strategies include:

- Onsite stormwater detention;
- Improvements in water quality control;
- Water sensitive urban design;
- Providing overland flow paths; and
- Implementing stormwater harvesting.

1.6.3 Open Space

Open Space and recreational strategies include:

- Sporting ground and parks booking policy;
- Working with sporting associations rather than individual clubs;
- Multiple use of recreational facilities;
- Use of alternate materials (e.g. use of synthetic surfaces);
- Improved lighting to extend operational hours;
- Analysis of facility requirements and recreation needs;
- Revision of the 'open space strategy'; and
- Encouraging private sector infrastructure.

1.6.4 Building Assets

Building Asset strategies include:

- Accommodation Strategies;
- Facilities Management strategy;
- Facility needs analysis;
- Multiple use of community building facilities;
- Recognition of Community Service obligations; and
- Encouraging private sector infrastructure.

Maintenance and Renewal

1.1 Maintenance

Maintenance is the regular on-going work that is necessary to keep assets operating, including instances where portions of the asset fail and need immediate repair to make the asset operational again. Council considers maintenance to be planned or unplanned.

1.1.1 Planned Maintenance

The following describes Council's approaches to planned maintenance.

Frequency based maintenance is maintenance scheduled periodically. It is required to sustain the design life of the asset or to maintain a performance standard. Programmed maintenance is typically undertaken on assets that are not critical, and have low risks associated with failure. Frequency based maintenance has set performance measures and maintenance activities undertaken are recorded to undertake performance monitoring. For example Council services its open space areas at set frequencies based on the hierarchy of the site, records are kept detailing when each site was serviced and when it is scheduled for its next service. These records form the basis of weekly performance monitoring.

Preventative maintenance is maintenance that can be initiated without routine or continuous checking (e.g. using information contained in maintenance manual or manufacturer's recommendations) and is not condition or performance based. The purpose of this maintenance is to undertake sufficient maintenance activities to reduce the risk of unforeseen failure. Preventative maintenance is undertaken on assets that have high risks or unacceptable loss of service associated with failure.

Routine maintenance is day-to-day operational activities to keep the asset operating (replacement of light bulbs, repairing garden edging, repairing leaking shelters etc) and which form part of the annual operating budget.

1.1.2 Unplanned Maintenance

Corrective maintenance is a task performed to identify, isolate and rectify a fault so that the failed asset can be returned to a condition in which it can perform its intended function. Council considers corrective maintenance as activity-based maintenance and has documented intervention levels, response times (to complete the work from date of issue), work methods and performance measures.

Depending on how critical the failed asset is, corrective maintenance can be either immediate or deferred corrective maintenance.

Unplanned maintenance includes unforeseen failure, vandalism, storm and accidental damage and is identified through customer requests, Council's maintenance crews and routine asset condition inspections. The manner that unplanned maintenance arises is irregular and cannot be predicted, for example damage caused by storms and vandalism. It is therefore necessary to monitor unplanned maintenance activities that cannot be undertaken immediately. Over time, by monitoring the trends of the amount of deferred corrective maintenance Council can optimise its investment or resources required to balance the trend.

Deferred maintenance, i.e. works that are identified for maintenance and unable to be delivered is to be included in the risk assessment process in the infrastructure risk management plan. Maintenance is funded from Council's operating budget and operating grants where available.

Currently some minor asset renewal is undertaken through maintenance budgets. Expenditure on assets need to be categorised with the definitions for Capital Renewal, Capital Expansion, Capital Upgrade and Maintenance.

1.2 Renewal

Renewal expenditure is major work which does not increase the asset's design capacity but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is upgrade/expansion or new works expenditure.

1.2.1 Renewal Demand

The first step of the renewal plan is to forecast the amount of renewal work required 10 years into the future. The information required to achieve this is obtained through modelling of the assets and their estimated deterioration over time.

The challenge for Council is to fund and schedule these works in a uniform annual budget ensuring;

- Uniform resources are maintained
- Budget requirements can be met and

- Delays to renewal treatments do not generate more expensive rehabilitation.

1.3 Condition Rating

Council has prepared its asset register in line with the NSW Office of Local Government's Requirement for Local Government Authorities, and in doing so, document and implement 'fair value' asset valuations. As part of this process Council utilises the Conquest asset system as its Maintenance Management System and Asset Register.

Assets are rated on a 1 to 5 scale to describe their condition, as indicated in the following table.

Asset Condition Definitions

Grade	Condition	% Useful Life remaining	Description
1	**Very Good**	>80%	Sound physical condition. No signs of deterioration. **Only normal maintenance required.**
2	**Good**	80% - 60%	Acceptable physical condition; minor deterioration visible, no short-term failure risk. Minor defects only. **Only minor work required, if any.**
3	**Fair / Satisfactory**	60% - 40%	Acceptable physical condition; minimal short-term failure risk but potential for deterioration in long-term. Minor defects only. Minor components or isolated sections of the asset may need replacement or repair now but asset functions safely at adequate level of service. Work may be required but asset is serviceable. **Maintenance is required to restore the asset to an acceptable level of service.**
4	**Poor**	40% - 20%	Significant deterioration evident. Failure likely in short-term. Likely need to replace most or all of asset. No immediate risk to health or safety but works required to ensure asset remains safe. Substantial work required in short-term, asset barely serviceable. **Asset requires renewal – work to be programmed.**

5	**Very Poor**	<20%	Failed or failure imminent. Immediate need to replace most or the entire asset. Health and safety hazards exist which present a possible risk to public safety, or asset cannot be serviced/operated without risk to personnel. Asset is effectively unserviceable. **Major work or replacement required urgently.**

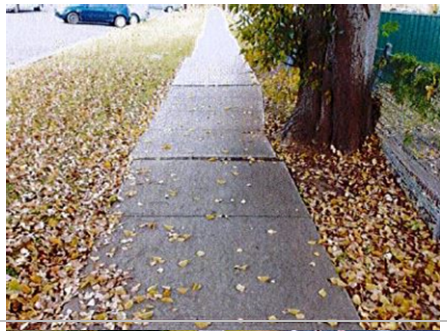
The above % Remaining Useful Life figures are based on a simple straight-line model, which assumes that the asset deteriorates uniformly over its life.

An alternative approach uses a more complex model to model the actual deterioration of the asset that matches its consumption over time. Council is currently investigating this model for future implementation if it provides additional benefits.

To illustrate what asset conditions may refer to in practice the following includes photos of various conditions of concrete footpath. Other assets are more complex as they can be far larger and include various components with a condition rating being a function of these variable. As such, other illustrations have not been included.

An Example of Asset Condition Descriptions

Footpaths	Example Photograph
Condition 1 New / Very Good Condition	
Condition 2 Good Condition	

Condition 3 Fair/Satisfactory Condition	
Condition 4 Poor Condition	
Condition 5 Very Poor / Failed Condition	

Levels of Service

1.1 Introduction

Levels of Service (LOS) provide the basis of the life cycle management strategies and works programme identified within the Asset Management Plans. They support the organisation's strategic goals and need to be based on community expectations, technical needs and statutory requirements. The levels of service will be continuously refined to match the expectations of Council's customers, and require a clear understanding of community needs, expectations, preferences and customers' willingness to pay for any increase in the levels of service.

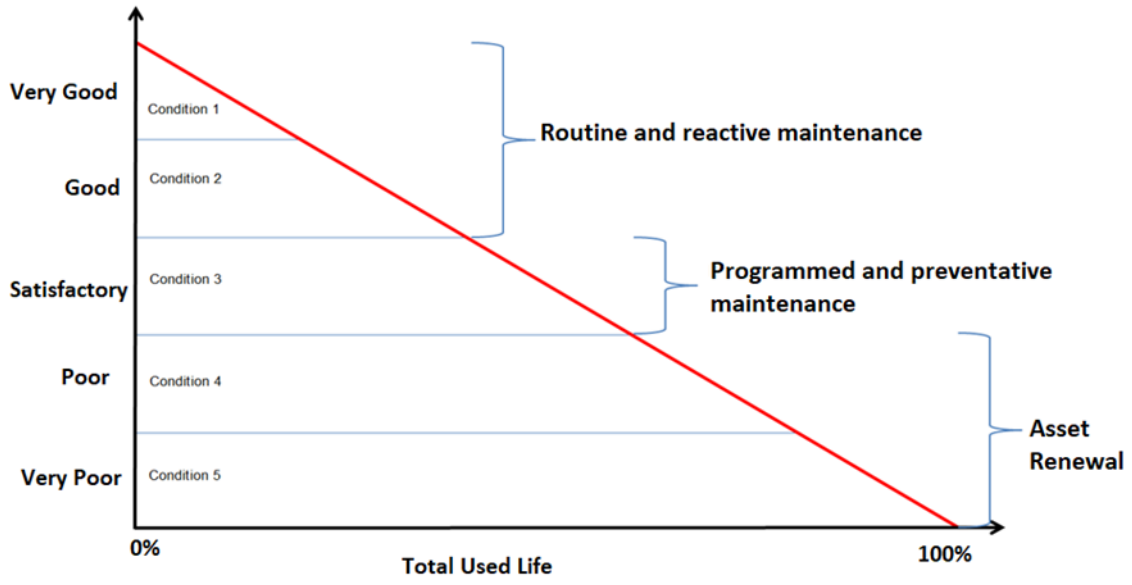
Understanding LOS is vital for the lifecycle management of assets. They will determine what type of assets will be provided; how often they will be maintained; and when assets will be rehabilitated or replaced. LOS defines the assets' performance targets in relation to reliability; quantity; quality; responsiveness; safety; capacity; environmental impacts; comfort; cost / affordability and legislative compliance.

1.2 Maintenance and Renewal Levels of Service

A key issue in the management of assets is when to intervene in the lifecycle of the asset to ensure that the asset stays in reasonable condition for as long as possible, to ensure that the asset continues to provide services to the community.
Without intervention, the asset will gradually deteriorate, with its condition ultimately reaching a failed state, where the asset is no longer serviceable and needs to be replaced.

In order to keep the asset operational for as long as possible, it will be require intervention to initially undertake maintenance of the asset to keep it in good or fair condition for as long as possible, while also undertaking intervention prior to failure to renew the asset at the optimum time to maintain services to the community.

The following graph indicates the general (industry standard) approach to these activities:



Generally, programmed maintenance is required to be undertaken on an asset when it reaches Condition 3 (Satisfactory Condition), while some reactive and routine maintenance may need to be undertaken while the asset is in very good or good condition (such as environmental damage through tree roots lifting footpaths, cleaning of drainage pits from storm debris, or repair of damage caused by vehicles).

The renewal of an asset is also generally programmed to occur prior to failure, which normally means that intervention occurs while the asset is in poor condition. Different intervention levels can be assessed, such as the end of Poor Condition (remaining life of say 20%), or can be higher, such as at remaining life of 30%. The higher the intervention level, the higher the cost to renew assets at that intervention level.

1.3 Levels of Service Requirements

Levels of Service are based on a combination of customer expectations, legislative and technical requirements. LOS is also governed by strategic and corporate goals of the organisation which should reflect the requirements listed above. In the case of assets, Camden Council's customers are many and varied; they include ratepayers, service authorities, pedestrians, residents, businesses and visitors to the Council area.

Council's customers value reliability, quality, capacity and good condition of the asset infrastructure network. These customer values are reflected in the Council's strategic direction. The specific Asset Renewal LOS adopted for all assets are:

- Community: All assets are maintained to satisfactory condition or better
- Technical: 95% of all assets are rated at satisfactory or better.

Within this target, critical and higher risk assets such as high-profile buildings, major road links, bridges and detention basins would be maintained to a higher level, to achieve at least a 'good' condition assessment.
This approach will provide an interim response to the community with a clear indication of how council will maintain its assets.

For Long-Term Financial Planning purposes (10-year goal) there are two LOS Scenarios based on the adopted LOS above.

Scenario 1 (Technical):	95% of all assets maintained to Satisfactory Condition or better
Scenario 2 (Community):	100% of all assets maintained to Satisfactory Condition or better

Council has adopted the technical Level of service; Scenario 1.

1.4 Strategic and Corporate Goals

Council's goal in managing infrastructure assets is to ensure assets perform and meet the required level of service in a sustainable manner for present and future stakeholders, so that the services of Council are delivered in an efficient manner. The key elements of infrastructure asset management are:

- Demonstrating responsible stewardship;
- Taking a life cycle approach to asset ownership;
- Defining the infrastructure assets physically and financially;
- Providing defined LOS and monitoring the performance against both LOS and community service expectations;
- Understanding and meeting the demands of growth through demand management and infrastructure investment;
- Managing risks associated with asset failure; and
- Support long term financial planning.

Camden Council's goals and objectives from the Community Strategic Plan that impact Asset Management are shown in the following table:

Council Goals and Objectives

Key Directions	Objectives
Welcoming – embracing our vibrant and diverse community	W2: Our Community is healthy and active with access to open space, facilities and services that support wellbeing W3: Our Community has opportunities to design and build safe and inviting places for all to enjoy
Connected – strong and integrated connections between our people and our services	C2: Our public spaces and places are vibrant and accessible C3: Our transport network is efficient, safe and integrated – locally and regionally
Balanced – providing sustainable and responsible solutions that enhance our heritage and natural environment	B1: Our natural environment and waterways are protected, maintained and enhanced for community enjoyment B2: Our environment is integrated into the design of our towns, villages, suburbs and places B3: We have confidence that our climate impacts and risks are being managed
Leading – A successful advocate for our people and our places	L1: Council is a leading council in the Western Parkland City, influencing metropolitan planning and decision making L3: Our Council decisions are informed, accountable and transparent

Regular assessment of condition levels of assets enables profiles of the deterioration of assets to be developed and refined. It also enables assessments to be made of the costs to reinstate assets to a reasonable condition. Asset condition assessment is particularly useful in identifying areas where there is insufficient maintenance, or where additional expenditure is required.

1.5 Desired Asset Outcomes

The following tables define an approach to identifying an overall outcome approach to desired levels of service for assets generally and provide a framework to demonstrate actual outcomes for various elements of asset management as Council further develops its asset and financial management capabilities.

The tables identify outcomes that reflect common expectations, while also providing information on Council's current progress in achieving these outcomes.

Council continues to develop its asset management capabilities, including financial tracking, and ultimately will be able to improve the documentation of its actual service levels, and identify gaps in provision that will need to be addressed through improved systems and processes, as well improved funding allocations.

1.5.1 Desired Outcomes – Roads and Transport

DESIRED OUTCOMES – ROADS AND TRANSPORT				
Roads Outcomes – Renewal				
Objective	**Description**	**Measure**	**Actions**	**Status**
Lowest Life Cycle Cost	To provide infrastructure required to underpin roads and transport services in the most economic and sustainable manner.	Renewal Plan requirements catered for in Council's Long Term Financial Plan	Undertake annual review of renewal modelling. Enhance traffic modelling capability to assess future demands.	Funding requirement is calculated annually based on Moloney Modelling. Currently renewal funding is permitting a high level of renewal performance.
Roads Outcomes – Maintenance and Operations				
Lowest Life Cycle Cost	To provide infrastructure required to support roads and transport services in the most economic and sustainable manner.	Performance monitoring of maintenance	Preparation of a Roads and Transport Maintenance Plan outlining performance measures for planned maintenance, prioritise unplanned maintenance and monitor deferred maintenance.	Funding requirement is calculated annually based on Moloney Modelling. Graffiti – offensive graffiti removed within 48 hours, other graffiti within 15 days.

Roads Outcomes - Aesthetics				
Public Domain	To provide vibrant and safe places to meet	Develop Public Domain Plans	Identify service gaps for consideration into Capital Works Program.	Streets Design Guide and Urban Design Framework Implementation plan in progress
Roads Outcomes – Minimum Standard				
Public Image	To Promote Camden's image through provision of high quality roads and transport infrastructure	Positive media and public comment	Monitor comments made in the media and customer satisfaction surveys.	Ongoing.
Pedestrian Access	Ensure an appropriate provision of all weather pedestrian access.	Provision in accordance with Council's adopted Pedestrian Access Mobility Plan (PAMP).	Implement Council's annual footpath program identified from the PAMP.	PAMP program adopted 2014, being implemented on an annual priority basis.
Carparking Availability	Ensure standard provision of parking facilities to Council, commercial and community facilities	Car Parking Development Control Plan / Engineering Guidelines	Monitor parking assets to determine locations where provision is lacking. List for funding consideration into the Capital Works Program.	Formalisation of car parks such as Rotary Cowpasture Reserve Park, additional Shoulder Carparking such as Jack Nash Reserve
Emergency Services	Provision of flood evacuation routes.	Flood proof 100 year flood event	Assess waterway crossings against desired flood protection and identify projects for funding consideration into the Capital Works Program.	In progress in conjunction with development of Floodplain Risk Management Plans for Nepean River and Upper South Creek.

Standard of Roads	To provide roads at contemporary standards.	Development and Technical Guidelines	Monitor the road network in conjunction with future renewal programs to determine roads that fall below guideline standards for consideration into the Capital Works Program	Ongoing
Signs and Lines	Ensure transport network is appropriately signed and marked to control movements safely.	Existing sites /intersections comply with standards	Monitor network and determine gaps for inclusion into enhancement program	Ongoing
Bus Stops	Provide shelters and seating to support public transport users.	Travel distances for public transport users. Ensure targets and standards of disability access are achieved.	Identify locations throughout the Camden LGA that have increased walking distance to public transport assets and list projects for consideration in the Capital Works Program. Assess the public transport network in conjunction with external public transport providers and identify locations that require additional bus facilities and list projects in the Capital Works Program. Undertake an	In progress through implementing new bus infrastructure in new release areas, and new advertising bus shelter contract in older areas. Council currently meets the target for disability access provision.

			audit of bus stops to determine enhancements required to achieve targeted provision of disability access.	
Roads Outcomes – Safety				
Pedestrian Safety	To provide safe access to Council's transport network for all pedestrians.	Number of pedestrian accidents. Number of successful claims. Number of trip hazards identified.	Annually review accident information and identify solutions to pedestrian blackspots and list projects in the Capital Works Program. Apply for Federal Blackspot funding. Review, develop and implement pedestrian plans as part of commercial centres improvements. Monitor insurance claims and include results into Risk Management Plan. Undertake Pedestrian Safety Audit of roads surrounding schools. Monitor the number of trip hazards, make safe where funds permit and develop footpath maintenance plan.	Ongoing - annual review of crash data to identify Blackspot funding options and grant opportunities. Ongoing Pathway Trip Hazard inspection process implemented High risks hazards addressed immediately. Low risk hazards addressed via ongoing preventative program Ongoing PAMP program adopted in 2014 identifies priority footpath projects around schools, while ongoing review is undertaken on school crossings, and relevant grant applications made.

Cyclist Safety	To provide safe access to Council's transport network for all cyclists.	Number of Cyclist accidents. Number of successful claims.	Annually review accident information to identify blackspots. Apply for Federal Blackspot funding. Monitor insurance claims and include results into Risk Management Plan. Monitor the number of trip hazards, make safe where funds permit and develop cycleway maintenance plan.	New Bike Plan in preparation. Annual review of crash data to identify Blackspot funding options is undertaken.
Motorist Safety	To provide safe access to Council's transport network for all motorists.	Number / Severity of motorist Accidents.	Improve safety for heavy vehicles. Reduce risk behaviours. Annually review accident information and identify blackspots and include results for consideration into the Capital Works Program. Seek available external grants funding sources. Monitor insurance claims and include results into Risk Management Plan. Undertake Safety	Council works regularly with review of heavy vehicle routes in conjunction with the National Heavy Vehicle Regulator and RMS. Ongoing Road Safety Education program with a range of projects identified and implemented. Ongoing monitoring of crash data and locations to identify eligible Blackspot projects on an annual basis.

			Audits during design stage for large projects.	
Roads Outcomes – Accessibility				
Access ramps, and accessible parking	Provide equity of access to Council's roads and transport infrastructure	Provision of access to the road network in accordance with Engineering Specifications, Disability Discrimination Act and Development Control Standards	Undertake audits of Council roads infrastructure and implement recommendations through inclusion in the Capital Works Program	Review of accessible parking is being implemented for Camden Town Centre. Other improvements are undertaken in response to customer requests.
Roads Outcomes – Capacity				
Road network capacity	Roads are able to cope with increased traffic volumes	Monitor road network performance through Camden Traffic Model and observations / community issues	Regularly update Traffic Model, monitor road network performance and identify issues. Identify grant funding opportunities for road network improvements. Liaise with RMS on State Road network performance. Identify alternative transport options and update the Integrated Transport Strategy. Advocate for improved public transport.	Council regularly liaises with TfNSW on observed traffic congestion issues, and has lobbied for major network improvements such as Badgally Road / Gregory Hills Drive link, and early delivery of Spring Farm Parkway. Lobbying continuing on provision of rail services to the growth areas and Narellan, and Badgerys Creek Airport.

1.5.2 Desired Outcomes – Drainage and Stormwater

DESIRED OUTCOMES – DRAINAGE AND STORMWATER				
Drainage Outcomes – Renewal				
Objective	**Description**	**Measure**	**Actions**	**Status**
Lowest Life Cycle Cost	To provide infrastructure required to underpin drainage services in the most economic and sustainable manner.	Renewal Plan requirements catered for in Council's Long Term Financial Plan	Undertake annual review of renewal modelling.	Funding requirement is calculated annually based on Moloney Modelling. Currently renewal funding is permitting a high level of renewal performance
Drainage Outcomes – Maintenance and Operations				
Lowest Life Cycle Cost	To provide infrastructure required to support drainage services in the most economic and sustainable manner.	Performance monitoring of maintenance	Preparation of a Drainage Maintenance Plan outlining performance measures for planned maintenance, prioritise unplanned maintenance and monitor deferred maintenance.	Funding requirement is calculated annually using Moloney Modelling, Existing Data and Growth information. Subdivision Growth impact on Maintenance of GPT's. GPT Handover to include comprehensive audit results
Drainage Outcomes - Aesthetics				
Stormwater drainage corridors (riparian lands)	To provide attractive flood relief corridors.	Customer satisfaction	Undertake customer satisfaction survey.	Limited programmed maintenance.
Drainage Outcomes – Capacity				
Stormwater drains	Ensure appropriate provision of stormwater drainage to cater for conveyance of local flows.	Provision in accordance with Engineering Development Guidelines.	CCTV Inspections included in Council's Inspection Regime Undertake city wide audit of stormwater drainage and identify locations where provision is below current	New facilities are delivered based on industry standard criteria and included in Council's Engineering Specification. Review of existing facilities has been identified as a future task to identify current levels of

			design standards. List required upgrades for funding consideration into the Capital Works Program.	service.
Flood Mitigation	Ensure appropriate provision of flood mitigation structures.	Mitigation provision in accordance with NSW Floodplain Development Manual.	Undertake flood studies and identify locations where provision is lacking. List required upgrades for funding consideration into the Capital Works Program.	Floodplain Risk Management Plans and Studies in progress for Nepean River and Upper South Creek.
Stormwater drainage corridors (riparian lands)	To manage vegetation to maintain required flood capacity	Performance monitoring of maintenance	Preparation of a Drainage Maintenance Plan outlining vegetation limits & planned maintenance program. Monitor deferred maintenance.	Limited programmed maintenance.
Drainage Outcomes – Safety				
Flood Evacuation	Provision of safe flood evacuation routes.	All identified flood evacuation routes are not inundated in a Probable Maximum Flood event.	Dam Safety Emergency Plan to be developed for prescribed dam. Comply with Dam Safety Committee guidelines and prescribed dam meets safety requirements.	Dam Safety Plan and Maintenance Plan Drafted for adoption Lake Yandelora (Council's only prescribed dam)

Drainage Outcomes – Environment				
Aquatic Ecosystem health	Ensure appropriate provision of water quality.	Provision in accordance with Development Control Plans, water quality/stability targets.	Undertake testing of water quality/stability measures and identify locations where water quality targets are not being met. Undertake a condition assessment of waterways and identify where rehabilitation is required. List required upgrades for funding consideration into the Capital Works Program.	Ongoing

1.5.3 Desired Outcomes – Open Space

DESIRED OUTCOMES – OPEN SPACE				
Open Space Outcomes – Renewal				
Objective	**Description**	**Measure**	**Actions**	**Status**
Lowest Life Cycle Cost	To provide infrastructure required to underpin open space infrastructure in the most economic and sustainable manner.	Renewal Plan requirements catered for in Council's Long Term Financial Plan	Undertake annual review of renewal modelling.	Funding requirement is calculated annually based on Moloney Modelling.
Open Space Outcomes – Maintenance and Operations				
Lowest Life Cycle Cost	To provide infrastructure required to provide community services in the most economic and sustainable	Performance monitoring of maintenance	Preparation of an Open Space Maintenance Plan outlining performance measures for planned maintenance,	Funding requirement is calculated annually using Moloney Modelling, Existing Data and Growth information. Mowing:

	manner.		prioritise unplanned maintenance and monitor deferred maintenance.	Sports fields and surrounds – undertaken weekly Other areas – 3 weekly Graffiti – offensive graffiti removed within 48 hours, other graffiti within 15 days. Playing fields renovated on an annual basis. Growth in subdivisions is having an immediate impact on mowing and maintenance demands for new parks.
Open Space Outcomes - Aesthetics				
Landscaping	To provide landscaped areas that integrate well with the functional elements of the land to develop strong identity and pleasing visual amenity.	Landscaping guidelines.	Prepare program of landscaping works for inclusion into the Capital Works Program	Landscaping guidelines under development
Open Space Image	To promote Camden's image through provision of high-quality open space infrastructure	Customer Satisfaction	Review Customer Satisfaction outcomes	To be considered further in conjunction with levels of service review.

Open Space Outcomes – Minimum Standard				
Passive Recreation Areas	Provision of an appropriate hierarchy and variety of open space.	Parks managed in accordance with the Management Plan	Progressively complete actions identified in the Management Plan	Plan of Management currently under review.
Sportsgrounds	Provision of appropriate hierarchy and variety of sportsgrounds.	Sportsgrounds managed /maintained in accordance with the Sportsgrounds Plan of Management	Progressively complete actions identified in the Sportsgrounds Plan of Management.	Plan of Management currently under review.
Bushland Areas	Provision of quality bushland areas.	Bushland Areas conservation, rehabilitated in accordance with Bushland Plan of Management.	Progressively complete actions identified in the Bushland Plan of Management.	Plan of Management currently under review.
Facilities	Provision of diverse recreational facilities.	Recreational facilities provided/managed in accordance with the Open Space and Recreation Plan.	Progressively complete actions identified in the various Plans of Management	Plan of Management currently under review.
Playgrounds	Provision of a hierarchy of playgrounds.	Playgrounds provided in accordance with Playground Strategy/policy.	Further develop the Playground Strategy. Audit existing provision against target set in Playground Strategy.	Plan of Management currently under review.
Paths and cycle ways	Ensure an appropriate provision of all-weather	Access provided in accordance with	Implement Council's annual footpath program identified from	PAMP program adopted 2014, being implemented on an annual priority basis.

	pedestrian and cycle access.	Australian Standards for accessibility.	the PAMP. Complete the review and update of Council's Bike Plan	
Open Space Outcomes – Safety				
Secure open space sites	To protect the community and infrastructure from unauthorised vehicle use.	Provision of physical barriers to unauthorised vehicle use whilst maintaining access for service vehicles.	Preparation of fencing and lighting guidelines and standards.	Landscaping guidelines under development.
Emergency Services	To provide access for emergency vehicles to Council's open space areas.	All sporting grounds have direct access to playing surfaces for emergency vehicles.	Conduct an audit and document existing emergency services access arrangements. Identify areas for improvement and list on Capital Works Program.	No formal audit has been completed, but emergency access is provided to all facilities, and forms part of the design of new facilities.
User Safety	To provide safe access to Council's Open Space network.	Number / Severity of Accidents	Monitor 5 year rolling average of reported accidents / insurance claims.	Reactive only based on reported incidents
Open Space Outcomes – Accessibility				
Carparks	Ensure adequate provision of off street parking facilities to Council reserves	Provision of parking complies with Development Control Standards	Assess current level of provision of parking for Council services, identify gaps and develop improvement program.	Ongoing
Connectivity	Provide pedestrian / cyclist networks that connect open	Connectivity between non-vehicular recreational routes and	Audit existing provision of recreational pedestrian /cyclist networks,	PAMP program adopted 2014, being implemented on an annual priority basis.

	space areas to each other and public transport.	commuter routes.	identify areas of improvement and list for consideration in Capital Works Program.	New Bike Plan in in preparation.
Wet Weather Access	Provide open spaces that can be utilised all year round with minimal disruption.	Open space areas are reopened for use as soon as practicable after wet weather.	Identify grounds that tend to take longer to reopen and investigate available solutions. List in Capital Works Program for funding consideration.	Reactive only based on reported incidents
Open Space Outcomes – Adaptability				
Multi-Purpose Facilities	Wherever possible provide open space facilities that may be adapted for other uses to meet changes in demand.	Maximum utilisation of existing facilities.	Identify facilities that are at capacity and have potential for multiple uses. List improvements for consideration in the Capital Works Program.	New facilities are designed on this basis. Reactive only based on requested use for existing facilities.
Open Space Outcomes – Provision				
Adequate provision of open space opportunities.	Provision of an appropriate level of passive recreational areas to meet demand.	Benchmark existing provision against other Local Government Areas. Benchmark existing provision against demand /utilisation.	Undertake benchmarking Develop framework to monitor utilisation /demand. Identify redundant capacity and improvement programs.	New facilities are delivered based on industry standard criteria and included in Council's Section 7.11 Developer Contribution Plans. Review of existing facilities has been identified as a future task to identify current levels of service.

1.5.4 Desired Outcomes – Buildings

DESIRED OUTCOMES - BUILDINGS				
Buildings Outcomes – Renewal				
Objective	**Description**	**Measure**	**Actions**	**Status**
Lowest Life Cycle Cost	To provide infrastructure required to underpin building services in the most economic and sustainable manner.	Renewal Plan requirements catered for in Council's Long Term Financial Plan	Undertake annual review of renewal modelling.	Funding requirement is calculated annually based on Moloney Modelling.
Buildings Outcomes – Maintenance and Operations				
Lowest Life Cycle Cost	To provide infrastructure required to provide community services in the most economic and sustainable manner.	Performance monitoring of maintenance	Preparation of a Building Maintenance Plan outlining performance measures for planned maintenance, prioritise unplanned maintenance and monitor deferred maintenance.	Funding requirement is calculated annually using Moloney Modelling, Existing Data and Growth information. Graffiti – offensive graffiti removed within 48 hours, other graffiti being addressed within 15 days.
Buildings Outcomes - Upgrade and New				
Public Domain	To provide vibrant and safe places to meet	Develop Public Domain Plans	Identify service gaps for consideration into Capital Works Program.	Public Domain works being delivered as part of ongoing growth in new release areas. Public Domain plans are currently being developed at Camden and Narellan Centres.

Buildings Outcomes – Minimum Standard				
Libraries	Ensure standard provision of library facilities to the community	Library quality is consistent with the building importance levels.	Undertake audit of libraries to determine locations where new facilities, modifications, extensions and refurbishments are required. List required upgrades for funding consideration into the Capital Works Program.	New facilities being delivered as part of ongoing growth in new release areas. Existing library buildings have yet to be reviewed.
Amenities	Provision of appropriate amenities to open space, community buildings and sporting facilities	Provision of appropriate amenities to open pace, community buildings and sporting facilities Amenities quality and size is consistent with the site use and patronage.	Undertake audit of Council's amenities buildings to determine locations where new facilities, modifications, extensions and refurbishments are required. List required projects for funding consideration into the Capital Works Program.	New facilities being delivered as part of ongoing growth in new release areas. Existing amenities have been reviewed for renewal, maintenance and limited upgrade works.
Leisure Centre's	To provide Leisure Centre's at a modern versatile standard.	Leisure centre quality and size is consistent with the site use and patronage.	Undertake audit of leisure centres to determine the condition and the locations where new facilities, modifications, extensions and refurbishments are required.	New facilities being delivered as part of ongoing growth in new release areas. Upgrades currently in progress at Mt Annan Leisure Centre, including renewal of the older elements of the centre.

Community Centre's	Ensure standard provision of community centre facilities to the community	Community centre quality and size is consistent with the site use and patronage.	Undertake audit of Community Centres to determine the condition and locations where new facilities, modifications, extensions and refurbishments are required. List required projects for funding consideration into the Capital Works Program.	New facilities being delivered as part of ongoing growth in new release areas. Existing facilities have been reviewed for renewal, maintenance and limited upgrade works.
Heritage	The protection of heritage buildings.	Heritage building management meets the requirements of the Heritage Act 1997	Review heritage building audit to assess management against the Heritage Act. List any projects for inclusion into maintenance program.	Existing facilities have been reviewed for renewal, maintenance and limited upgrade works.
Arts and Cultural	Provide buildings that support and promote the arts and cultural development opportunities.	Arts and Cultural facilities are consistent with site use and meet community requirements.	Undertake audit of Arts & Cultural facilities to determine the condition and locations where new facilities, modifications, extensions and refurbishments are required. List required projects for funding consideration into the Capital Works Program.	Existing facilities have been reviewed for renewal, maintenance and limited upgrade works.

Operational	Provide functional buildings to support Council's operations.	Buildings are adequate to support Council operations.	Through consultation with operational staff establish proposals where new facilities, modifications, extensions and refurbishments are required. List required projects for funding consideration into the Capital Works Program.	Existing facilities have been reviewed for renewal, maintenance and limited upgrade works. Specific funds not provided.
Buildings Outcomes – Safety				
Fall protection	To provide safe access to Council buildings roofs.	All Council buildings have safe working arrangements to areas with difficult access.	Install anti-fall devices to Council buildings and identify projects for consideration into the Capital Works Program	Existing facilities have been reviewed for limited upgrade works.
Emergency Service	To provide safe methods of construction	Management of Emergency and Fire Service assets are in accordance with the BCA and Australian Standards.	Undertake annual Fire Service monitoring and maintenance.	Annual Fire Service inspections undertaken.
Anti-slip flooring	To provide safe access and passage through Council's buildings for users.	Flooring and anti-slip measures for Council buildings are in accordance with Standards	Undertake anti-slip measure audit of Council buildings and identify projects for consideration into the Capital Works Program	Existing facilities have been reviewed for limited upgrade works.

Buildings Outcomes – Accessibility				
Access ramps, accessible toilets and accessible parking	Provide equity of access to Council's building facilities	Provision of access to Council buildings in accordance with Disability Discrimination Act and Development Control Standards	Undertake audits of Council buildings and implement recommendations through inclusion in the Capital Works Program	Existing facilities have been reviewed for limited upgrade works.
Buildings Outcomes – Adaptability				
Dual function Buildings / Rooms	Ensure designs allow for variety in activities and use of facilities.	Council's buildings support the requirements of the communities changing needs.	Review the use of Council buildings and plan the best types of buildings to service the community.	New facilities being delivered as part of ongoing growth in new release areas to have adaptive use.
Buildings Outcomes – Comfort				
Heating and Cooling	Ensure a comfortable environment through good ventilation and air conditioning.	Council's buildings satisfy the occupants expectations	Review the type of buildings, the use of the building and current facilities	New facilities being delivered as part of ongoing growth in new release areas to have air-conditioning. Existing facilities yet to be assessed.
Buildings Outcomes – Capacity				
Provision of facilities	Buildings are adequately sized to accommodate the community.	Review current use of buildings and model capacity trends.	Continuous monitoring of venue numbers. Identify locations that have insufficient capacity.	New facilities being delivered as part of ongoing growth in new release areas to suit current standards. Existing facilities yet to be formally assessed.

Lifecycle Strategy

1.6 Introduction

The lifecycle strategy focuses on economic and physical management options and strategies from initial planning through to the disposal stages of an asset. Lifecycle management aims to develop decision support information, to model future asset maintenance and renewal requirements and compare these predictions with historical expenditure trends.

To model the lifecycle of assets will require the input of data including asset economic life, estimates of remaining life, average expenditure and asset replacement costs. The effective economic life of any asset is linked to the maintenance carried out on that asset during its life span.

Any estimate of economic life of an asset assumes a certain level of maintenance in order to achieve that life but will ensure the asset condition does not deteriorate ahead of its time. Maintenance activities will not result in an increase in the economic life of an asset. Renewal activities are carried out so as to extend the economic life of an asset. Therefore the asset net book value will increase as a result of each renewal activity as the condition of the asset is restored to better reflect its original condition. Asset renewal should be carried out at the appropriate time as delays in some cases may cause rapid deterioration and as a result, increase the cost for renewal works.

Camden Council maintains its Asset Registers in the Conquest System for the management of its asset data including section parameters, classes, condition details, treatment details and dates. This data is also available in a Geographical Information System (GIS) format which allows users the flexibility to graphically identify the location of assets as well as draw on the asset information from a database file.

This strategy includes assets in the following asset categories:

- Roads & Transport;
- Stormwater Drainage;
- Open Space; and
- Buildings

Asset useful life used to inform asset management modelling and practices are as accepted by industry standards.

1.7 Asset Hierarchy

An asset hierarchy allows Camden Council to establish a framework for segmenting an asset base into appropriate classifications. The asset hierarchy can be based on asset function, asset type or a combination of the two. These relationships can also help to facilitate the customer-determined data collection for component or equipment movement (play equipment etc), asset maintenance, and cost for individual assets and any groupings of assets.

Camden Council has set its asset hierarchy structure in the following descending form:

Asset Hierarchy

Hierarchy Name	Definition
Asset Class	A logical grouping of assets at its highest functional level within the asset hierarchy
Asset Category	A collection of assets within an asset class that forms the asset class
Asset Sub-Category	The lowest level of grouping for similar assets or similar assets that provide similar services
Asset Type	The most general group of asset types within an asset class that allows for reporting of like asset sub-categories
Asset Component	The distinct elements that comprise an individual asset. Components have an independent physical or functional identity and can be replaced without changing the identity of the asset. Components have differing specific attributes such as life expectancy and maintenance requirements. Identification of asset components can range from individual replaceable parts through to entire systems

By establishing the hierarchy model, it becomes clear how certain components of an asset item can influence the collective lifecycle costs for an asset class. It also helps to establish effective risk management tools or regimes for the same component across different asset class / groups and types.

1.8 Lifecycle Definitions

In order to understand the lifecycle of assets, it is important to explore some terminology and definitions. This section of the asset management strategy will discuss how certain asset management words are utilized throughout the document.

Life Cycle costing is defined in the *Australian Standard AS/NZS 4536:1999 Life Cycle Costing – An Application Guide* as a "process to determine the sum of all expenses associated with a product or project, including acquisition, installation, operation, maintenance, refurbishment, discarding and disposal costs"

The Standard also defines several phases in the life cycle of asset. These are investigated and aligned with the International Infrastructure Management Manual 2006[4] in the table below:

[4] *International Infrastructure Management Manual Version 3, the Association of Local Government Engineering New Zealand Inc (INGENIUM) and the Institute of Public Works Engineering Australia (IPWEA), 2006.*

Lifecycle Definitions

Activity	Description
Acquisition	Acquisition includes – identification, concept, preliminary, detailed design and development, construction and transfer of ownership of an asset
Capital Works	The creation of new assets or an increase in the capacity of existing assets beyond their original design capacity or service potential
Disposal	The cost of decommissioning the structure at the end of its life, which includes all activities necessary to dispose of decommissioned assets
Maintenance	All actions for works or actions necessary for retaining an asset as near as practical to an acceptable condition, but excluding refurbishment or renewal. These works do not add to the value of the asset. In general maintenance falls into two broad categories: 1. Planned (proactive) maintenance planned to prevent asset failure; and 2. Unplanned (reactive) maintenance to correct asset malfunctions and failures as required, such as emergency repairs. A key element of advanced asset management planning is determining the most cost-effective mix of planned and unplanned maintenance.
New Works	New work is the same as Capital Works i.e. money spent on new works (development costs) and upgrades to an existing asset or on creating a new asset
Operation	The active process of utilising an asset which will consume resources such as manpower, energy, chemicals and materials. Operational expenditure is money spent on managing and servicing the asset, such as inspections, cleaning and administration
Renewal	The cost of unusual restoration events. Works or actions to upgrade; refurbish or replace components of an asset to restore it to near new and required functional condition, extending its current remaining life

1.9 Asset Inspections

Asset inspections are a key factor of asset management. Asset inspections are designed to identify defects that have the potential to create a risk of damage or inconvenience to the public and may impact on overall asset life. The asset inspections are to be aligned with the hierarchy and recommend outcomes that may require maintenance or changes to maintenance and operational processes.

A full condition inspection of all Council's assets was undertaken between early 2015, and mid 2016, covering roads, buildings, stormwater and open space asset. Recently a more comprehensive inspection regime has been completed from 2018 to current which has included increased assets (ie GPT's) and a reduced inspection cycle (ie 5 year now 3 year cycle). This has enabled an improved understanding of council's assets, and ensure the inventory is up to date

The Asset Management Plans include an inspection regime for each asset category and component which relate to the criticality of the asset. Listed below are the desired inspection regimes for each major asset category. Council is also required to meet the minimum requirement to undertake 3 yearly inspections as required meet statutory obligations for Fair Value reviews of various asset classes, with more targeted inspections in between focussing on high-risk assets such as footpaths and playgrounds. The desired inspection frequency is provided in the following tables. Note: Inspection Frequency "50% per year" denotes 50% of the asset Group / Class inspected per year, synonymous with once every 2 years.

Proposed Asset Inspection Regime for Roads & Transport

Asset Category	Inspection Type	Desired Inspection Frequency
Bridges & Culverts	Condition Inspection	Level 1 – 100% per year Level 2 – 50% per year Level 3 – Upon Request
Carparks & Driveways	Condition Inspection	50% per year
Footpaths & Cycleways	Condition Inspection	40% per year
Kerb & Gutter	Condition Inspection	33% per year
Road Furniture	Condition Inspection	33% per year
Road Structures	Condition Inspection	33% per year
Road Pavement	Condition Inspection	33% per year

Proposed Asset Inspection Regime for Stormwater Drainage

Asset Category	Inspection Type	Desired Inspection Frequency
Channels	Condition Inspection	33% per year
Flood Mitigation	Condition Inspection	33% per year
Headwalls	Condition Inspection	33% per year
Pipes	Condition Inspection	33% per year based on sampling approach
Pits	Condition Inspection	33% per year
Stormwater Quality Improvement Devices (SQIDs)	Preventative Maintenance Inspection	33% per year

Proposed Asset Inspection Regime for Open Space

Asset Category	Inspection Type	Desired Inspection Frequency
Play Equipment & Exercise Equipment	Condition Inspection	Comprehensive Inspection – once a year Operational Inspection – 3 times a year
Land Improvement (sportsground)	Condition Inspection	50% per year
Other Structure	Condition Inspection	50% per year

Proposed Asset Inspection Regime for Buildings

Asset Category	Inspection Type	Desired Inspection Frequency
Building Structure	Condition Inspection	Level 2 Inspection – 50% per year Level 3 Inspection – Upon Request
Swimming Pool	Condition Inspection	100% per year

Critical Assets (ie those that are essential in terms of business continuity or that need to perform at a level above that generally accepted for the asset class) .

1.10 Risk Management

Camden Council recognises risk management as in integral part of sound management practice. Risks arise out of uncertainty, and whilst the Council acknowledges that it is not possible to have a totally risk-free environment, it is possible to manage risks by avoiding; reducing; transferring, eliminating or accepting and managing certain risks.

The overall objectives of a formal risk management approach are to:

- Outline the process by which the organisation will manage risk associated with its assets, so that all risks can be identified and evaluated in a consistent manner;
- Identify operational and organisational risks at a broad level;
- Allocate responsibility for managing risks to specific staff to improve accountability;
- Prioritise the risks to identify the highest risks that should be addressed in the short to medium term; and
- Define the response levels based on the risk management approaches and residual risks.

Council's Enterprise Risk Management Policy and Strategy forms the basis for managing risk across Councils Asset Management practices.

In each of the four asset management plans, the risk management section concentrates on identification of practical risks at the asset level. An assessment

of the risks associated with the service delivery of infrastructure assets has identified some critical risks to Council. The risk assessment process identifies:

- Credible risks;
- The likelihood of the risk event occurring;
- The consequences should the event occur;
- Develops a risk rating; and
- Evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Risks within each plan are categorised from Low (L); Medium (M); High (H) to Very High (VH). Critical risks, being those assessed as 'Very High' and requiring immediate corrective action and 'High', requiring prioritised corrective action are given a treatment plan to reduce; transfer, eliminate or accept and manage the risks to the service provision given by the asset. Such assets might include bridges and stormwater drainage etc.

As the Risk Management Policy and Strategy are developed it will be essential to ensure that the risk management section of each plan and this strategy correlate across into the organisation's risk management strategy and the methodologies determined at a corporate level for assessing risk identification and criteria are mirrored into these plans. Areas to ensure this integration occurs will be:

- Risk probability ratings;
- Measures of impact of failure;
- Measures of likelihood; and
- Risk control.

Critical Assets are determined by an analysis of the characteristics of each asset grouping. The critical assets are identified and classified as either High, Medium or Low criticality for each asset category. A detailed analysis of the identified risks relative to the critical assets should be carried out. That analysis could include the cost of treatment to minimise or eliminate the risk, considered against the evaluated post treatment risk score. The aim is to ensure that risks associated with the highly critical assets in each asset category have been assessed.

Asset Management Improvement

1.11 Overview

This section of the asset management strategy outlines possible asset management practice improvements. These can be incorporated into the organisation's methodology for further enhancement to the asset management process and practice to progress from the currently achieved Intermediate capability to an advanced capability in asset management.

Council has undertaken an Asset Maturity review to identify areas of improvement. Those areas identified were addressed in an Asset Management Improvement Plan. The Asset Management Improvement Plan concluded in 2021 with the

following improvements implemented increasing our Asset Management capability.

- Implementation of cyclic condition assessments of all Assets over a three-year cycle
- Development of a resourcing strategy
- Benchmarked and reviewed Asset Class life expectancies
- Implemented improved revaluation cycles
- Establishment of Levels of Service for Council assets
- Ability to undertake financial modelling of current and future funding needs for renewal and maintenance
- Implemented a rolling program of asset inspections to keep data up to date
- Improved the condition data & development of renewal / maintenance works programs.
- Improved financial tracking of maintenance and renewal works to improve modelling of future funding needs
- Implementation of SMEC Pavement Management System for modelling and managing road pavements maintenance and renewal needs.

1.12 Asset Management Improvement

The Asset Management Improvement Plan concluded in 2021. Following this body of work further areas for improvement have been identified and additional objectives set. These include the following.

1.12.1 Asset Management Preparation/ Corporate Overview

- Continue to review its Asset Management Plans to reflect changes in asset knowledge, changes in community service levels, changes in legislation.

1.12.2 Asset Management Process Improvement

- Further improve financial tracking & monitoring of maintenance and renewal and impacts on asset conditions to validate & increase Moloney Modelling accuracy and better inform future funding needs
- Further improve the development of long-term works / maintenance programs; and
- Increase to monthly capitalisation of all assets
- Increase planned renewal and maintenance programmed works to reduce reactive maintenance demand.

1.12.3 Asset Management Information System Improvement

- Continue to review asset system needs to ensure that its systems are meeting organisational needs
- Further refinement & Integration of Council Systems ensuring cost effective system integration / interface across relevant corporate and business systems (Assets, LIS/GIS, Finance)

- Continue to review contracts and specifications, and Conditions of Consent, to ensure asset management needs are addressed.

1.12.4 Organisational / People Issues

- Ensure sufficient resources are available to keep asset data up to date, particularly in response to ongoing growth
- Regularly review asset staffing needs to ensure that council has sufficient resources to collect, process and monitor assets
- Ensure staff across the organisation understand and are aware of asset management practices and needs, including the monitoring and handover of assets.

1.13 Additional Asset Categories

In addition to the asset categories identified and analysed in this strategy document there are other community assets which will require further work by Camden Council. It is proposed to include in this strategy the following asset categories;

- Open Space Lighting
- Open Space Bin Enclosures
- Stormwater Basins

1.14 Standards and Guidelines

The following list of Standards and guidelines have been used to develop this asset management Strategy:

- International Infrastructure Management Manual Version 3, the Association of Local Government Engineering New Zealand Inc (INGENIUM) and the Institute of Public Works Engineering Australia (IPWEA), 2006
- Australian Infrastructure Financial Management Guidelines, the Association of Local Government Engineering New Zealand Inc (INGENIUM) and the Institute of Public Works Engineering Australia (IPWEA), 2009
- Planning a Sustainable Future: Planning and Reporting Manual for local government in NSW, NSW Department of Local Government, May 2009
- NSW Division of Local Government (DLG) Circular 06-75 – Valuation of Assets at Fair Value, December 2006
- AASB116 Australian Accounting Standard – Infrastructure, Plant, Property and Equipment
- Engineering Design Specifications, Camden Council
- Engineering Construction Specifications, Camden Council

Glossary of Terms

ABS	Australian Bureau of Statistics
Acquisition	The act of acquiring or gaining possession of an asset
Age	The current date less year when asset was constructed
AMP	Asset Management Plan
Asset	A physical component of a facility, which has value, enables services to be provided and has an economic life greater than 12 months
Asset Class	A logical grouping of assets at its highest functional level within the asset hierarchy
Asset Management	A systematic process to guide the planning, acquisition, operation and maintenance, renewal and disposal of assets
Asset Management Information System	An asset management system is a combination of processes, data and software applied to provide the essential outputs for effective asset management such as reduced risk and optimum infrastructure investment
Asset Management Plan	A plan developed for the management of one or more infrastructure assets that combines multi-disciplinary management techniques over the lifecycle of the asset in the most cost effective manner to provide a specific level of service
Asset Register	A record of asset information including: condition, construction, financial, historical, inventory and technical details
Backlog of Works	The current estimated cost to bring all assets up to at least a satisfactory condition
Building	Includes all ancillary buildings, amenities, structures such as change rooms, toilets, shade structures, etc.
Camden 2040	The Community Strategic Plan developed following community consultation which captures the Camden community's aspirations and which has been developed in line with the DLG's Integrated Planning & Reporting framework

CAPEX	Capital Expenditure
Capital Works	The creation of new assets or an increase in the capacity of existing assets beyond their original design capacity or service potential
Community Strategic Plan	A plan developed by the Council for the community based on the Integrated Planning & Reporting framework developed by the DLG
Conquest	An asset management software package that includes Council's Asset Register and Asset Maintenance Management System
Council	Camden Council
CPI	Consumer Price Index
CWP	Capital Works Program
Depreciation	The wearing out, consumption or other loss of value of an asset whether arising from use, passing of time or obsolescence through technological and market changes. It is accounted for by the allocation of the cost (or revalued amount) of the asset less its residual value over its useful life
Depreciation Method	The depreciation method used in Conquest is currently straight line method which is constant consumption of the asset over its useful life, while the adoption of a consumption based depreciation model is also being finalised which better matches the life of the asset.
Disposal	Activities necessary to dispose of decommissioned assets
DLG	NSW Division of Local Government, Department of Premier and Cabinet (and its successors)
DNR	NSW Department of Natural Resources
Facility	A complex comprising many assets which represent a single management unit for financial, operational, maintenance and other purposes
Fair Value	The best estimate of the price reasonably obtainable in the market at the date of the valuation

GIS	Geographical Information System, mapping and spatial location technology systems which show location and relationship to key geographical datum points
IIMM2006	International Infrastructure Management Manual 2006
IP&R	Integrated Planning and Reporting framework
IPWEA	Institute of Public Works & Engineering Australia
Levels of Service	The defined service quality or provision rate for a particular activity (ie. roads) or a service area (ie. a particular footpath) against which service performance may be measured. Levels of service are set in order to meet community service expectations.
LGA	Local Government Area
Local Road	Local Roads are roads within the LGA under the care and control of the Local Council, which are not State Roads as identified in the Roads & Transport Asset Management Plan (Section 1.2). Local Roads include Regional Roads
LOS	Levels of Service
Lifecycle	The cycle of activities that an asset goes through while it retains an identity as a particular asset (ie. From planning & design to decommissioning or disposal)
Maintenance	All actions for works or actions necessary for retaining an asset as near as practical to an acceptable condition, but excluding refurbishment or renewal
MMS	Maintenance Management System – for Camden Council this is its Conquest System.
New Works	New work expenditure is Capital Works expenditure, i.e. money spent on new works (development costs) and upgrades to an existing asset or on creating a new asset
WHS	Work Health Safety
Operational Costs	A combination of both 'Operational & Maintenance' expenditure

Operational Expenditure	Costs associated with the process of utilising an asset which will consume resources such as manpower, energy, chemicals and materials. An operational cost is money spent on managing and servicing the asset, such as inspections, cleaning and administration.
Operational Plan	Generally comprise detailed implementation plans and information with a 1-4 year outlook (short-term). The plans detail structure, authority, responsibilities, defined levels of service and emergency responses
PMS	Pavement Management System - A civil engineering software package designed for determining road network condition ratings, future funding needs, and prioritised works programs.
Remaining Useful Life	Remaining useful life is determined for each individual asset from the condition rating. Reliable condition decay profiles for roads are available in Council's pavement management system (PMS). It is the time that the asset provides future economic benefit, from acquisition to expected replacement, renewal in full or replacement /disposal
Renewal	Works or actions to upgrade; refurbish or replace components of an asset to restore it to near new and required functional condition, extending its current remaining life
Residual Value	Residual value is the estimated amount Council will obtain from the disposal of the asset. The residual value is recognized, where the asset is renewed or replaced in full and the cost to restore the asset to as new condition is less than the replacement cost
Risk Management	The process of managing 'possibility values' relating to key factors associated with a risk in order to determine the likely outcomes and the probability of the outcome occurring
Service	A benefit gained from utilising or accessing an asset and the associated work done by Council staff or others associated with the Council
Service Expectation	The description of Level of Service available to users of an asset and any associated services, as described through consultation in developing and reviewing the Community Strategic Plan

Stakeholder	A person; group; company or government department representing an interest in an asset; project or service utilising an asset
State Roads	State Roads are roads within the LGA under the care and control of the State Government. State Roads
Useful Life	The period over which a depreciable asset is expected to be in service / used
WIK	Works In Kind or other material public benefit arrangements in lieu of the part or full payment of either a monetary payment or the dedication of land required under Council's Section 94 contributions

70 Central Ave,
Oran Park NSW 2570

4654 7777

mail@camden.nsw.gov.au

PO Box 183, Camden 2570

camden.nsw.gov.au