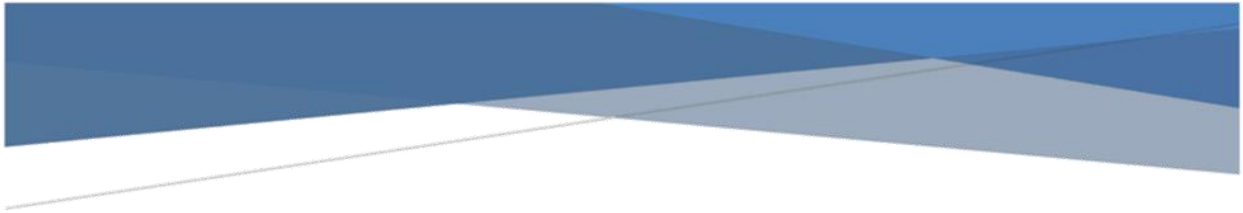


Glen Innes Severn Council Ordinary Meeting
23 JUNE 2022

Annexures

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Asset Management Strategy

DOCUMENT AUTHORISATION

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1	19/05/2009	19.05/09	Original Draft	MTS	Council

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General Manager

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Date

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EXECUTIVE SUMMARY

The purpose of this Asset Management Strategy is to provide an assessment of the asset management processes within Glen Innes Severn Council and to develop a structured set of goals to work towards. Glen Innes Severn Council maintains a variety of Assets throughout its LGA. The core asset classes to which this Asset Management Strategy applies is shown in Table 1.

Table 1: Asset Class`

Asset Classes
Roads
Urban Drainage
Water
Sewerage
Buildings, Structures and Land
Bridges
Plant and Fleet

It is proposed to separate rural drainage structures out of the road asset class and bring these into a combined drainage asset class. This will provide greater ability to calculate accurate budgets for the upgrade of sealed roads, where widening and subsequent extension of associated drainage needs to occur.

This document is broken into three key components being:

- A current situation analysis
 - An analysis of Council's current asset portfolio, asset management practices, and a summary of assets that are identified as critical to Council's operations.
 - An overview of the legislative controls under which Council must operate.
- Where do we want to be?
 - This section interpolates specific goals from the Asset Management Policy framework that Council wishes to reach over the life of this iteration of the Asset Management Strategy.
- How will we get there?
 - The final section of this strategy highlights the means and order in which the goals set out previously may be met.

CURRENT SITUATION ANALYSIS

This section of the Asset Management Strategy provides an analysis of Council's current Asset portfolio, Asset Management practices, as well as a summary of Assets that are identified as critical to Council's operations. An overview of the legislative controls under which Council must operate is also provided.



Image 1: Emergency side track installation after Wyaliba bridge was lost through natural disaster (fire)

COUNCIL'S CURRENT ASSET STOCK

Glen Innes Severn Council maintains a vast variety of Assets throughout its LGA. Table 2 details the core asset classes to which this Asset Management Strategy applies. Ongoing data capture programs are currently underway across all Asset groups therefore the quantity of the current asset stock may be subject to change over the life of this Asset Management Strategy.

Table 2: Current Asset Stock

Asset Group	Description of Asset Stock
Roads	110 Major Street Furniture assets 176 footpath assets 42 carpark assets 373 kerb and gutter assets 351km of sealed roads 732 km of gravel roads 10 km of formed local roads 68 km of sealed regional roads 10 km of sealed state road parking
Urban Drainage	31 km of storm water pipes 1393 storm water pits
Water	110 km of reticulation 9 km of rising mains 4 bores 4 pump stations 6 reservoirs 2 weirs 3 offstream storage 2 treatment plants
Sewerage	95 km of reticulation 15 km of rising mains 9 pump stations 2 treatment plants
Buildings, Structures, and Land	110 Buildings 229 open space assets 156 other structures 46 swimming pool assets 207 land parcels 9 library assets 24 furniture assets 9 office equipment assets
Bridges	11 timber bridges 77 concrete bridges 33 major culverts 134 causeways
Plant and Fleet (Plant Fund)	30 heavy fleet 52 light vehicles 50 trailers and attachments 23 major plant 47 mobile plant

CRITICAL ASSETS

Council has identified the following assets that are critical to its operations:

- Glen Innes and Deepwater Water Treatment Plants
- Glen Innes and Deepwater Sewer Treatment Plant
- Eerindii Ponds Off-Stream Storage and Beardy Waters Weir
- Works Depot
- Town Hall (including main server room)
- Library Learning Centre (back-up server and BCP alternate location)

Council has a business continuity plan that incorporates its management of business continuity.

ASSET CONDITION

Council is continually in the process of gathering comprehensive condition data for its assets. Details pertaining to particular asset classes and their corresponding condition profiles can be found within the respective Asset Management Plans.

Council has most recently completed a thorough inspection and assessment of the sealed road network, identifying the next intervention type, cost and optimum timeframe for each asset segment. Gravel roads were condition assessed and revalued as part of the preparation of the 2020/2021 audited financial statements. Work is next planned to capture condition data for rural drainage structures as these assets are separated out from the road asset register.

VALUE OF ASSETS AND ONGOING COSTS

This section seeks to provide an overview of the value of Council's current asset stock. Council's total asset holdings as summarized in the annual financial statement and how these holdings are covered by current asset management plans are outlined in Table 3. These figures are provided below in 4 and the values compared in the Figure 1. Operational and maintenance costs are contained in the relevant Asset Management Plans.

Table 3: Value & Cost of Council's Assets

Note 10 Category	2021 Annual Financial Report Note 10 Figures	AMP	Replacement Cost Covered by AMP	Notes
Roads (general)	\$ 136,273,000	Roads	\$ 220,722,558	
Bulk Earthworks	\$ 64,754,000			
Kerb and Gutter	\$ 11,330,000			
Footpaths (road related)	\$ 4,547,000			
Major Street Furniture	\$ 2,331,000			
Roads (carparks)	\$ 1,488,000			
Bridges	\$ 64,840,000	Bridges	\$ 72,006,019	
Causeways	\$ 7,166,000			
Water	\$ 41,449,000	Water	\$ 41,449,652	Note 1
Sewerage Network	\$ 32,281,000	Sewerage	\$ 32,277,105	
Stormwater Drainage	\$ 17,589,000	Urban Drainage	\$ 17,589,279	
Plant and Equipment	\$ 11,333,000	Plant and Equipment	\$ 12,376,378	Note 2
Buildings	\$ 45,694,000	Buildings and Structures	\$ 78,623,867	Note 3
Other Structures	\$ 10,245,000			
Open Spaces	\$ 3,642,000			
Swimming Pools	\$ 3,142,000			
Land	\$ 13,901,000			
Library	\$ 958,000			
Office Equipment	\$ 305,000			
Furniture and Fittings	\$ 291,000			
Tip Assets	\$ 3,263,000	Not applicable		
Capital Works in Progress	\$ 2,726,000			
Total	\$ 479,548,000		\$ 475,044,857	

1. Asset financials held by the Asset Management Team are calculated to 4 decimal places and rounded at point of entry into the tables. Data is also updated at time of review. Note 10 figures are rounded to nearest \$1,000 thus minor discrepancies occur.

2. This AMP also includes leased plant assets, which are not covered by the Note 10 Plant and Equipment.

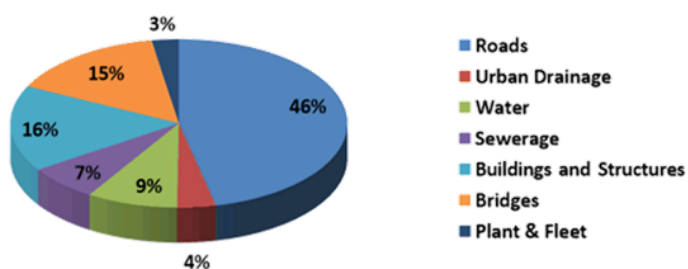
3. This AMP also includes investment properties, which are not covered by Note 10 Buildings.

Table 4: Value & Cost of Council's Assets

Asset Category	Replacement Cost	Depreciable Amount	Annual Asset Consumption	Backlog Value	Backlog Ratio
Roads	\$ 220,712,827	\$ 155,489,953	-\$ 3,021,333	\$ 15,333,186	0.07
Urban Drainage	\$ 17,589,279	\$ 17,589,279	-\$ 194,356	\$ 1,741,776	0.10
Water	\$ 41,445,323	\$ 40,908,831	-\$ 543,425	\$ 1,487,696	0.04
Sewerage	\$ 32,277,105	\$ 32,277,105	-\$ 483,665	\$ 3,985,847	0.12
Buildings and Structures *	\$ 78,623,867	\$ 64,659,269	-\$ 1,545,895	\$ 7,774,301	0.10
Bridges	\$ 72,006,019	\$ 72,006,019	-\$ 714,085	\$ 4,800,120	0.07
Plant & Fleet	\$ 12,376,378	\$ 12,376,378	-\$ 937,499	Not reported	Not reported
Total	\$ 475,030,798	\$ 395,306,833	-\$ 7,440,259	\$ 35,122,927	0.0

* Note that Furniture and Fittings, Office Equipment, and Library Assets were not included in FY22 Special Schedule 7; therefore, these assets are not included in backlog figures.

Figure 1: Comparison of Valuations



CURRENT ASSET MANAGEMENT PRACTICES

Asset Management Team

Glen Innes Severn Council has an Asset Management Team that acts as a medium for all asset management related matters being developed within Council. The Manager Asset Services leads a group consisting of the Technical Services Coordinator (Geospatial and technical data capture lead), the Property Officer (land, building, and lease lead), and the Maintenance Officer (technical advisor). The Finance Team, led by the CFO, provide all financial asset reporting based on technical data from the Asset Management Team. Managers, however, have a critical role in providing data on capital works, maintenance, and operational costs.

Asset Management Systems

Council has historically utilised a number of asset management systems and programs/methods including:

- **Geospatial Information System (GIS) Database:** A dedicated server stores all asset information based on spatial objects. The implementation of this system involved a significant review of asset stock and data cleaning. This system allows for powerful data analysis across asset classes and ensure future compatibility with other asset management platforms.
- **Intramaps:** Council currently uses Intramaps as a portal-based GIS viewer. Staff members across Council can easily access both asset and non-asset information from the GIS database. This tool is a user-friendly means of viewing the database therefore keeping all staff using a single-point of truth and maintaining data integrity. This platform is being replaced as Council transitions to a new corporate system (Open Office).
- **Intramaps ROAM:** This program is a mobile data capture system that allows operators to edit asset information and perform condition assessment in the field. This system will need to be replaced as part of the transition to Open Office.

Financial System: Civica's Practical is being replaced by Open Office as the base accounting system used within Council.

WHERE DO WE WANT TO BE?

This section interpolates specific goals from the Asset Management Policy framework that Council wishes to reach over the life of this iteration of the Asset Management Strategy.

ASSET DOCUMENTATION

Detailed Asset Management Plan Framework

Council currently prepares a Common Asset Management Plan for its entire asset portfolio with additional type-specific Asset Management Plans for the more complex asset classes:

- Roads
- Bridges
- Urban Drainage
- Buildings and Other Structures
- Water
- Sewerage
- Plant and Fleet

Of note, Urban Drainage is proposed to be expanded to include Rural Drainage structures, with this asset class funded by the current drainage charge.

Legislative Requirements

The above Asset Management Plans will enable Council to maintain registers and requirements of relevant legislation as applicable to specific asset types. The inclusion of such legislative registers within the detailed Asset Management Plans will assist managers to ensure that decisions/actions regarding the planning, purchase, installation, operation, maintenance and renewal of Council's Assets will be done in a manner that is in compliance with legislative requirements, codes and standards.

“Living” Asset Management Plans

Following the 2020 review of Asset Management Plans, Council began a process whereby Asset Management Plans become 'living' documents. The plans will be updated upon the receipt of any significant new data or adoption of new asset management techniques; as a minimum, review will occur every 12 months following adoption of the audited financial statements.

ASSET DATA

Data Capture

Complete and accurate data capture of all Council assets is fundamental to the implementation of core asset management processes. Moreover, maintaining the integrity of this data is essential. The interaction between Council's GIS and assets financial system is an essential component of the asset management system, providing a visual representation of the financial data to provide confidence that the dataset is both accurate and complete.

Condition Assessment

Condition assessment techniques vary across asset types. Visual inspection by staff suffices for some assets whereas independent specialists are required for more complex structures. Technology varies also: from 'form-based' techniques through GPS-tablet collection to robotic camera systems. Moving forward the asset management system software must be compatible with various condition assessment techniques.

Work is ongoing to improve condition assessment and modelling this data into asset financial data. This process will be outlined in the detailed Asset Management Plans as they are reviewed.

The recent sealed road condition assessment was performed by an expert short term contracted staff member who has extensive experience in the physical application of bitumen seals. This has provided Council with an excellent basis to make decisions on capital renewal of sealed road assets moving forward, using a variety of techniques including heavy patching, resealing, conventional pavement renewal and low-cost pavement renewal (using a Graded Aggregate Seal technique).

Risk Assessment Framework

Council currently has an effective risk management framework in place for all detailed Asset Management Plans. This framework will be refined with each yearly review of the Asset Management Plans.

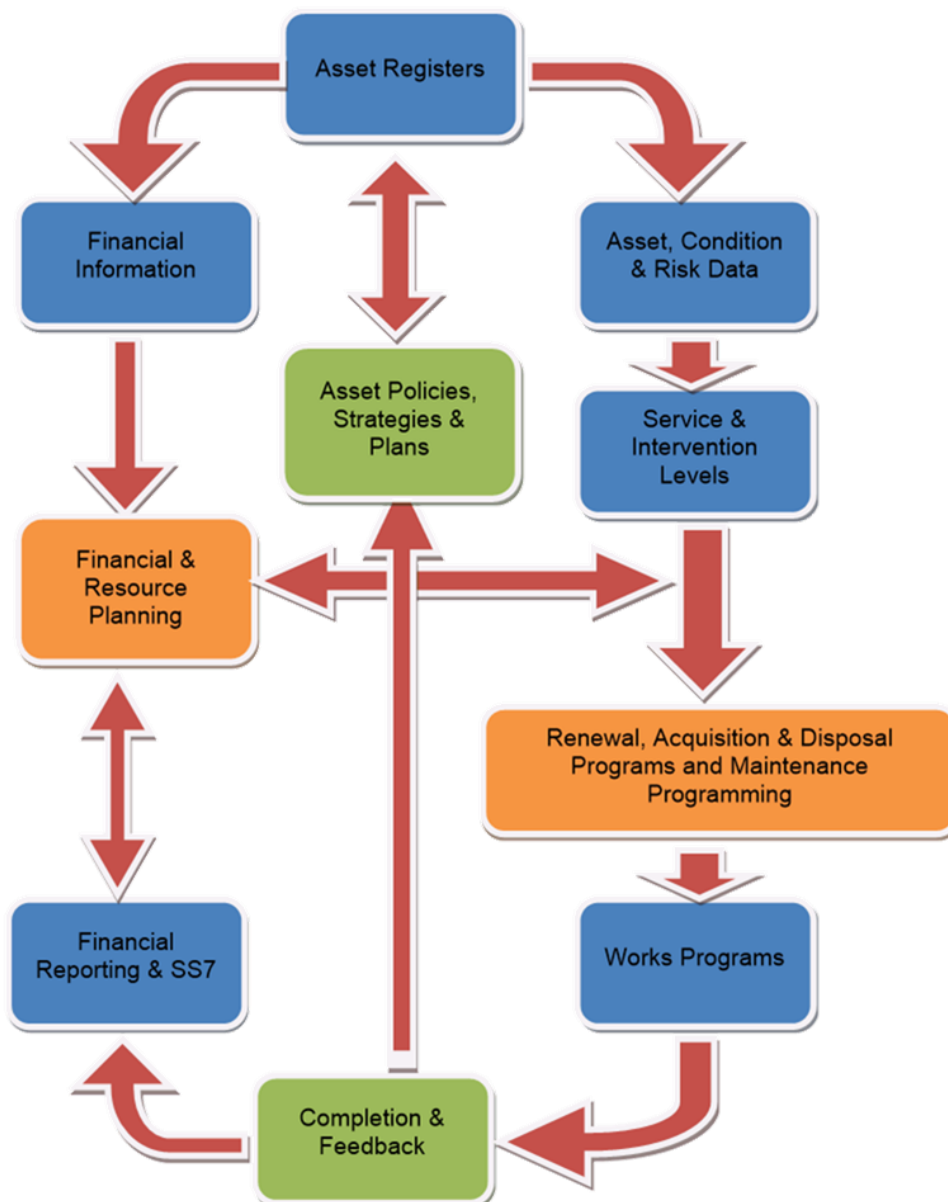
Council records its risks in a corporate risk register using the Pulse enterprise risk management software.

Asset Management System

Glen Innes Severn Council will continue to optimise its asset management system to manage all the asset management processes within Council.

ASSET PROGRAMMING & PLANNING

The following diagram portrays the cycle of asset management that Council will utilise.



Renewal Planning

The revised condition assessment of sealed road assets has resulted in a revised forward planning program for renewal of these assets.

Renewal will be undertaken using 'low-cost' renewal methods where practical. The aim of 'low-cost' renewals is to restore the service potential or future economic benefits of the asset by renewing the assets at a cost less than replacement cost.

Maintenance Planning

Council has implemented a team-based approach to assist with the effective maintenance of assets. The concept is that each team is led by a staff member who is capable, experienced and given sufficient authority to make day to day decisions.

In addition, work is structured to be conducted as part of a routine wherever possible. Maintenance grading of unsealed roads is a key maintenance item and provides a good example of this approach. Two maintenance grading teams operate, each has a defined route and the teams do not deviate from this program except in exceptional circumstances. Even while managing the recent natural disaster events, the teams have followed these routes to minimise travel between daily tasks, and therefore maximise efficiency. Work that is required beyond the ability of the two teams to catch up on is outsourced to private contractors who provide a surge capacity. Budgets are set to cover the annual cost of the staff members and plant used in the two teams, with a small provision for contractors and gravel patching.

Gravel patching is undertaken by the maintenance grading teams as they pass on the circuit: if the team leader deems that the section would not remain in satisfactory condition until the next grading cycle is due. This approach minimises reactive maintenance requests.

Lifecycle Costing

Lifecycle costing is based on actual management practice wherever possible. For example, Council's policy is to reseal bitumen roads every 15 years. This is matched by the asset life of 15 years for the seal component in the asset register. Unsealed road pavement is currently set at 30 years. This is a difficult class to determine effective life, especially considering the increasing impacts of climate change and associated increased stormwater damage events. Drought also has a deleterious effect on unsealed pavements as more fines are lost from the pavement due to increased dust, and so as climate changes there may be an increased financial motivation to continue to convert gravel roads to seal using the low-cost graded aggregate seal technique. While this does require an initial capital investment, savings are made through a reduction in maintenance grading costs and drainage maintenance costs

Acquisition/Disposal Planning

An acquisition/disposal program will identify assets that are required by Council (acquisition) as well as Assets that have ceased serving a purpose and are to be demolished or sold (disposal). This program will be developed in conjunction with the current community investigations into the possible alternate use of redundant assets.

Service Level Reviews

Council will continue to assess the appropriate service level of Council's Assets. In particular, the sealing of unsealed roads using the Graded Aggregate Seal technique will be undertaken where there is a financially viable pathway to do so. Council has been successful in obtaining funding for 121km of conversion of gravel roads since 2019, with 42km constructed to date.



Image 2: Graded Aggregate Seal on Yarraford Road

HOW WILL WE GET THERE?

HOW WILL WE GET THERE?

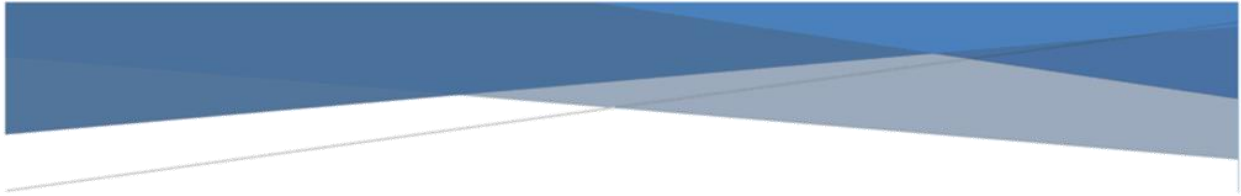
Glen Innes Severn Council is committed to delivering the best from its current and future asset base and, therefore, endeavours to continually improve its asset management processes. This section summarises what Council intends to achieve with consideration given to the order of events. The following diagram depicts the framework that will be followed.



Breaking this diagram down into its sub-components and relationships, a picture of how asset management will evolve at Glen Innes Severn Council begins to form. The structure and sequencing of events is also a deliberate strategic plan that Glen Innes Severn Council will take.

Prior to formal renewal planning being attempted, Council will shore up its condition and risk assessment processes. A revision of processes in financial systems will then lead to Council being able to consider the implementation of an asset management system which will provide a tool for the proper planning of maintenance processes and lifecycle costing. This data will then enable Council to prepare acquisition/disposal plan frameworks and then to finally consult with the community with detailed information at hand.

It should be noted that ancillary facets of asset management (such as the refinement of detailed asset management plans) mentioned within this strategy, but not listed in the above diagram, will be actioned as a matter of course throughout the various stages. It should also be remembered, that as with any process, the end is never the final step. The end will simply mark the start of the next "Strategic Lifecycle".



Asset Management Policy

Item 7.27

Annexure B

DOCUMENT AUTHORISATION

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2	27/08/2015	18.05/15	Adoption of revised AMP	DIS	Council
1	19/05/2009	19.05/09	Original Draft	MTS	Council

.....
General Manager

.....
Date

ACKNOWLEDGEMENT OF COUNTRY

Glen Innes Severn Council acknowledges and pays respect to the Ngoorabul people as the traditional custodians of this land, their elders past, present and emerging and to Torres Strait Islander people and all First Nations people.

PURPOSE

The purpose of this policy is to set guidelines for implementing consistent asset management processes throughout Glen Innes Severn Council.

APPLICABILITY

This policy applies to:

- Councillors, General Manager, Manex, CFO, Managers.

OUTCOMES

The policy ensures adequate provision is made for the long-term replacement of major assets by:

- Ensuring that services and infrastructure are provided in a financially sustainable manner, with the appropriate levels of service to customers and the environment.
 - Safeguarding infrastructure assets including physical assets and employees by implementing appropriate asset management strategies and appropriate financial resources for those assets.
 - Creating an environment where all employees take part in the management of infrastructure assets by creating and sustaining an asset management awareness throughout the organisation.
 - Meeting legislative requirements for asset management.
 - Ensuring resources and operational capabilities are identified and the responsibility for asset management is allocated.
 - Demonstrating transparent and responsible asset management processes that align with best practice.
-

ROLES AND RESPONSIBILITIES

Councillors are responsible for adopting the policy, allocating resources, and providing high level oversight of the delivery of the Council's asset management strategy and plans. Council is also responsible for ensuring that Council's resources are appropriately allocated to ensure sustainable service delivery.

The **General Manager** has overall responsibility for developing an asset management strategy, plans and procedures and reporting on the status and effectiveness of asset management within the Council. The General Manager is supported in this role by **Manex**.

The **Director Infrastructure Services** and **Technical Asset Services** staff of the Infrastructure Services Directorate are tasked by the General Manager to conduct the internal review and day to day implementation of Council's Asset Management systems.

DEFINITIONS

Asset: A physical component of a facility which has value, enables services to be provided and has an economic life of greater than 12 months. Council's assets include roads, bridges, footpaths, parks, buildings, drainage and heritage items. These assets are generally called infrastructure assets.

Asset Management: The process applied to assets from their planning, acquisition by Council, operation, maintenance, renewal and disposal, to ensure that the assets meet Council's priorities for service delivery.

Asset Management Strategy: A strategy for asset management covering the development and implementation of plans and programs for asset creation, operation, maintenance, rehabilitation/replacement, disposal and performance monitoring to ensure that the desired levels of service and other operational objectives are achieved at optimum cost

Asset Management Plan: A plan developed for the management of one (1) or more infrastructure assets (Classes) that combines multi-disciplinary management techniques (including technical and financial) over the lifecycle of the asset in the most cost-effective manner to provide a specified level of service.

Infrastructure Assets: Stationary systems forming a network and serving whole communities, where the system, as a whole, is intended to be maintained indefinitely at a particular level of service potential by the continuing replacement and refurbishment of its components. The network may include normally recognised ordinary assets as components.

Asset Management Information Systems: 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.

Level of Service: The defined service quality for a particular activity or service area against which service performance may be measured.

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

POLICY STATEMENT

Council's sustainable service delivery needs will be met by ensuring adequate provision is made for the long-term planning, financing, operation, maintenance, renewal, upgrade, and disposal of capital assets by:

- Providing capital assets in a manner that demonstrates financial, cultural, economic and environmental sustainability;
- Meeting all relevant legislative and regulatory requirements;
- Demonstrating transparent and responsible Asset Management processes that align with best practices;

Implementing sound Asset Management strategies is undertaken by:

- Creating an Asset Management plan for all asset classes;
- Incorporating projections from Asset Management Plans into Council's Long-Term Financial Plan;
- Regularly reviewing asset management plans to ensure that assets are managed, valued, and depreciated in accordance with Australian Accounting Standards and best practice;
- Inspecting assets routinely to ensure agreed service levels are maintained and to identify asset renewal priorities;
- Allocating budgets within each Annual Operational Plan that are informed by the Asset Management Plan and Long Term Financial Plan;
- Reporting and considering future life cycle costs in all decisions relating to new or upgraded services and assets;
- Determining service levels with associated delivery costs in consultation with the community;

- Providing the community with the levels of service that are adopted by Council after thorough community consultation.

LEGISLATION AND SUPPORTING DOCUMENTS

Relevant Legislation, Regulations and Industry Standards include:

- *NSW Local Government Act 1993*;
- *International Infrastructure Asset Management Manual*;
- *Australian Accounting Standards*.

Relevant Council Policies and Procedures include:

- GISC Asset Management Strategy;
- GISC Asset Management Plans;
- GISC Long Term Financial Plan.

VARIATION AND REVIEW

The Asset Management Policy shall be reviewed every four (4) of years, or earlier if deemed necessary, to ensure that it meets the requirements of legislation and the needs of Council. The term of the Policy does not expire on the review date, but shall continue in force until superseded, rescinded or varied either by legislation or a new resolution of Council.

GLEN INNES SEVERN COUNCIL



CORE ASSET MANAGEMENT PLAN

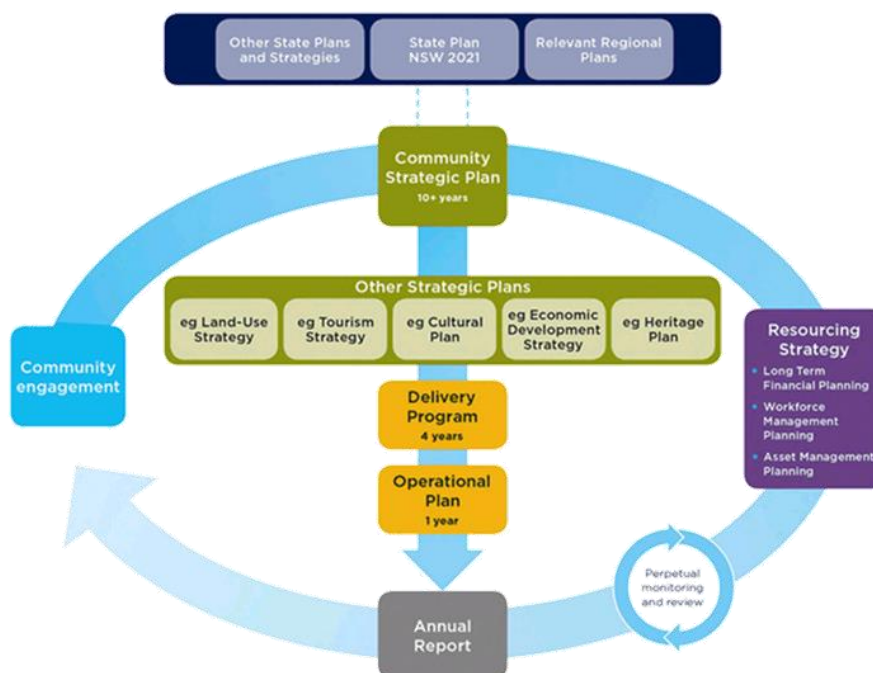


Version 6.0



April 2022

PART 1

GENERAL STATEMENTS



This plan is a component of the Integrated Planning and Reporting Framework and provides the management philosophy for each asset class, on which the relevant sections of the Delivery Program are developed.

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1.0	20/6/2011	Incorporates Community Strategic Plan 2011-2021 outcomes	DIS	MTS	Council
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Draft 3.0	14/6/2017	For public exhibition – Incorporates review of all asset management class plans and creation of a new separate plan for bridge assets	DIS	PA (DIS)	Council
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ABBREVIATIONS

AAAC	Average annual asset consumption
AMP	Asset management plan
ARI	Average recurrence interval
BOD	Biochemical (biological) oxygen demand
CRC	Current replacement cost
CWMS	Community wastewater management systems
DA	Depreciable amount
EF	Earthworks/formation
IRMP	Infrastructure risk management plan
LCC	Life Cycle cost
LCE	Life cycle expenditure
MMS	Maintenance management system
PCI	Pavement condition index
RV	Residual value
SS	Suspended solids
vph	Vehicles per hour

GLOSSARY

Annual service cost (ASC)

An estimate of the cost that would be tendered, per annum, if tenders were called for the supply of a service to a performance specification for a fixed term. The Annual Service Cost includes operating, maintenance, depreciation, finance/ opportunity and disposal costs, less revenue.

Asset class

Grouping of assets of a similar nature and use in an entity's operations (AASB 166.37).

Asset condition assessment

The process of continuous or periodic inspection, assessment, measurement and interpretation of the resultant data to indicate the condition of a specific asset so as to determine the need for some preventative or remedial action.

Asset management

The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner.

Assets

Future economic benefits controlled by the entity as a result of past transactions or other past events (AAS27.12).

Property, plant and equipment including infrastructure and other assets (such as furniture and fittings) with benefits expected to last more than 12 month.

Average annual asset consumption (AAAC)*

The amount of a local government's asset base consumed during a year. This may be calculated by dividing the Depreciable Amount (DA) by the Useful Life and totalled for each and every asset OR by dividing the Fair Value (Depreciated Replacement Cost) by the Remaining Life and totalled for each and every asset in an asset category or class.

Brownfield asset values**

Asset (re)valuation values based on the cost to replace the asset including demolition and restoration costs.

Capital expansion expenditure

Expenditure that extends an existing asset, at the same standard as is currently enjoyed by residents, to a new group of users. It is discretionary expenditure, which increases future operating, and maintenance costs, because it increases council's asset base, but may be associated with additional revenue from the new user group, e.g. extending a drainage or road network, the provision of an oval or park in a new suburb for new residents.

Capital expenditure

Relatively large (material) expenditure, which has benefits, expected to last for more than 12 months. Capital expenditure includes renewal, expansion and upgrade. Where capital projects involve a combination of renewal, expansion and/or upgrade expenditures, the total project cost needs to be allocated accordingly.

Capital funding

Funding to pay for capital expenditure.

Capital grants

Monies received generally tied to the specific projects for which they are granted, which are often upgrade and/or expansion or new investment proposals.

Capital investment expenditure

See capital expenditure definition

Capital new expenditure

Expenditure which creates a new asset providing a new service to the community that did not exist beforehand. As it increases service potential it may impact revenue and will increase future operating and maintenance expenditure.

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Capital renewal expenditure

Expenditure on an existing asset, which returns the service potential or the life of the asset up to that which it had originally. It is periodically required expenditure, relatively large (material) in value compared with the value of the components or sub-components of the asset being renewed. As it reinstates existing service potential, it has no impact on revenue, but may reduce future operating and maintenance expenditure if completed at the optimum time, e.g. re-surfacing or re-sheeting a material part of a road network, replacing a material section of a drainage network with pipes of the same capacity, resurfacing an oval. Where capital projects involve a combination of renewal, expansion and/or upgrade expenditures, the total project cost needs to be allocated accordingly.

Capital upgrade expenditure

Expenditure, which enhances an existing asset to provide a higher level of service or expenditure that will increase the life of the asset beyond that which it had originally. Upgrade expenditure is discretionary and often does not result in additional revenue unless direct user charges apply. It will increase operating and maintenance expenditure in the future because of the increase in the council's asset base, e.g. widening the sealed area of an existing road, replacing drainage pipes with pipes of a greater capacity, enlarging a grandstand at a sporting facility. Where capital projects involve a combination of renewal, expansion and/or upgrade expenditures, the total project cost needs to be allocated accordingly.

Carrying amount

The amount at which an asset is recognised after deducting any accumulated depreciation / amortisation and accumulated impairment losses thereon.

Class of assets

See asset class definition

Component

An individual part of an asset which contributes to the composition of the whole and can be separated from or attached to an asset or a system.

Cost of an asset

The amount of cash or cash equivalents paid or the fair value of the consideration given to acquire an asset at

the time of its acquisition or construction, plus any costs necessary to place the asset into service. This includes one-off design and project management costs.

Current replacement cost (CRC)

The cost the entity would incur to acquire the asset on the reporting date. The cost is measured by reference to the lowest cost at which the gross future economic benefits could be obtained in the normal course of business or the minimum it would cost, to replace the existing asset with a technologically modern equivalent new asset (not a second hand one) with the same economic benefits (gross service potential) allowing for any differences in the quantity and quality of output and in operating costs.

Current replacement cost "As New" (CRC)

The current cost of replacing the original service potential of an existing asset, with a similar modern equivalent asset, i.e. the total cost of replacing an existing asset with an as NEW or similar asset expressed in current dollar values.

Cyclic Maintenance**

Replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, building roof replacement, cycle, replacement of air conditioning equipment, etc. This work generally falls below the capital/ maintenance threshold and needs to be identified in a specific maintenance budget allocation.

Depreciable amount

The cost of an asset, or other amount substituted for its cost, less its residual value (AASB 116.6)

Depreciated replacement cost (DRC)

The current replacement cost (CRC) of an asset less, where applicable, accumulated depreciation calculated on the basis of such cost to reflect the already consumed or expired future economic benefits of the asset

Depreciation / amortisation

The systematic allocation of the depreciable amount (service potential) of an asset over its useful life.

Economic life

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See useful life definition.

Expenditure

The spending of money on goods and services.
Expenditure includes recurrent and capital.

Fair value

The amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties, in an arm's length transaction.

Greenfield asset values **

Asset (re)valuation values based on the cost to initially acquire the asset.

Heritage asset

An asset with historic, artistic, scientific, technological, geographical or environmental qualities that is held and maintained principally for its contribution to knowledge and culture and this purpose is central to the objectives of the entity holding it.

Impairment Loss

The amount by which the carrying amount of an asset exceeds its recoverable amount.

Infrastructure assets

Physical assets of the entity or of another entity that contribute to meeting the public's need for access to major economic and social facilities and services, e.g. roads, drainage, footpaths and cycle ways. These are typically large, interconnected networks or portfolios of composite assets. Components of these assets may be separately maintained, renewed or replaced individually so that the required level and standard of service from the network of assets is continuously sustained. Generally the components and hence the assets have long lives. They are fixed in place and are often have no market value.

Investment property

Property held to earn rentals or for capital appreciation or both, rather than for:

- (a) the production or supply of goods or services or for administrative purposes; or
- (b) use in the ordinary course of business (AASB 140.5)

Level of service

The defined service quality for a particular service against which service performance may be measured. Service levels usually relate to quality, quantity, reliability, responsiveness, environmental, acceptability and cost).

Life Cycle Cost **

The life cycle cost (LCC) is average cost to provide the service over the longest asset life cycle. It comprises annual maintenance and asset consumption expense, represented by depreciation expense. The Life Cycle Cost does not indicate the funds required to provide the service in a particular year.

Life Cycle Expenditure **

The Life Cycle Expenditure (LCE) is the actual or planned annual maintenance and capital renewal expenditure incurred in providing the service in a particular year. Life Cycle Expenditure may be compared to Life Cycle Expenditure to give an initial indicator of life cycle sustainability.

Loans / borrowings

Loans result in funds being received which are then repaid over a period of time with interest (an additional cost). Their primary benefit is in 'spreading the burden' of capital expenditure over time. Although loans enable works to be completed sooner, they are only ultimately cost effective where the capital works funded (generally renewals) result in operating and maintenance cost savings, which are greater than the cost of the loan (interest and charges).

Maintenance and renewal gap

Difference between estimated budgets and projected expenditures for maintenance and renewal of assets, totalled over a defined time (e.g. 5, 10 and 15 years).

Maintenance and renewal sustainability index

Ratio of estimated budget to projected expenditure for maintenance and renewal of assets over a defined time (e.g. 5, 10 and 15 years).

Maintenance expenditure

Recurrent expenditure, which is periodically or regularly required as part of the anticipated schedule of works required to ensure that the asset achieves its useful life and provides the required level of service. It is

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expenditure, which was anticipated in determining the asset's useful life.

Materiality

An item is material if its omission or misstatement could influence the economic decisions of users taken on the basis of the financial report. Materiality depends on the size and nature of the omission or misstatement judged in the surrounding circumstances.

Modern equivalent asset.

A structure similar to an existing structure and having the equivalent productive capacity, which could be built using modern materials, techniques and design. Replacement cost is the basis used to estimate the cost of constructing a modern equivalent asset.

Non-revenue generating investments

Investments for the provision of goods and services to sustain or improve services to the community that are not expected to generate any savings or revenue to the Council, e.g. parks and playgrounds, footpaths, roads and bridges, libraries, etc.

Operating expenditure

Recurrent expenditure, which is continuously required excluding maintenance and depreciation, e.g. power, fuel, staff, plant equipment, on-costs and overheads.

Pavement management system

A systematic process for measuring and predicting the condition of road pavements and wearing surfaces over time and recommending corrective actions.

Planned Maintenance**

Repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown criteria/experience, prioritising scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

PMS Score

A measure of condition of a road segment determined from a Pavement Management System.

Rate of annual asset consumption*

A measure of average annual consumption of assets (AAAC) expressed as a percentage of the depreciable amount (AAAC/DA). Depreciation may be used for AAAC.

Rate of annual asset renewal*

A measure of the rate at which assets are being renewed per annum expressed as a percentage of depreciable amount (capital renewal expenditure/DA).

Rate of annual asset upgrade*

A measure of the rate at which assets are being upgraded and expanded per annum expressed as a percentage of depreciable amount (capital upgrade/expansion expenditure/DA).

Reactive maintenance

Unplanned repair work that carried out in response to service requests and management/supervisory directions.

Recoverable amount

The higher of an asset's fair value, less costs to sell and its value in use.

Recurrent expenditure

Relatively small (immaterial) expenditure or that which has benefits expected to last less than 12 months. Recurrent expenditure includes operating and maintenance expenditure.

Recurrent funding

Funding to pay for recurrent expenditure.

Rehabilitation

See capital renewal expenditure definition above.

Remaining life

The time remaining until an asset ceases to provide the required service level or economic usefulness. Age plus remaining life is economic life.

Renewal

See capital renewal expenditure definition above.

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Residual value

The net amount which an entity expects to obtain for an asset at the end of its useful life after deducting the expected costs of disposal.

Revenue generating investments

Investments for the provision of goods and services to sustain or improve services to the community that are expected to generate some savings or revenue to offset operating costs, e.g. public halls and theatres, childcare centres, sporting and recreation facilities, tourist information centres, etc.

Risk management

The application of a formal process to the range of possible values relating to key factors associated with a risk to determine the resultant ranges of outcomes and their probability of occurrence.

Section or segment

A self-contained part or piece of an infrastructure asset.

Service potential

The capacity to provide goods and services in accordance with the entity's objectives, whether those objectives are the generation of net cash inflows or the provision of goods and services of a particular volume and quantity to the beneficiaries thereof.

Service potential remaining*

A measure of the remaining life of assets expressed as a percentage of economic life. It is also a measure of the percentage of the asset's potential to provide services that is still available for use in providing services (DRC/DA).

Strategic Management Plan (SA)**

Documents Council objectives for a specified period (3-5 years), the principle activities to achieve the objectives, the means by which that will be carried out, estimated income and expenditure, measures to assess performance and how rating policy relates to the Council's objectives and activities.

Sub-component

Smaller individual parts that make up a component part.

Useful life

Either:

- (a) the period over which an asset is expected to be available for use by an entity, or
- (b) the number of production or similar units expected to be obtained from the asset by the entity.

It is estimated or expected time between placing the asset into service and removing it from service, or the estimated period of time over which the future economic benefits embodied in a depreciable asset, are expected to be consumed by the council. It is the same as the economic life.

Value in Use

The present value of estimated future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life. It is deemed to be depreciated replacement cost (DRC) for those assets whose future economic benefits are not primarily dependent on the asset's ability to generate new cash flows, where if deprived of the asset its future economic benefits would be replaced.

1. EXECUTIVE SUMMARY

WHAT COUNCIL PROVIDES

Glen Innes Severn Council owns and is responsible for the management, operation and maintenance of a diverse asset portfolio that provides services and facilities to the community. Asset Management Plans have been developed to ensure that Council continues to provide effective and comprehensive management of its asset categories. Plans have been completed for the following asset categories:

ASSET CATEGORY	
Part 2	Roads
Part 3	Urban Drainage
Part 4	Water
Part 5	Sewerage
Part 6	Buildings, Structures, and Land
Part 7	Bridges
Part 8	Plant & Fleet

Asset Management Plans are reviewed during the annual budget preparation and amended to recognize any changes in service levels and / or resources available to provide those services as a result of the budget decision process. Moving forward, plans will be reviewed at the December ordinary Council meeting each year, with a major review completed for any asset classes that have been independently revalued during the year. This will align the asset management plan with the cycle of revaluation and will ensure that each asset class undergoes a complete review at intervals not exceeding five years. In this revision of the plan, Plant and Fleet is the class that has undergone a complete review, along with Roads.

ASSET MANAGEMENT POLICY STATEMENT

Council has adopted the following to guide the development of asset management plans:

- Council will ensure that assets covered under this policy are planned, created, operated, maintained, renewed and disposed of in accordance with sustainability principles and Council's priorities for service delivery;
- Asset Management Plans will be developed for each asset class for long term strategic management of Council assets and will include financial plans;
- Council will implement systematic asset management methodology (Asset Management Strategy) to apply appropriate asset management best practices across all areas of Council. This will include establishment of service levels, inspections and condition audits to take informed decision on assets and to identify future funding needs;

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- Asset management information systems will be further developed and will include data capture, asset register, programming of maintenance and inspections, whole of life costing, forecasting and financial reporting;
- All relevant legislative requirements together with political, social, environmental and economic considerations will be taken into account in asset management; and
- The Council will promote training and continuous improvement in asset management practices and processes in the Council so as to progressively improve asset management.

WHAT DOES IT COST?

Infrastructure construction, maintenance and operations is a major cost to the community. Infrastructure is funded through rates revenue and grants from Federal and State governments. Without these grants, Council would be unable to continue to provide the wide range of services supported by infrastructure.

The following table indicates the total value of infrastructure that the Council is responsible for and how it is covered in the Asset Management Plan framework:

Note 10 Category	2021 Annual Financial Report Note 10 Figures	AMP	Replacement Cost Covered by AMP	Notes
Roads (general)	\$ 136,273,000	Roads	\$ 220,722,558	
Bulk Earthworks	\$ 64,754,000			
Kerb and Gutter	\$ 11,330,000			
Footpaths (road related)	\$ 4,547,000			
Major Street Furniture	\$ 2,331,000			
Roads (carparks)	\$ 1,488,000			
Bridges	\$ 64,840,000	Bridges	\$ 72,006,019	
Causeways	\$ 7,166,000			
Water	\$ 41,449,000	Water	\$ 41,449,652	Note 1
Sewerage Network	\$ 32,281,000	Sewerage	\$ 32,277,105	
Stormwater Drainage	\$ 17,589,000	Urban Drainage	\$ 17,589,279	
Plant and Equipment	\$ 11,333,000	Plant and Equipment	\$ 12,376,378	Note 2
Buildings	\$ 45,694,000	Buildings and Structures	\$ 78,623,867	Note 3
Other Structures	\$ 10,245,000			
Open Spaces	\$ 3,642,000			
Swimming Pools	\$ 3,142,000			
Land	\$ 13,901,000			
Library	\$ 958,000			
Office Equipment	\$ 305,000			
Furniture and Fittings	\$ 291,000			
Tip Assets	\$ 3,263,000	Not applicable		
Capital Works in Progress	\$ 2,726,000			
Total	\$ 479,548,000		\$ 475,044,857	

1. Asset financials held by the Asset Management Team are calculated to 4 decimal places and rounded at point of entry into the tables. Data is also updated at time of review. Note 10 figures are rounded to nearest \$1,000 thus minor discrepancies occur.

2. This AMP also includes leased plant assets, which are not covered by the Note 10 Plant and Equipment.3.

3. This AMP also includes investment properties, which are not covered by Note 10 Buildings.

PLANS FOR THE FUTURE

This asset management plan has been linked with Council's Community Strategic Plan. Therefore, the asset management plan needs to reflect community expectations. This asset management plan has been finalised in conjunction with the outcomes of the public consultation for the Community Strategic Plan and in conjunction with development of the Long-Term Financial Plan and Infrastructure Backlog Management Plan.

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The overwhelming message coming from the community consultation that was conducted for the current delivery program was that the focus of Council's activities should revolve around the roads asset class until that class is brought to an acceptable state. Recent community survey shows that while there is a slight improvement in satisfaction in this area, more is needed. Given that the roads backlog issue has taken decades of neglect to develop, it is not surprising that it will take a decade to achieve normality.



Wattle Vale Quarry established 2017

MEASURING OUR PERFORMANCE

Quality

The assets will be maintained in a reasonably usable condition. Defects found or reported that are outside our service standard will be repaired. Defect prioritization and response times will be detailed in Council's Maintenance Response Levels of Service

Function

Council's intent is to provide an appropriate asset network which is maintained in partnership with other levels of government and stakeholders (including the community) to achieve the aforementioned objectives.

Safety

The assets will be maintained at a safe level and associated signage and equipment will be provided as needed to ensure public safety. Council will inspect assets regularly and prioritise and repair defects in accordance with the inspection schedule to ensure they are safe.

Generally, Council will utilize the Statewide Risk Management best practice directives in this regard.

THE NEXT STEPS

Council will build on these Asset Management Plans by enhancing the data and determining appropriate levels of service through engagement with the community. The principle objective of this is to provide agreed levels of service in a sustainable manner.

WANT TO KNOW MORE?

Copies of the complete Asset Management Plans are available for viewing at Council offices or on Council's website www.gisc.nsw.gov.au

2. INTRODUCTION

2.1 BACKGROUND

This asset management plan is to demonstrate responsive management of assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding required to provide the required levels of service. It is to be read with the following associated planning documents:

- Community Strategic Plan – Articulates the long-term strategic direction of Council.
- Delivery Program – outlines how the Council will deliver its objectives over a four-year program
- Long-term Financial Plan – Outlines all aspects of the key financial strategic objectives and commitments.
- Operational Plan – Detailed action plan on projects and finances for each particular year. The works identified in the AMP form the basis on which future annual plans are prepared.
- Infrastructure Backlog Management Plan – Identifies assets that are overdue for renewal and provides the basis for infrastructure renewal funding.
- Service Level Agreements & Contracts – The service levels, strategies and information requirements contained in the AMP are translated into field staff work instructions, contract specifications and reporting requirements.
- Standards and Policies – Tools to assist in the management of, and to support, strategies.
- Business Plans – Levels of service, processes and budgets defined in the AMP are incorporated into business plans as activity budgets, management strategies and performance measures.

This asset management plan covers the following infrastructure assets:

Table 2.1. Assets covered by this Plan

Asset Category	Replacement Cost	Depreciable Amount	Annual Asset Consumption	Backlog Value	Backlog Ratio
Roads	\$ 220,722,558	\$ 155,489,953	-\$ 3,021,333	\$ 15,333,186	0.07
Urban Drainage	\$ 17,589,279	\$ 17,589,279	-\$ 194,356	\$ 1,741,776	0.10
Water	\$ 41,449,652	\$ 40,908,831	-\$ 543,425	\$ 1,487,696	0.04
Sewerage	\$ 32,277,105	\$ 32,277,105	-\$ 483,665	\$ 3,985,847	0.12
Buildings and Structures *	\$ 78,623,867	\$ 64,659,269	-\$ 1,545,895	\$ 7,774,301	0.10
Bridges	\$ 72,006,019	\$ 72,006,019	-\$ 714,085	\$ 4,800,120	0.07
Plant & Fleet	\$ 12,376,378	\$ 12,376,378	-\$ 937,499	Not reported	Not reported
Total	\$ 475,044,857	\$ 395,306,833	-\$ 7,440,259	\$ 35,122,927	0.08

* Note Library, Furniture, and Office Equipment not captured in Special Schedule 7; therefore, these assets not included in backlog figures.

2.1.1 KEY STAKEHOLDERS

Key stakeholders in the preparation and implementation of this asset management plan are:

Federal and State Governments and Agencies	Funding assistance and standards development.
Elected members	Community representation and administration.
Community	End-user involvement.
Visitors	End-user involvement.
Utilities / Developers	Providers of services and infrastructure facilities.
Employees / Volunteers	Operational and administration providers.
Contractors / Suppliers	Suppliers of goods and services.
Insurers	Remedy providers

2.2 GOALS AND OBJECTIVES OF ASSET MANAGEMENT

Council exists to provide services to its community. Some of these services are provided by infrastructure assets. Council has acquired infrastructure assets by 'purchase', by contract, construction by council staff and by donation of assets constructed by developers and others to meet increased levels of service.

Council's goal in managing infrastructure assets is to meet the required level of service in the most cost-effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Taking a life cycle approach,
- Developing cost-effective management strategies for the long term,
- Providing a defined level of service and monitoring performance,
- Understanding and meeting the demands of growth through demand management and infrastructure investment,
- Managing risks associated with asset failures,
- Sustainable use of physical resources,
- Continuous improvement in asset management practices.¹

¹ IIMM 2006 Sec 1.1.3, p 1.3

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This asset management plan is prepared under the direction of Council's vision, mission, goals and objectives.

Council chose to adopt the same vision statement for the next four (4) years as the one developed by the community for the next 10 years, namely:

"Glen Innes Severn will be recognized as a prosperous connected community that nurtures its people and places."

Further, Council has adopted the following mission statement through which it will achieve its vision:

"Together we focus on our customers and partners to deliver the best possible local government services and projects at the best possible value now and into our shared future."

These vision and mission statements are supported by the following noble set of values: Respect, Integrity, Courage, Honesty, and Transparency. Key Council goals and objectives and how these are addressed in this asset management plan are advised in each plan. Some of the overarching goals are:

Table 2.2: Council Goals and how these are addressed in this Plan

GOAL	OBJECTIVE	HOW GOAL AND OBJECTIVES ARE ADDRESSED IN AMP
IM 3.2.3: Maintain and/or further develop advanced Asset Management Plans across all asset classes.	To ensure all Council assets are identified, classified, and managed according to the data available and asset complexity.	This plan captures assets which previously fell outside of AMPs. As individual asset plans are reviewed, the asset data and treatment modelling will improve towards 'advanced' asset management.
IM 3.2.1 Implement maintenance infrastructure works according to adopted service levels.	To implement maintenance infrastructure works according to adopted service levels.	This plan incorporates methods to optimise the maintenance of infrastructure assets.
IM 3.1.4: Implement the Infrastructure Backlog Plan and review as necessary.	The backlog of infrastructure works is addressed in the most efficient manner given the resources available.	The Infrastructure Backlog Management Plan is now developed and incorporated into this version of the AMP.

2.3 **PLAN FRAMEWORK**

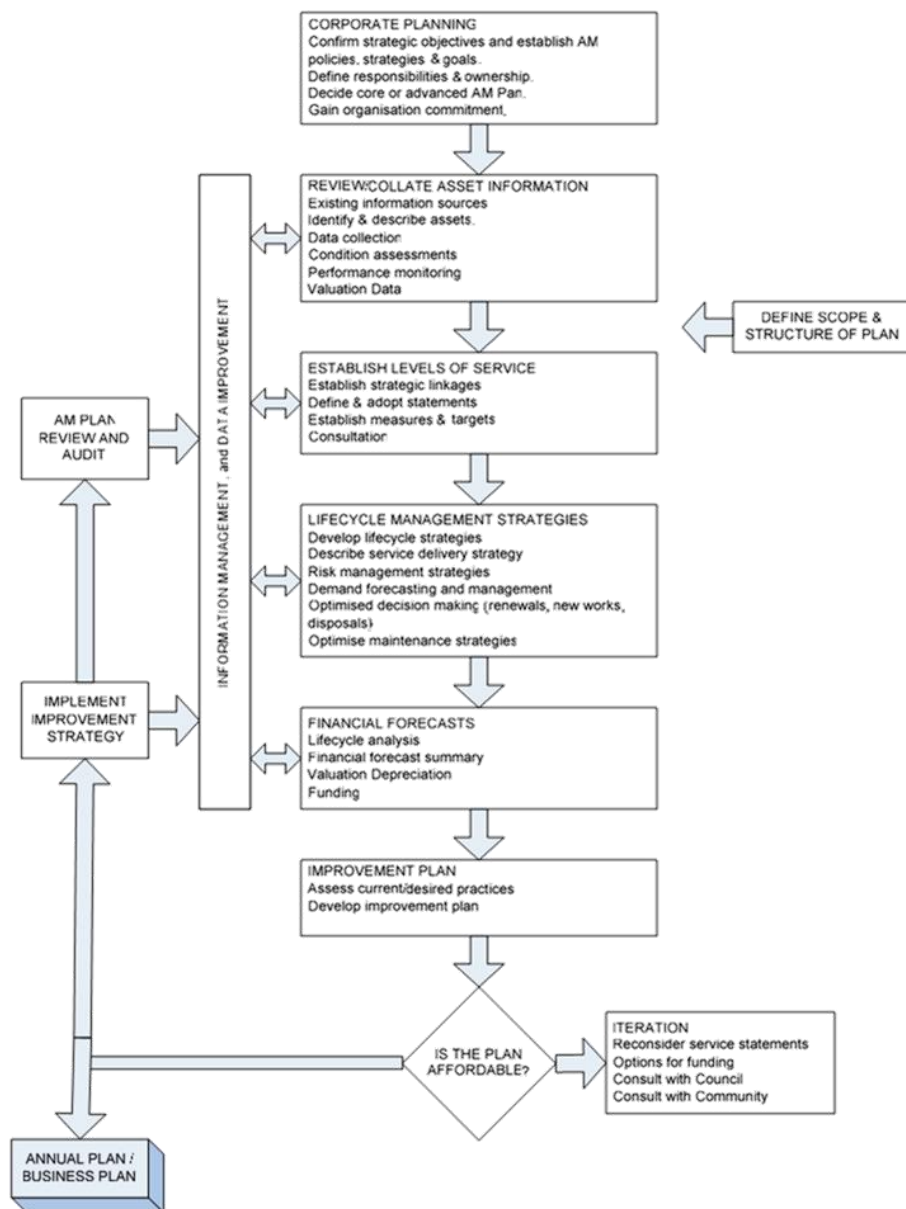
Key elements of the plan are

- Levels of service – specifies the services and levels of service to be provided by council.
- Future demand – how this will impact on future service delivery and how this is to be met.
- Life cycle management – how Council will manage its existing and future assets to provide the required services
- Financial summary – what funds are required to provide the required services.
- Asset management practices
- Monitoring – how the plan will be monitored to ensure it is meeting Council's objectives.
- Asset management improvement plan

A road map for preparing an asset management plan is shown below.

Road Map for preparing an Asset Management Plan

Source: IIMM Fia 1.5.1. p 1.11



2.4 CORE AND ADVANCED ASSET MANAGEMENT

This asset management plan is moving from being a “core” AMP towards being an “advanced” plan.

Future revisions of this asset management plan will continue to move further towards ‘advanced’ asset management using a ‘bottom up’ approach for gathering asset information for individual assets to support the optimisation of activities and programs to meet agreed service levels.

2.4.1 KEY ASSET ASSUMPTIONS AND DATA LIMITATIONS

Limitations on data quality and current analysis tools, applied over the diversity of assets in the AMP, have constrained the Plan outcomes.

ASSET CLASS	ASSUMPTION / LIMITATION
General	<ul style="list-style-type: none"> Improvement Plan to address AMP shortcomings.
Roads	<ul style="list-style-type: none"> With the exception of sealed road pavements, Roads are excluded from financial modelling due to industry-wide condition rating uncertainties.
Urban Drainage	<ul style="list-style-type: none"> Urban drainage assets are now able to be accurately assessed for condition due to the purchase of a larger jetting truck and CCTV camera equipment. This work will continue across the network until a full condition inspection is complete, allowing a 100% confidence in asset data.
Water and Wastewater Management	<ul style="list-style-type: none"> Condition rating methodology for underground assets (e.g., pipes) is expensive and in the case of water assets not available. <p>The purchase of the CCTV camera and jetting truck allows Council to perform its own condition assessment of sewer assets moving forward.</p>
Buildings	<ul style="list-style-type: none"> Limited data to enable building maintenance requirements to be calculated.
Bridges	<ul style="list-style-type: none"> Asset renewals in recent times have been performed using more efficient methods and replacement costs may not be accurately reflected (too high) in the financial reporting.

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	A full and independent revaluation of the bridge asset class is underway for reporting in the 2021 financial statements. The next iteration of this plan will include a complete review of the Bridge class.
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Item 7.27

Annexure C

3. LEVELS OF SERVICE

3.1 CUSTOMER RESEARCH AND EXPECTATIONS

Council's customer research into asset needs and satisfaction has included:

- Customer feed-back surveys
- Community requests to Council
- Community engagement sessions as part of the development of the Community Strategic Plan.

Council has conducted qualitative internal and external customer surveys for the services provided.

As part of the integrated planning & reporting framework, Council has conducted extensive community engagement. Council uses this information in developing the Community Plan and in allocation of resources in the budget.

The Community Strategic Plan outlines the desires and expectations of the community.

The most recent customer satisfaction survey demonstrated the following satisfaction rating for each asset class in this plan:

CLASS	SATISFACTION RATING
Roads	40%
Drainage	N/A
Water	72%
Sewer	94%
Buildings and Structures	90%
Bridges	73%
Plant and Fleet	N/A

3.2 LEGISLATIVE REQUIREMENTS

Council has to meet many legislative requirements including Australian and State legislation and State regulations. These include:

Table 3.2. Legislative Requirements

DOCUMENT TITLE	REQUIREMENT
ACTS	
National Asset Management Framework Legislation 2010	Focuses on long term financial sustainability and provides a mandate to have long term strategy, financial statements and annual reporting mechanisms. AM plans are likely to be audited.
<i>Local Government Act 1993</i>	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long-term financial plan supported by asset management plans for sustainable service delivery.
<i>Local Government Act 1993 - Annual Reporting Section 428(2)(d)</i>	(d) A report of the condition of the public works (including public buildings, public road and water sewerage and drainage works) under the control of council as at the end of that year; together with an estimate (at current values) of the amount of money required to bring the works up to a satisfactory standard; and an estimate (at current values) of the annual expense of maintain the works at that standard; and the Council's program for maintenance for that year in respect of the works.
Financial Reporting Requirements	Special Schedule 7 (AASB 116)
The Protection of the Environment Operations Act 1997 (POEO Act)	Is the key piece of environment protection legislation administered by the Office of Environment and Heritage. The POEO Act enables the Government to set out explicit protection of the environment policies (PEPs) and adopt more innovative approaches to reducing pollution.
Fisheries Management Act 1994	Requires approval from NSW fisheries before construction across a waterway. This is administered by NSW Department of Primary Industries.

Work Health and Safety Regulation 2011	Explains conditions required for safety at work site and documentary evidence to be kept.
Environmental Planning and Assessment Act 1979	Considers the effect of a project on the local environment and provides exemption for completion of a full environmental impact study in certain circumstances.
<i>Road Transport (Mass, Loading and Access) Regulation 2015</i>	Provides for maximum loads that will be legally able to use the structure.
<i>Roads Act 1993</i>	Defines who the road authority is for an asset and provides a legal basis for ownership of road assets.
<i>Land Acquisition (Just Terms Compensation) Act 1991</i>	Provides for compensation to a landowner where land is compulsorily acquired by the road authority
<i>Disability Discrimination Act 1992</i>	Sets out the responsibilities of Council and staff in dealing with access and use of public infrastructure.
Other relevant State and Federal Acts and Regulations	As appropriate.
STANDARDS	
AAS27, AASB116, AASB1031	The responsibilities of Council for maintaining accounting standards.
Australian Accounting Standards Board	Accounting rules setting out Council requirements for the financial reporting of assets.
Australian Road Rules	Regulations under the <i>NSW Road Rules 2014</i> .
Australian Standards	The minimum requirements for Council for operational and design standards.
Building Code of Australia	The responsibilities and powers of Council in providing safe buildings.

3.3 CURRENT LEVELS OF SERVICE

Council has defined service levels in two terms.

Community Levels of Service relate to how the community receives the service in terms of safety, quality, quantity, reliability, responsiveness, cost/efficiency and legislative compliance.

Supporting the community service levels are operational or technical measures of performance developed to ensure that the minimum community levels of service are met. These technical measures relate to service criteria such as:

Service Criteria	Technical measures may relate to
Quality	Smoothness of roads
Quantity	Area of parks per resident
Availability	Distance from a dwelling to a sealed road
Safety	Number of injury accidents

Where table entries are shown as '#' data are unavailable. Future AMP revisions will include this information, as it becomes available.

3.4 DESIRED LEVELS OF SERVICE

At present, indications of desired levels of service are obtained from various sources including Customer Satisfaction surveys, residents' feedback to Councillors and staff, service requests and correspondence.

4. FUTURE DEMAND

4.1 DEMAND FORECAST

Factors affecting demand include population change and changes in demographics.

Demand factor trends are summarised in the following tables:

Table 4.1a.: Key Indicators: Projected Population, Households and Dwellings

Key Indicators: Projected Population, Households and Dwellings - all data at 30th June						
	2016	2021	2026	2031	2036	2041
Total Population	8,950	8,550	8,100	7,650	7,150	6,600
2016 Population Projection	8,800	8,650	8,450	8,200	7,850	
Total Households	3,900	3,850	3,700	3,550	3,350	3,150
Household Size*	2.19	2.11	2.09	2.04	2.01	1.97
Implied Dwelling Projection**	4,550	4,450	4,300	4,150	3,900	3,650

*Average persons resident per occupied private dwelling

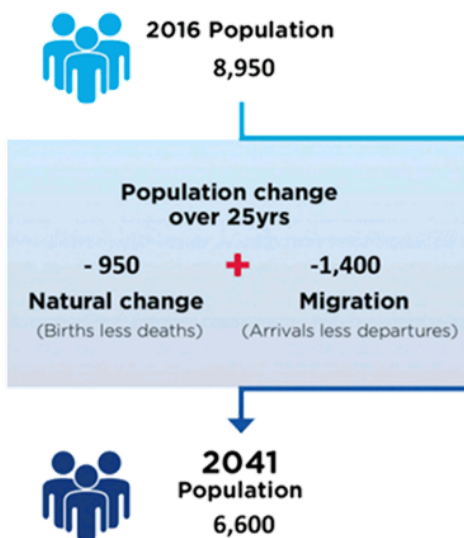
**Dwellings required if the population forms households in the same ways as in 2016

GISC continues to enjoy steady population dynamics with potential upside for population growth if the proposed economic development benefits of projects such as the New England Rail Trail eventuate. For the reporting period to 2030, increases in asset stock will be derived largely from donated assets or development, rather than new / expansion works undertaken by Council.

Table 4.1b: Population Projection

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(Source: www.planning.nsw.gov.au – LGA Population Projection Fact Sheet)

4.1.2 DEMAND FACTORS – TRENDS AND IMPACTS

Refer to relevant detailed Asset Management Plan for further discussion.

4.2 CHANGES IN TECHNOLOGY

Technological changes, more particularly those related to climate change, energy consumption patterns and water usage, are forecast to have some effect on service delivery.

Refer to relevant detailed Asset Management Plan for further discussion.

4.3 DEMAND MANAGEMENT PLAN

Demand for new and enhanced service delivery will be managed through a combination of better utilisation and upgrading of existing assets and providing new assets to meet demand. Demand management practices also include non-asset solutions, insuring against risks and managing failures.

Refer to relevant detailed Asset Management Plan for further discussion.

4.4 NEW ASSETS FROM GROWTH

Refer to relevant detailed Asset Management Plan for further discussion.

4.4. ASSUMPTIONS USED IN PROJECTED ASSET GROWTH

There is a diminishing degree of confidence in the projected data from 'committed' for a one-year Operational Plan program, through 'credible' in the 10 – year LTFP to 'plausible' for the balance of the period. Some attempts have been made to anticipate growth and expenditure 'peaks', rather than a linear extrapolation. It is recognised that projections are, at best, estimates based on current knowledge and will be subjected to regular review.

The relationship between asset growth (Council-acquired and developer-contributed) and population growth / demographic changes varies across the asset categories and classes. For example, road pavement and seal assets will be created for most of the created allotments, whereas very few built-form assets will accrue in recreational open space. Thus, there is not a clear ratio of asset creation per created allotment, which is then made more complex when Council-acquired assets are taken into account.

4.4. CONTRIBUTED ASSETS

Refer to relevant detailed Asset Management Plan for further discussion.

5. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how Council plans to manage and operate the assets at the agreed levels of service (defined in section 3) while optimising life cycle costs.

5.1 BACKGROUND DATA

All infrastructure assets, which are the responsibility of Council, are being managed with a long-term view and a whole-of-life approach. That is to say, the assets are managed from installation, through various maintenance phases until renewal, disposal or upgrade is required.

This section reviews the processes required for the effective management, maintenance, renewal and upgrade of assets.

The lifecycle management plans outline for each asset class:

The objectives for the asset class.

Supporting data, including:

- key lifecycle management issues;
- physical parameters and values;
- asset capacity / performance;
- asset condition; and
- historical expenditure.

The management strategies to achieve the levels of service in the following work categories:

- operations and maintenance;
- renewals; and
- new works.

Council as asset owner is committed to maintaining its assets to ensure stakeholders' desired levels of service are maintained at sustainable levels commensurate with affordable expectations.

To meet this requirement, Council seeks to match funding levels, condition and community expectations. Some of the key lifecycle issues are:

- There has not been a significant shortfall in expenditure in the previous decade. Provisions have been made to deal with demand for cyclical maintenance within the next 10 to 20 years.
- The research work on predictive modelling of deterioration needs to be continued, to enable understanding of asset component lives and justify planned increases in rehabilitation / expansion expenditure.

5.1.1 PHYSICAL PARAMETERS

Refer to relevant detailed Asset Management Plan for further discussion.

5.1.2 ASSET CAPACITY AND PERFORMANCE

Council's services are generally provided to meet design standards where these are available. Service deficiencies were identified from the results of condition rating surveys undertaken and through staff inspections.

Refer to relevant detailed Asset Management Plan for further discussion.

5.1.3 ASSET CONDITION

Profiles of network condition, remaining useful live and asset age are illustrated for the asset category in the relevant Part.

Condition is generally measured using a 1 – 5 rating system.²

Table 5.1.3.a: Condition Ratings

Rank	Description of Condition (Note 1)	RUFL (Note 2)	GISC Interval (Note 3)
1	Very Good Condition	60% to 100%	60.0 - 100
2	Good Condition - Minor Defects Only	35 % to 60%	35.0 - 59.9
3	Fair or Moderate Condition - Maintenance Required to Return to Acceptable Level of Service	20% to 35%	20.0 - 34.9
4	Poor Condition - Consider Renewal	10% to 20%	10.0 - 19.9
5	Very Poor Condition - Approaching Unserviceable	0 to 10%	0 - 9.9

Notes

1. Descriptions are sourced from IIMM 2020 and are generalized. More detail description, if required, will be detailed in each relevant part (asset plan).
2. Percentage Remaining Useful Life (RUFL): sourced from IPWEA Practice Note 9, para 9.2, table 4.
3. A specific numeral interval and threshold is often needed for revaluation calculations and financial reporting (e.g. 'Cost to Bring to Satisfactory'). Those listed above will be used by default, unless specified in a particular revaluation methodology.

The condition rating methods adopted vary across the asset categories.

- For sealed road pavements, an advanced condition assessment has been developed based on measured roughness and rutting values and modelled to determine predicted life expectancy for each individual asset.

² IIMM 2006, Appendix B, p B:1-3 ('cyclic' modified to 'planned')

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- The condition of unsealed road pavements is assessed on observations of gravel depth, surface condition and crown height through subjective inspection, with inherent uncertainty due to human variability and the constant change of asset condition through the maintenance cycle.
- The condition of individual bridge components are rated to determine an average condition rating for each component. Component scores are then weighted to determine an overall Bridge Condition Number for each structure, based on the VicRoads methods outlined in the IPWEA Bridge and Inspection and Management Manual.
- A Causeway Condition Index is determined for each structure based on assessment of the slab, pipe, waterway, and approach conditions.
- Kerb and gutter is assessed based on observed cracking, misalignment, chipping and ponding.
- A score for the condition of footpaths is determined from trip size, unevenness, slipperiness, shadows, and lighting.
- Culverts in rural roads are assessed based on cracking, abrasion and sedimentation, while the condition of headwalls is averaged from one observed condition value of the headwalls at each end.

The systematic approach is in line with procedures outlined in IIMM (ref. 14)

Council's preferred practice is to re-rate assets every 3-5 years to ensure that those assets nearing the end of their life are not allowed to deteriorate beyond the intervention point at which relatively low-cost rehabilitation can be undertaken. For sealed road pavements this assessment is performed annually using vehicle mounted monitoring laser profiling.



With each subsequent survey, a better picture of asset conditions is developed. This enables the actual rate of deterioration to be observed over time and on pavements of varying condition, providing a high level of accuracy for modelling decay rates.

Condition ratings are scheduled to coincide with valuations (see para 5.1.4) to take advantage of external expertise and to reduce the workload on internal teams. Forward planning and spreading the ratings across a 5-year period across asset classes, will allow

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staff the capacity to conduct a revaluation should asset condition vary significantly from previous data.

Table 5.1.3.a: Condition Rating Schedule

Asset Class	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Roads - Sealed (Note 1)	External	External	External	External	External	External	External	External	External	External
Roads - Unsealed (Note 2)	Grading Sheets	Grading Sheets	Grading Sheets	Grading Sheets	Grading Sheets	Grading Sheets	Grading Sheets	Grading Sheets	Grading Sheets	Grading Sheets
Bulk Earthworks	Not required: Non-depreciable									
Water		External					External			
Sewer										
Bridges					Bridge Team					Bridge Team
Causeways					Bridge Team					Bridge Team
Land	Not required: Non-depreciable									
Buildings (Note 3)		External					External			
Footpaths (Note 4)	Tech Services	Tech Services	Tech Services	Tech Services	Tech Services	Tech Services	Tech Services	Tech Services	Tech Services	Tech Services
Kerb and Gutter			Tech Services					Tech Services		
MSF				Tech Services					Tech Services	
Carparks				Tech Services					Tech Services	
Cattle Grids (Non-asset - Note 5)	Build Data	Tech Services					Tech Services			
Rural Drainage (Note 6)	Build Data	Tech Services					Tech Services			
Urban Drainage (Note 7)	Build Data	External					Integrated Water Services			
Other Structures		External (Note 8)					External (Note 8)			
Swimming Pools										
Open Spaces										
Plant & Fleet		Tech Services				Tech Services				
Office Equipment		External (Note 8)					External (Note 8)			
Furniture										
Investment Properties (Note 9)		External					External			
Library (Note 10)	Not required: Assets depreciated and removed from register									

Notes:

1. Sealed roads seal and base components are condition rated using an external contractor's laser measurements of roughness and cracking.
2. Unsealed roads condition data captured by Grading Teams in the field during maintenance work and logged in the asset management system.
3. Building condition rating coincides with asset valuation which is timed to coincide with Council's insurer's insurance valuation to reduce costs.
4. GISC Footpath Maintenance and Inspections Policy requires annual hazard assessment. Condition rating is captured concurrently as both activities involve the same staff member.
5. Cattle grids are not owned by Council and thus are not an asset. However, cattle grid condition rating is included here to be deconflicted from other condition rating activity.
6. Rural drainage will be componentized out of the rural roads register and captured in a distinct asset register in FY23.
7. Urban drainage condition rating will require a complete re-mapping and remote camera inspections. Estimated completion will be in FY23 or FY24.
8. Other structure, open spaces, swimming pools, office equipment and furniture will be included in the land and buildings external valuation and condition rating contract.
9. Investment properties are included in the buildings register for the purpose of condition rating.
10. Library assets are being depreciated and treated as an operational expense. No further condition rating is required.

5.1.4 ASSET VALUATIONS

Council values assets for two different purposes: insurance and asset management. Significant savings can be made if an insurance valuation (paid for by Council's insurer) can be expanded (at Council cost) to cover an asset valuation of the same building or property. Council's insurer currently values plant, fleet, land, buildings, other structures, open space, and swimming pool asset including contents insurance. Ideally the insurer schedules its valuations every 5 years.

Australian Accounting Standards Boards AASB 116, stipulates that Council must revalue assets every 3-5 years provided that no significant change in Fair Value has occurred in the past FY. Local Government Code of Accounting 2021/22, Section 5, Appendix E recommends external valuations for buildings and land whilst investment properties must be independently valued.

Class Year	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Roads (including causeways) and BE)			Internal	Unsealed	Sealed			Internal					Internal	
Footpaths			Internal					Internal					Internal	
Kerb and Gutter			Internal					Internal					Internal	
MSF			Internal					Internal					Internal	
Carparks			Internal					Internal					Internal	
Water	External					External					External			
Sewer														
Bridges			Internal	External					Internal					Internal
Causeways			Internal						Internal					Internal
Land	External					External					External			
Buildings														
Other Structures	External					External					External			
Swimming Pools														
Open Spaces	External					External					External			
Office Equipment	External					External					External			
Furniture														
Rural Drainage					Build Data	Build data	Internal					Internal		
Urban Drainage			Internal		Build Data	Build data	Internal					Internal		
Plant & Fleet				Internal		Internal					Internal			
Investment Properties yearly	External	External	External	External	External	External	External	External	External	External	External	External	External	External
Library (From July 2020 to be operational cost)				Depreciate	Depreciate	Depreciate	Depreciate	Depreciate						

5.2 RISK MANAGEMENT PLAN

The risk assessment process identified credible risks, the likelihood of the risk event occurring and the consequences should the event occur. Future refinements will use these factors to develop risk ratings, incorporating a risk treatment plan for non-acceptable risks.

Critical risks are those assessed as:

- Very High (VH)- requiring immediate corrective action, and;
- High (H) – requiring prioritised corrective action.

Refer to critical risks in each relevant Part.

5.3 ROUTINE MAINTENANCE PLAN

Routine 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.

5.3.1 MAINTENANCE PLAN

Maintenance includes reactive, planned and cyclic maintenance work activities.

Historic maintenance expenditure patterns across each asset category are shown in the relevant Part.

Note that amounts shown have been extracted from Council's Annual Operational Plan and Budget for each year and are stated in that year's dollars. Thus, unless the maintenance expenditures show a progressive increase in line with construction inflation, then actual expenditures are not keeping pace.

Refer to relevant detailed Asset Management Plan for further discussion.

5.3.2 STANDARDS AND SPECIFICATIONS

Maintenance work is carried out in accordance with the Standards and Specifications, outlined in each relevant Part and in Council's LTFP.

5.3.3 SUMMARY OF FUTURE MAINTENANCE EXPENDITURES

Deferred maintenance, i.e. works that are identified for maintenance and unable to be funded, are to be included in the risk assessment process in the infrastructure risk management plan in future revisions of this asset management plan.

Maintenance is funded from Council's operating budget and grants where available. This is further discussed in Section 5 of each Part.

5.4 RENEWAL/REPLACEMENT PLAN

Assets requiring renewal are identified from estimates of remaining life obtained from the asset register. Candidate proposals are inspected to verify the accuracy of the remaining life estimate and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programs.

Renewal will be undertaken using 'low-cost' renewal methods where practicable. The aim of these treatments is to restore the service potential or future economic benefits of the asset by renewing the assets at a cost less than replacement cost.

Renewals will be funded from Council's Capital Works Program and grants where available. This is further discussed in Section 6 in each relevant part.

5.4.1 SELECTION CRITERIA

Selection criteria for asset renewal and replacement are noted in Section 5 in each relevant Part.

5.4.2 RENEWAL STANDARDS

Renewal work is carried out in accordance with the Standards and Specifications noted in Section 5 in each relevant Part.

5.5 CREATION/ACQUISITION/UPGRADE PLAN

New works are those works that create a new asset that did not previously exist, or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost to the Council from land development. These assets from growth are considered in Section 4.4 in each relevant Part.

Candidate new assets and upgrade / expansion of existing assets are identified from various sources such as Elected Member or community requests, proposals identified by strategic plans or partnerships with other organisations. Proposals are investigated to verify need and to develop a preliminary estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programs.

New assets contributed by land developers are discussed separately in Section 4 of each relevant Part.

5.5.1 SELECTION CRITERIA

Selection criteria for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2 in each relevant Part.

The decision on whether physical assets are treated as operational expenses or capitalized, and therefore added to asset plans and registers, are based on the following capitalization thresholds:

Table 5.5.1: Asset Capitalization Thresholds

Asset Capitalization Threshold	\$
Office Equipment	\$2,000
Furniture and Fittings	\$2,000
Plant and Equipment	\$5,000
IWS Assets	\$5,000
Stormwater	\$5,000
Structures: Open Space Assets, Swimming Pools, and Other Structures	\$5,000
Buildings (including Renovations and Extensions)	\$10,000
Transport Assets	\$25,000
Land	100% Cap
Library Resources	Operational

5.5.2 STANDARDS AND SPECIFICATIONS

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.5.2 in each relevant Part.

5.6 DISPOSAL PLAN

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any.

No plans exist to formalise a disposal schedule at present for the asset categories in the AMP.

Refer to relevant detailed Asset Management Plan for further discussion.

6. FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

6.1 FINANCIAL STATEMENTS AND PROJECTIONS

Refer to relevant detailed Asset Management Plan for further discussion.

6.1.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators for financial sustainability that have been considered in the analysis of the services provided by this asset category, these being long term life cycle costs and medium-term costs over the 10-year financial planning period.

Long term - Life Cycle Cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the longest asset life. Life cycle costs include maintenance and asset consumption (depreciation expense).

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes maintenance plus capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals.

A gap between life cycle costs and life cycle expenditure gives an indication as to whether present consumers are paying their share of the assets they are consuming each year. The purpose of each asset management plan is to identify levels of service that the community needs and can afford and develop the necessary long-term financial plans to provide the service in a sustainable manner.

Medium term – 10-year financial planning period

This asset management plan identifies the estimated maintenance and capital expenditures required to provide an agreed level of service to the community over a 20-year period for input into a 10-year financial plan and funding plan to provide the service in a sustainable manner.

This may be compared to existing or planned expenditures in the 20-year period to identify any gap. In a core asset management plan, a gap is generally due to increasing asset renewals.

Table 6.1.1 shows the gap between projected and planned renewals.

One purpose of the AMP is to identify levels of service that the community needs and can afford and to develop the necessary LTFPs to provide the service in a sustainable manner.

The AMP identifies estimated maintenance and capital expenditures required to provide an agreed level of service to the community in a sustainable manner over a 20-year period. These are inputted into the 10-year Long Term Financial Plan. This may be compared to existing or planned (i.e. pre-AMP development) expenditures in the 20-year period to identify any funding shortfall.

The projected asset renewals are compared to the planned renewal expenditure in the capital works program and renewal expenditure in year one (1) of the planning period.

6.2 FUNDING STRATEGY

Refer to relevant detailed Asset Management Plan for further discussion.

6.3 VALUATION FORECASTS

Refer to relevant detailed Asset Management Plan for further discussion.

6.4 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

Key assumptions made in presenting the information contained in the AMP and in preparing forecasts of required operating and capital expenditure and asset values, depreciation expenses and carrying amount estimates, are detailed below. They are presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions:

- Average useful lives and average remaining lives of the asset classes are based on current local knowledge and experience, historical trends and accepted industry practice. These need to be reviewed and the accuracy improved, based on regular re-assessment of asset deterioration.
- Reviews of the effective useful lives of assets and population / demographic changes have the potential for greatest variance in future cost predictions.
- Changes in development needs associated with the rate and location of growth and changes in the desired level of service and service standards from those identified in the AMP, will both impact on future funding.

Accuracy of future financial forecasts may be improved in future revisions of the AMP by the following actions:

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- More refined condition rating data with more history for reference.
- Development of better degradation models through national research and development programs.
- Development of better financial models through collaborative processes.
- Improvements to the asset information system.

7. ASSET MANAGEMENT PRACTICES

7.1 ACCOUNTING/FINANCIAL SYSTEMS

Accounting Standards applicable to the AMP include:

- AAS27 (ref. 2);
- AASB116 (ref. 4); and
- AASB1031 (ref. 3).

The present Maintenance / Capital threshold (materiality limit) varies by asset class, ranging from \$5,000 for Plant to \$25,000 for Roads.

Recommended changes resulting from the AMP are as follows:

- Upgrades to condition rating systems for asset types and components to improve the monitoring and reporting capabilities.
- Inform Council of long-term financial plans through regular reviews.
- Ongoing implementation of improved asset information software and systems.

7.2 ASSET MANAGEMENT SYSTEMS

The asset information systems adopted for the AMP include the following:

- Intramaps software for management of financial and spatial data.
- Practical Plus financial software

Planned upgrades include the current migration to the Open Office software.

7.3 INFORMATION FLOW REQUIREMENTS AND PROCESSES

The key information flows *into* this asset management plan are:

- The asset register data on size, age, value, remaining life of the network;
- The unit rates for categories of work/material;
- The adopted service levels;
- Projections of various factors affecting future demand for services;
- Correlations between maintenance and renewal, including decay models;
- Data on new assets acquired by council.

The key information flows *from* this asset management plan are:

- The assumed Works Program and trends;
- The resulting budget, valuation and depreciation projections;

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- The useful life analysis.

These will impact the Long Term Financial Plan, Community Strategic Plan, Delivery Program, Operational Plan, Infrastructure Backlog Management Plan and departmental business plans and budgets.

7.4 STANDARDS AND GUIDELINES

The relevant standards, guidelines, policies, and the like, relevant to general asset management practices are noted in Table 7.1.

7.5 DATA CONFIDENCE LEVEL

The level of confidence in the data used for financial forecasting has been graded by the system outlined in Table 7.2.

Table 7.5: Data Confidence Levels

CONFIDENCE LEVEL		DESCRIPTION
A	Highly Reliable	Sound records, procedures, investigations and analysis that are documented to best appropriate practice
B	Reliable	Sound records, procedures, investigations and analysis that are documented to best appropriate practice. Contains minor shortcomings, e.g. some old data
C	Uncertain	Incomplete records, procedures, investigations and analysis, with some unsupported assumptions or extrapolations
D	Very Uncertain	Data based on unconfirmed, anecdotal evidence, or cursory inspection and analysis

Refer to asset category and relevant Part for specific data confidence levels

8. PLAN IMPROVEMENT AND MONITORING

8.1 PERFORMANCE MEASURES

The effectiveness of the asset management plan can be measured in the following ways:

- The degree to which the required cash flows identified in this asset management plan are incorporated into council's long term financial plan and Strategic Management Plan;
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the 'global' works program trends provided by the asset management plan;

8.2 IMPROVEMENT PLAN

The asset management improvement plan generated from this asset management plan is shown in Table 8.2.

Table 8.2: Improvement Plan

TASK NO	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TARGET COMPLETION DATE
1	Valuation Unit Costs – review unit cost derivations on a 'brownfields' basis	Technical Services Engineer	Staff	As assets are revalued
2	Risk Management – refine, expand and document the risk management plan	MRP Manager of Governance, Risk and Corporate Planning/Director of Infrastructure Services	Staff	Incorporation of risks into Council's corporate risk register
3	Job Costing System – Integrate Intramaps and new finance software (Open Office)	MANEX	Staff	2022/2023
4	Document methodology and procedures for asset useful lives, asset unit costs (rates), condition rating and scoring and depreciation calculations	Technical Services Engineer	Staff	For Core AMP assets not already completed
5	Population Projections – review projections based on latest available Census, or other, data	MANEX	Staff	Next Census
6	Community Consultation – undertake targeted engagement with the community to resolve acceptable and achievable levels of service	MANEX	Staff / Consultant	With preparation of each Community Strategic Plan
7	Condition Rating – refine data collection and analysis processes,	Technical Services Engineer	Staff	With preparation of Advanced AMPs

8.3 MONITORING AND REVIEW PROCEDURES

This asset management plan will be reviewed following annual budget preparation and amended to recognise any changes in service levels and/or resources available to provide those services because of the budget decision process.

The Plan is a living document and is due for revision and updating annually, with a major review within two years of the election of a new Council.

REFERENCES

Glen Innes Severn Council, 'Community Strategic Plan 2017 - 2027'.

Glen Innes Severn Council, 'Delivery Program 2017 - 2021'.

Glen Innes Severn Council, 'Long Term Financial Plan for the 10 Year period ending 30 June 2030'

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GLEN INNES SEVERN COUNCIL





ROADS

ASSET MANAGEMENT PLAN PART 2



Version 4.0

April 2022

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1. EXECUTIVE SUMMARY

Community consultation has been completed for the development of the Community Strategic Plan and associated suite of documents. The overwhelming message coming from the process was that the primary desire of the community is to restore the road network to a satisfactory level of service. This plan therefore is at the centre of Council's focus during the term of the current delivery plan.

Council finds itself in the unenviable position of having less resources at hand than are required to bring the network to a satisfactory condition in a timely manner. This plan provides for a pathway toward restoring the network to an acceptable standard through short, medium and long-term planning.

Council implemented a special rates variation during an earlier delivery plan cycle with a particular purpose of addressing the backlog of infrastructure works, primarily in the road asset class. Rehabilitation works initially focussed on the sealed network, and the worst of the problems in that area were resolved. The unsealed network has been the focus of attention over the last three years, with the worst of the problematic roads now having been gravel re-sheeted with quality manufactured material.

A team-based structure has been created, and team leaders are being actively mentored to further develop this new culture. This has proved to be successful, with excellent projects now routinely being delivered by staff who have adjusted quickly.

A dedicated crew is allocated to the maintenance of drains on local roads, addressing a lack of maintenance over many years in that area. These works will protect road gravel, and as drainage works are carried out additional gravel will be applied to restore unsealed road gravel surfaces that have been washed away over time.

This version of the plan continues to build on the use of laser profiling to obtain very accurate condition assessment data on sealed roads. For sealed road assets, a specific intervention methodology is defined whereby segments are to be rehabilitated at the following roughness levels (NAASRA*):

Rural Roads	135
Urban Roads	225

**NAASRA has been chosen for reporting to provide a more meaningful number to the lay reader.*

It is noted that the acceptable roughness of an urban road (with a speed limit of 50kph) is much greater than a rural road. International studies have shown that the motorist perception of acceptable roughness is very dependent on the speed environment, and the above intervention levels have been adopted based on local feedback regarding roads with that particular roughness.

A significant number of sealed roads were measured for roughness in 2008. This has provided a very useful historical snapshot of the network condition at that time, enabling a calculation of

deterioration when the network was again measured in 2016, and has continued to be assessed annually to 2021. The deterioration rate of typical segments averaged 1.475 points per year increase during that time. Typical segments are those that had no major rehabilitation work performed during the time and did not demonstrate excessive rates of deterioration in comparison to the majority (i.e. outliers in the data set have been removed). That figure has therefore been accepted as the rate of deterioration for a typical sealed road segment.

An advantage of this technology is that it enables those roads that are deteriorating more rapidly than typical roads, to be identified and managed. Physical investigation into underlying factors will be undertaken prior to the next review of this plan, particularly regarding pavement and subgrade strength. In addition, the measured rate of deterioration for these segments will be used for calculation of depreciation. In some cases, these roads are failing up to 10 times faster than typical roads, and allowance will have to be made for early intervention or renewal.

The step-by-step process that has been adopted in the management of the sealed road network is as follows:

- The network is componentised into segments that are essentially uniform in character (i.e. age, construction dimensions and materials used). Assets are broken into seal, base (incorporates single coat seal), sub-base and bulk earthworks.
- Each segment is mapped, and sufficient data is held for each segment (length, seal width, construction year etc.) to enable financial and engineering management.
- Roughness is used as the primary measurement of pavement condition. Roughness is measured each year for all segments according to current Austroads standards and reported using the International Roughness Index quality controls (IRIqc) as defined by Austroads. To provide a meaningful number to the lay reader, roughness is converted to NAASRA in this document.
- Asset consumption is calculated using either the actual rate of increasing roughness or the average over typical segments (currently 1.475 points per year), whichever is the greater.
- Atypical segments (identified from anomalous roughness or rutting measurements) are investigated individually to determine the best management practice for each. The deterioration rate of these assets is calculated based on the individual asset deterioration rate observed.
- Rutting is used only as a secondary measurement of abnormal early failure of a pavement.
- The above approach to pavement management relies strongly on the maintenance of a waterproof seal and the construction of a sufficiently strong pavement on a well-drained subgrade. Failure to provide these elements will be the primary cause of atypical (excessive and non-linear) deterioration rates. Bitumen seals are scheduled for renewal each 15 years.
- Seal cracking is identified during annual investigation. Cracking is to be rectified through either crack sealing or early resealing according to the seal maintenance program.

This plan is a living document that provides the current status of the network, including the most recent condition assessment of each asset. It also defines particular methodologies that have been adopted or are proposed for the management of the network and will be reviewed annually to monitor progress against key performance indicators.

2. INTRODUCTION

2.1 BACKGROUND

This asset management plan covers the following infrastructure assets:

Table 2.1.a Assets covered by this Plan

Asset Type	Quantity	Replacement Value	Accumulated Depreciation
Major Street Furniture	110	\$ 2,330,657	-\$ 427,085
Footpaths	176 assets	\$ 4,547,286	-\$ 1,244,616
Carparks	42 assets	\$ 1,470,964	-\$ 448,242
Kerb and Gutter	373 assets	\$ 11,347,385	-\$ 5,681,485
Local Sealed Roads	351 km	\$ 99,705,148	-\$ 27,177,413
Local Unsealed Roads	732 km	\$ 75,408,998	-\$ 21,707,462
Other Sealed Roads	10 km	\$ 2,541,653	-\$ 985,675
Regional Sealed Roads	68 km	\$ 23,370,468	-\$ 5,289,837
Total	N/A	\$ 220,722,558	-\$ 62,961,814

It is noted that these road assets may comprise pavement, seal, gravel surfacing, small drains and roadside furniture but does not include bridges, which comprise an asset class in their own right.

Community consultation has been completed for the development of the Community Strategic Plan and associated suite of documents. The overwhelming message coming from the process was that the primary desire of the community is to restore the road network to a satisfactory level of service.

Table 2.1. Road Infrastructure Backlog

Component	Infrastructure Backlog	Replacement Cost	Infrastructure Backlog %**
Roads - Local - Sealed - Rural	\$ 4,116,932	\$ 54,558,834	8%
Roads - Local - Sealed - Urban	\$ 1,143,476	\$ 22,855,277	5%
Roads - Local Rural Unsealed	\$ 8,527,316	\$ 36,166,441	24%
Roads - Other - Urban Sealed	\$ 230,360	\$ 2,222,018	10%
Roads - Regional - Sealed - Rural	\$ 694,043	\$ 18,538,027	4%
Roads - Regional - Sealed - Urban	\$ 25,121	\$ 1,041,833	2%
Bulk Earthworks	\$ -	\$ 64,707,795	0%
Total Road Pavements	\$ 14,737,249	\$ 200,090,225	7%

These figures are derived from Councils audited financial statements and represent the cost to bring each class to satisfactory condition.

This plan provides the current status of the network, including the most recent condition assessment of each asset. It also defines particular methodologies that have been adopted or are proposed for the management of the network.

Council finds itself in the unenviable position of having less resources at hand than are required to bring the network to a satisfactory condition in a timely manner. This plan provides for a pathway toward restoring the network to an acceptable standard through short, medium and long-term planning.

2.2 GOALS AND OBJECTIVES OF ASSET MANAGEMENT

Relevant Council goals and objectives communicated to Council via the Community Strategic Plan are listed in Table 2.2 below.

Table 2.2: Council Goals and how these are addressed in this Plan

Goal	Objective	How Goal and Objectives are addressed in AMP
CS 1.1.8 - Implement the Pedestrian Access and Mobility Plan.	To provide accessible pathways around the town and villages.	Paths identified in the PAMP are prioritised for inclusion in the Operational Plan and Budget capital works program.
EH 4.8.1 - Convert priority roads from unsealed to sealed surface as funding allows to mitigate storm erosion and maintenance issues during drought.	To improve resilience of the rural road network by converting priority roads from unsealed to sealed surface.	This plan includes the priority list of roads for conversion to seal.
EH 4.8.2 - Improve drainage to reduce road pavement damage during future storm events.	To improve resilience of the rural road network by improving drainage capacity of rural roads.	Rural stormwater drainage assets are included as a component of rural roads.
IM 3.1.1 - Implement Capital Roads Infrastructure works according to adopted service levels.	To implement maintenance infrastructure works according to adopted service levels.	This plan incorporates methods to optimise the maintenance of the road network.
IM 3.1.5 - Maintain a Survey and Design and Road Safety customer service delivery function.	To ensure new roads are constructed to appropriate standards	This plan identifies the roads requiring design in the current term of Council.
IM 3.2.6 - Deliver Best Practice Road Management Functions.	Customer requests are maintained accurately in a register and addressed in a timely manner.	This plan relies on the newly developed customer service request system to provide effective customer service including feedback to customers to "close the loop".
IM 3.2.9 - Implement the Asset Management Plan for footpaths and review as necessary.	Implement the Asset Management Plan for footpaths and review as necessary.	This asset management plan includes footpath networks.

IM 3.2.14 - Implement the Roads Asset Management Plan and review as necessary.

Roads and drainage assets are fit for purpose and meet community service level aspirations.

This plan develops an asset management program for roads and drainage that sets Council's maintenance and renewal program to maximise the use of available funding for the maintenance and renewal of infrastructure, based on predictive modelling of the network through advanced inspection methods and ongoing review of asset consumption.

IM 3.2.7 - Monitor the street lighting maintenance program within Glen Innes and the villages.

Street lighting is provided and maintained in Glen Innes and the villages

Street lights are provided by a third party arrangement for oth capital and oeprational costs and funded through an allocation identified in the Operational Plan and Budget.

2.4 CORE AND ADVANCED ASSET MANAGEMENT*Sealed Roads*

The progression to advanced asset management (by definition asset management that incorporates modelling of future asset consumption based on known deterioration rates) for the sealed road network is now starting to be possible due to a history of objective assessment data having been collected since 2008.

The laser road profiling technology that has been used to assess the condition of sealed roads in that time is extremely accurate and repeatable. Data is collected for roughness and rutting and cracking of the surface is recorded by video. Cracking is also captured by field inspection of the network.

The Austroads guidelines define roughness as being anomalies with road surface profile wavelengths between 0.5 m and 50 m. The guidelines describe two (2) broad measures of roughness, the NAASRA Roughness Meter (NRM roughness values in counts/km) and the International Roughness Index. A standard reporting interval of 100m is adopted and the NAASRA value is used by Council as it provides an intuitively more meaningful range of numbers.

Some segments of the sealed road network lack an adequate sub grade or are compromised in some other way and are observed to be deteriorating more rapidly than is acceptable. These segments will be assessed individually and managed initially to improve subgrade drainage and restore seal integrity. A new heavy patching team has been implemented in the organization structure and will work through these segments to address problem areas and restore the integrity of the pavement.

Unsealed Roads

Unlike sealed road pavements, unsealed roads vary in condition significantly in short periods of time. Grading maintenance activity has a very large effect on surface condition, and so any objective measurement will be affected by the timing with regard to grading maintenance activity and seasonal conditions. The methodology to model the deterioration of unsealed roads in a meaningful way is unknown within the industry.

3. LEVELS OF SERVICE

3.1 CUSTOMER RESEARCH AND EXPECTATIONS

Council's customer research into Rural Road assets needs and satisfaction has included:

- External customer surveys;
- Internal staff surveys;
- Community requests to Council;
- Community engagement during the development of the Community Strategic Plan;
- Feedback from the Roads Consultative Committee.

3.2 LEGISLATIVE REQUIREMENTS

Refer to Core Asset Management Plan.

3.3 CURRENT LEVELS OF SERVICE

Council has previously adopted a road hierarchy that informs the level of service for transport infrastructure. The current hierarchy has eight (8) categories.

Hierarchy Level	Traffic Warrant
1 - Arterial	Regional Road.
2 - Primary	ADT > 150 vpd.
3 - Major Collector	ADT > 100 and ≤ 150 vpd.
4 - Minor Collector	ADT > 50 and ≤ 100 vpd.
5 - Local Access, Type A	Minimum level of service for all school bus routes.
6 - Local Access, Type B	ADT > 20 and ≤ 50 vpd.
7 - Local Access, Type C	ADT ≤ 20 vpd.
8 - Formed Track (4WD Access - Signposted 'Road Not Maintained')	

Implications of the current hierarchy:

- Existing gravel roads will be sealed as per the priority list detailed in section of the 4.4 New Assets
- Rural Local Access Roads that are currently sealed, and do not serve a school bus route, will be converted to an unsealed pavement at end of life if average daily traffic is less than

40 vehicles per day. Under the revised hierarchy school bus routes can only be reverted to gravel if the necessary community consultation and Council recommendation is sought.

3.4 DESIRED LEVELS OF SERVICE

For sealed roads the desired level of service was previously set to slightly better the lowest average roughness on record, being the average roughness that existed in 2008. This equates to an average roughness for rural sealed roads of 80 and for urban sealed roads of 100. At this point in time the target has been set to at least maintain the average roughness of the sealed road network year on year until those average results from 2008 are matched.

The table below shows average roughness for segments with valid data in each given year. The current level of service is therefore not meeting the desired level of service, however is tracking slightly better year on year.

Table 3.4: Average Roughness by Survey Year and Road Location

	2008	2018	2020	2021
Rural	84	90	87	87
Urban	102	121	118	115

For unsealed roads there is no current objective measurement that provides a consistent result. The level of service has therefore been set with reference to the number of maintenance requests received into the infrastructure services customer request database. It is also determined by subjective feedback from the Roads Consultative Committee. The management of the unsealed road network is aimed at continually improving the results received through these two (2) channels.

The management practices that have been set to deliver these results include the use of teams of maintenance staff who are set routine tasks that move them systematically around the network in such a way as to minimise travel time between tasks. A single team leader is set in place for each team and held accountable for the team’s performance.

Maintenance grading provides the best opportunity for assessment of gravel condition, and the maintenance grading team leader is given the responsibility of selecting pavement sections that require patch re-sheeting. This gravel is sourced while the maintenance grader is on site, facilitating efficiency in minor re-sheeting tasks.

Table 3.4a: Community Levels of Service

KEY PERFORMANCE INDICATOR	COMMUNITY LEVEL OF SERVICE	PERFORMANCE MEASUREMENT PROCESS	TARGET PERFORMANCE	CURRENT PERFORMANCE
Sustainability	Roads are managed for future generations: maintaining an agreed level of service in a financially sustainable fashion.	Roughness of sealed roads.	The average roughness reduces or is maintained year on year.	<p>Average roughness has reduced from 90 to 87 (NAASRA) for rural roads in the period 2018 – 2021, but remains above the 2008 figure of 84.</p> <p>Average roughness has reduced from 121 to 115 (NAASRA) for urban roads in the period – 2018- 2021 but remains well above the 2008 figure of 102.</p>
		Condition of unsealed roads at the bottom of the maintenance cycle.	Subjective feedback from the roads consultative committee indicates satisfactory performance with regard to the condition of unsealed roads.	The gravel re-sheeting program and subsequent Otta seal program has resulted in positive feedback from the roads committee, however recent natural disaster impacts are contributing to a new round of complaints across the network.

	Scheduled maintenance is well planned.	Unsealed roads are graded by in house resources according to a defined geographic schedule that minimises travel distance between tasks. The schedule is sufficient to maintain the condition of roads at an acceptable standard until the following grade is due.	95% of roads are graded by in house resources according to the grading schedule.	Roads are graded according to a geographic schedule in 95% of cases.
	Pavement materials are reused where possible.	Existing road base material is recycled when sealed pavements are rehabilitated.	Pavement design is optimised to utilise 100% of existing pavement material through thorough measurement of existing pavement depth and quality. The most efficient plant is utilised for each task. Sufficient plant items are on hand to provide appropriate flexibility to utilise maintenance graders to perform re-sheeting operations as part of the grading schedule.	Pavements are recycled, with lime demand testing now able to be undertaken by a regional service. All maintenance graders have now been replaced. Additional plant has now been procured to assist with heavy patching to help improve the overall condition of the sealed network.
	Road construction machinery is selected for efficiency of operations.	Plant options are well researched and selected to optimise the efficiency of operations.		

Table 3.4b: Community Levels of Service

KEY PERFORMANCE INDICATOR	COMMUNITY LEVEL OF SERVICE	PERFORMANCE MEASUREMENT PROCESS	TARGET PERFORMANCE	CURRENT PERFORMANCE
Safety	Safe accessible network.	Crash reports.	Zero reported crashes attributed to road condition.	1
		Customer Service Request 'CRS'.	<5 per month.	2.3 per month
Quality	Driveability.	Customer Service Requests in regards to pot holes, patching and repairs to transport infrastructure.	< 10 per month.	51 per month
Function	Meet user requirements for accessibility, road width, and traffic management.	Customer Service Request.	<20 per year.	29 per year
		Austrroads technical specifications and guidelines.	Compliance with current standards and specs.	
		Customer satisfaction survey.		

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Table 3.4c: Technical Levels of Service

KEY PERFORMANCE INDICATOR	COMMUNITY LEVEL OF SERVICE	PERFORMANCE MEASUREMENT PROCESS	TARGET PERFORMANCE	CURRENT PERFORMANCE
Condition	Average Roughness of rural sealed road network (NAASRA count).	Annual independent assessment of road network using automated vehicle mounted measuring equipment.	Average Roughness of the rural sealed road network (NAASRA) is less than previous year or 80, whichever is the greater.	87
Condition	Average Roughness of urban sealed road network (NAASRA count).	Annual independent assessment of road network using automated vehicle mounted measuring equipment.	Average Roughness of the urban sealed road network (NAASRA) is less than previous year or 100, whichever is the greater.	115
Condition	Acceptable condition of unsealed rural roads.	Inspection. Condition of road at time of grading (subjective).	95% of unsealed roads are in acceptable travelling condition immediately prior to grading.	60% of roads are in acceptable travelling condition at time of grading.

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Cost effectiveness	Reuse of materials.	Pavement design records.	100% of rehabilitation projects are designed and pavement reuse is optimised.	Reuse of pavements occurs routinely, however rehabilitation projects are not currently investigated to a level that optimises reuse.
Safety	Provide: <ul style="list-style-type: none"> • clear signage; • well maintained line marking; • appropriate traffic management devices. 	Compliance inspections.	Zero compliance defects.	Zero compliance defects per year.
		Customer service request 'CRS'.	<10 per year.	27 customer requests per year.

4. FUTURE DEMAND

4.1 DEMAND FORECAST

Refer to Core Asset Management Plan.

4.1.2 DEMAND FACTORS – TRENDS AND IMPACTS

Developers will contribute roads in land divisions, but Council will need to upgrade connector roads and footpath links to cater for growth demands and achieve cohesive networks.

The aim of the road construction programs is to improve the amenity of urban areas through the rehabilitation of streets and to provide improved infrastructure and access for rural residents and industry through major freight links and access roads, particularly heavy vehicle routes.

To enable fair and planned distribution of funding throughout the LGA, many different factors are taken into account:

- Traffic surveys to determine vehicle and cyclist numbers and vehicle classifications.
- Meetings with various industry groups (key stakeholders) to determine future expansion of industry and required needs, e.g. A-double route to the Rangers Valley feedlot.
- Known traffic black spots (sites with a high crash history).
- High road maintenance costs areas.
- Known development areas.

The impact of some demand factors on services are shown in Table 4.1.

Table 4.1.2: Demand Factors, Projections and Impact on Services

FACTOR	IMPACT
Population changes in townships/rural areas	Expectations on level of service independent of number of properties serviced.
Rural freight task increasing	Greater demand for increased capacity freight vehicles. Last mile considerations.

4.2 CHANGES IN TECHNOLOGY

Technological changes (as distinct from changes to installations brought about by external, e.g. environmental, forces) will impact on the asset classes in this AMP over the 10 year timeframe.

ROADS

Changes in construction techniques and maintenance practices are likely, such as:

- Improved products for in-situ recycling of pavement materials.
- Greater use of recycled materials.
- Improved quality of pavement materials through the operation of Glen Innes Aggregates.

4.3 DEMAND MANAGEMENT PLAN

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

Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this asset management plan.

Table 4.3. Demand Management Plan Summary

SERVICE ACTIVITY	DEMAND MANAGEMENT PLAN
Road maintenance and upgrades	Upgrades and network extensions to meet population growth demand and changes identified in review reports and planning studies. Provide access for wheeled mobility devices, pedestrians, cyclists and tourism growth.
Safety Improvement Plan	Upgrades to improve user safety (to be developed further within the next review period). Regular road safety audits and inspections. Consideration of a Road Safety Officer position if external funding is received.

Road Hierarchy Review Plan	<p>Review of Hierarchy Plan to incorporate planned works particularly and examination of utilisation patterns and network links, within next review period.</p> <p>Consideration of freight routes.</p>
Community demand for reconstruction and reseal of roads and car parks	<p>Study road condition rating from this plan and prioritise a list of roads to be included in the annual reseal / rehabilitation program.</p> <p>Investigate alternative treatments to lower life cycle costs i.e. seal types, rejuvenation.</p>
Upgrading of Unsealed Roads	<p>Progressive re-sheeting of all unsealed roads. Unsealed roads with a traffic volume exceeding 50 vehicles per day to be considered for conversion to bitumen seal.</p>
New land divisions	<p>Implement quality control measures for donated assets.</p>
Kerb Maintenance and Upgrades	<p>Upgrades to meet community expectations.</p>
Planning	<p>Revise planning controls to increase population density and decrease the extent of new road network. Encourage industry to be near State controlled roads.</p>
Capital Works	<p>Schedule a long term capital works program and develop an infrastructure backlog management plan.</p>

4.4 NEW ASSETS

The new assets required to meet community expectations will be constructed by Council and be funded utilising external funding streams as they become available.

A formula has been developed combining average daily traffic (including heavy traffic), drainage issues, Cost benefit and cost efficiencies and School bus routes to produce a priority list of gravel roads for sealing. The formula is as follows:

Average Daily Traffic + Drainage + Cost Efficiency + Cost Benefit + School Bus Route + Classification.

This formula as produced the priority list below.

Table 4.4: New Assets

ROAD NAME	RANK	Status
Old Grafton Road	1	Completed
Strathbogie Road / Gordons Road	2	Funding Obtained
West Furracabad Road	3	Funding Obtained
Yarraford Road	3	Completed
Chandler Road	4	Allocated in 2022/23 Draft Budget
Blacks Road	5	Allocated in 2022/23 Draft Budget
Maybole Road	6	Completed
Duval Road	7	Allocated in 2022/23 Draft Budget
Ward Crescent	8	Allocated in 2022/23 Draft Budget
Pinkett Road	9	Funding Obtained
Gulf Road	10	Funding Obtained
Mt Mitchell Road	11	Completed
Ten Mile Road	12	Funding Obtained
Rodgers Road	12	Allocated in 2022/23 Draft Budget
Tent Hill Road	13	Funding Obtained
Waterloo Road	14	
Kings Plains Road	15	
Shannon Vale Road	16	
Glen Elgin Road	17	
Wilson Road	18	
Caerleon Road	19	

Acquiring these new assets will commit Council to fund ongoing operations and maintenance costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operating and maintenance costs. The introduction of the Graded Aggregate Seal treatment (otherwise known as Otta seal) combined with successful grant applications has seen in excess of 100km of unsealed road funded for conversion to a sealed surface. These works have been delayed by the impact of natural disaster but are expected to be completed in the winter months of 2022, noting that this treatment requires cooler temperatures to be installed.

5. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how Council plans to manage and operate the assets at the agreed levels of service (defined in section 3) while optimising life cycle costs.

5.1 BACKGROUND DATA

5.1.1 PHYSICAL PARAMETERS

The assets covered by this asset management plan are shown in Table 2.1.

5.1.2 ASSET CAPACITY AND PERFORMANCE

Council's services are generally provided to meet design standards where these are available.

Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

Table 5.1.2: Known Service Performance Deficiencies

LOCATION	SERVICE DEFICIENCY
Road Surfacing	Inadequate expenditure during the last three (3) decades has led to a backlog of work required and this has resulted in a peak in expenditure arising within the next three (3) years, which we are now trying to address with an appropriate increase in annual resealing. This lag has meant a drop in service level achieved due to increasing roughness and unnecessary failure of some pavements.
Road Pavements	Inadequate expenditure during the last three (3) decades has also impacted on pavement condition as seals have failed and moisture infiltration has occurred together with traffic changes. Again, a service level decrease has required greater financial input to address the shortfall.
Gravel Re-sheeting	The lag in expenditure created during the last three (3) decades has also impacted on unsealed pavement condition as gravel has been lost over time, and drainage has not been maintained adequately to prevent unnecessary gravel loss due to washouts. The gravel re-sheeting program conducted during the last delivery program has restored service on a number of roads and has allowed conversion to seal using the graded aggregate treatment.

5.1.3 ASSET CONDITION

The condition profile of Council's assets has moved from a basic core approach utilising a five (5) tiered ranking system to an advanced method whereby each asset is modelled for an accurate end of life forecast.

For sealed road assets the average roughness of the network has been adopted as the primary measure of network condition. This is differentiated into rural and urban assets due to the effect that the different speed environment has on the perceived level of acceptable roughness.

For unsealed road assets it is acknowledged that there is not really an objective measurement that is available that can provide a measure of the network condition. Subjective methods are therefore used, being an annual inspection by an experienced staff member in combination with total numbers of maintenance requests received, and feedback obtained from the Roads Consultative Committee.

5.1.4 ASSET VALUATIONS

The value of assets is shown below for transport infrastructure assets as at 30 June 2021. Assets are valued at green field rates.

Asset Type	Quantity	Replacement Value	Annual Depreciation
Major Street Furniture	110	\$ 2,330,657	-\$ 54,071
Footpaths	176 assets	\$ 4,547,286	-\$ 56,841
Carparks	42 assets	\$ 1,470,964	-\$ 27,721
Kerb and Gutter	373 assets	\$ 11,347,385	-\$ 139,243
Local Sealed Roads	351 km	\$ 99,705,148	-\$ 1,197,006
Local Unsealed Roads	732 km	\$ 75,408,998	-\$ 1,201,739
Other Sealed Roads	10 km	\$ 2,541,653	-\$ 56,528
Regional Sealed Roads	68 km	\$ 23,370,468	-\$ 288,185
Total	N/A	\$ 220,722,558	-\$ 3,021,333

It is noted here that the asset consumption rate is higher than the depreciation shown in Council's financial statements. The reason for this is that some assets are fully depreciated, and can incur no further depreciation expense, yet need to be accounted for in terms of future replacement.

Table 5.1: Financial Reporting Ratios

FINANCIAL REPORTING CRITERION	ROAD INFRASTRUCTURE, %
Asset Consumption Rate (Annual)	1%
Asset Renewal Rate (Annual)	1%
Asset Upgrade Expansion Rate (Annual)	0%
Road Asset Backlog Ratio (Special Schedule 7)	7%

5.2 RISK MANAGEMENT PLAN

The risk assessment process identified credible risks, the likelihood of the risk event occurring and the consequences should the event occur. Future refinements will use these factors to develop risk ratings, incorporating a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' (VH) - requiring immediate corrective action and 'High' (H) – requiring prioritised corrective action identified in the infrastructure risk management plan are summarised in Table 5.2.

Table 5.2: Critical Risks and Treatment Plans

ASSET AT RISK	WHAT CAN HAPPEN	RISK RATING (VH, H)	RISK TREATMENT PLAN
Sprayed seal surfacing	Increase in seal failures leading to pavement failures.	H	Increase cyclical maintenance expenditure to match asset depreciation.
Road surfacing	Seal wear or binder bleeding can result in vehicle instability in high speed rural environments	H	Monitor seal condition and reseal ahead of normal intervention as required.

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Pavements	Increase in pavement reconstruction due to lack of maintenance and patching.	H	<p>Increased maintenance inspections and repairs.</p> <p>The maintenance budget for unsealed roads has been increased to accommodate the year round use of three (3) maintenance graders.</p>
Road seals and pavements	Poor service trench reinstatement by Utilities.	H	Issue specification for reinstatement work.

5.3 ROUTINE MAINTENANCE PLAN

Routine maintenance is the regular ongoing 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.

5.3.1 MAINTENANCE PLAN

Maintenance includes reactive, planned and cyclic maintenance work activities.

Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions.

Planned maintenance is repair work that is identified and managed through a maintenance management system. These activities include inspection, assessing the condition against failure/breakdown experience, prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Cyclic maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including patch gravel re-sheeting. This work generally falls below the capital/maintenance threshold.

Maintenance expenditure levels have been increased dramatically in the unsealed road network in recent years and are now considered to be adequate to meet required service levels.

Assessment and prioritisation of reactive maintenance is undertaken by Council staff using experience and judgement following inspection. As the increased budget allows for improved maintenance of the network overall it is envisaged that reactive maintenance will reduce in favour of planned and cyclic maintenance activities, which are inherently more efficient.

5.3.2 STANDARDS AND SPECIFICATIONS

Maintenance work is carried out in accordance with the following Standards and Specifications.

- ARRB Sealed Local Roads Manual;
- ARRB Unsealed Local Roads Manual;
- AS 2150-2005 Hot mix asphalt – A guide to good practice;
- GISC Safe Work Method Statements;
- AAPA Bituminous Surfacing Manual;
- Austroads Guide to Sprayed Sealing;
- Requirements by manufacturers for the use of proprietary products;
- Traffic control at Works on Roads;
- Project-specific Technical Specifications;
- GISC Internal Service Level Agreements;
- AS4283-1995 Cold mixed asphalt for maintenance patching;
- AS5100.1-2017 Bridge design-scope and general principles;
- AS2008-2013 Bitumen for pavements;
- AS3727.1:2016 Pavements Residential.

5.3.3 SUMMARY OF FUTURE MAINTENANCE EXPENDITURES

Future maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Table 5.4.1. Note that all costs are shown in current dollar values. The cost of road works has not been indexed in the table below, however, a fuel and the latest construction index will need to be applied before setting each yearly budget

Table 5.3.3: Planned Maintenance Expenditure

Road Maintenance Expenditure				
Year	Sealed	Unsealed	Footpaths	Year Total
2023	\$ 835,724	\$ 1,629,224	\$ 30,631	\$ 2,495,579
2024	\$ 835,724	\$ 1,629,224	\$ 30,631	\$ 2,495,579
2025	\$ 835,724	\$ 1,629,224	\$ 30,631	\$ 2,495,579
2026	\$ 835,724	\$ 1,629,224	\$ 30,631	\$ 2,495,579
2027	\$ 835,724	\$ 1,629,224	\$ 30,631	\$ 2,495,579
2028	\$ 835,724	\$ 1,629,224	\$ 30,631	\$ 2,495,579
2029	\$ 835,724	\$ 1,629,224	\$ 30,631	\$ 2,495,579
2030	\$ 835,724	\$ 1,629,224	\$ 30,631	\$ 2,495,579
2031	\$ 835,724	\$ 1,629,224	\$ 30,631	\$ 2,495,579
2032	\$ 835,724	\$ 1,629,224	\$ 30,631	\$ 2,495,579
Total by Type	\$ 8,357,240	\$ 16,292,242	\$ 306,308	\$ 24,955,790

Deferred maintenance, i.e. works that are identified for maintenance and unable to be funded are to be included in the risk assessment process in the Infrastructure Risk Management Plan.

Maintenance is funded from Council's operating budget and grants where available. This is further discussed in Section 6.2.

5.4 RENEWAL/REPLACEMENT PLAN

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.

5.4.1 RENEWAL PLAN

Assets requiring renewal are identified from forecasts of remaining life obtained from roughness inspections. The priority ranking criteria is detailed in Table 5.4.1.

Table 5.4.1: Renewal Priority Ranking Criteria

CRITERIA	WEIGHTING
Intervention Score	No current weighting or ranking against other Asset Classes.
Road	No current weighting or ranking against other Asset Classes.
Other	No current weighting or ranking against other Asset Classes.
Condition	No current weighting or ranking against other Asset Classes.
Total	100%

Renewal will be undertaken using 'low-cost' renewal methods where practical. The aim of 'low-cost' renewals is to restore the service potential or future economic benefits of the asset by renewing the assets at a cost less than replacement cost.

An example of low cost renewal, in lieu of full pavement reconstruction, is pavement rehabilitation work, where patching and strengthening of the pavement is undertaken.

5.4.2 RENEWAL STANDARDS

Renewal work is carried out in accordance with the Standards and Specifications noted in Section 5.3.1.

5.4.3 SUMMARY OF OPTIMAL RENEWAL EXPENDITURE

The projected capital renewal program is shown in Appendix B.

Any future deferred renewal, i.e. those assets projected for renewal and not planned for renewal in capital works programs, are to be included in the risk assessment process in the Corporate Risk Management Plan.

5.5 CREATION/ACQUISITION/UPGRADE PLAN

New works are those works that create a new asset that did not previously exist, or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost to Council from land development. These assets from growth are considered in Section 4.4.

5.5.1 SELECTION CRITERIA

New assets and upgrade/expansion of existing assets are identified from various sources such as Councillor or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed below.

Table 5.5.1: New Assets Priority Criteria

CRITERIA	COMMENTARY
Community Strategic Plan	Projects are identified annually during the development of the Operational Plan, and assessed against other asset class projects by senior staff and recommendations are made to the elected Council for decision.
Technical need (e.g. heavy vehicle increases)	Projects required as a result of technical need may arise, however these will generally be funded through external sources. If funding is required from internal accounts that funding will be beyond the scope of this plan.
Total	100%

5.5.2 STANDARDS AND SPECIFICATIONS

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.3.1.

5.5.3 SUMMARY OF FUTURE UPGRADE/NEW ASSETS EXPENDITURE

The primary assets to be created are new bitumen seals on roads highlighted in Section 4.4 of this document, and these upgrades are to be funded from grant availability.

New assets and services are to be funded grants where available. This is further discussed in Section 6.2.

5.6 DISPOSAL PLAN

Road closures, i.e. the legal prevention of use of a road reserve by vehicles and the public, often result in retention of the land by Council for use as a revegetation corridor. Existing road pavement materials may be ripped and left in-situ. Upgraded pavements (i.e. by depth, not width) may result in the existing pavement layers being removed and reused elsewhere as second grade re-sheeting on local rural roads. For all practical purposes, the value of salvaged road and footpath materials is of little consequence.

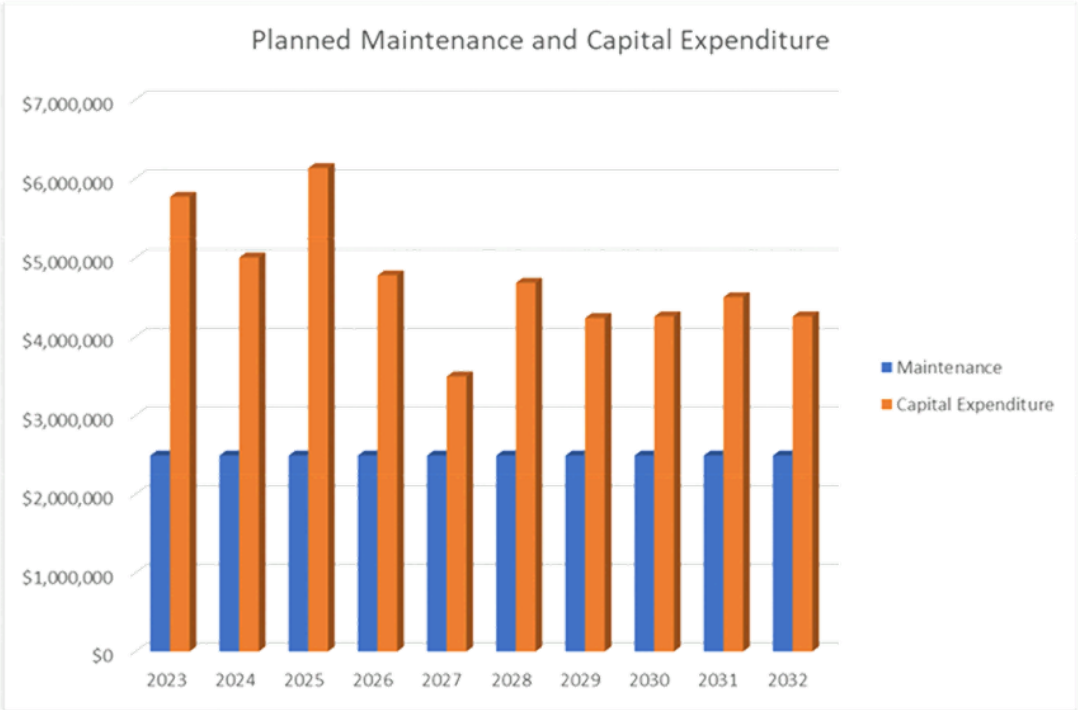
6. FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

6.1 FINANCIAL STATEMENTS AND PROJECTIONS

The financial projections are shown in Fig 6.1 for planned operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets).

Fig 6.1: Planned Operating and Capital Expenditure



6.1.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two (2) key indicators for financial sustainability that have been considered in the analysis of the services provided by this asset category, these being long term life cycle costs and medium-term costs over the 10 year financial planning period.

Long term - Life Cycle Cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the longest asset life. Life cycle costs include maintenance and asset consumption (depreciation expense). The annual average life cycle cost for the services covered in this asset management plan is \$5,516,000.

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes maintenance plus capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The average planned expenditure over the 10-year forward plan is \$7,211,000 per annum.

A gap between life cycle costs and life cycle expenditure gives an indication as to whether present consumers are paying their share of the assets they are consuming each year. The purpose of this Transport asset management plan is to identify levels of service that the community needs and can afford and develop the necessary long-term financial plans to provide the service in a sustainable manner.

The situation at present is that the community is expending more than the life cycle cost of the network. Additional funding of \$1,694,000 is available to address some of the backlog of infrastructure works. The life cycle sustainability index is 131%.

6.2 FUNDING STRATEGY

Projected costs are to be funded from Council's operating and capital budgets. The funding strategy will be detailed in the Council's LTFP.

It is noted that backlog works associated with bitumen seal renewals are required to be done sooner rather than later, as the ingress of water through cracked seals will create additional pavement decay. It will therefore be necessary to borrow to address that issue. This will be able to be afforded as existing loans reach maturity over the next 5-10 years.

6.3 VALUATION FORECASTS

Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. The replacement value of assets is also forecast to increase by 2.3% above inflation due to rising energy costs.

6.4 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

This section details the key assumptions made in presenting the information contained in this asset management plan and in preparing forecasts of required operating and capital expenditure and asset values, depreciation expense and carrying amount estimates. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions:

- Assumptions have not been made on changes to useful life based on improved maintenance and renewal practices. This results in a conservative outlook.
- Present service levels will remain constant until revised service levels are produced in accordance with Section 3.3.
- Assumption of normal weather conditions.
- Borrowings of \$1,000,000 per year are taken up to assist with backlog reduction.

Accuracy of future financial forecasts may be improved in future revisions of this Asset Management Plan by the following actions:

- Undertaking regular surveys on the road pavement, surface, and kerb conditions.
- Reducing expenditure on unplanned road maintenance and using these funds for planned reconstruction, rehabilitation and reseal programs.
- Improved information systems on maintenance and operating expenditures.
- A review of the effective economic life of different pavement rehabilitation methods providing the potential to further increase efficiencies
- Changes in development needs associated with the rate and location of growth.
- Changes in the desired level of service and service standards from those identified in this plan.

7. ASSET MANAGEMENT PRACTICES

7.1 ACCOUNTING/FINANCIAL SYSTEMS

Refer to Core Asset Management Plan.

7.2 ASSET MANAGEMENT SYSTEMS

Refer to Core Asset Management Plan.

7.3 INFORMATION FLOW REQUIREMENTS AND PROCESSES

Refer to Core Asset Management Plan.

7.4 STANDARDS AND GUIDELINES

Refer to Core Asset Management Plan.

7.5 DATA CONFIDENCE LEVEL

Data confidence levels for this AMP are rated as B or C.

8. PLAN IMPROVEMENT AND MONITORING

8.1 PERFORMANCE MEASURES

The effectiveness of the asset management plan can be measured in the following ways:

- The degree to which the required cash flow identified in this asset management plan are incorporated into Council's Long Term Financial Plan and Community Strategic Plan;
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the 'global' works program trends provided by the asset management plan.

8.2 IMPROVEMENT PLAN

Refer to Core Asset Management Plan.

The asset management improvement plan generated from this asset management plan is shown in Table 8.2.

Table 8.2: Improvement Plan

TASK NO	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TARGET COMPLETION DATE
1	Maintenance Activities - document levels of service and a Maintenance Management Plan	Director Infrastructure Services Personal Assistant	Staff	Completed
2	Undertake yearly condition assessments of 100% of the roadwork network.	Manager of Infrastructure Delivery	Contract Laser profiling	Ongoing
3	Undertake an annual review of this Asset Management plan.	Manager of Infrastructure Delivery	Staff	Ongoing

8.3 MONITORING AND REVIEW PROCEDURES

This asset management plan will be reviewed following annual budget preparation and amended to recognise any changes in service levels and/or resources available to provide those services as a result of the budget decision process.

The Plan is a living document and is to be updated annually.

REFERENCES

Refer to Core Asset Management Plan.

APPENDICES

APPENDIX A: PLANNED TRANSPORT INFRASTRUCTURE EXPENDITURES FOR LONG-TERM FINANCIAL PLAN

Year	Maintenance Expenditure	Required Renewal*	Planned Capital Expenditure*	Backlog*
2023	\$ 2,495,579	\$10,500,616	\$6,026,391	\$4,474,225
2024	\$ 2,495,579	\$7,111,049	\$7,048,270	\$62,779
2025	\$ 2,495,579	\$3,656,593	\$3,805,660	-\$149,067
2026	\$ 2,495,579	\$10,752,587	\$4,302,045	\$6,450,542
2027	\$ 2,495,579	\$3,469,923	\$3,373,676	\$96,247
2028	\$ 2,495,579	\$7,326,101	\$4,209,695	\$3,116,407
2029	\$ 2,495,579	\$2,957,927	\$4,015,840	-\$1,057,913
2030	\$ 2,495,579	\$3,104,348	\$4,033,314	-\$928,966
2031	\$ 2,495,579	\$780,800	\$2,962,000	-\$2,181,200
2032	\$ 2,495,579	\$2,423,168	\$4,343,410	-\$1,920,241
10-year Total	\$ 24,955,790	\$52,083,113	\$ 44,120,301	\$7,962,812

* Footpath, Major Street Furniture, Carparks, and Kerb & Gutter are not modelled.

APPENDIX B: PROJECTED 10-YEAR CAPITAL WORKS PROGRAM FOR SEALED AND UNSEALED ROAD NETWORK

FUNDING SOURCE	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	10 Year Summary
Total Required Renewal	\$10,500,616	\$7,111,049	\$3,656,593	\$10,752,587	\$3,469,923	\$7,326,101	\$2,957,927	\$3,104,348	\$780,800	\$2,423,168	\$52,083,113
General Fund	\$359,975	\$1,536,270	\$843,660	\$1,340,045	\$411,676	\$1,247,695	\$1,053,840	\$1,071,314	\$0	\$1,381,410	\$9,245,885
Additional Borrowing	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$10,000,000
Quarry Surplus	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$5,000,000
LRCI	\$154,416	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$154,416
ROSI	\$2,550,000	\$2,550,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,100,000
Roads to Recovery Grants	\$872,000	\$872,000	\$872,000	\$872,000	\$872,000	\$872,000	\$872,000	\$872,000	\$872,000	\$872,000	\$8,720,000
Regional Roads Grants	\$590,000	\$590,000	\$590,000	\$590,000	\$590,000	\$590,000	\$590,000	\$590,000	\$590,000	\$590,000	\$5,900,000
Total Funding	\$6,026,391	\$7,048,270	\$3,805,660	\$4,302,045	\$3,373,676	\$4,209,695	\$4,015,840	\$4,033,314	\$2,962,000	\$4,343,410	\$44,120,301
Unfunded Backlog	\$4,474,225	\$62,779	-\$149,067	\$6,450,542	\$96,247	\$3,116,407	-\$1,057,913	-\$928,966	-\$2,181,200	-\$1,920,241	\$7,962,812

1. The 'Total Required Renewal' row is based on a physical condition and engineer assessment performed by a sealed road expert; the assessment occurred in December 2021. The results gave a 2- year intervention range. The intervention year was chosen by Council staff, within the range provided by the engineer, using local knowledge taking account of the grouping of assets for treatment, priority of treatment type, Council staff capacity, and spreading of costs where possible.
2. The gravel re-sheeting requirement is added to each year based on estimated depreciation expense.
3. Assumed funding streams reduce the renewals required until a backlog of untreated assets remain. A positive effect indicates an increase to the total backlog of untreated assets. A negative figure in the year identifies capacity to deal with emergent work or address the extant backlog.
4. The '10-year Summary' column shows total expenditure by funding stream and overall effect on the road network backlog.
5. This model shows sealed and unsealed roads only.

GLEN INNES SEVERN COUNCIL



URBAN DRAINAGE



ASSET MANAGEMENT PLAN PART 3



Version 5.0

April 2022

GLEN INNES SEVERN COUNCIL – URBAN DRAINAGE ASSET MANAGEMENT PLAN

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1. EXECUTIVE SUMMARY

Council has adopted a drainage charge levied on those assessments within the respective drainage basins of Glen Innes, Emmaville, and Deepwater in recent years. The charge has been set at a level that allows for maintenance of open drains, investigation of drainage issues and funding of long-term replacement of drainage assets. While the drainage assets are theoretically not due for replacement, some lines are subject to ground movement and have become disjointed. Tree root ingress has also occurred, but this is not as problematic in storm water drains as it is in other asset classes due to the lack of permanent wet conditions.

A number of drainage problems existed around Glen Innes prior to the implementation of the drainage charge. These resulted in water not escaping during rain events, which in turn impacted on urban street pavement assets and nearby properties. Council has rectified the worst of these drainage issues through a combination of pipe cleaning and pipe replacement. Council is now entering a more strategic phase and plans to investigate the drainage network in detail using in-house CCTV equipment to accurately determine the current condition of underground pipes throughout the network. Historic construction of the asset database has been difficult without the ability to see underground, and often assets have been mapped incorrectly due to the assumptions made at the time. The inspection program will also identify these anomalies. This phase of improving Council's knowledge of its drainage assets was identified in the 2020 version of this plan but was hampered by multiple natural disaster events and the global pandemic. External contractor support will be sought for CCTV mapping and a full review of the asset register. Rural drainage assets will also be added to this plan.

In addition to the cost of renewal of assets, many areas of Deepwater have inadequate drainage. Council has used the drainage charge funds to obtain a highly accurate aerial survey of the two villages of Emmaville and Deepwater, enabling hydraulic calculations to be performed into the future. This has been particularly beneficial with regard to a problematic culvert at the intersection of Alice Street and the New England Highway in Deepwater. Council has provided that information to NSW RMS who have used it to construct new drainage in that location under the New England Highway (a non-Council asset), which will alleviate a longstanding problem for the adjacent Deepwater Bakery.

2. INTRODUCTION

2.1 BACKGROUND

This asset management plan covers the following infrastructure assets:

Table 2.1. Assets covered by this Plan

Asset Type	Quantity	Replacement Value	Accumulated Depreciation
Conduits	31 km	\$ 15,256,434	-\$ 6,347,501
Pits	1393	\$ 2,332,845	-\$ 945,377
Total	N/A	17,589,279	-\$ 7,292,877

2.2 GOALS AND OBJECTIVES OF ASSET MANAGEMENT

Relevant Council goals and objectives and how these are addressed in this asset management plan are:

Table 2.2. Council Goals and how these are addressed in this Plan

GOAL	OBJECTIVE	HOW GOAL AND OBJECTIVES ARE ADDRESSED IN AMP
IM 3.3.4 - Continue the Rural Drainage program.	Roads and drainage assets are fit for purpose and meet community service level aspirations.	The next iteration of this plan will be expanded to include rural drainage assets now that these assets are covered by an expansion of the drainage charge. This will require an audit of those assets, revised condition assessment and development of a forward works program.
IM 3.2.13 - Implement the Urban Drainage Asset Management Plan and review as necessary.	Asset Management Plans are updated for the asset categories of storm water drainage	This plan identifies the need for annual review to ensure that it is a living document that addresses the current needs and utilizes the most up to date information.

2.3 PLAN FRAMEWORK

Refer to Core Asset Management Plan.

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2.4 CORE AND ADVANCED ASSET MANAGEMENT

Refer to Core Asset Management Plan.

3. LEVELS OF SERVICE

3.1 CUSTOMER RESEARCH AND EXPECTATIONS

Council has performed an external customer survey generally of its service provision. Stormwater was not included as one of the functions to be assessed, however, feedback from the roads consultative committee has routinely stressed the importance of having adequate drainage; particularly in the rural road network. For that reason, the drainage charge has been extended to cover these assets and this plan will be broadened in the next iteration to capture the expanded asset class.

3.2 LEGISLATIVE REQUIREMENTS

Refer to Core Asset Management Plan.

3.3 CURRENT LEVELS OF SERVICE

Refer to Core Asset Management Plan.

Council's current levels of service are set out in Tables 3.4a and 3.4b.

Where table entries are shown as '#' data are unavailable. Future AMP revisions will include this information, as it becomes available.

3.4 DESIRED LEVELS OF SERVICE

Refer to Core Asset Management Plan.

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Table 3.4a: Community Levels of Service

KEY PERFORMANCE INDICATOR	COMMUNITY LEVEL OF SERVICE	PERFORMANCE MEASUREMENT PROCESS	TARGET PERFORMANCE	CURRENT PERFORMANCE
Safety	Minimize risk to the public from drowning, pollution and spread of diseases.	Accident reports, Customer Requests	Nil incidents	Nil incidents
Quality	Provide efficient method of collection & disposal of storm water	Customer Service Requests regarding flooding or storm water nuisance.	< 5 per month	<5 per month
Function	Adequate capacity to accommodate flow rates generated by 1 in 10 years storms.	Customer Requests Service Australian Rainfall Runoff technical specifications and guidelines.	< 20 storm water blockages per 100 km pipe per annum.	<10 Customer service requests have been received. Staff inspect pipes during rain events and problems are investigated by CCTV contractors.
Sustainability	Facilities are managed for future generations.	Master planning. Long-Term Financial Plan.	Infrastructure backlog ratio for drainage assets <2%	Infrastructure Backlog Ratio is 10%

GLEN INNES SEVERN COUNCIL – URBAN DRAINAGE ASSET MANAGEMENT PLAN

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Table 3.4b : Technical Levels of Service

KEY PERFORMANCE INDICATOR	COMMUNITY LEVEL OF SERVICE	PERFORMANCE MEASUREMENT PROCESS	TARGET PERFORMANCE	CURRENT PERFORMANCE
Condition	Minimum blockage, cracks, deformation / damage and / or system deficiencies.	Length of pipes / reconstructed per annum	Renew 1% of drainage infrastructure per annum	2020 Asset renewal rate is 0%
Cost effectiveness	Proactive scheduled maintenance.	Percent of maintenance done by proactive repairs	70% of maintenance budget spent on pro-active maintenance	Most maintenance is reactive following observation of blockages during rain events.

4. FUTURE DEMAND

4.1 DEMAND FORECAST

Refer to Core Asset Management Plan.

4.1.2 DEMAND FACTORS

In determining the need for construction or upgrading of storm water infrastructure, the following aspects have been considered:

- Providing satisfactory protection of properties from flooding.

To enable fair and planned distribution of funding throughout the Council area, some of the factors influencing the prioritizing of works are:

- Changing community expectations and demographics.
- Known areas of drainage under-supply.
- Storm water systems with high maintenance demands.

In the relevant asset classes, some issues which may influence future asset provision are:

- Resident expectations will be raised in the established areas and townships for kerb and storm water management provision matching those enjoyed by the newer areas.
- There will be an increased need to renew drainage in older areas.
- Expectations created by the introduction of a drainage charge will drive demand for works in village and rural areas particularly.

4.2 CHANGES IN TECHNOLOGY

Further implementation of closed-circuit television (CCTV) inspections will improve the management of drainage infrastructure, particularly the coordination of maintenance activities, through enhanced data collection, analysis and dissemination systems.

Where drains are renewed, in-situ rehabilitation / replacement without surface disturbance may become more feasible. The incorporation of more recycled material into new products may increase also.

4.3 DEMAND MANAGEMENT PLAN

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

Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this asset management plan.

Table 4.3. Demand Management Plan Summary

SERVICE ACTIVITY	DEMAND MANAGEMENT PLAN
Storm water Maintenance and Upgrades	Upgrade systems to meet population growth demand and changes identified in review reports and planning studies. Construct mains in existing areas where drainage is substandard.
Flood zones / Safety Improvement Plan	Utilize the flood study model to optimize drainage design within Glen Innes.

4.4 NEW ASSETS FROM GROWTH

There are no new assets planned.

4.4.1 ASSUMPTIONS USED IN PROJECTED ASSET GROWTH

Refer to Core Asset Management Plan.

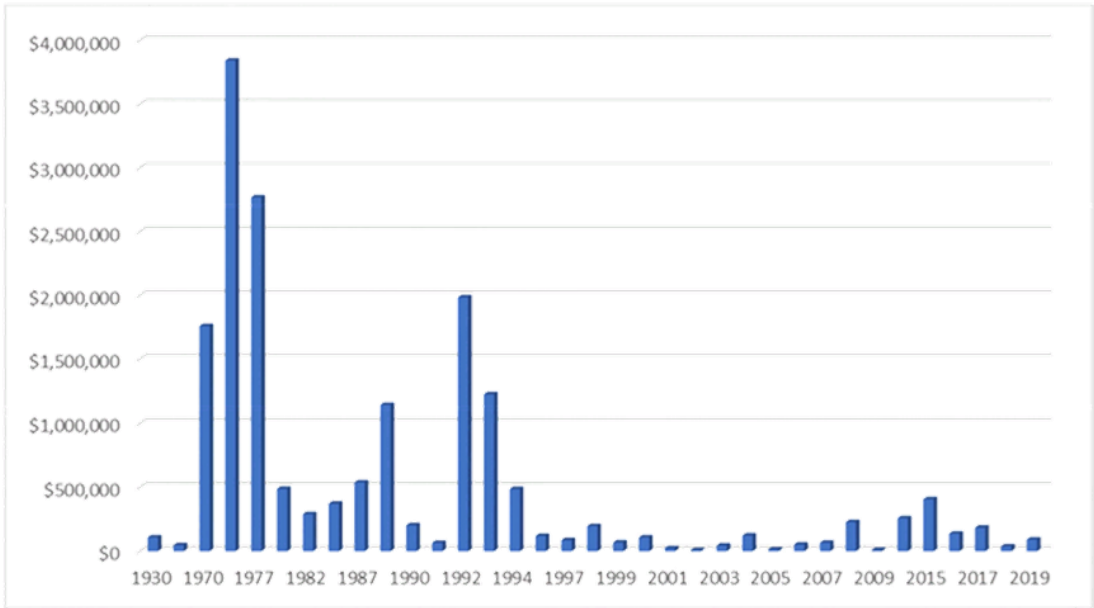
5. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how Council plans to manage and operate the assets at the agreed levels of service (defined in section 3) while optimizing life cycle costs.

5.1 BACKGROUND DATA

5.1.1 PHYSICAL PARAMETERS

Fig 5.1.1: Asset Age Profile



5.1.2 ASSET CAPACITY AND PERFORMANCE

Council's services are generally provided to meet design standards where these are available. Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

Table 5.1.2. Known Service Performance Deficiencies

LOCATION	SERVICE DEFICIENCY
Storm water Pipes	Ground movement and improper construction practices have been identified in some pipes. These issues have led to early loss of function through the formation of holes at joints and lifting points, in some cases causing minor sinkholes to develop in road pavements and nature strips.
Storm water Pits / headwalls	<p>Blockages, breakages and movement of downstream pipes causes early failure of these assets.</p> <p>Increase land divisions which increase the load and the volumes beyond the capacity of existing drainage infrastructure can also lead to early renewal requirements.</p> <p>Erosion and degradation of soil undermining headwalls can cause malfunction and damage to the system and associated road assets.</p>

The above service deficiencies were identified from regular safety and technical inspections undertaken by GISC Infrastructure staff.

5.1.3 ASSET CONDITION

The condition profile of Council's assets is shown below.

Fig 5.1.3: Asset Condition Profile



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Condition is measured using a 1 – 5 rating system.¹

Rating	Description of Condition
1	Excellent condition: Only planned maintenance required.
2	Very good: Minor maintenance required plus planned maintenance.
3	Good: Significant maintenance required.
4	Average: Significant renewal/upgrade required.
5	Poor: Unserviceable.

¹ IIMM 2006, Appendix B, p B:1-3 ('cyclic' modified to 'planned')

5.1.4 ASSET VALUATIONS

The value of assets at 2021 covered by this asset management plan is summarized below. Assets were last revalued internally in 2020. Assets are valued at Greenfield rates and do not include open drainage assets.

Table 5.1.4a: Asset Summary

Asset Type	Quantity	Replacement Value	Annual Depreciation
Conduits	31 km	\$ 15,256,434	-\$ 168,510
Pits	1393	\$ 2,332,845	-\$ 25,846
Total	N/A	\$ 17,589,279	-\$ 194,356

Council's sustainability reporting reports the rate of annual asset consumption and compares this to asset renewal and asset upgrade and expansion.

Table 5.1.4b: Financial Reporting Ratios

FINANCIAL REPORTING CRITERION	STORM WATER INFRASTRUCTURE, %
Asset Consumption Rate	1%
Asset Renewal Rate	0%
Asset Upgrade Expansion Rate	0%

5.2 RISK MANAGEMENT PLAN

An assessment of risks associated with service delivery from infrastructure assets has identified 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, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' - requiring immediate corrective action and 'High' – requiring prioritized corrective action identified in the infrastructure risk management plan are summarized in Table 5.2.

Table 5.2. Critical Risks and Treatment Plans

ASSET AT RISK	WHAT CAN HAPPEN	RISK RATING (VH, H)	RISK TREATMENT PLAN
Headwalls	Soil erosion may cause an element to collapse injuring people or other species	Medium	Register defect in customer request system Maintenance, erosion protection and stabilization.
Storm water pipes	Subsided trenches are likely to cause injuries and property damage. Collapsed pipes or heavy rain events cause upstream overflowing with potential health and environmental impact.	High High	Register defect in customer request system Proactive maintenance, strict quality control of materials and workmanship during the installation / repairing and conformance with the specifications is essential. Percentage of flooding incidents or blocked drains and watercourse erosion incidents.
Storm water pits	Misplaced lids and covers are major hazard for traffic and pedestrians.	High	Register defect in customer request system
Gross Pollutant Traps	The failure of storm water quality control devices	High	Proactive maintenance
Storm water Drainage Design	The accuracy of catchment modelling	High	Design structures in accordance with the Australian Standards referenced in 5.3.2

5.3 ROUTINE MAINTENANCE PLAN

Routine 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.

5.3.1 MAINTENANCE PLAN

Maintenance includes reactive, planned and cyclic maintenance work activities.

Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions.

Planned maintenance is repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown experience, prioritizing, scheduling, completing the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance. Council is investigating the incorporation of an MMS within project JIGSAW.

Cyclic maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, building roof replacement, etc. This work generally falls below the capital/maintenance threshold.

5.3.2 STANDARDS AND SPECIFICATIONS

Maintenance work is carried out in accordance with the following Standards and Specifications.

- AS/NZS 3500.3.2003 Plumbing and Drainage Part 3: Storm water Drainage.
- Australian Rainfall & Runoff - 4th Edition.
- AusSpec & Natspec

5.3.3 SUMMARY OF FUTURE MAINTENANCE EXPENDITURES

Future maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Fig 5.3.3. Note that all costs are shown in current dollar values.

Fig 5.3.3: Planned Maintenance Expenditure



Deferred maintenance, i.e. works that are identified for maintenance and unable to be funded are to be included in the risk assessment process in the infrastructure risk management plan.

Maintenance is funded from Council's operating budget and grants where available. This is further discussed in Section 6.2.

5.4 RENEWAL/REPLACEMENT PLAN

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.

5.4.1 RENEWAL PLAN

Candidate proposals are inspected to verify accuracy of remaining life estimate and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programs. The priority ranking criteria is detailed in Table 5.4.1.

Table 5.4.1 Renewal Priority Ranking Criteria

CRITERIA	WEIGHTING
Renewal and maintenance of storm water drainage	Assessed by known sinkhole issues and the CCTV inspection program.
Open drains	Drains are prioritized according to observed flow issues during storm events and hydraulic models developed through analysis of the elevation contour data obtained.

Renewal will be undertaken using 'low-cost' renewal methods where practical. The aim of 'low-cost' renewals is to restore the service potential or future economic benefits of the asset by renewing the assets at a cost less than replacement cost. In some cases, this will involve reusing pipes that are in sound condition but have become displaced by ground movement.

5.4.2 RENEWAL STANDARDS

Renewal work is carried out in accordance with the following Standards and Specifications.

- AS/NZS 3500.3.2003 Plumbing and Drainage Part 3: Storm water Drainage using a 10% ARI.
- Australian Rainfall Runoff - 4th Edition.
- AusSpec & Natspec

5.4.3 SUMMARY OF FUTURE RENEWAL EXPENDITURE

Projected future renewal expenditures are forecast to increase over time as the asset stock ages. The costs are summarized in Fig 5.4.3a. Note that all costs are shown in current dollar values.

Fig 5.4.3a: Projected Capital Renewal Expenditure

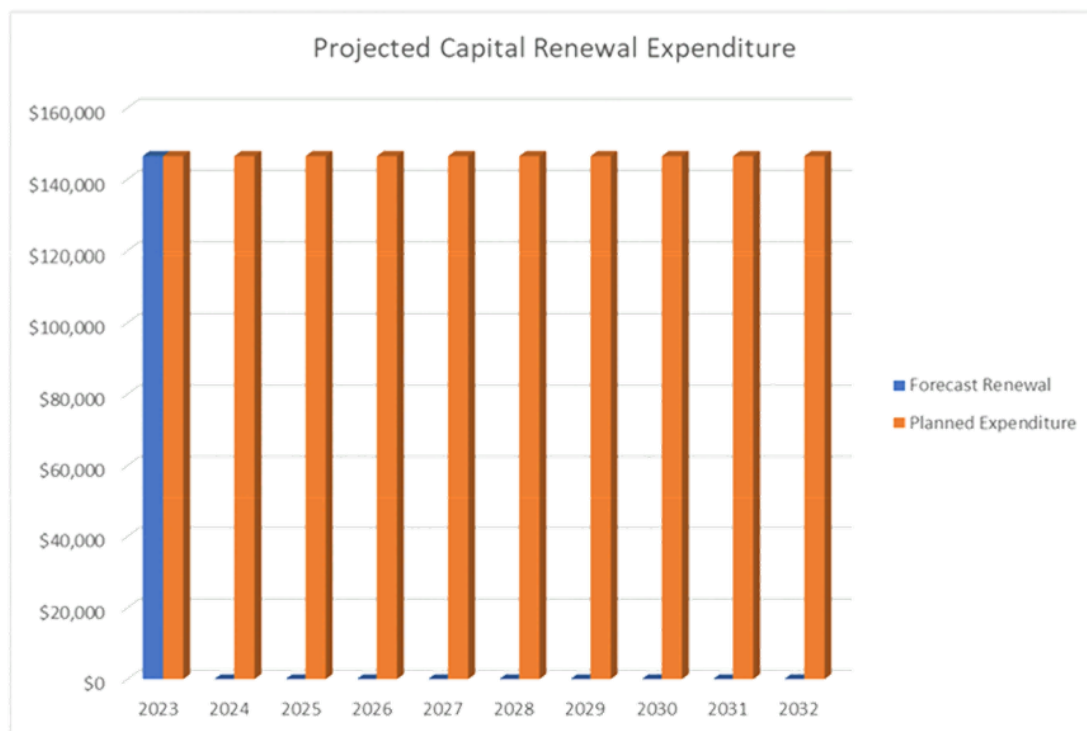
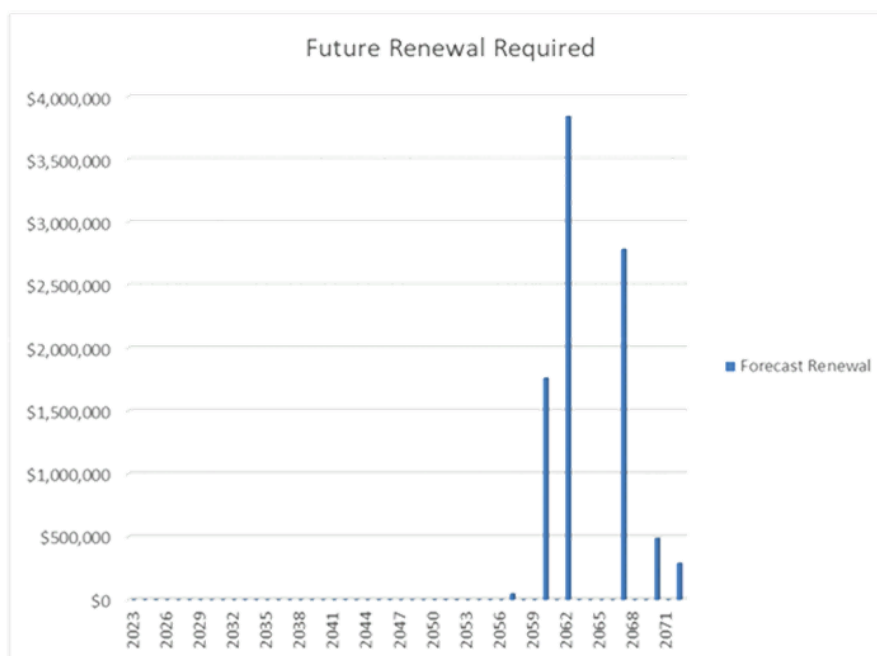


Fig 5.4.3b: 50-Year Future Renewal



Deferred renewal, i.e. those assets identified for renewal and not scheduled for renewal in capital works programs are to be included in the risk assessment process in the risk management plan.

Renewals are to be funded from Council's capital works program and grants where available. This is further discussed in Section 6.2.

5.5 CREATION/ACQUISITION/UPGRADE PLAN

New works are those works that create a new asset that did not previously exist or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost to the Council from land development. These assets from growth are considered in Section 4.4.

5.5.1 SELECTION CRITERIA

New assets and upgrade/expansion of existing assets are identified from various sources such as councilor or community requests, proposals identified by strategic plans or partnerships with other organizations. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programs. The priority ranking criteria is detailed below.

Table 5.5.1 New Assets Priority Ranking Criteria

CRITERIA	WEIGHTING
New storm water pipes and pits due to development	These are constructed at the expense of the developer as development occurs.
New storm water pipes and pits due to lack of capacity	Pipes and pits are added or upgraded where other assets (normally roads) are being renewed, and the design capacity of the existing stormwater drainage is less than 10% ARI.
Storm water quality (pollutant traps, infiltration trenches)	No current plans are in place to construct these assets.
Erosion / sedimentation measures	No current plans are in place to construct these assets.

5.5.2 STANDARDS AND SPECIFICATIONS

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2.

5.5.3 SUMMARY OF FUTURE UPGRADE/NEW ASSETS EXPENDITURE

5.6 DISPOSAL PLAN

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Assets will be identified for possible decommissioning and disposal during the CCTV camera and GIS mapping scheduled for 2022 and 2023. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any.

Where cash flow projections from asset disposals are not available, these will be developed in future revisions of this asset management plan.

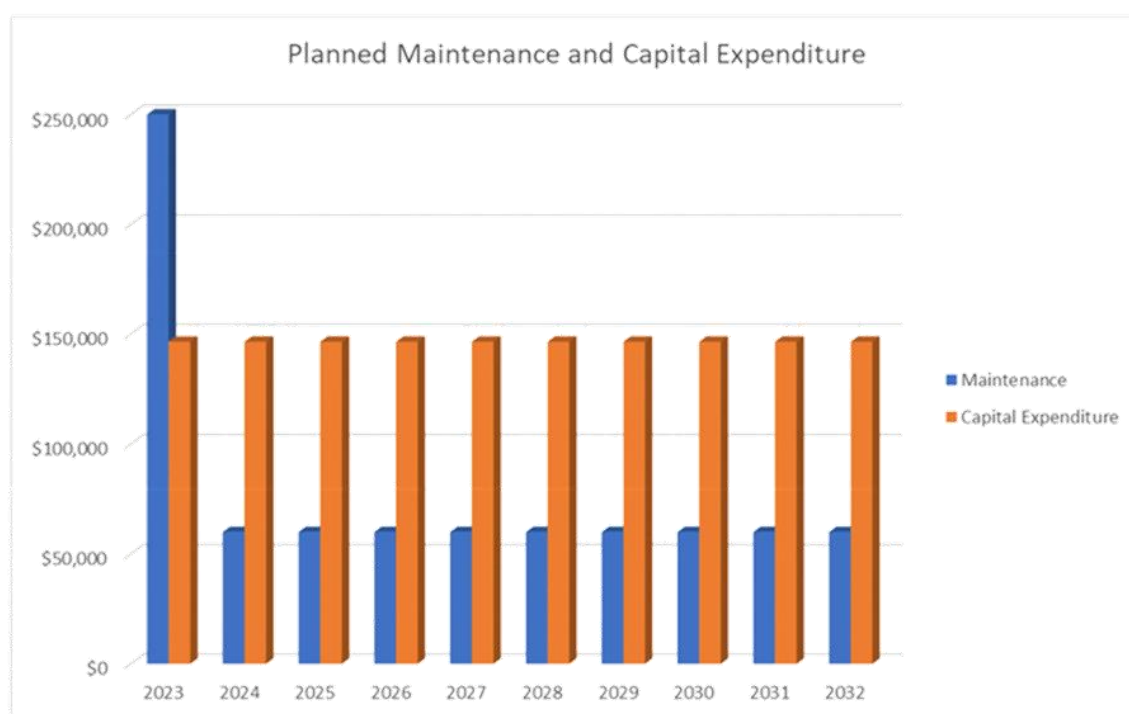
6. FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

6.1 FINANCIAL STATEMENTS AND PROJECTIONS

The financial projections are shown in Fig 6.1 for planned operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets).

Fig 6.1: Planned Maintenance and Capital Expenditure



Note that all costs are shown in current dollar values.

6.1.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators for financial sustainability that have been considered in the analysis of the services provided by this asset category, these being long term life cycle costs and medium-term costs over the 10-year financial planning period.

Long-term Life Cycle Cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the longest asset life. Life cycle costs include maintenance and asset

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consumption (depreciation expense). The annual average life cycle cost for the services covered in this asset management plan is \$273,000.

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes maintenance plus capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure at the start of the plan is \$226,000.

A gap between life cycle costs and life cycle expenditure gives an indication whether present consumers are paying their share of the assets they consume each year. The purpose of this storm water asset management plan is to identify levels of service that the community needs and can afford and develop the necessary long-term financial plans to provide the service in a sustainable manner.

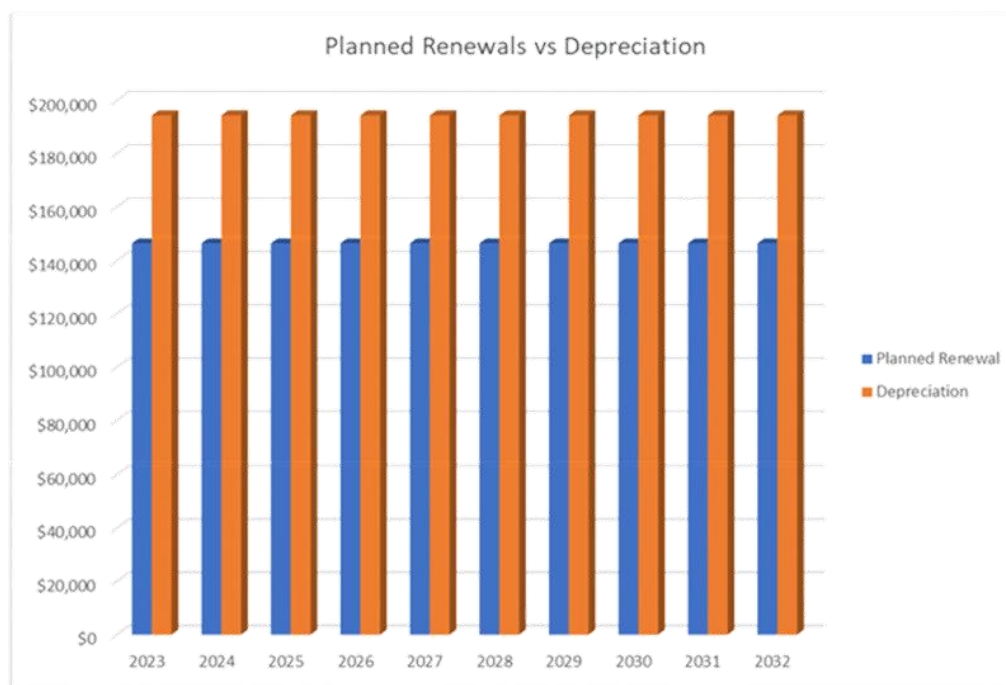
The life cycle gap for services covered by this asset management plan is \$48,000 per annum. The life cycle sustainability index is 83%.

Medium-term 10-year financial planning period

Funding for the remainder of the delivery program will be adequate to keep pace with asset consumption using the previous financial modelling that is contained in the asset register. These will be reviewed, and it is hoped that actual costs will prove to be much lower than have been adopted in the past. The current iteration of this plan provides accurate modelling as project history accumulates and costs with associated variables become more accurately known.

Council will manage the 'gap' by developing this asset management plan to provide guidance on future service levels and resources required to provide these services.

Fig 6.1.1: Planned Renewals vs Depreciation



GLEN INNES SEVERN COUNCIL – URBAN DRAINAGE ASSET MANAGEMENT PLAN

6.2 FUNDING STRATEGY

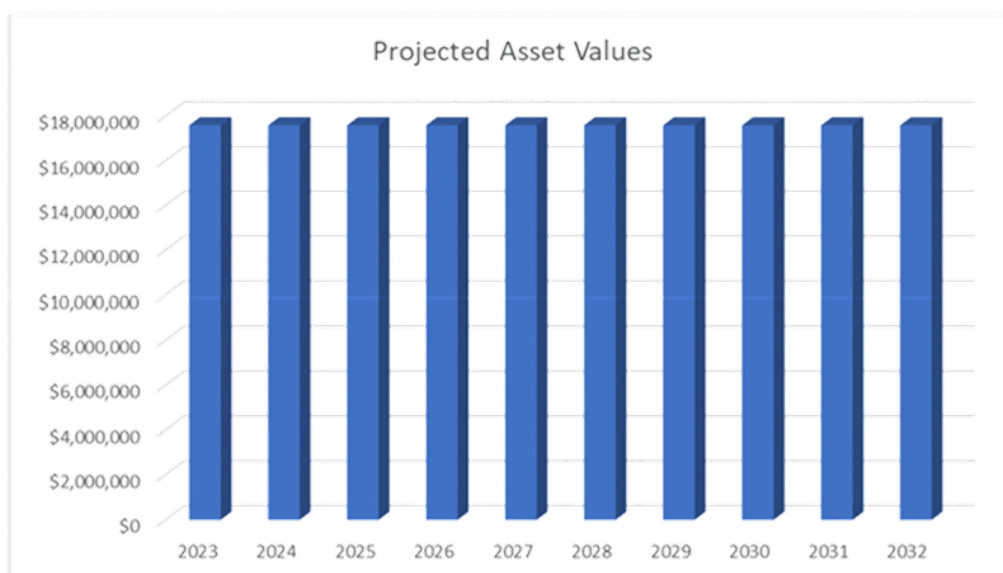
Projected expenditure identified in Section 6.1 is to be funded from Council's operating and capital budgets. The funding strategy is detailed in the Council's 10-year long-term financial plan and is sourced from a drainage charge levied on properties within the area serviced by drainage assets. Longer term asset renewals require the setting aside of funds by current users of the assets to prevent placing an unfair burden on future generations.

Achieving the financial strategy will require an ongoing commitment to fund the increasing demand for asset renewals.

6.3 VALUATION FORECASTS

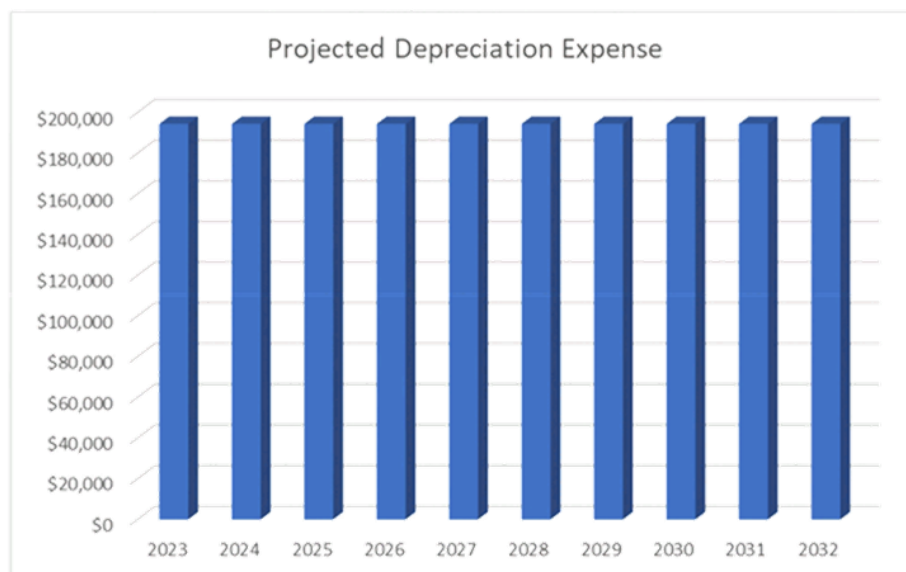
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Fig 6.3 shows the projected replacement cost asset values over the planning period in current dollar values.

Fig 6.3a: Projected Asset Values



Depreciation expense values are forecast in line with asset values as shown in Fig 6.3b.

Fig 6.3b: Projected Depreciation Expense



6.4 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

This section details the key assumptions made in presenting the information contained in this asset management plan and in preparing forecasts of required operating and capital expenditure and asset values, depreciation expense and carrying amount estimates. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions made in this asset management plan are:

- Assumption of a normal weather conditions.
- Assumption that expected and adopted useful life of pipes, pits and headwalls will be achieved.

Accuracy of future financial forecasts may be improved in future revisions of this asset management plan by the following actions.

- Monitoring of the useful life of the existing pipe network via CCTV inspection.
- Undertaking regular defect surveys on drainage pits / headwalls.
- Undertake analysis of the increase of defects with time, and build this into future revisions of this Asset Management Plan

7. ASSET MANAGEMENT PRACTICES

7.1 ACCOUNTING/FINANCIAL SYSTEMS

Refer to Core Asset Management Plan.

7.2 ASSET MANAGEMENT SYSTEMS

Refer to Core Asset Management Plan.

7.3 INFORMATION FLOW REQUIREMENTS AND PROCESSES

Refer to Core Asset Management Plan.

7.4 STANDARDS AND GUIDELINES

Refer to Core Asset Management Plan.

7.5 DATA CONFIDENCE LEVEL

Data confidence levels for this AMP are rated as B or C.

8. PLAN IMPROVEMENT AND MONITORING

8.1 PERFORMANCE MEASURES

Refer to Core Asset Management Plan.

8.2 IMPROVEMENT PLAN

The asset management improvement plan generated from this asset management plan is shown in Table 8.2.

Table 8.2: Improvement Plan

TASK NO	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1.	Undertake yearly condition assessments of the drainage network with the aim for 100% coverage every five (5) years	Manager Infrastructure Delivery	Yes	Annually
2.	Develop priority ranking system for storm water drainage upgrade program	Manager Infrastructure Delivery	Yes	Annually
3.	Undertake an annual review of this Asset Management Plan	Technical Services Engineer	Yes	Annually
4.	Separate maintenance expenditure into reactive and proactive lines	Chief Financial Officer	Yes	During implementation of new finance system

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5.	Undertake proactive CCTV inspection of pipes by environmental conditions and populate a condition database.	Manager Infrastructure Delivery	Yes	Using in-house mains CCTV programs
6.	Include open drainage infrastructure in next versions of this plan	Manager Infrastructure Delivery/ Technical Services	No	Dec 2024
7.	Twenty-year Renewal Program – develop program, with emphasis on the first 10 years of the reporting period	Manager Infrastructure Delivery/ Technical Services Engineer	No	Dec 2024

8.3 MONITORING AND REVIEW PROCEDURES

Refer to Core Asset Management Plan.

REFERENCES

Refer to Core Asset Management Plan.

GLEN INNES SEVERN COUNCIL




WATER

ASSET MANAGEMENT PLAN PART 4



Version 4.0

April 2022

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1. EXECUTIVE SUMMARY

In addition to the overarching summary of Council assets in the Core Asset Management Plan, it is worth noting here the system of management of the Glen Innes Water supply.

Originally constructed in 1930, the town was served with a raw water supply through cast iron pipes. Many of these pipes remain in service, and today present a challenge regarding deposits of iron and manganese that accumulate on the rough pipe walls at times when those minerals are present in the treated supply.

Fortunately, the construction of a new off stream storage has largely eliminated the issue of manganese discoloration as all water is aerated prior to treatment, causing the mineral to precipitate out and be collected in the filtration process. In the past, blue green algae prevented the use of that facility, however this plan identified the need for a carbon dosing system, which was installed at the off-stream storage and commissioned in August 2017, thereby allowing its continued use through times when algae are present.

A new bore was installed and commissioned at the Glen Innes Aggregates Quarry in October 2019, after reaching Level Three (3) Water Restrictions, in compliance with the Drought Management Plan.

The only issues that may remain are in those areas where pipe circulation is incomplete, and dead ends occur. That situation allows particular bacteria (iron bacteria) to attack pipe walls and cause discoloration. While not a health issue, it is problematic from an aesthetic perspective and dead ends are eliminated as resources allow.

Old mains are also routinely renewed in those locations where road works are undertaken, to lower the risk of water leaks or future main breaks damaging newly constructed road assets.

The off-stream storage has not only provided quality assurance, but also water supply assurance in two ways. The bulk of water stored is sufficient to provide approximately 32 months of supply after depletion of available water in the Beady Waters, when used in conjunction with the Red Range Road and Eerindii Ponds Bores. In addition, the new pumping arrangement and backup diesel powered unit provides for multiple sources in the event of infrastructure failure or water quality issues in a particular supply.

The business is operating at a break even cost basis, with additional surplus revenue used to address capital renewal works.

2. INTRODUCTION

2.1 BACKGROUND

This asset management plan covers the following infrastructure assets:

Table 2.1: Assets covered by this Plan

Asset Type	Quantity	Replacement Value	Accumulated Depreciation
Reticulation Mains	110 km	\$ 14,409,780	-\$ 4,422,903
Rising Mains	9 km	\$ 2,600,784	-\$ 649,612
Bores	4	\$ 410,526	-\$ 53,981
Pump stations	4	\$ 1,835,274	-\$ 964,376
Reservoirs	6	\$ 3,984,455	-\$ 1,862,919
Weirs	2	\$ 5,023,699	-\$ 124,481
Offstream Storage	3	\$ 630,918	-\$ 1,779,825
Treatment Works	2	\$ 12,554,216	-\$ 4,478,228
Total	N/A	\$ 41,449,652	-\$ 14,336,324

2.1.1 KEY STAKEHOLDERS

Refer to Core Asset Management Plan.

In addition to the Core Asset Management Plan, specific stakeholders in the preparation and implementation of this asset management plan are:

Federal and State Governments and Agencies	Department of Planning, Industry, and Environment
	Office of Environment and Heritage
	Office of Local Government
	Dams Safety NSW
	Independent Pricing and Regulatory Tribunal of NSW
Community	Existing customers
	Future customers
	NSW Fire and Rescue
	Downstream landholders

2.2 GOALS AND OBJECTIVES OF ASSET MANAGEMENT

Relevant Council goals and objectives and how these are addressed in this asset management plan are:

Table 2.2: Council Goals and how these are addressed in this Plan

Goal	Objective	How Goal and Objectives are addressed in AMP
IM 3.3.3 - Implement the Drought Management Plan and review as necessary.	The community has a plan in place to manage times of drought.	The Drought Management Plan sits within the resourcing strategy and is reviewed regularly including after each drought event.
IM 3.4.1 - Manage water functions according to adopted service levels.	The water business is managed according to adopted service levels.	The AMP sets the overall framework for the management of the water business. It defines the levels of service and describes how these will be attained.
IM 3.4.3 - Implement the Water Asset Management Plan and review as necessary.	Ensure annual asset renewal expenditure is targeted to ensure assets are renewed at a pace equal to asset consumption.	The AMP defines the asset renewal ratios required to meet ongoing asset consumption. It also defines the condition rating of assets and the planned capital renewals program that directly feeds into the annual operational plan and budget.
IM 3.4.5 - Implement the Integrated Water Cycle Management Plan and review as necessary.	The community has a current Integrated Water Cycle Management Plan in place.	The Integrated Water Cycle Management Plan sits within the resourcing strategy and is reviewed regularly with an operational budget set to cover the expenses of the review.

2.3 PLAN FRAMEWORK

Refer to Core Asset Management Plan.

2.4 CORE AND ADVANCED ASSET MANAGEMENT

Refer to Core Asset Management Plan.

3. LEVELS OF SERVICE

3.1 CUSTOMER RESEARCH AND EXPECTATIONS

Major expectations of the stakeholders are as follows:

EXISTING AND FUTURE CUSTOMERS AND GLEN INNES SEVERN COUNCIL

- A water supply that is acceptable and sustainable in terms of reliability, quality, quantity and price.
- A scheme that minimises adverse effects on the environment.
- A scheme that does not limit the future development potential of the town.
- An equitable system of charging which customers readily understand and complies with best practice outcomes.
- Good service in respect to response time for dealing with problems.

THE GENERAL PUBLIC

- That the water supply is safe from a public health perspective and that there is an adequate supply i.e. that no restrictions are in place.

COUNCIL EMPLOYEES

- A healthy and safe work environment.
- Fair and consistent management practices.
- Opportunity to provide input into current and future work practices and plans.

DOWNSTREAM LANDOWNERS

- Extraction volumes do not unreasonably reduce the flow of water in the Beardy Waters downstream of the weirs.

DEPARTMENT OF PLANNING, INDUSTRY AND ENVIRONMENT (WATER)

- That the long-term viability of the state's water resources is not compromised.
- That future works meet the relevant standards in departmental publications.
- That best-practice management practices are in place, including:
 - Strategic Business Planning;
 - Pricing & Developer Charges (including Liquid Trade Waste Approvals);
 - Demand Management;
 - Drought Management;
 - Annual Performance Reporting; and
 - Integrated Water Cycle Management.
- That all the necessary licences are secured or renewed. Current licences include:
 - Licence No 90AL832586 - Beardy Weir - 2252ML, Expires 09/02/2026
 - Licence No 90AL827292 - Rocky Ponds Creek, 36ML, Expires 31/05/2025
 - Licence No 90AL827830 - Red Range Road Bore, 198ML, Expires 17/01/2025
 - Licence No 90WA836403 - Quarry Bore, 46ML, Expires 12/09/2039

- Licence No 90CA827699 - Deepwater Weir - 64ML - Expires 31/05/2025
- Licence No 90AL316700 - Mann River - 20ML - Expires 20/06/26

HERITAGE NSW ENVIRONMENT PROTECTION AUTHORITY (EPA)

- A scheme that disposes of wastes in a responsible manner and does not cause any harm to the environment.
- That Council complies with conditions imposed on any discharge licences.

DAMS SAFETY NSW

- That Council meets its obligations under the Dams Safety Act (2015) in respect of the Beardy Waters Weir.

OFFICE OF LOCAL GOVERNMENT

- That Council has considered the implications of the National Competition Policy and in particular, competitive neutrality and competitive tendering.

INDEPENDENT PRICING AND REGULATORY TRIBUNAL OF NSW

- That Council has taken into consideration the principles associated with Voluntary Structural Reform.
- That Council has a system of transparent reporting of costs and services.

3.2 LEGISLATIVE REQUIREMENTS

Refer to Core Asset Management Plan.

LOCAL GOVERNMENT ACT (1993)

- Section 68 - Council approval is required to carry out plumbing works.
- Section 60 - Ministerial approval is required to construct or extend a water treatment works or dam.
- Sections 634 to 640 - Water supply offences.
- Regulations - Water, Sewerage and Drainage.

PROTECTION OF THE ENVIRONMENT OPERATIONS ACT (1997)

- No specific licencing is required under this Act, which replaced all previous pollution control acts.

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT (1979)

- All proposals, activities, and functions which are investigated, designed, planned, constructed, and operated by Council should be studied at all stages for their environmental impact on the basis of scale, location and performance.
- The findings of environmental studies should be reported initially in Reviews of Environmental Factors (REF), which indicate the need for further studies, their extent and depth, and the degree of public or other involvement.

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- An Environmental Impact Statement (EIS) is a comprehensive report compiled from extensive studies. An EIS is required for:
 - Designated developments (part IV EP&A Act);
 - Projects that significantly affect the environment (part V EP&A Act); and/or
 - When designated by a State Environmental Planning Policy or in an LEP.

DAMS SAFETY ACT (2015)

- Dams Safety NSW has provided Councils across NSW with a twelve-month transition period to comply with all requirements of the new act and associated regulations.
- Under the new departmental arrangements, the training function previously provided by the Dams Safety Committee has been ceased, with Dams Safety NSW performing a pure regulatory function only.
- Additional requirements to have the weir assessed by a competent person (deemed by legislation to mean a registered engineer with specialist expertise in dam safety) at least every 15 years will be met in this transition period.

PUBLIC HEALTH ACT (2010)

The objectives of the Public Health Act are to:

- Protect and promote public health.
- Control the risk to public health.
- Promote the control of infectious diseases.
- Prevent the spread of infectious diseases.
- Recognise the role of local governments in protecting public health.

FLUORIDATION OF PUBLIC WORKS SUPPLIES ACT (1957)

- Council requires approval from the Department of Health to add Fluoride to the water supply (approval was granted on 10 June 1981 but Council has ceased dosing fluoride to the Glen Innes supply). Recommencement of fluoridation will require a community consultation process to be undertaken before any approval is granted.

WATER MANAGEMENT ACT (2000)

- The Natural Resources Access Regulator (NRAR) regulates conditions associated with the operation of dams and pumps for the extraction of water. Council is in discussion with the regulator regarding problematic conditions on existing licences that are not able to be complied with.

WORK HEALTH AND SAFETY ACT (2011)

- This Act impacts on all operations, including water. Council is required to provide a safe working environment and supply equipment to ensure safety.

INDEPENDENT PRICING AND REGULATORY TRIBUNAL ACT (1992)

- The Act empowers the Independent Pricing and Regulatory Tribunal (IPART). The tribunal sets principles and guidelines related to charging for water supply and sewerage. These include:
 - Charges must reflect the cost (user-pays); and

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- Charges must be transparent.

3.3 CURRENT LEVELS OF SERVICE

Refer to Core Asset Management Plan.

3.4 DESIRED LEVELS OF SERVICE

Refer to Core Asset Management Plan.

AVAILABILITY OF SUPPLY

Pressure

The Water Loss Management Plan has seen two (2) pressure-reducing valves installed, creating a multi-zoned reticulation system and allowing excessive pressures to be reduced to more manageable levels. This has significantly reduced water losses throughout the reticulation system. Minimum pressure supply of 200kPa (static pressure) has been set as the supply standard.

Consumption Restrictions in Droughts

In recent years Council has developed the Eerindii Ponds, the Glen Innes Aggregates off stream storage facility. This facility provides approximately thirty-two (32) months' supply under level 5 restrictions after depletion of the Beardy Waters Weir, when used in conjunction with the Quarry and Red Range Road Bores.

Council's initiatives will alleviate the need to impose water restrictions except in an exceptionally severe drought, ensuring that the town can prosper and not be held back in any way due to a shortage of water.

Table 3.4a: Community Levels of Service

KEY PERFORMANCE INDICATOR	COMMUNITY LEVEL OF SERVICE	PERFORMANCE MEASUREMENT PROCESS	TARGET PERFORMANCE	CURRENT PERFORMANCE
Safety	Ensure public safety around high risk assets such as pump stations, water treatment plants, storage lagoons and reticulation fittings.	Reported hazards from Customer Service requests. Number of injuries.	< 10 reported hazards pa. No injuries.	Nil occurrences. Nil reported.
Quality	Minimal disruption to residential water schemes.	Reported unplanned events from Customer Service requests.	< 10 reported events pa.	5 occurrences (based on number of mains breaks)
Quantity	Satisfactory provision of water treatment assets to cater for long term growth.	Analysis undertaken every three (3) years.	Water infrastructure provides for a minimum of 125% of instantaneous peak demand.	Water infrastructure provides for a minimum of 200% of instantaneous peak demand.
Responsiveness	Maintenance staff to respond to reticulation failures within a given timeframe.	Response to emergency situations within one (1) hour of the alarm being raised.	90% of alarms to be responded to within one (1) hour of notification.	This is generally accepted to be satisfied, but exact response times are not documented.

Cost	Complaints and enquiries are responded to in a timely manner.	Dedicated customer service officer for infrastructure related enquiries.	Respond to 95% of written complaints or enquiries (complaints other than supply failure) within 10 working days.	A new customer service process has been implemented that provides for same day response in most cases.
	Costs are maintained within annual budget allocations.	Job Costing System.	Total annual (non-capital) expenditure is less than 102% of budget.	Total annual (non-capital) expenditure is less than 102% of budget.
	Service charges are to represent good value to the community.	Service charges identified for future years in the Long-Term Financial Plan.	Annual service charges are calculated according to best practice guidelines.	Annual service charges are calculated according to best practice guidelines.
Legislative Compliance	Compliance.	All schemes to ensure appropriate compliance with the WH & S Act, POEO Act and NSW Health approvals.	All schemes to comply with relevant legislation, in particular the need for a risk-based management approach according to the Australian Drinking Water Guidelines.	All schemes to comply with relevant legislation, in particular the need for a risk-based management approach according to the Australian Drinking Water Guidelines.
Function	Ensure systems meet user requirements and cater for residential growth.	All network infrastructure to be verified via network observation and analysis.	Systems cater for loadings during peak events.	Systems cater for loadings during peak events.

Reliability	Water supply is not affected by drought conditions.	Water supply records.	Severe water restrictions should not be imposed for more than 5% of the time, that they should not be imposed more often than once in every 10 years and the water supply should be capable of supplying 90% of normal demand through a repeat of the worst drought on record.	Permanent Level 1 water restrictions.
	Supply users are advised of planned supply interruptions in a timely manner.	Customer Service Officer.	Planned: Domestic customers will receive 48 hours written notice and Industrial (including Commercial) will receive seven (7) days written notice. Unplanned: Not to occur more than three (3) times per year not last longer than 12 hours for any resident.	Domestic customers receive 48 hours written notice by letter box drop and Industrial (including Commercial) will receive seven (7) days written notice.
Sustainability	Facilities are managed for future generations.	Master planning. Long-Term Financial Plan.	Key Financial Ratios are maintained.	Asset renewal ratio is 1.0. Asset maintenance ratio is 1.0

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Table 3.4b: Technical Levels of Service

KEY PERFORMANCE INDICATOR	COMMUNITY LEVEL OF SERVICE	PERFORMANCE MEASUREMENT PROCESS	TARGET PERFORMANCE	CURRENT PERFORMANCE
Quality	Treated water is to comply with relevant standards.	NATA accredited laboratory to test samples.	100% compliance with the Australian Drinking Water Guidelines, published jointly by the National Health and Medical Research Council (NHMRC) and the Australian Water Resources Council (AWRC).	Council has implemented the recommended water-quality monitoring programme that involves weekly biological testing (from alternating sites at various locations within the network) and a monthly comprehensive physical and chemical analysis. Testing is by a NATA-certified laboratory.

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Quantity	Condition.	Water quality complaints for colour.	Nil complaints under normal operating conditions (not involving main breaks or fire service activity).	9 reported, however, all were associated with routine mains flushing.
	Structural & hydraulic defects.	Hydraulic reserve capacity capable of supplying hydrant service level of 10 litres per second at 20 meters head.	Maintain service level across the network 99% of the time.	Service level is maintained across the network except during planned and unplanned outages.
	Collection, treatment, storage and reticulation infrastructure to cater for current number of domestic connections plus allowance for projected long-term growth.	Network Analysis undertaken on infrastructure.	> 99% of network having adequate capacity.	100% of network has adequate capacity

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	Supply failure rectification is carried out expediently.	Customer request system.	<p>Priority 1 – water main break (discharging large quantity of water):</p> <ul style="list-style-type: none"> • During normal working hours – Attend site within one (1) hour; • After hours – Attend site within (2) hours. <p>Priority 2 – water service break (affecting single customer):</p> <ul style="list-style-type: none"> • During normal working hours – Attend site within two (2) hours; • After hours – Attend site within 2 hours. <p>Priority 3 – slow leak in water service or water main:</p> <ul style="list-style-type: none"> • Attend site within two working days. 	This target is being met throughout the service area.
	Provide minimum levels of pressure and flow.	Hydrant testing.	Provide minimum residual pressure of 20 metres head of water in the reticulation system whilst delivering a minimum of 10 litres per second through a hydrant.	This target is being met throughout the service area.

	Supply meets peak day demands.	Flow meters and continuous pressure monitoring.	Provide for a peak day demand of 3000 litres per occupied residential tenement.	This target is being met throughout the service area.
Safety	Water network free of preventable hazards & deficiencies.	WorkCover & insurance claims for personal injury or property damage.	Zero claims per annum.	Nil claims.
		Reported hazardous conditions via Customer Request System.	< 10 reported hazards pa.	Nil reports.
Function	Fit for purpose network and structures.	Compliance with design standards & maintenance programs.	100% compliance.	100% compliance.

4. FUTURE DEMAND

4.1 DEMAND FORECAST

Refer to Core Asset Management Plan.

4.1.2 DEMAND FACTORS

To enable fair and planned distribution of funding throughout the Council area, some of the factors influencing the prioritising of works are:

- Changing community expectations and demographics.
- Known areas of systems capacity limitations.
- Systems and processes with high maintenance demands.
- Development at the boundaries of the water supply zones.

In the relevant asset classes, some issues which may influence future asset provision are:

- Resident expectations will be raised for the provision of treated water outside the existing water supply zones and village areas.
- There will be an increased need to renew infrastructure in older land divisions.

More concentration on water re-use initiatives will occur.

Refer to Council's Demand Management Plan for details.

4.2 CHANGES IN TECHNOLOGY

Further development of Geographic Information Systems (GIS) and asset management systems will improve the management of water infrastructure, particularly the coordination of maintenance activities, through enhanced data collection, analysis and dissemination systems.

Automated water meter reading and analysis has the potential to radically improve the level of knowledge of water flows systemically and to individual properties. Subject to a successful grant funding allocation Council has resolved to install automated water meter reading technology to each metered connection.

4.3 DEMAND MANAGEMENT PLAN

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

Refer to Council's Demand Management Plan for further details.

4.4 NEW ASSETS FROM GROWTH

The new assets required to meet growth will be acquired from land developments and constructed by Council. The new asset values are summarised in Fig 4.4.

Fig 4.4: New Assets from Growth



4.4.1 ASSUMPTIONS USED IN PROJECTED ASSET GROWTH

Refer to Core Asset Management Plan.

5. LIFECYCLE MANAGEMENT PLAN

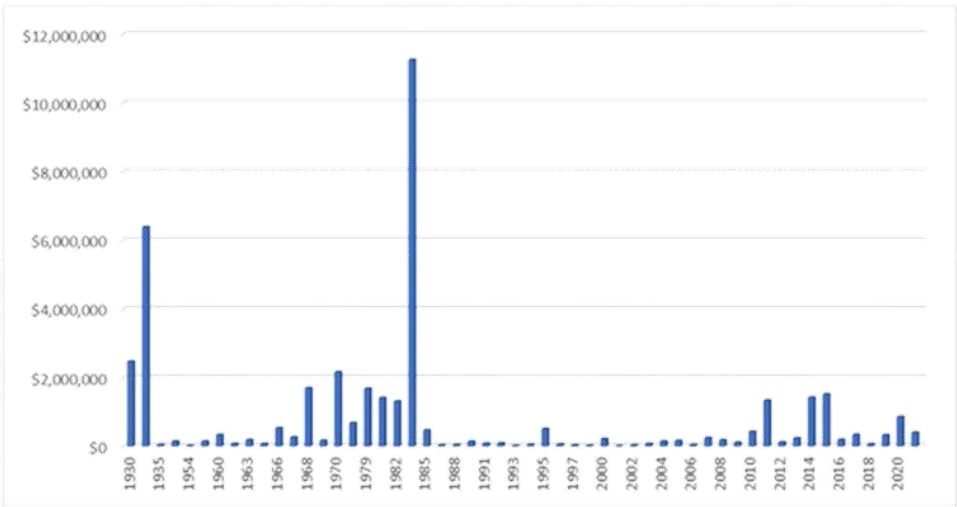
The lifecycle management plan details how Council plans to manage and operate the assets at the agreed levels of service (defined in section 3) while optimising life cycle costs.

5.1 BACKGROUND DATA

5.1.1 PHYSICAL PARAMETERS

The age profile of Council's assets is shown below.

Fig 5.1.1: Asset Age Profile



5.1.2 ASSET CAPACITY AND PERFORMANCE

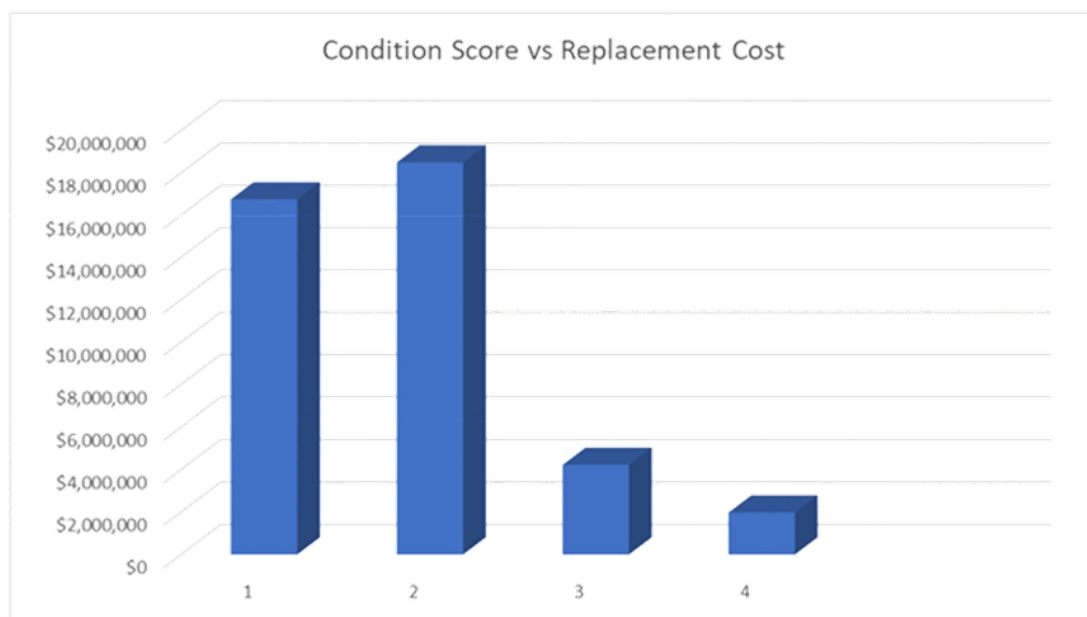
Council's services are generally provided to meet design standards where these are available. Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

Table 5.1.2: Known Service Performance Deficiencies

LOCATION	SERVICE DEFICIENCY
Water Mains	Mains not constructed to maintain circulation flow in some areas (dead ends).
Water Quality	Colour issues caused by iron and manganese build up in mains near dead ends.

5.1.3 ASSET CONDITION

Fig 5.1.3: Asset Condition Profile



Condition is measured using a 1 – 5 rating system.¹

Rating	Description of Condition
1	Excellent: Only planned maintenance required.
2	Very good: Minor maintenance required plus planned maintenance.
3	Good: Significant maintenance required.
4	Average: Significant renewal/upgrade required.
5	Poor: Unserviceable.

¹ IIMM 2006, Appendix B, p B:1-3 ('cyclic' modified to 'planned')

5.1.4 ASSET VALUATIONS

Table 5.1.4a: Asset Summary

Asset Type	Quantity	Replacement Value	Annual Depreciation
Reticulation Mains	110 km	\$ 14,409,780	-\$ 160,061
Rising Mains	9 km	\$ 2,600,784	-\$ 28,898
Bores	4	\$ 410,526	-\$ 6,631
Pump stations	4	\$ 1,835,274	-\$ 60,088
Reservoirs	6	\$ 3,984,455	-\$ 42,033
Weirs	2	\$ 5,023,699	-\$ 3,604
Offstream Storage	3	\$ 630,918	-\$ 51,946
Treatment Works	2	\$ 12,554,216	-\$ 190,165
Total	N/A	\$ 41,449,652	-\$ 543,425

Sustainability reporting reports the rate of annual asset consumption for the asset category as a whole and compares this to asset renewal, upgrade and expansion, as shown in Table 5.4 below:

Table 5.1.4b: Financial Reporting Ratios

FINANCIAL REPORTING CRITERION	WATER SUPPLY INFRASTRUCTURE - %
Asset Consumption Rate	1%
Asset Renewal Rate	1%
Asset Upgrade Expansion Rate	1%

5.2 RISK MANAGEMENT PLAN

An assessment of risks associated with service delivery from infrastructure assets has identified 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, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' (VH) - requiring immediate corrective action and 'High' (H) – requiring prioritised corrective action identified in the infrastructure risk management plan are summarised in Table 5.2.

Table 5.2: Critical Risks and Treatment Plans

ASSET AT RISK	WHAT CAN HAPPEN	RISK RATING (VH, H)	RISK TREATMENT PLAN
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Reticulation	Contaminated water supply.	Multiple.	The system is managed according to the risk-based Drinking Water Quality Management Plan for Glen Innes and Deepwater.
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5.3 ROUTINE MAINTENANCE PLAN

Routine operations and maintenance are the regular ongoing works that are necessary to keep assets operating, including instances where portions of the asset fail and need immediate repair to make the asset operational again.

5.3.1 MAINTENANCE PLAN

Maintenance includes reactive, planned and cyclic maintenance work activities.

Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions.

Planned maintenance is repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown experience, prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Cyclic maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, building roof replacement, etc. This work generally falls below the capital/maintenance threshold.

The structure of Council's present Budget account lines does not permit the disaggregation of maintenance

Planned maintenance work is not distinguished from reactive maintenance work in Council's current finance system.

Future revision of this Asset Management Plan will include linking required maintenance expenditures with required service levels.

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

5.3.2 STANDARDS AND SPECIFICATIONS

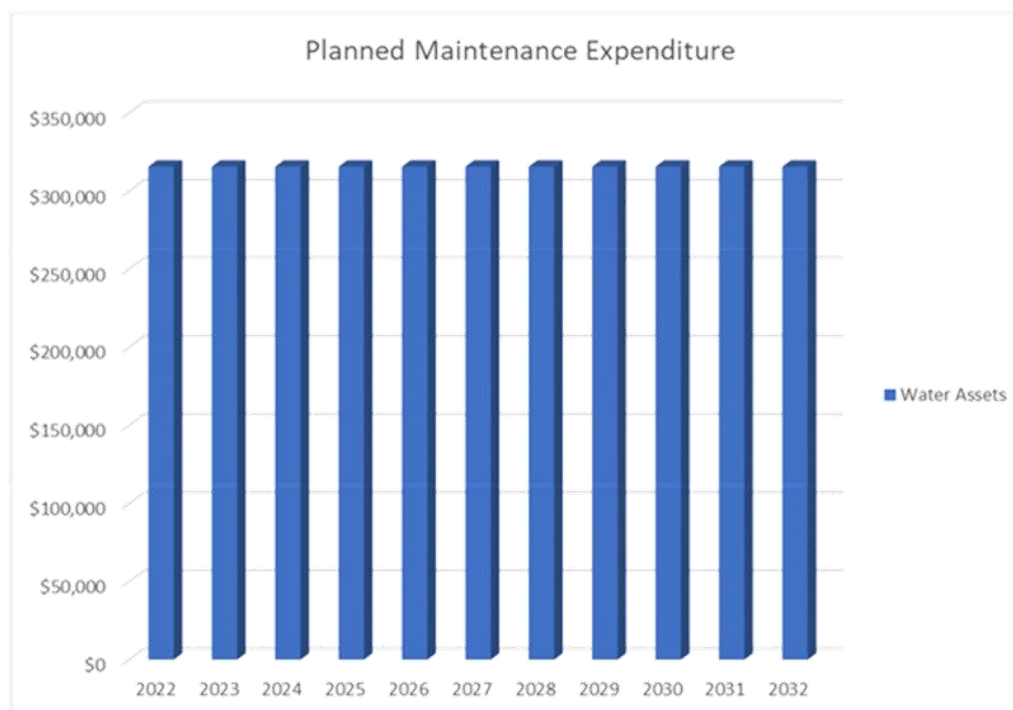
Maintenance work is carried out in accordance with the following Standards and Specifications.

- Maintenance work is carried out in accordance with sound industry practices and requirements set down by manufacturers of proprietary products.

5.3.3 SUMMARY OF FUTURE MAINTENANCE EXPENDITURES

Future maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Fig 5.3.3. Note that all costs are shown in current dollar values.

Fig 4.5.3.3 Planned Maintenance Expenditure



Maintenance is funded from Council's operating budget. This is further discussed in Section 6.2.

5.4 RENEWAL/REPLACEMENT PLAN

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.

5.4.1 RENEWAL PLAN

Assets requiring renewal are identified from assessment of current remaining useful life. In many cases the road network that is driving the renewal program, as road assets inevitably lie above water assets in the field. If a road asset is to be rehabilitated, it makes sense to rehabilitate underlying assets at the same time, unless they have an expected remaining life that is longer than the expected life of the new road asset.

The priority ranking criteria is detailed in Table 5.4.1.

Table 5.4.1: Renewal Priority Ranking Criteria

CRITERIA	PRIORITY
Pipe is located under planned road works, and is in potentially obstructing road making equipment due to shallow depth	1
Pipe is located under planned road works, and is in condition 3,4 or 5	2
Non pipe assets in condition 5	1
Non pipe assets in condition 4	3

5.4.2 RENEWAL STANDARDS

Renewal work is carried out in accordance with the following Standards and Specifications.

- AS/NZS 3500
- AusSpec & Natspec

5.4.3 SUMMARY OF FUTURE RENEWAL EXPENDITURE

Projected future renewal expenditures are forecast to increase over time as the asset stock ages. The costs are summarised in Fig 5.4.3. Note that all costs are shown in current dollar values.

The projected capital renewal program is shown in Appendix B. This program has been determined from existing asset data and is a projection of the expected life from the construction year. As the bulk of the network was constructed in 1938 a theoretical glut of work will be required in 2018, however in reality this work will be carried out over an extended period to maximise efficient use of resources. Condition of mains is best ascertained by water mains break data. The incidence of mains breaks remains low, and so the effective life of pipe assets appears to have been underestimated in the past.

The plan moving forward is to renew assets according to the priority ranking criteria above, expending an amount equal to depreciation each year.

Fig 5.4.3a: Projected Capital Renewal Expenditure

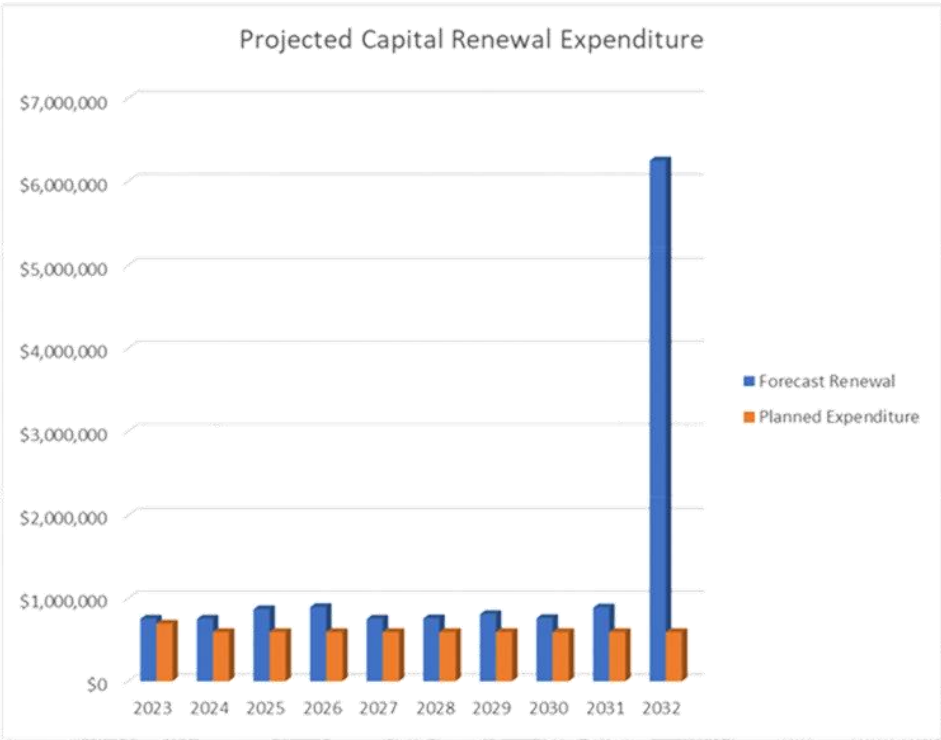
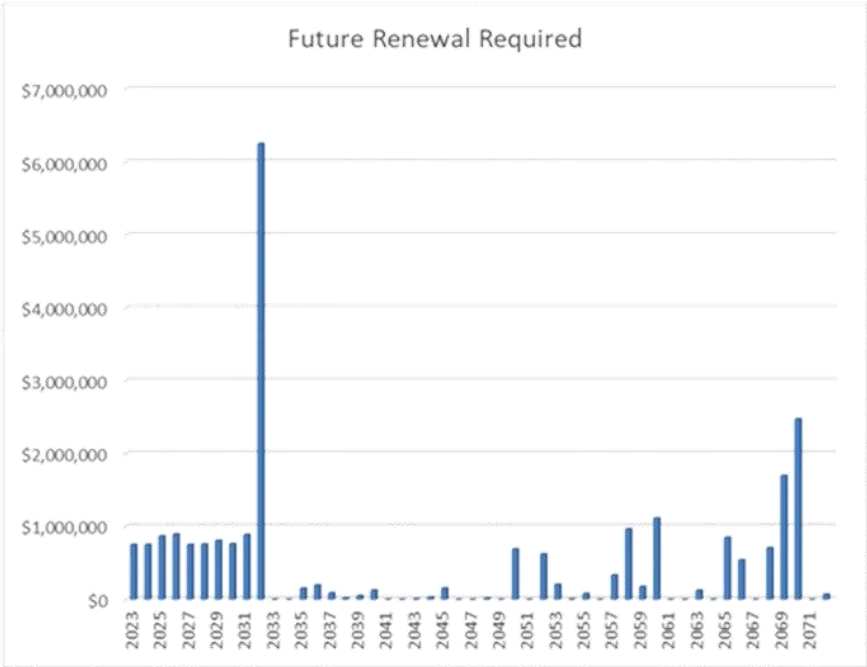


Fig 5.4.3b: 50-Year Future Renewal



Renewals are to be funded from Council's capital works program and grants where available. This is further discussed in Section 6.2.

5.5 CREATION/ACQUISITION/UPGRADE PLAN

New works are those works that create a new asset that did not previously exist or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost to the Council from land development. These assets from growth are considered in Section 4.4.

5.5.1 SELECTION CRITERIA

Council has recently upgraded the head works and storage capacity of the Glen Innes supply system. This has been funded through the taking out of loans and government grants.

New reticulation assets and upgrade/expansion of existing assets are identified from various sources such as customer requests or developer payment for works. There is generally no funding proposed for future new assets from funds held in reserve. These assets are funded either from private works income or through cost savings in existing projects.

Table 5.5.: New Assets Priority Ranking Criteria

CRITERIA	PRIORITY
Required for development	New assets required for development are generally funded by private works costs borne by the developer.
Gravity main duplication or upsizing for increased demand	These assets are constructed as part of the renewal program where there are cost savings due to reduced cost of having service lines traversing road pavements.
Connection of dead-end mains to provide circulation of supply	These assets are constructed as part of the renewal program where there are cost savings due to reduced cost of maintenance of attending to customer complaints in an area.

5.5.2 STANDARDS AND SPECIFICATIONS

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2.

5.5.3 SUMMARY OF FUTURE UPGRADE/NEW ASSETS EXPENDITURE

Refer to Section 4.4.

New assets and services are to be funded primarily from developer payments for works as quoted. This is further discussed in Section 6.2.

5.6 DISPOSAL PLAN

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any.

Table 5.6 Assets identified for Disposal

ASSET	REASON FOR DISPOSAL	TIMING	CASHFLOW FROM DISPOSAL
Various	End of service life.	As per capital renewal program.	Nil.

Where cash flow projections from asset disposals are not available, these will be developed in future revisions of this asset management plan.

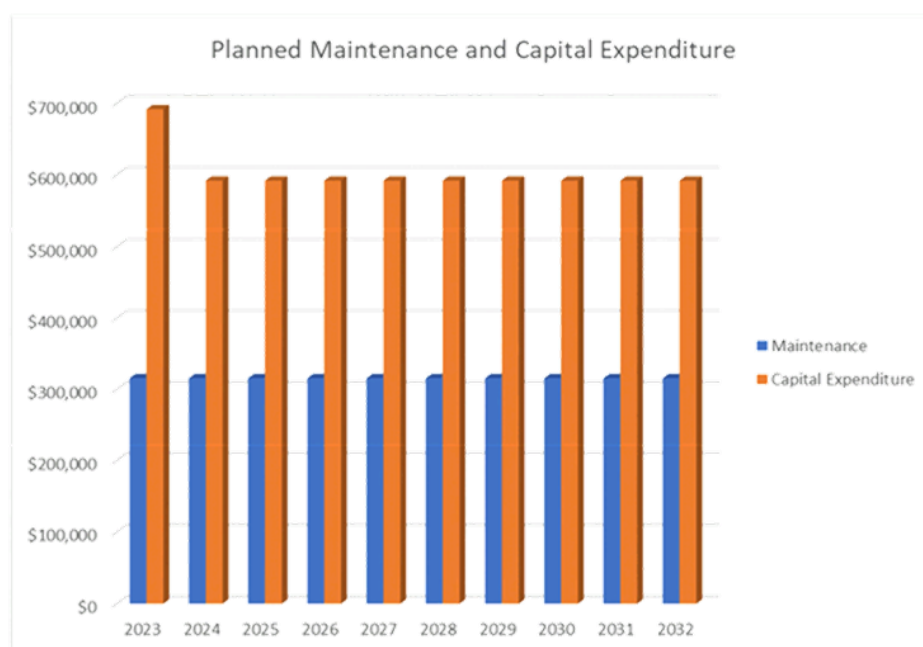
6. FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

6.1 FINANCIAL STATEMENTS AND PROJECTIONS

The financial projections are shown in Fig 6.1 for planned operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets).

Fig 6.1: Planned Maintenance and Capital Expenditure



Note that all costs are shown in current dollar values.

6.1.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two (2) key indicators for financial sustainability that have been considered in the analysis of the services provided by this asset category, these being long term life cycle costs and medium-term costs over the 10 year financial planning period.

Long term - Life Cycle Cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the longest asset life. Life cycle costs include maintenance and asset

consumption (depreciation expense). The annual average life cycle cost (10-year forecast) for the services covered in this asset management plan is \$859,000.

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes maintenance plus capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure (10-year average forecast) is \$917,000.

A gap between life cycle costs and life cycle expenditure gives an indication as to whether present consumers are paying their share of the assets, they are consuming each year. The purpose of this water asset management plan is to identify levels of service that the community needs and can afford and develop the necessary long-term financial plans to provide the service in a sustainable manner.

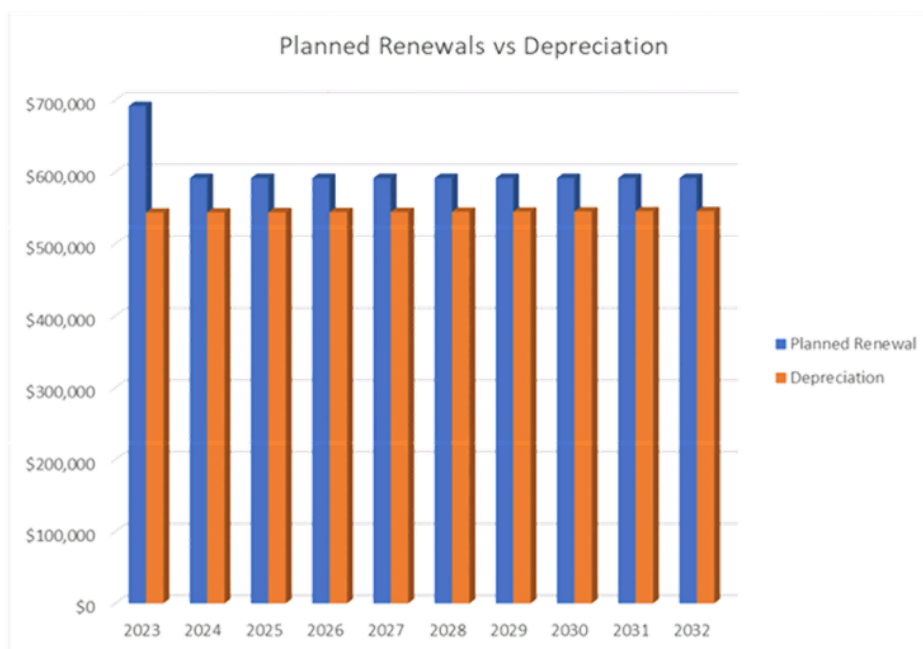
The life cycle surplus for services covered by this asset management plan is \$58,000. The life cycle sustainability index is 107%.

Medium term – 10 Year Financial Planning Period

Funding for the remainder of the delivery program will be adequate to keep pace with asset consumption using the previous financial modelling that is contained in the asset register. These will be reviewed, and it is hoped that actual costs will prove to be much lower than have been adopted in the past. The current iteration of this plan provides accurate modelling as project history accumulates and costs with associated variables become more accurately known.

Council will manage the 'gap' by developing this asset management plan to provide guidance on future service levels and resources required to provide these services.

Fig 6.1.1: Planned Renewals vs Depreciation



6.2 FUNDING STRATEGY

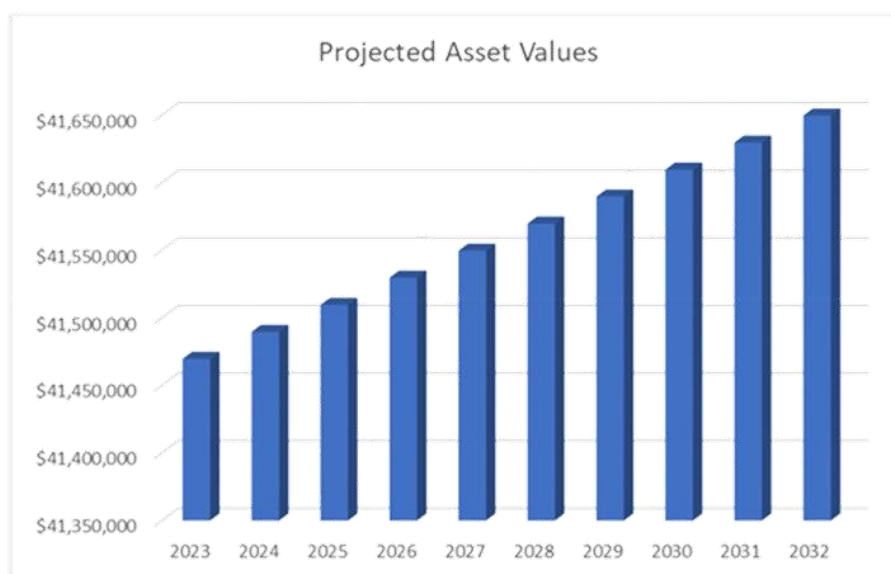
Projected expenditure identified in Section 6.1 is to be funded from Council's operating and capital budgets. The funding strategy is detailed in the Council's 10-year long term financial plan.

Achieving the financial strategy will require an ongoing commitment to fund the increasing demand for asset renewals. Renewal costs may outpace increased revenue from development growth.

6.3 VALUATION FORECASTS

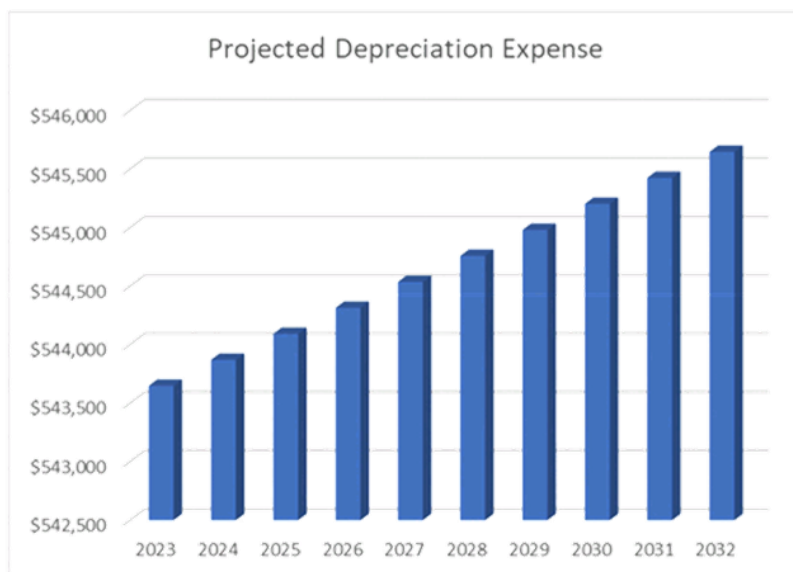
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Fig 6.3a shows the projected replacement cost asset values over the planning period in current dollar values.

Fig 6.3a: Projected Asset Values



Depreciation expense values are forecast in line with asset values as shown in Fig 6.3b.

Fig 6.3b: Projected Depreciation Expense



The depreciated replacement cost (current replacement cost less accumulated depreciation) will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets.

6.4 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

This section details the key assumptions made in presenting the information contained in this asset management plan and in preparing forecasts of required operating and capital expenditure and asset values, depreciation expense and carrying amount estimates. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Table 6.4: Key Assumptions

PARAMETER	DOCUMENT SECTION	ASSUMPTION
Asset Values	Core Asset Management Plan, Section 5	GIS – recorded quantities and reviewed unit rates, as at June 30 of previous year.
Depreciation	Core Asset Management Plan, Section 7	Depreciation curve method as AASB116 with reviewed useful lives applicable as at June 30 of previous year.
Levels of service	Section 3 above	Present levels maintained or enhanced.
Demand	Section 4 above	Renewals using current technology, uniform population and asset stock growth to 2030.
Maintenance and Renewal Expenditure	Section 5 above	Similar pattern to previous years, with regular increases to recognise larger asset stock.

Maintenance costs for water supply assets will typically increase to allow for the increase in total asset value (reflecting the higher costs associated with managing a larger asset stock). Again, asset values are predicted to increase over the reporting period. Maintenance costs will need to be closely monitored to ensure that sufficient funds are available to optimise long-term expenditure and not create a backlog.

7. ASSET MANAGEMENT PRACTICES

7.1 ACCOUNTING/FINANCIAL SYSTEMS

Refer to Core Asset Management Plan.

7.2 ASSET MANAGEMENT SYSTEMS

Refer to Core Asset Management Plan.

7.3 INFORMATION FLOW REQUIREMENTS AND PROCESSES

Refer to Core Asset Management Plan.

7.4 STANDARDS AND GUIDELINES

Refer to Core Asset Management Plan.

7.5 DATA CONFIDENCE LEVEL

Data confidence levels for this AMP are rated as B or C.

8. PLAN IMPROVEMENT AND MONITORING

8.1 PERFORMANCE MEASURES

Refer to Core Asset Management Plan.

8.2 IMPROVEMENT PLAN

The asset management improvement plan generated from this asset management plan is shown in Table 8.2.

Table 8.2: Improvement Plan

TASK NO	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1.	Implement automated water meter reading system.	Manager Integrated Water Services	A budget of \$600,000 has been allocated in 2021/2022 financial year for stage 2.	July 2022
2.	Review Strategic Plans including IWCM.	Manager Integrated Water Services	External consultant.	June 2023
3.	Develop priority ranking system for water upgrade program.	Manager Asset Services	Annual road rehabilitation plan to correlate underground service renewals.	Annually
4.	Undertake annual review of this Asset Management Plan.	Manager Asset Services	Staff time.	Annually for December Council meeting.
5.	Separate maintenance expenditure into reactive and proactive lines.	Chief Financial Officer	New finance system.	As new finance system is implemented.

8.3 MONITORING AND REVIEW PROCEDURES

Refer to Core Asset Management Plan.

REFERENCES

Refer to Core Asset Management Plan.

GLEN INNES SEVERN COUNCIL



SEWERAGE


ASSET MANAGEMENT PLAN PART 5



Version 4.0

April 2022

GLEN INNES SEVERN COUNCIL – SEWER ASSET MANAGEMENT PLAN

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1. EXECUTIVE SUMMARY

Refer to the Corporate Asset Management Plan.

2. INTRODUCTION

2.1 BACKGROUND

This asset management plan covers the following infrastructure assets:

Table 2.1: Assets covered by this Plan

Asset Type	Quantity	Replacement Value	Accumulated Depreciation
Gravity Mains	95 km	\$ 23,182,421	-\$ 7,431,065
Rising Mains	15 km	\$ 1,374,749	-\$ 192,160
Pump Stations	9	\$ 512,425	-\$ 304,432
Treatment Works	2 Plants	\$ 7,207,509	-\$ 2,815,252
Total	N/A	\$ 32,277,105	-\$ 10,742,908

2.1.1 KEY STAKEHOLDERS

Refer to Core Asset Management Plan.

In addition to the Core Asset Management Plan, specific stakeholders in the preparation and implementation of this asset management plan are:

Federal and State Governments and Agencies	Department of Planning, Industry and Environment NSW Environment Protection Authority (EPA) NSW Office of Local Government (OLG) Independent Pricing and Regulatory Tribunal of NSW
Community	Existing customers Future customers

2.2 GOALS AND OBJECTIVES OF ASSET MANAGEMENT

Relevant Council goals and objectives and how these are addressed in this asset management plan are:

Table 2.2: Council Goals and how these are addressed in this Plan

Goal	Objective	How Goal and Objectives are addressed in AMP
IM 3.4.2 - Manage wastewater functions according to adopted service levels.	The wastewater business is managed according to adopted service levels	The AMP sets the overall framework for the management of the wastewater business. It defines the levels of service and describes how these will be attained.
IM 3.4.4 - Implement the Sewer Asset Management Plan and review as necessary.	Ensure annual asset renewal expenditure is targeted to address the infrastructure backlog within the next 10-15 years.	The AMP defines the asset renewal ratios required to meet ongoing asset consumption. It also defines the condition rating of assets and the planned capital renewals program that directly feeds into the annual operational plan and budget.

2.3 PLAN FRAMEWORK

Refer to Core Asset Management Plan.

2.4 CORE AND ADVANCED ASSET MANAGEMENT

Refer to Core Asset Management Plan.

3. LEVELS OF SERVICE

3.1 CUSTOMER RESEARCH AND EXPECTATIONS

Major expectations of the major players are as follows:

EXISTING AND FUTURE CUSTOMERS AND GLEN INNES SEVERN COUNCIL

- A sewerage treatment system that is acceptable in terms of reliability, quality, quantity and price.
- A scheme that minimises adverse effects on the environment.
- A scheme that does not limit the future development potential of the town.
- An equitable system of charging that customers readily understand.
- Good service in respect to response time for dealing with problems.

THE GENERAL PUBLIC

- That the sewerage system is safe from a public health perspective and that there is an adequate supply i.e. that no restrictions are in place.

COUNCIL EMPLOYEES

- A healthy and safe work environment.
- Fair and consistent management practices.
- Opportunity to provide input into current and future work practices and future plans.

DEPARTMENT OF PLANNING, INDUSTRY AND ENVIRONMENT (WATER)

- That future works meet the relevant standards in departmental publications.
- That best-practice management practices are in place, including:
 - Strategic Business Planning;
 - Pricing & Developer Charges (including Liquid Trade Waste Approvals);
 - Annual Performance Reporting; and
 - Integrated Water Cycle Management.

ENVIRONMENT PROTECTION AUTHORITY

- A scheme that disposes of wastes in a responsible manner and does not cause any harm to the environment.
- That all the necessary licences are secured or renewed. Current licences include:
 - EPA License No 576 (Glen Innes Sewerage Treatment Plant);
 Note: No license is required for Deepwater Common Effluent system.
- That council complies with conditions imposed on any discharge licences.

NSW OFFICE OF LOCAL GOVERNMENT

- That Council has considered the implications of the National Competition Policy and in particular, competitive neutrality and competitive tendering.

INDEPENDENT PRICING AND REGULATORY TRIBUNAL OF NSW

- That Council has a system of transparent reporting of costs and services.

3.2 LEGISLATIVE REQUIREMENTS

Refer to Core Asset Management Plan.

LOCAL GOVERNMENT ACT (1993)

- Section 68 - Council approval is required to carry out plumbing works.
- Section 60 - NSW Office of Water approval is required to construct or extend a sewerage treatment facility.
- Regulations - Water, Sewerage and Drainage.

PROTECTION OF THE ENVIRONMENT ACT (1997)

- Compliance with EPA licence conditions.
- Pollution and Incident Monitoring and Reporting

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT (1979)

- All proposals, activities, and functions which are investigated, designed, planned, constructed, and operated by Council should be studied at all stages for their environmental impact on the basis of scale, location and performance.
- The findings of environmental studies should be reported initially in Reviews of Environmental Factors (REF) under part 5 of the Act, which indicate the need for further studies, their extent and depth, and the degree of public or other involvement.
- An Environmental Impact Statement (EIS) is a comprehensive report compiled from extensive studies. An EIS is required for:
 - Designated developments (part IV EP&A Act);
 - Projects that significantly affect the environment (part V EP&A Act); and/or
 - When designated by a State Environmental Planning Policy or in an LEP.

PUBLIC HEALTH ACT (1991)

- Notification of public health related pollution incidents.

WORK HEALTH AND SAFETY ACT (2010)

- This Act impacts on all operations, including sewerage. Council is required to provide a safe working environment and supply equipment to ensure safety.

INDEPENDENT PRICING AND REGULATORY TRIBUNAL ACT (1992)

- The Act empowers the Independent Pricing and Regulatory Tribunal (IPART). The tribunal sets principles and guidelines related to charging for water supply and sewerage. These include:
 - Charges must reflect the cost (user-pays); and
 - Charges must be transparent.

3.3 CURRENT LEVELS OF SERVICE

Refer to Core Asset Management Plan.

3.4 DESIRED LEVELS OF SERVICE

Refer to Core Asset Management Plan.

Table 3.4a: Community Levels of Service

KEY PERFORMANCE INDICATOR	COMMUNITY LEVEL OF SERVICE	PERFORMANCE MEASUREMENT PROCESS	TARGET PERFORMANCE	CURRENT PERFORMANCE
SAFETY	Ensure public safety around high risk assets such as pump stations, wastewater treatment plants, storage lagoons and manholes.	Reported hazards from Customer Service requests.	< 10 reported hazards pa	Nil reports
		Number of injuries.	Zero	Nil reports
QUALITY	Ensure minimal odours from effluent pump stations and wastewater treatment plants.	Reported hazards from Customer Service requests.	< 10 customer service requests per year	Nil reports
QUANTITY	Satisfactory provision of sewerage collection and treatment assets to cater for long term growth.	Review sewerage/effluent inflows. Infrastructure network assessment every 3 years.	Audit undertaken every 3 years.	Audit is undertaken annually during performance monitoring reporting
	Minimise stormwater ingress into sewerage / effluent collection systems.	Identification of potential stormwater ingress locations. Undertake CCTV inspections.	CCTV inspection on network conducted to prioritise renewal program.	CCTV inspections have been undertaken on the oldest 40% of underground assets.

RELIABILITY	Sewerage/ effluent disposal system to operate without blockages.	Reported hazards from Customer Service requests.	< 100 reported hazards pa.	9 occurrences
RESPONSIVENESS	Maintenance staff to respond to pump station high level alarms and gravity drain blockages within a given timeframe.	Response to emergency situations within one (1) hour of the alarm being raised.	90% of alarms to be respond to within one (1) hour of notification.	Nil occurrences
COST	Within annual budget allocations. Service charges to represent good value for service.	Job Costing System.	Total expenditure for wastewater business to be less than 102% of annual operational budget and within 5% of annual capital budget.	Total expenditure for wastewater business to be less than 102% of annual operational budget and within 5% of annual capital budget.
		Service charges identified for future years in 10-year long term financial plan.	Annual service charges in accordance with NSW Best Practice guidelines.	Annual service charges in accordance with NSW Best Practice guidelines.
LEGISLATIVE COMPLIANCE	Compliance.	All schemes to comply with the Protection of the Environment Operations Act and NSW Health approvals.	All schemes to comply with relevant legislation and conditions of EPA licence 576.	100% compliance is achieved.

FUNCTION	Ensure sewerage / effluent collection, treatment and reuse systems meet user requirements and cater for residential growth.	All reticulation, pump station, treatment and storage infrastructure to cater for loadings during peak events.	All network infrastructure designed in accordance with Australian Standards	All network infrastructure is designed in accordance with Australian Standards
SUSTAINABILITY	Facilities are managed for future generations.	Master planning. Long-Term Financial Plan.	Asset renewal ratio exceeds 1.0 Asset maintenance ratio is 1.0.	Asset renewal ratio is 2%. Asset maintenance ratio is 1.0.

Table 3.4b: Technical Levels of Service

KEY PERFORMANCE INDICATOR	COMMUNITY LEVEL OF SERVICE	PERFORMANCE MEASUREMENT PROCESS	TARGET PERFORMANCE	CURRENT PERFORMANCE
QUALITY	Treated sewerage to comply with relevant standards.	NATA accredited laboratory to test samples.	Compliance with effluent standards required by EPA licence 576.	100% compliance with effluent standards required by EPA licence 576.
QUANTITY	Collection, treatment, storage and reticulation infrastructure to cater for current number of domestic connections plus an allowance for projected long-term growth.	Network Analysis undertaken on infrastructure.	100% of network having adequate capacity to cater for three (3) times the average dry weather flow.	100% of network has adequate capacity to cater for seven (7) times the average dry weather flow.
SAFETY	Sewerage network free of preventable hazards & deficiencies.	WorkCover & insurance claims for personal injury or property damage.	Zero claims pa.	One claim received for personal injury or property damage

4. FUTURE DEMAND

4.1 DEMAND FORECAST

Refer to Core Asset Management Plan.

4.1.2 DEMAND FACTORS

To enable fair and planned distribution of funding throughout the Council area, some of the factors influencing the prioritising of works are:

- Changing community expectations and demographics.
- Known areas of systems capacity limitations.
- Systems and processes with high maintenance demands.
- Development at the boundaries of the sewerage zones.

In the relevant asset classes, some issues which may influence future asset provision are:

- Resident expectations may be raised for the provision of sewerage reticulation outside the existing sewerage zones and village areas.
- There will be an increased need to renew infrastructure in older land divisions.

More concentration on water re-use initiatives will occur.

Refer to Council's Demand Management Plan for details.

4.2 CHANGES IN TECHNOLOGY

Further development of Geographic Information Systems (GIS) will improve the management of sewerage infrastructure, particularly the coordination of maintenance activities, through enhanced data collection, analysis and dissemination systems.

4.3 DEMAND MANAGEMENT PLAN

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

Opportunities identified to date for demand management are shown in Table 4.6. Further opportunities will be developed in future revisions of the AMP.

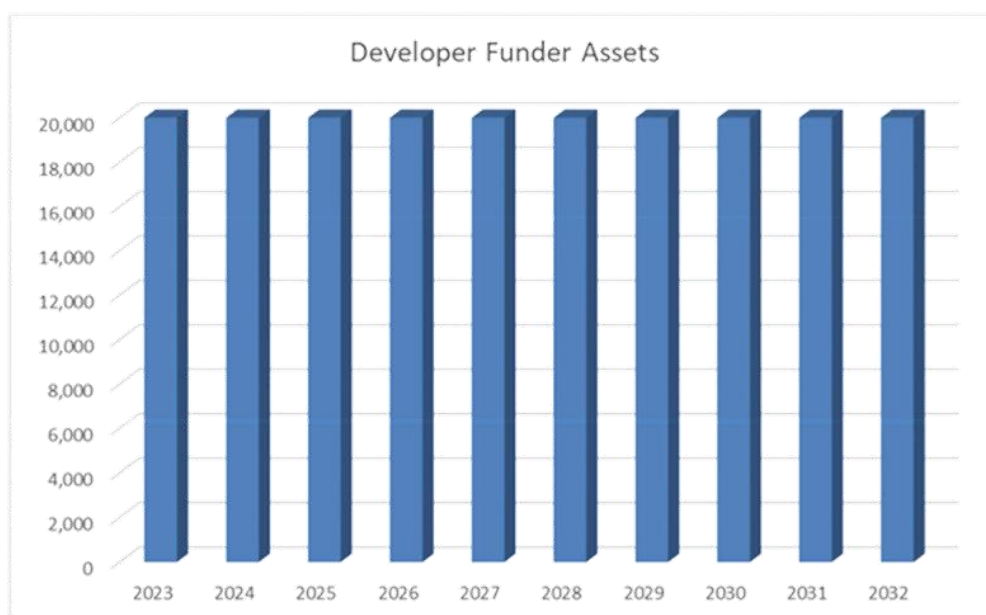
Table 4.3: Demand Management Plan Summary

SERVICE ACTIVITY	DEMAND MANAGEMENT PLAN
Development of new residential subdivisions currently not serviced by a CWMS	Assessment is undertaken for each major development to determine capacity of downstream pump stations and treatment/storage facilities. Upgrades are funded through developer contributions to comply with adopted engineering standards.
Future Capital Works	A review of a 10-year long term financial plan is undertaken at the beginning of each financial year to determine upgrade projects to meet asset utilisation.

4.4 NEW ASSETS FROM GROWTH

The new assets required to meet growth will be acquired from land developments and constructed by Council. The new asset values are summarised in Fig 4.4.

Fig 4.4: New Assets from Growth



4.4.1 ASSUMPTIONS USED IN PROJECTED ASSET GROWTH

Refer to Core Asset Management Plan.

5. LIFECYCLE MANAGEMENT PLAN

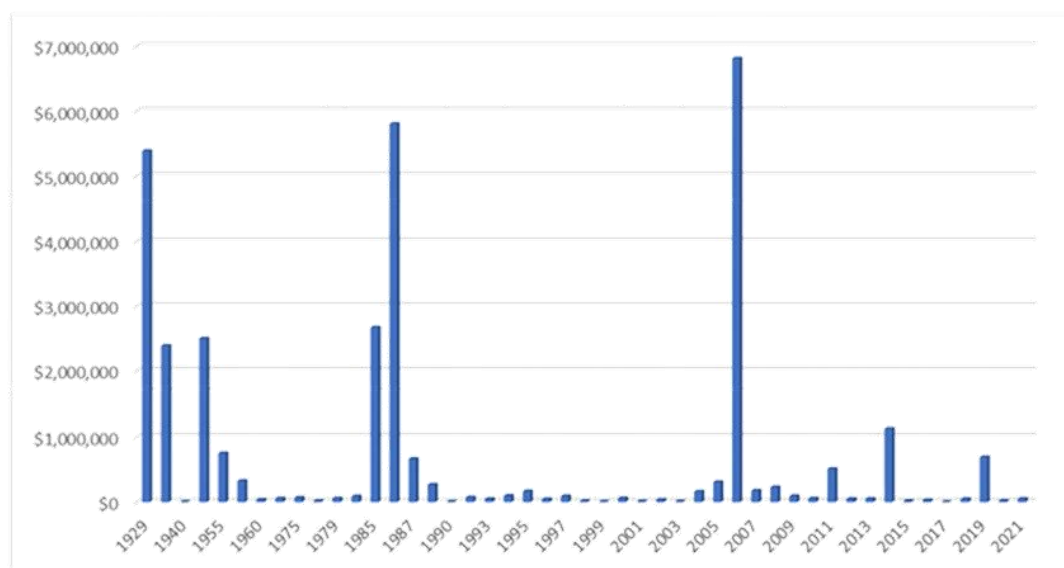
The lifecycle management plan details how Council plans to manage and operate the assets at the agreed levels of service (defined in section 3) while optimising life cycle costs.

5.1 BACKGROUND DATA

5.1.1 PHYSICAL PARAMETERS

The age profile of Council's assets is shown below.

Fig 5.1.1: Asset Age Profile



5.1.2 ASSET CAPACITY AND PERFORMANCE.

Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

Table 5.1.2: Known Service Performance Deficiencies

LOCATION	SERVICE DEFICIENCY
Sewerage Mains	Ingress of stormwater

The above service deficiency is being progressively addressed by mains relining each year.

5.1.3 ASSET CONDITION

Fig 5.1.3: Asset Condition Profile



Condition is measured using a 1 – 5 rating system.¹

Rating	Description of Condition
1	Excellent: Only planned maintenance required.
2	Very good: Minor maintenance required plus planned maintenance.
3	Good: Significant maintenance required.
4	Average: Significant renewal/upgrade required.
5	Poor: Unserviceable.

¹ IIMM 2006, Appendix B, p B:1-3 ('cyclic' modified to 'planned')

5.1.4 ASSET VALUATIONS

The value of assets covered by this asset management plan is summarised below. Assets were last revalued in 2019 and will be revalued at 30 June 2024. Assets are valued at Greenfield rates.

Table 5.1.4a: Asset Summary

Asset Type	Quantity	Replacement Value	Annual Depreciation
Gravity Mains	95 km	\$ 23,182,421	-\$ 257,582
Rising Mains	15 km	\$ 1,374,749	-\$ 15,275
Pump Stations	9	\$ 512,425	-\$ 15,290
Treatment Works	2 Plants	\$ 7,207,509	-\$ 195,518
Total	N/A	\$ 32,277,105	-\$ 483,665

Sustainability reporting reports the rate of annual asset consumption for the asset category as a whole and compares this to asset renewal, upgrade and expansion, as shown in Table 5.4 below:

Table 5.1.4b: Financial Reporting Ratios

FINANCIAL REPORTING CRITERION	SEWERAGE INFRASTRUCTURE, %
Asset Consumption Rate	1%
Asset Renewal Rate	2%
Asset Upgrade Expansion Rate	0%

5.2 RISK MANAGEMENT PLAN

An assessment of risks associated with service delivery from infrastructure assets has identified 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, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' (VH) - requiring immediate corrective action and 'High' (H) – requiring prioritised corrective action identified in the infrastructure risk management plan are summarised in Table 5.2.

Table 5.2: Critical Risks and Treatment Plans

ASSET AT RISK	WHAT CAN HAPPEN	RISK RATING (VH, H)	RISK TREATMENT PLAN
Glen Innes Sewerage Treatment Plant	Hydraulic overload.	VH	Reduce stormwater infiltration by maintaining a sewer main relining program.
Pumping Stations, General	Power outages resulting in overflows.	H	Enact the Pollution Incident Response Management Plan (PIRMP).

5.3 ROUTINE MAINTENANCE PLAN

Routine maintenance is the regular ongoing 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.

5.3.1 MAINTENANCE PLAN

Maintenance includes reactive, planned and cyclic maintenance work activities.

Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions.

Planned maintenance is repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown experience, prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Cyclic maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, building roof replacement, etc. This work generally falls below the capital/maintenance threshold.

Note that amounts shown have been extracted from Council's Annual Budget for each year and are stated in that year's dollars. Thus, unless planned maintenance expenditures show a progressive increase in line with construction inflation (commonly 5 or more percent pa), then actual expenditures will be insufficient.

The structure of Council's present Budget account lines does not permit the disaggregation of maintenance expenditure down the levels of 'reactive', 'planned' or 'cyclic'.

Planned maintenance work is not distinguished from unplanned maintenance work in council's current finance system.

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

5.3.2 STANDARDS AND SPECIFICATIONS

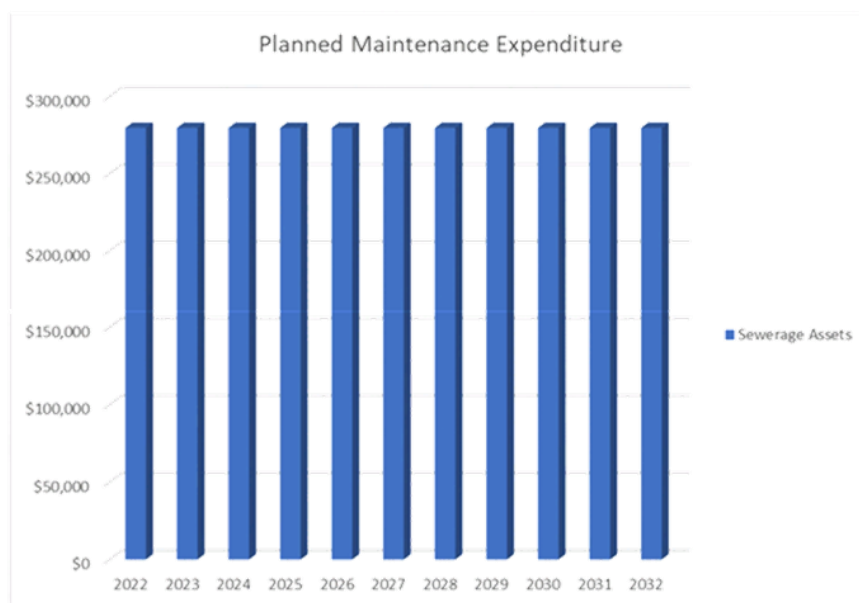
Maintenance work is carried out in accordance with the following Standards and Specifications.

- Maintenance work is carried out in accordance with sound industry practices and requirements set down by manufacturers of proprietary products.
- AusSpec & Natspec.

5.3.3 SUMMARY OF FUTURE MAINTENANCE EXPENDITURES

Future maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Fig 5.3.3. Note that all costs are shown in current dollar values.

Fig 5.3.3: Planned Maintenance Expenditure



Maintenance is funded from Council's Operating Budget. This is further discussed in Section 6.2.

5.4 RENEWAL/REPLACEMENT PLAN

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.

5.4.1 RENEWAL PLAN

Asset renewals are targeted at restoring the integrity of the sewer mains reticulation network. Most mains were constructed in 1930 and are subject to considerable levels of stormwater ingress through cracks and joint failures. The priority ranking is determined by CCTV inspection performed by contracted resources. CCTV inspection is prioritised to cover the oldest mains, and those mains that have been affected by sewer blockages. This information is detailed in table 5.4.1.

Table 5.4.1: Renewal Priority Ranking Criteria

CRITERIA	WEIGHTING
Pump replacement at pumping stations	Pump stations are fitted with a duty/standby arrangement that allows pumps to run to failure prior to renewal.
Component replacement at treatment plants	Treatment plant assets are still within expected life. Assets are only renewed if early failure occurs.
Deterioration of pipes	Pipes (mains) are routinely inspected using CCTV performed by contract suppliers. Inspections are undertaken on the most at risk mains, being those that are older or have experienced sewer blockages.
Deterioration of manholes	Manhole renewal is considered secondary to mains renewal until the backlog of low condition mains are relined or replaced.

Renewal will be undertaken using 'low-cost' renewal methods where practical. The aim of 'low-cost' renewals is to restore the service potential or future economic benefits of the asset by renewing the assets at a cost less than replacement cost. Primarily this involves relining sewer mains using proprietary products as supplied by contractors who specialise in this field.

5.4.2 RENEWAL STANDARDS

Renewal work is carried out in accordance with the following Standards and Specifications.

- Manufacturers' requirements for the installation of propriety and precast / prefabricated products.
- Relevant Australian Standards.
- AusSpec & Natspec.

5.4.3 SUMMARY OF FUTURE RENEWAL EXPENDITURE

Projected future renewal expenditures are forecast to increase over time as the asset stock ages. The costs are summarised in Fig 5.4.3a. Note that all costs are shown in current dollar values.

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Fig 5.4.3a: Projected Capital Renewal Expenditure

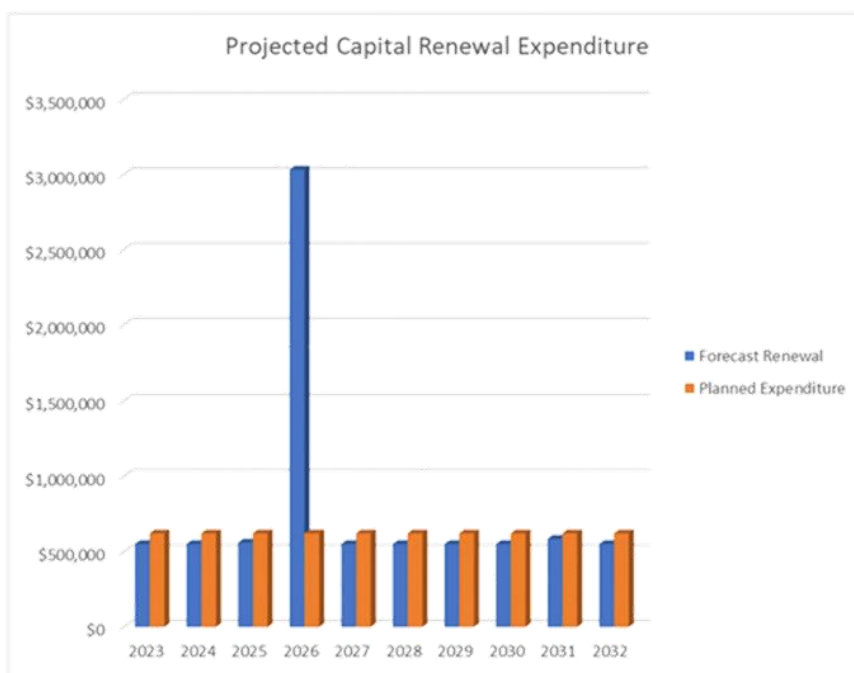
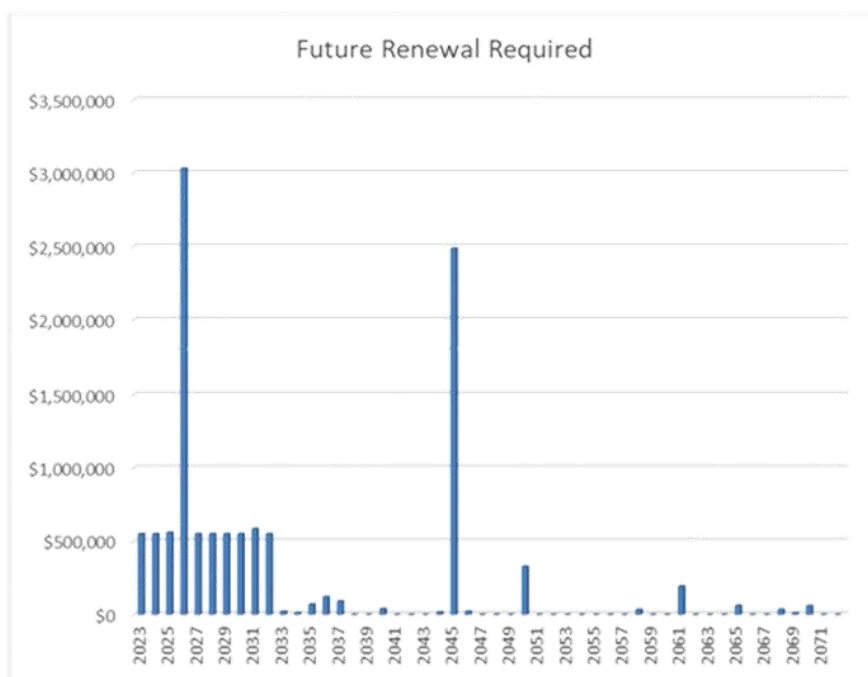


Fig 5.4.3b: 50-Year Future Renewal



Renewals are to be funded from reserves and cash profits from the sewer fund where available. This is further discussed in Section 6.2.

5.5 CREATION/ACQUISITION/UPGRADE PLAN

New works are those works that create a new asset that did not previously exist or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost to the Council from land development. These assets from growth are considered in Section 4.4.

5.5.1 SELECTION CRITERIA

New assets and upgrade/expansion of existing assets are requested and paid for by private developers.

5.5.2 STANDARDS AND SPECIFICATIONS

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2.

5.5.3 SUMMARY OF FUTURE UPGRADE/NEW ASSETS EXPENDITURE

Refer to Section 4.4.

New assets and services are to be funded from Council's capital works program and grants where available. This is further discussed in Section 6.2.

5.6 DISPOSAL PLAN

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. For underground assets the normal practice is to leave assets in situ unless there is a requirement to remove them for some other purpose. Assets identified for possible decommissioning and disposal are shown in Table 5.6. These assets will be further reinvestigated to determine the required levels of service and to see what options are available for alternate service delivery, if any.

Table 5.6: Assets identified for Disposal

ASSET	REASON FOR DISPOSAL	TIMING	CASHFLOW FROM DISPOSAL
Various	End of service life.	As per sewer mains rehabilitation program.	Nil.

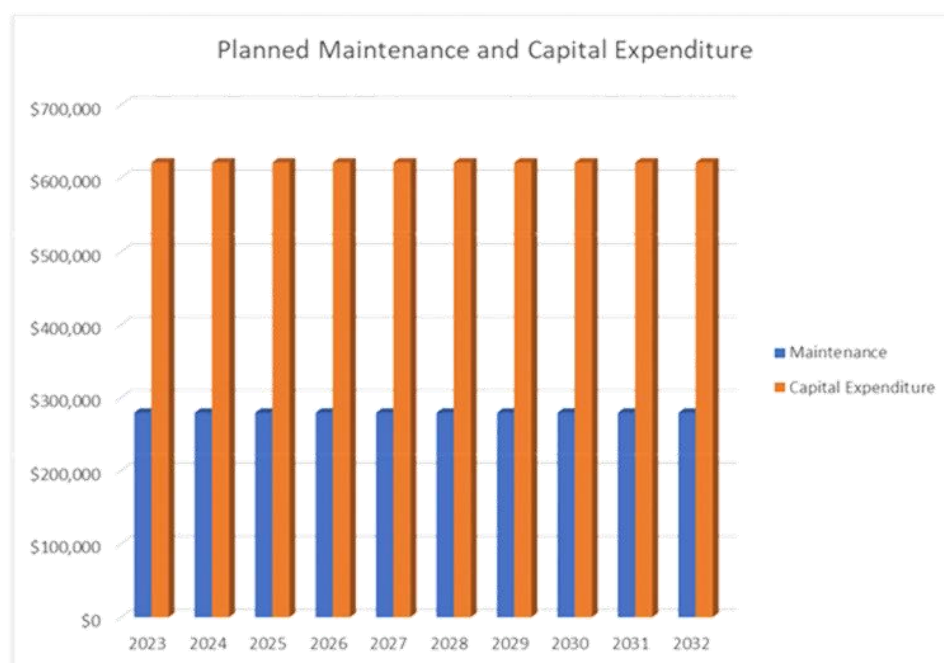
6. FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

6.1 FINANCIAL STATEMENTS AND PROJECTIONS

The financial projections are shown in Fig 6.1 for planned maintenance and capital expenditure (renewal and upgrade/expansion/new assets).

Fig 6.1: Planned Maintenance and Capital Expenditure



Note that all costs are shown in current dollar values.

6.1.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two (2) key indicators for financial sustainability that have been considered in the analysis of the services provided by this asset category, these being long term life cycle costs and medium term costs over the 10 year financial planning period.

Long term - Life Cycle Cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the longest asset life. Life cycle costs include maintenance and asset

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consumption (depreciation expense). The annual average life cycle cost for the services covered ((forecasted 10-year average) in this asset management plan is \$763,000.

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes maintenance plus capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure (forecasted 10-year average) is \$901,000.

A gap between life cycle costs and life cycle expenditure gives an indication as to whether present consumers are paying their share of the assets they are consuming each year. The purpose of this sewer asset management plan is to identify levels of service that the community needs and can afford and develop the necessary long term financial plans to provide the service in a sustainable manner.

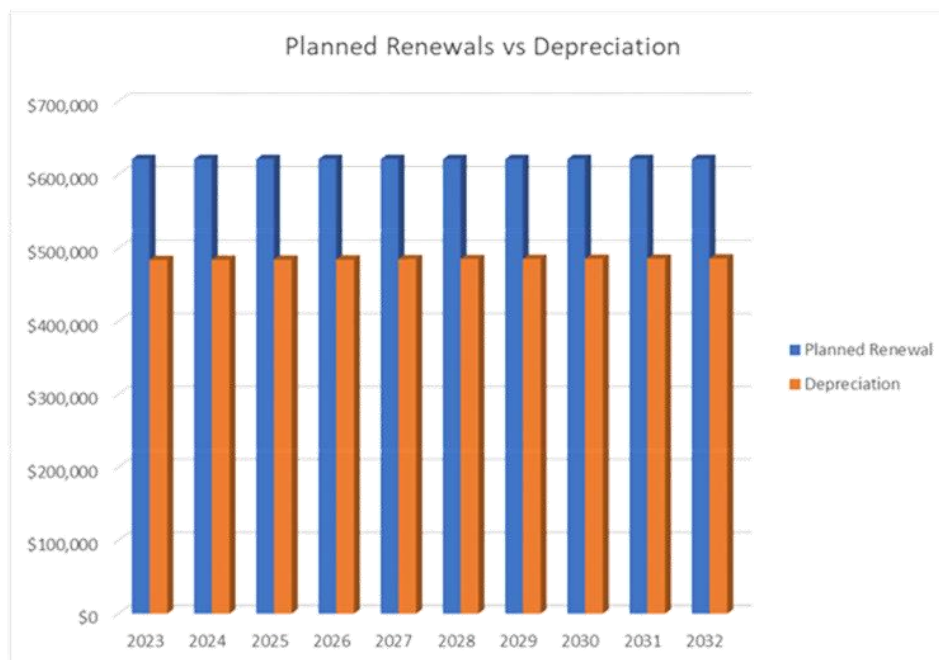
The current level on income ensures that the business unit is operating on a sustainable basis with a current \$137,000 surplus. The life cycle sustainability index is 118%.

Medium term – 10 Year Financial Planning Period

Funding for the remainder of the delivery program will be adequate to keep pace with asset consumption using the previous financial modelling that is contained in the asset register. These will be reviewed, and it is hoped that actual costs will prove to be much lower than have been adopted in the past. The current iteration of this plan provides accurate modelling as project history accumulates and costs with associated variables become more accurately known.

Council will manage the 'gap' by developing this asset management plan to provide guidance on future service levels and resources required to provide these services.

Fig 6.1.1: Planned Renewals vs Depreciation



6.2 FUNDING STRATEGY

Projected expenditure identified in Section 6.1 is to be funded from Council's operating and capital budgets. The funding strategy is detailed in Council's 10-year long-term financial plan.

Achieving the financial strategy will require an ongoing commitment to fund the increasing demand for asset renewals. Renewal costs may outpace increased revenue from development growth.

6.3 VALUATION FORECASTS

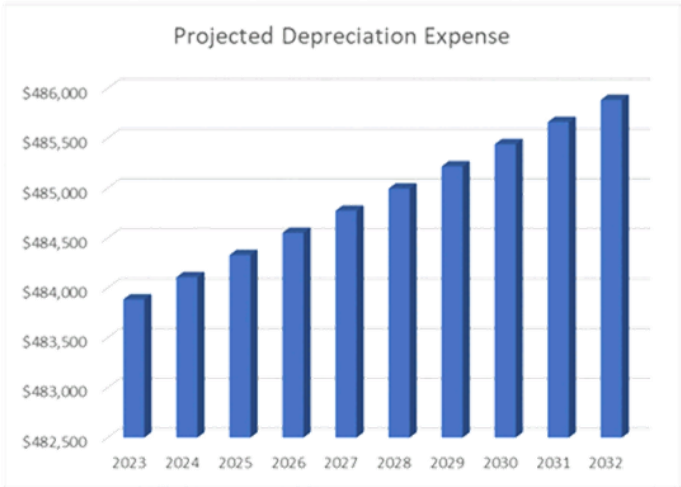
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Fig 6.3a shows the projected replacement cost asset values over the planning period in current dollar values.

Fig 6.3a: Projected Asset Values



Depreciation expense values are forecast in line with asset values as shown in Fig 6.3b.

Fig 6.3b: Projected Depreciation Expense



6.4 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

This section details the key assumptions made in presenting the information contained in this asset management plan and in preparing forecasts of required operating and capital expenditure and asset values, depreciation expense and carrying amount estimates. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Table 6.4: Key Assumptions

PARAMETER	DOCUMENT SECTION	ASSUMPTION
Asset Values	Core Asset Management Plan, Section 5.	GIS – recorded quantities and reviewed unit rates, at June 30 of previous year.
Depreciation	Core Asset Management Plan, Section 7.	Depreciation curve method as AASB116 with reviewed useful lives applicable as at June 30 of previous year.
Levels of service	Section 3 above	Present levels maintained or enhanced.
Demand	Section 4 above	Renewals using current relining technology, uniform population and asset stock growth, to 2030.

Maintenance and Renewal Expenditure	Section 5 above	Similar pattern to previous years, with regular increases to recognise larger asset stock.
---	-----------------	--

Maintenance costs for sewerage assets will typically increase to allow for the increase in total asset value (reflecting the higher costs associated with managing a larger asset stock). Again, asset values are predicted to increase over the reporting period. Maintenance costs will need to be closely monitored to ensure that sufficient funds are available to optimise long-term expenditure and not create a backlog.

7. ASSET MANAGEMENT PRACTICES

7.1 ACCOUNTING/FINANCIAL SYSTEMS

Refer to Core Asset Management Plan.

7.2 ASSET MANAGEMENT SYSTEMS

Refer to Core Asset Management Plan.

7.3 INFORMATION FLOW REQUIREMENTS AND PROCESSES

Refer to Core Asset Management Plan.

7.4 STANDARDS AND GUIDELINES

Refer to Core Asset Management Plan.

7.5 DATA CONFIDENCE LEVEL

Data confidence levels for this AMP are rated as B or C.

8. PLAN IMPROVEMENT AND MONITORING

8.1 PERFORMANCE MEASURES

Refer to Core Asset Management Plan.

8.2 IMPROVEMENT PLAN

The asset management improvement plan generated from this asset management plan is shown in Table 8.2.

Table 8.2: Improvement Plan

TASK NO	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1.	20 Year Upgrade / Expansion Program – develop program, with emphasis on the first 10 years of the reporting period.	Director of Infrastructure Services	Completed	Review annually
2.	Undertake yearly condition assessments of the sewerage network with the aim for 100% coverage every five (5) years.	Director of Infrastructure Services	Yes	Annually
3.	Develop priority ranking system for sewer upgrade program.	Director of Infrastructure Services	Yes	Completed
4.	Undertake an annual review of this Asset Management plan.	Manager of Asset Services	Staff time	Annually reported to December meeting of Council.
5.	Separate maintenance expenditure into reactive and proactive lines.	Chief Financial Officer	Yes.	As new finance system is implemented.

8.3 MONITORING AND REVIEW PROCEDURES

Refer to Core Asset Management Plan.

REFERENCES

Refer to Core Asset Management Plan.

GLEN INNES SEVERN COUNCIL





BUILDINGS, STRUCTURES, AND LAND

ASSET MANAGEMENT PLAN PART 6



Version 4.0

April 2022

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2.0	20/6/2011	Incorporates Community Strategic Plan 2011-2021 outcomes	MTS	DIS	Council
3.0	15/06/2017	Revised to update schedules and for consistency with latest Long Term Financial Plan	DIS	GM	Council
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1. EXECUTIVE SUMMARY

Council has been very proactive in improving management of this asset class during the past 2 years. In 2018, an independent asset valuation was completed on the previous asset register. Thereafter, considerable work was done within the Department of Infrastructure Services to refine and reclassify asset holdings. The result is a very detailed and accurate building register. Additionally, a full-time Maintenance Officer has been employed by Council to inspect and condition rate this asset class yearly. Having an in-house expert will give Council an accurate assessment of gaps in asset condition against satisfactory condition levels set by MANEX. This gap analysis will inform future budgets and give more accurate results in the Annual Financial Report (cost to bring to satisfactory and backlog ratios). Lastly, recruitment has been successful for a Property Officer to manage this asset class and Council's property holdings.

Due to the sheer number of smaller structures across Council's holdings, and lack of historical data, managing this asset class is a challenge. Data gathering is the key problem which needs to be addressed first. Key preparatory work, however, has been completed. Geo-spatial mapping tools have been purchased and are in the preliminary stages of implementation. These devices will allow Council staff to accurately map and condition rate assets in remote parts of the LGA. The aim is to have data gathering completed by the end of FY22 so that a revaluation of Other Structures can be completed by FY22 FY23. Again, having a dedicated Property Officer and Maintenance Officer to interpret and act upon this data, will make future revisions of the asset management plan more effective.

Lastly this plan now includes land, library, furniture, and office equipment assets. Of note, new library assets have, since FY21, been treated as an operational expense, with legacy holding being depreciated to zero by FY25. Furthermore, land assets have a special treatment being considered as condition 1 and non-depreciable assets.

2. INTRODUCTION

2.1 BACKGROUND

This plan covers buildings, structures, land, library, furniture, and office equipment. Structures are treated as 3 distinct groups: Open Space Assets (serving parks and sportsgrounds), Swimming Pools (all non-building assets serving Council's two swimming facilities), and all 'Other Structures'. New library assets have, since FY21, been treated as an operational expense, with legacy holding being depreciated to zero by FY25. Furthermore, land assets have a special treatment being considered as condition 1 and non-depreciable assets.

Rural Fire Service assets are not part of Council's asset holdings and are not included in this plan.

Table 2.1. Assets covered by this plan

Asset Type	Quantity	Replacement Value	Accumulated Depreciation
Buildings	110	\$ 46,065,604	-\$ 26,507,914
Open Space Assets	229	\$ 3,642,961	-\$ 952,881
Other Structures	156	\$ 10,248,710	-\$ 6,083,806
Swimming Pools	46	\$ 3,147,189	-\$ 1,405,461
Land	207	\$ 13,964,598	\$ -
Library Assets	9	\$ 958,743	-\$ 491,256
Furniture	24	\$ 291,102	-\$ 208,211
Office Equipment	9	\$ 304,961	-\$ 256,912
Total	790	\$ 78,623,867	-\$ 35,906,441

Note that many buildings are subject to lease arrangements with varying levels of commitment to maintenance. These buildings are included in this plan to enable a contingent liability to be allocated in projected costs in case Council must resume full control of the asset should the lease end.

2.2 GOALS AND OBJECTIVES OF ASSET MANAGEMENT

Relevant Council goals, objectives, and proposed actions addressed in this asset management plan are:

Table 2.2. Council Goals and how these are addressed in this Plan

Goal	Objective	HOW Goal and Objectives are addressed in AMP
IM 3.2.1 - Implement Maintenance infrastructure works according to adopted service levels.	Develop and implement Work Schedules for building maintenance, renewals, and upgrades.	A building maintenance officer is employed to perform routine maintenance on building assets. An open spaces management plan will be developed to set the level of routine maintenance of open spaces and sporting fields by December 2022.
IM 3.6.1 - Continue to investigate options for increased utilisation of the Airport, whilst maintaining current service levels.	To increase the utilisation of the Airport, whilst maintaining current service levels, particularly for emergency services.	An airport master plan is developed and actions funded through external grants as available.
IM 3.6.2 - Implement the Corporate Property Policy	Council property ownership is optimised, with redundant assets disposed via proper means.	This plan identifies the property assets held and the associated cost of ownership.

2.3 PLAN FRAMEWORK

Refer to Core Asset Management Plan.

2.4 CORE AND ADVANCED ASSET MANAGEMENT

Refer to Core Asset Management Plan.

3. LEVELS OF SERVICE

3.1 CUSTOMER RESEARCH AND EXPECTATIONS

Refer to Core Asset Management Plan.

3.2 LEGISLATIVE REQUIREMENTS

Refer to Core Asset Management Plan.

3.3 CURRENT LEVELS OF SERVICE

Refer to Core Asset Management Plan.

Council's current levels of service are set out in Tables 3.4.

3.4 DESIRED LEVELS OF SERVICE

Table 3.4: Levels of Service

KEY PERFORMANCE INDICATOR	COMMUNITY LEVEL OF SERVICE	PERFORMANCE MEASUREMENT PROCESS	TARGET PERFORMANCE	CURRENT PERFORMANCE
Safety	The buildings are safe to use and access.	WHS Audit Routine inspections of fire appliances, exit lighting, and air conditioner.	Eliminate issues identified in WHS Audit All safety features inspected regularly	No outstanding issues All building safety features were inspected according to the required schedule
Quality	The facilities provide a good quality experience for all users.	Buildings are maintained to the desired level of service.	Maintenance Officer conducts an internal condition inspection yearly.	Maintenance Officer has completed initial inspections of all public and staff-occupied buildings.

			Independent valuation and condition rating conducted every 5 years. Maintenance defects are addressed.	Valuation and condition rating conducted in 2018. 100% of reported maintenance defects have been programmed for FY21.
Function	The facilities meet the needs of the users.	Buildings are maintained to the desired service and condition levels. Asset performance complies with its Building Maintenance Manual	Desired service and condition levels. Meets minimum building specific service level	After condition ratings are completed, Property Officer will propose desired service and condition levels to MANEX: work ongoing. Building Maintenance Manuals are currently in development – Work ongoing
Sustainability	Facilities are managed for future generations.	Master planning. Long-Term Financial Plan.	Key Financial Ratios are maintained	See financial data at 5.1.4

BUILDING SERVICE STANDARDS

As mentioned in 2.1, work is ongoing to condition rate all assets in this class. The current condition rating system is based on IPWEA's International Infrastructure Management Manual which has been applied to all other asset classes.

The aim will be to identify current condition and compare it to the desired condition rating (using the same criteria) which, in turn, is required to meet desired service levels. The gap will then be costed, prioritized, and budgeted.

Ongoing asset performance will be monitored by a Building Maintenance Manual which is now the required standard for all new building assets. This manual will not only capture safety and technical defects for maintenance planning, but it will also capture asset performance against specific service requirements for its current use. This process ensure that the buildings are technical sound, 'fit for use', and allow for both technical expert and user input. Council staff are currently working on developing these manuals for existing assets.

4 FUTURE DEMAND

4.1 DEMAND FORECAST

Refer to Core Asset Management Plan.

4.1.2 DEMAND FACTORS – TRENDS AND IMPACTS

In determining the need for construction or upgrading of buildings, the following aspects have been considered:

- Provide greater access flexibility to facilities, to cater for changing community needs.
- Providing appropriate community facilities within the urban and rural areas to support increasing population and cater for demographic changes.

To enable fair and planned distribution of funding throughout the Council area, some of the factors influencing the prioritising of works are:

- Community demand and changing demographics.
- Meetings with various groups (key stakeholders) to determine future expansion and required needs.
- Known areas of under-supply or under-utilisation.
- Buildings with high maintenance demands and poor compliance to Standards.
- Known development areas and Planning Review outcomes.

A building refurbishment and cyclic maintenance program is being developed to cater the increasing demand on Council's buildings.

Table 4.1. Demand Factors, Projections and Impact on Services

POPULATION CHANGES IN TOWNSHIPS	DEMAND FOR FACILITIES
Ageing population	Smaller-scale community buildings, easily accessed by walking or mobility aids
Decline in involvement in team sports	Reduced single-use buildings and facilities at sports fields. Reduced ability of clubs to pay rentals.
Increased tourism	Increased demand for public toilet facilities and of better standard.
'Baby Boomers' / Retirees	More demand for community facilities, e.g. small meeting rooms and libraries.

4.2 CHANGES IN TECHNOLOGY

Technology changes are forecast to have little effect on the delivery of services covered by this plan.

Some may include:

- Alternative fuels use; and
- Solar and wind energy use.

4.3 DEMAND MANAGEMENT PLAN

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

Opportunities identified to date for demand management are shown in Table 4.2. Further opportunities will be developed in future revisions of the AMP.

Table 4.3: Demand Management Plan Summary

SERVICE ACTIVITY	DEMAND MANAGEMENT PLAN
Building Maintenance and Upgrades	Upgrades to meet population growth demand and changes identified in review reports and planning studies. Upgrades to meet changed legislative requirements.
Safety Improvement Plan	Upgrades to improve user safety – to be developed further within the next review period.
Building Review Plan	Review of Strategic Plan to incorporate planned works, incorporate building hierarchy standards and examine utilisation patterns within next review period.
Financial	Developing long term Financial Management plans to ensure financial sustainability.

4.4 NEW ASSETS FROM GROWTH

The new assets required to meet growth will be acquired from land developments and constructed by Council.

Acquiring new assets will commit council to fund ongoing operations and maintenance costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operating and maintenance costs.

4.4.1 CONTRIBUTED ASSETS

There has been no history of the contribution of built assets to Council from developers. In the past some buildings have been handed over to Council's care and control from local organisations. There is also likelihood that Council may receive other contributed buildings, where an organisation with a community focus, has ceased active operations.

5. LIFECYCLE MANAGEMENT PLAN

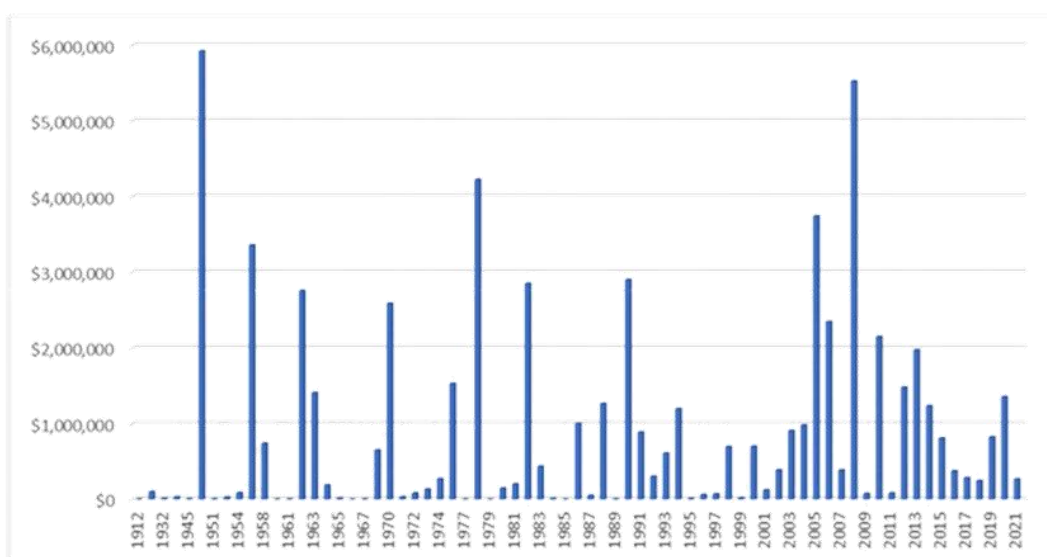
The lifecycle management plan details how Council plans to manage and operate the assets at the desired levels of service (defined in section 3) while optimising life cycle costs.

5.1 BACKGROUND DATA

5.1.1 PHYSICAL PARAMETERS

The age profile of Council's assets is shown below.

Fig 5.1.1: Asset Age Profile



Council, as an asset owner and subject to the qualifier discussed in Section 2.1, is committed to maintaining its building assets to ensure stakeholders' desired levels of service are maintained at sustainable levels commensurate with affordable expectations.

To meet this requirement, Council seeks to match funding-level, condition, and community expectations.

5.1.2 ASSET CAPACITY AND PERFORMANCE

Service deficiencies are the specific issues causing the gap between the desired service level and the current asset condition. These deficiencies will be identified in a future revision of this plan.

5.1.3 ASSET CONDITION

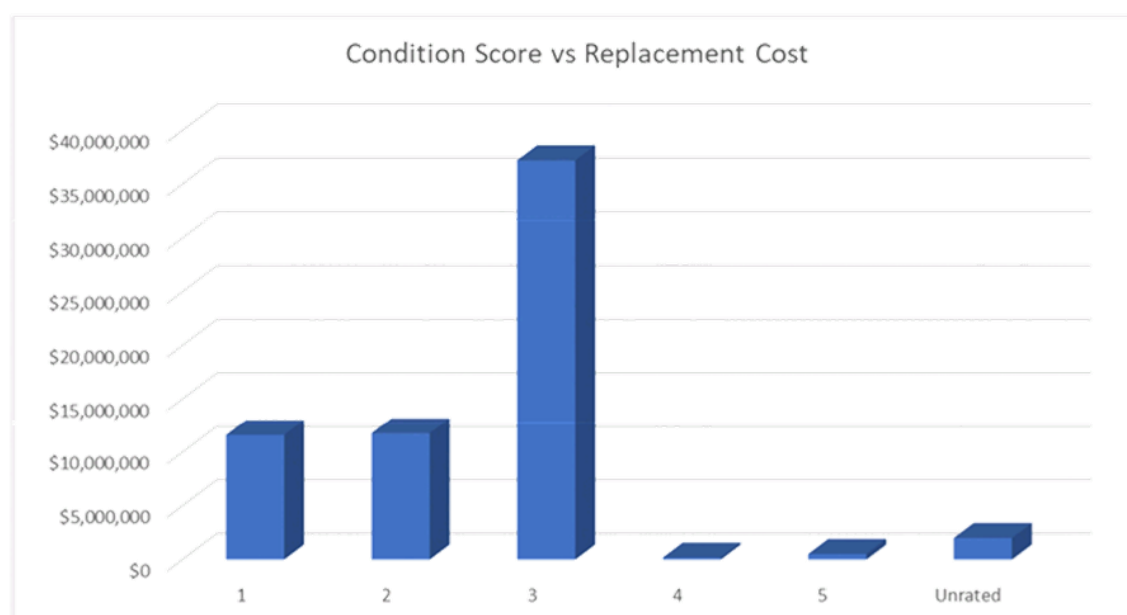
Limited data to produce age profiles from condition or age have been captured historically. Condition ratings of building assets were assessed by an independent valuer in 2018. Other Structures will be independently assessed in 2022. Nevertheless, data gathering and mapping of Other Structures is scheduled for 2021 which will greatly enhance Council's data set.

It is proposed to re-rate building assets every 3-5 years to ensure that those assets nearing the end of their life on the deterioration curve are not allowed to deteriorate beyond the maintenance intervention point and require costly reconstruction or replacement.

With each subsequent survey, a better picture of the asset condition is developed.

The condition graph below has been generated from 100% of Building assets approximately 50% of the Other Structures assets captured during the 2018 revaluation.

Fig 5.1.3: Asset Condition Profile



Condition is measured using a 1 – 5 rating system.¹

RATING	DESCRIPTION OF CONDITION
1	Excellent condition: Only planned maintenance required.
2	Very good: Minor maintenance required plus planned maintenance.
3	Good: Significant maintenance required.
4	Average: Significant renewal/upgrade required.
5	Poor: Unserviceable.

5.1.4 ASSET VALUATIONS

The value of Building Assets and larger Other Structures Assets (which were included in previous building registers) were revalued in 2018. All assets in this plan will be revalued as a complete asset class in 2023. Assets are valued at greenfield rates.

Table 5.4.1a: Asset Summary

Asset Type	Quantity	Replacement Value	Annual Depreciation
Buildings	110	\$ 46,065,604	-\$ 1,029,630
Open Space Assets	229	\$ 3,642,961	-\$ 63,338
Other Structures	156	\$ 10,248,710	-\$ 228,339
Swimming Pools	46	\$ 3,147,189	-\$ 42,860
Land	207	\$ 13,964,598	\$ -
Library Assets	9	\$ 958,743	-\$ 155,829
Furniture	24	\$ 291,102	-\$ 15,466
Office Equipment	9	\$ 304,961	-\$ 10,432
Total	790	\$ 78,623,867	-\$ 1,545,895

Council's sustainability reporting reports the rate of annual asset consumption and compares this to asset renewal and asset upgrade and expansion.

¹ IIMM 2006, Appendix B, p B:1-3 ('cyclic' modified to 'planned')

Table 5.4.1b: Financial Reporting Ratios

FINANCIAL REPORTING CRITERION	BUILDINGS INFRASTRUCTURE, %
Asset Consumption Rate	2%
Asset Renewal Rate	199%
Asset Upgrade Expansion Rate	11%

The above ratios are based on estimated FY23 values from Section 4.4 and do not include land assets.

.2 RISK MANAGEMENT PLAN

The risk assessment process identified credible risks, the likelihood of the risk event and the consequences should the event occur. Future refinements will use these factors to develop risk ratings, incorporating a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' - requiring immediate corrective action and 'High' – requiring prioritised corrective action identified in the infrastructure risk management plan are summarised in Table 5.2a.

At this time no critical risks have been identified.

Table 5.2a: Risks with Controls & Treatments

ASSET AT RISK	WHAT CAN HAPPEN?	EXISTING CONTROLS	RISK RATING	RISK TREATMENT PLAN	ACTIONS
Buildings	Age, condition and insufficient maintenance over the years have increased the risk of injury to users.	Reactive maintenance relying on user reporting	Medium	Planned replacement/ maintenance as per AMP's and service delivery.	Submit program work for budget consideration.
Buildings	Non-compliance with legislation / DDA.	Development approval, Building.	Medium	Upgrades to comply with legislation and	Maintain DDA Action,

		Audits, DDA Action plan.		maintain DDA Action plan.	Funding and design works.
Buildings	Lack of notification of required maintenance by tenant causing GISC to be unaware of maintenance requirements.	Lease and inspections.	Medium	Communication with clubs and lease holders.	Information and communication with clubs when renewing leases.
Buildings (mainly Corporate Facilities)	Air-conditioning failure.	Nil	Low	Replacement of Plant, regular service and inspections.	Programmed maintenance and replacement program.
Buildings	Roof leaks and internal flooding.	Reactive maintenance and lease conditions.	Medium	Maintain roof. Regular maintenance and inspections. Programmed replacement plan.	Programmed maintenance and replacement program.

5.3 ROUTINE MAINTENANCE PLAN

Routine maintenance is the regular ongoing 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.

5.3.1 MAINTENANCE PLAN

Maintenance includes reactive, planned and cyclic maintenance work activities.

Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions.

Planned maintenance is repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown experience, prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Cyclic maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, building roof replacement, etc. This work generally falls below the capital/maintenance threshold.

Maintenance expenditure levels are considered to be adequate to meet required service levels, however a lack of data for this asset class provides a low level of confidence. Future revision of this asset management plan will include linking required maintenance expenditures with required service levels.

Assessment and prioritisation of reactive maintenance is undertaken by GISC staff using experience and judgement. Future plans will differentiate between the expenditure on reactive, planned and cyclic maintenance.

5.3.2 STANDARDS AND SPECIFICATIONS

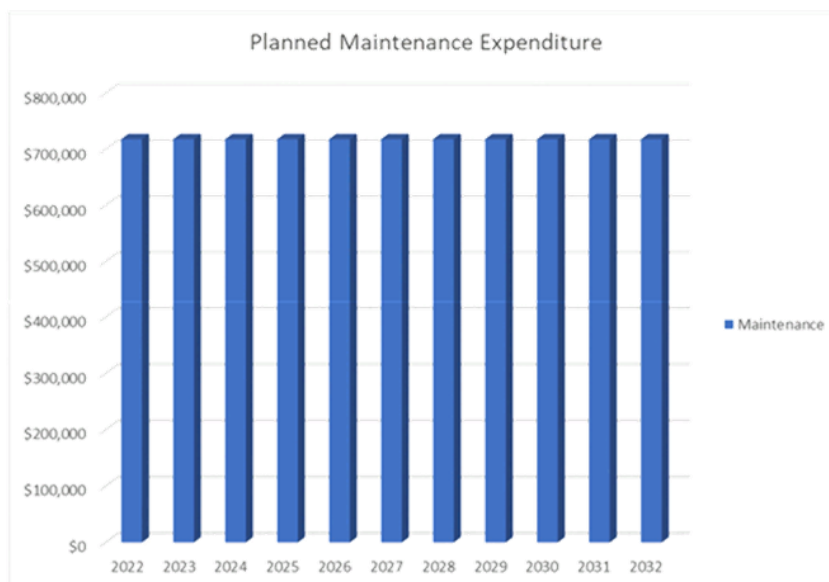
Maintenance work is carried out in accordance with the following standards and specifications.

- GISC Internal Service Level Agreements
- Natspec
- Building Code of Australia.
- Australian Standards
- Manufacturer's requirements for proprietary products

5.3.3 SUMMARY OF FUTURE MAINTENANCE EXPENDITURES

Future maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Fig 5.3.3. Note that all costs are shown in current dollar values and have been indexed according to a 20-year average of the NSW Non-residential construction index.

Fig 5.3.3: Planned Maintenance Expenditure



Deferred maintenance, i.e. works that are identified for maintenance and unable to be funded, are to be included in the risk assessment process in the infrastructure risk management plan.

Maintenance is funded from Council's operating budget and grants where available. This is further discussed in section 6.2.

5.4 RENEWAL/REPLACEMENT PLAN

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.

5.4.1 RENEWAL PLAN

Table 5.4.1: Planned Asset Additions and Renewals

Project	Estimated Addition	Estimated Renewal
Public Art Projects	\$ 50,000	
Replacement of Emmaville pool covers		\$ 8,950
Anzac Park playground equipment		\$ 200,000
Aquatic Centre pools reapply top coat		\$ 45,000
Carpet for William Gardner Conference Room		\$ 8,280
LC-SS Outdoor Furniture Settings x 2		\$ 5,000
CAFS Sun Shade for playground equipment		\$ 50,000
Emmaville War Memorial Hall Upgrades		\$ 131,651
Centennial Parklands Skywalk	\$ 700,000	
Centennial Parklands - Amenities		\$ 402,485
Skate Park redevelopment		\$ 221,557
Warwick Twigg Indoor Sports Stadium	\$ 6,300,000	
Airport runway renewal		\$ 1,000,000
Outdoor netball courts		\$ 692,000
Total	\$ 7,050,000	\$ 2,764,923

Renewal will be undertaken using 'low-cost' renewal methods where practical. The aim of 'low-cost' renewals is to restore the service potential or future economic benefits of the asset by renewing the assets at a cost less than replacement cost.

Examples of low-cost renewal include minor repair of an asset e.g. replace a section of the roof sheeting oppose to replace all the roofing material.

5.4.2 RENEWAL STANDARDS

Renewal work is carried out in accordance with the following Standards and Specifications.

- GISC Internal Service Level Agreements

- Natspec
- Building Code of Australia.
- Australian Standards
- Manufacturer's requirements for proprietary products
- GISC, Lease / Tenancy Agreements - Buildings.

5.4.3 SUMMARY OF FUTURE RENEWAL EXPENDITURE

Analysis of future renewal requirements against planned expenditure will be fully modelled after structures assets are revalued in FY23. However, the following two graphs show the best estimates for renewal requirements for buildings-only based on valuations completed in 2017:

Fig 5.4.3a: Projected Capital Renewal Expenditure
(To be fully modelled in early FY23)

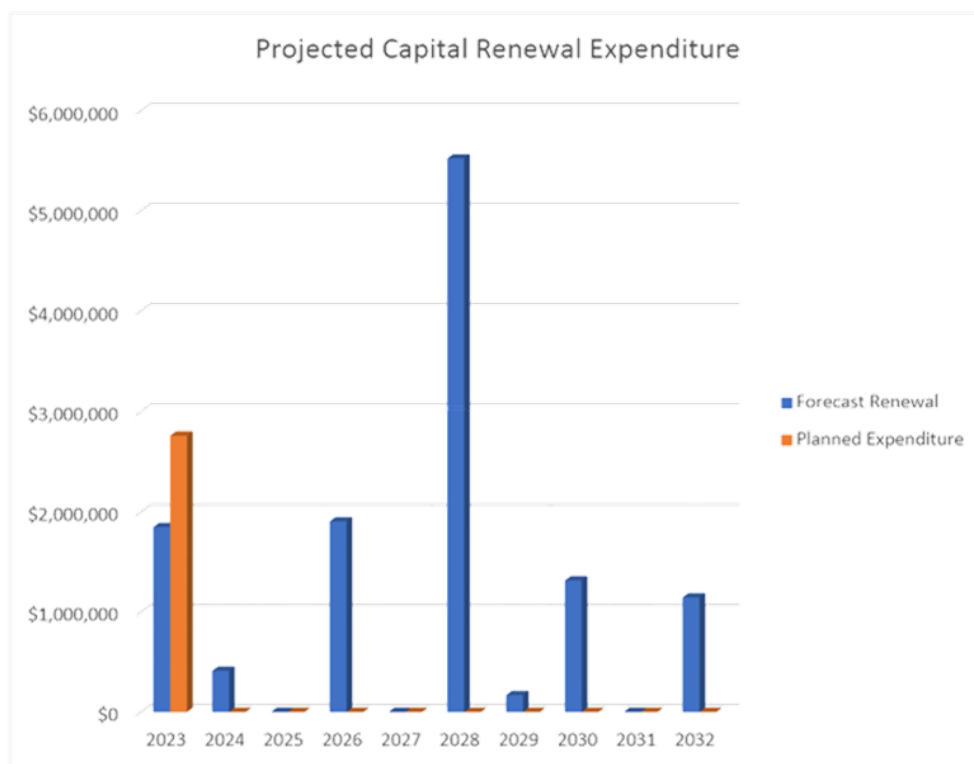
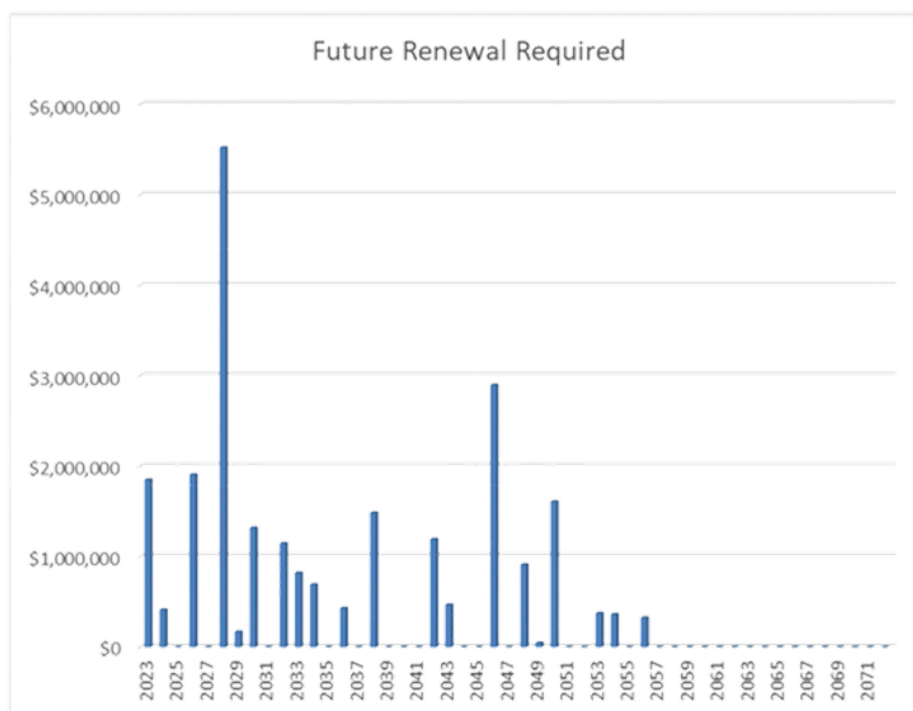


Fig 5.4.3b: Future Renewal Required



5.5 CREATION/ACQUISITION/UPGRADE PLAN

New works are those works that create a new asset that did not previously exist or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social, or environmental needs. Assets may also be acquired at no cost to the Council from land development. These assets from growth are considered in Section 4.4 in each relevant Part.

Candidate new assets and upgrade / expansion of existing assets are identified from various sources such as councillor or community requests, proposals identified by strategic plans or partnerships with other organisations. Proposals are investigated to verify need and to develop a preliminary estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programs.

New assets contributed by land developers are discussed separately in Section 4 of each relevant Part.

Identified new assets currently planned for construction are described in Fig 5.4.1.

5.5.1 SELECTION CRITERIA

New assets and upgrade/expansion of existing assets are identified from various sources such as councillor or community requests, proposals identified by strategic plans or partnerships with

other organisations. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed below.

Table 5.5.1: New Assets Priority Ranking Criteria

CRITERIA	WEIGHTING
Administration and Operations Buildings	Expansion in staff services due to population growth and increases in operational and service requirements.
Community and Commercial Buildings	Increase in services or facilities identified or requested by growing communities and / changing demands. Requirements to upgrade existing facilities depend on the structural adequacy of the building.
Public Toilets and Ablutions	Community pressure to install public toilets to complement other open space facilities. Demands from changing tourism patterns and for higher-standard facilities. Improved access to comply with legislative requirements.
Sporting Clubrooms	Community needs. Relocation, expansion and changing needs of sporting bodies.
Total	100%

5.5.2 STANDARDS AND SPECIFICATIONS

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2.

5.6 DISPOSAL PLAN

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any.

Table 5.6: Assets identified for disposal

ASSET	REASON FOR DISPOSAL	TIMING	CASH FLOW FROM DISPOSAL
Church Street offices	Consolidation	TBA	Unknown at this time
181 Bourke Street	Transfer to new fire control centre	This building will be utilised for Project Jigsaw and disposed when that project is completed	Unknown at this time

Where cash flow projections from asset disposals are not available, these will be developed in future revisions of this Asset Management Plan.

6. FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

6.1 FINANCIAL STATEMENTS AND PROJECTIONS

6.1.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators for financial sustainability that have been considered in the analysis of the services provided by this asset category, these being long term life cycle costs and medium-term costs over the 10-year financial planning period.

Long term - Life Cycle Cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the longest asset life. Life cycle costs include maintenance and asset consumption (depreciation expense). Due to lack of data, only the 2023 life cycle cost can be modelled: \$2,258,000.

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes maintenance plus capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure at the start of the plan is \$3,483,000.

A gap between life cycle costs and life cycle expenditure gives an indication whether present consumers are paying their share of the assets they consume each year. The purpose of this storm water asset management plan is to identify levels of service that the community needs and can afford and develop the necessary long-term financial plans to provide the service in a sustainable manner.

The life cycle surplus for services covered by this asset management plan for FY23 is \$1,225,000 per annum. The life cycle sustainability index is 154%.

6.2 FUNDING STRATEGY

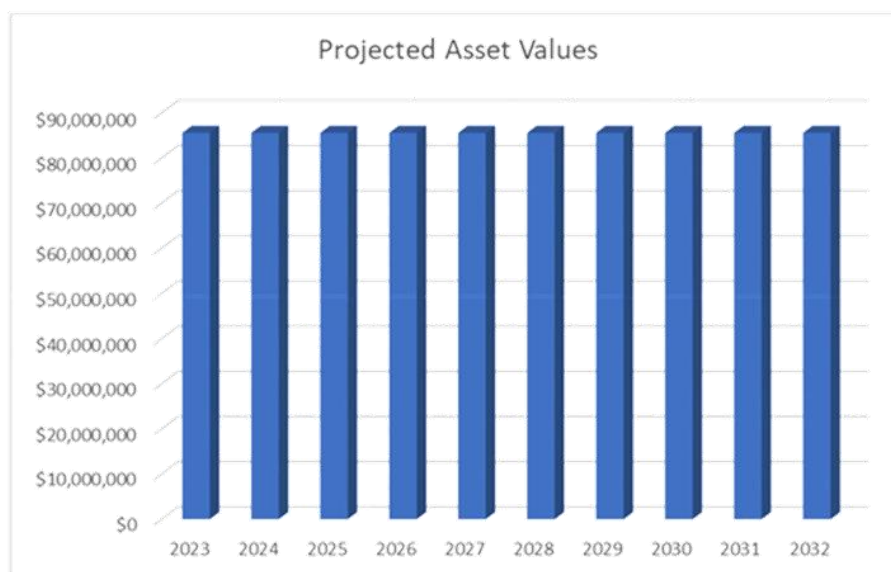
Projected costs are to be funded from Council's operating and capital budgets. The funding strategy will be detailed in the Council's LTFP.

Achieving the financial strategy will require an ongoing commitment to fund the increasing demand for asset renewals.

6.3 VALUATION FORECASTS

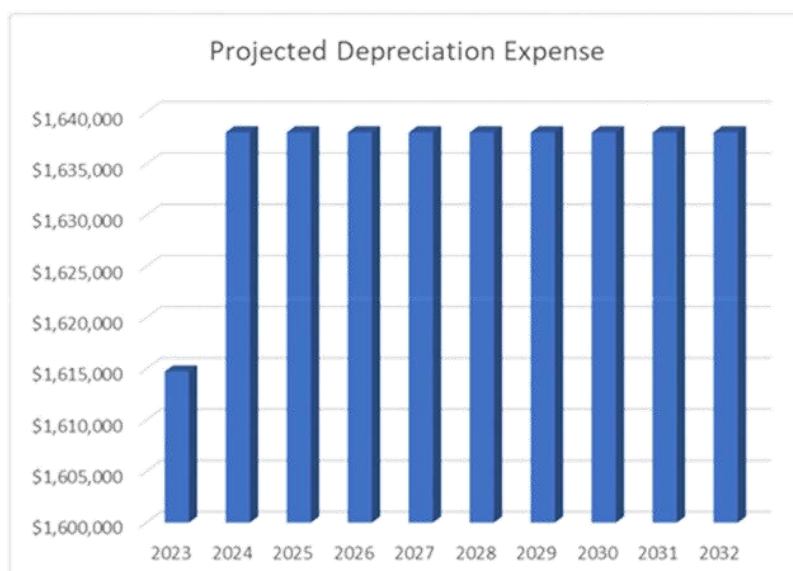
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Fig 6.3a shows the projected replacement cost asset values over the planning period in current dollar values.

Fig 6.3a: Projected Asset Values



Depreciation expense values are forecast in line with asset values as shown in Fig 6.3b.

Fig 6.3b: Projected Depreciation Expense



6.4 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

Key assumptions made in presenting the information contained in the AMP and in preparing forecasts of required operating and capital expenditure and asset values, depreciation expenses and carrying amount estimates, are detailed below. They are presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions:

- Average useful lives and average remaining lives of the asset classes are based on current local knowledge and experience, historical trends and accepted industry practice. These need to be reviewed and the accuracy improved, based on regular re-assessment of asset deterioration.
- Reviews of the effective useful lives of assets and population / demographic changes have the potential for greatest variance in future cost predictions.
- Changes in development needs associated with the rate and location of growth and changes in the desired level of service and service standards from those identified in the AMP, will both impact on future funding.

Accuracy of future financial forecasts may be improved in future revisions of the AMP by the following actions:

- More refined condition rating data with more history for reference.
- Greater degree of componentisation in the rating process.
- Development of better degradation models through the monitoring of the ongoing maintenance program.

7. ASSET MANAGEMENT PRACTICES

7.1 ACCOUNTING/FINANCIAL SYSTEMS

Refer to Core Asset Management Plan.

7.2 ASSET MANAGEMENT SYSTEMS

Refer to Core Asset Management Plan.

7.3 INFORMATION FLOW REQUIREMENTS AND PROCESSES

Refer to Core Asset Management Plan.

7.4 STANDARDS AND GUIDELINES

Refer to Core Asset Management Plan.

7.5 DATA CONFIDENCE LEVEL

Data confidence levels for this AMP are rated as C or D.

8. PLAN IMPROVEMENT AND MONITORING

8.1 PERFORMANCE MEASURES

Refer to Core Asset Management Plan.

8.2 IMPROVEMENT PLAN

The asset management improvement plan generated from this asset management plan is shown in Table 8.2.

Table 8.2 Improvement Plan

TASK NO	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TARGET COMPLETION DATE
1	Develop a plan for proactive maintenance and renewal works, including recording all costs against each job.	Manager Asset Services	Required Budget	Ongoing
2	Undertake strategic review of community needs which require building services. The review should include public consultation in an informed environment where costs and benefits are openly discussed. Compare these needs against the current stock of buildings. Identify options to close the gap including non-asset solutions, joint ventures, public / private partnerships, community group's joint ventures. Dispose of surplus assets.	MANEX	Staff	Ongoing
3	Create maintenance service levels through development of Building Maintenance Manuals	Manager Asset Services	Staff	Ongoing

8.3 MONITORING AND REVIEW PROCEDURES

This asset management plan will be reviewed during annual budget preparation and amended to recognise any changes in service levels and/or resources available to provide those services as a result of the budget decision process.

The Plan has a life of 4 years and is due for revision and updating within 2 years of each Council election.

REFERENCES

Refer to Core Asset Management Plan.

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BRIDGES

ASSET MANAGEMENT PLAN PART 7



Version 4.0

April 2022

Document Control		 			
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Draft 1	15/6/17	For public exhibition	DIS	GM	Council
Draft 2	16/6/17	For distribution with other IPRF documents	DIS	GM	Council
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1. EXECUTIVE SUMMARY

In recent years Council has commenced a volume of work on the bridge network that has been unseen for decades. Bridges have previously been identified through technical inspection as having defects ranging from minor to significant. A great deal of work has already been undertaken on the network using funding from the LIRS scheme and, predominantly, in-house resources.

This approach has provided Council staff with a significant learning opportunity; the bridge team have developed into a professional unit that can renew timber bridges particularly well. Council has made the step of reverting to the use of timber in some bridge renewal works with great success. For instance, the renewal of the Gulf Road bridge over the Beardy River (locally known as Glen Creek) was completed with excellent quality at a cost of just \$900 per square metre. In comparison a new concrete structure of similar dimension has been constructed on Rangers Valley Road for \$4500 per square meter. It is noted that a concrete bridge was replaced in that location, being just 45 years old.

The use of concrete structures is justified on high freight roads, but the use of low-cost timber solutions that utilise existing concrete foundations is a very cost-effective long-term solution for low traffic local roads.

Council has moved from conventional hardwood timber to laminated timber as part of its continuous improvement philosophy. The benefit of laminated components being that a fully engineered product, consistent in dimension and treated for insect and fire protection, far outweighs their additional cost compared to natural hardwood timbers, which are becoming more and more difficult to source. A fifty-year warranty is now offered by the supplier of these components.

The approach moving forward continues to be a "horses for courses" methodology. The philosophy underpinning renewal decisions at end of life is as follows:

Timber components will not be installed in contact with the ground. Concrete will always be used for abutments and gravel boards to minimise the risk of fungal infections and termites in timber components, even when using treated timbers.

Multiple span low level bridges (<2m in height) will be replaced with laminated timber decks in those cases when an existing concrete foundation is able to be reused.

High level bridges (three bridges >2m) with concrete foundations will either be retrofitted with laminated timber using a newly developed system for working safely at heights. Bridges with timber foundations will be replaced with concrete foundation bridges when the time comes for renewal.

2. INTRODUCTION

2.1 BACKGROUND

This asset management plan covers the following infrastructure assets:

Table 2.1: Assets covered by this Plan

Asset Type	Quantity	Replacement Value	Accumulated Depreciation
Timber Bridges	11	\$ 2,410,800	-\$ 2,221,166
Concrete/Steel Bridges	77	\$ 51,607,619	-\$ 17,813,228
Culverts	33	\$ 10,821,980	-\$ 4,330,713
Causeways	134	\$ 7,165,619	-\$ 4,067,016
Total	222	72,006,019	-\$ 28,432,122

2.2 GOALS AND OBJECTIVES OF ASSET MANAGEMENT

Relevant Council goals and objectives and how these are addressed in this asset management plan are:

Table 2.2: Council Goals and how these are addressed in this Plan

GOAL	OBJECTIVE	HOW GOALS AND OBJECTIVES ARE ADDRESSED IN AMP
IM 3.1.2 Implement Capital Bridge infrastructure works according to adopted service levels.	Implement and complete Capital Bridge Infrastructure works for the current financial year.	This plan defines Capital Bridge Infrastructure works according to adopted service levels.
IM 3.2.10 Implement the Asset Management Plan for bridges.	Complete all works identified in the asset management plan for bridges in each financial year.	This plan and supporting asset registers identify assets due for renewal each year.

2.3 CORE AND ADVANCED ASSET MANAGEMENT

Refer to Core Asset Management Plan.

3. LEVELS OF SERVICE

3.1 CUSTOMER RESEARCH AND EXPECTATIONS

The recent external customer satisfaction survey indicated that community satisfaction with bridges has reduced from previous surveys. The reason for this is not known, however, one possibility is that the timber methodology needs to be communicated more thoroughly than has been the case.

3.2 LEGISLATIVE REQUIREMENTS

Refer to Core Asset Management Plan.

3.3 CURRENT LEVELS OF SERVICE

Refer to Core Asset Management Plan.

In recent years Council has commenced a volume of work on the bridge network that has been unseen for decades. Bridges have been identified through technical inspection as having a range of defects from minor to significant. A great deal of work has already been undertaken on the network using funding from the LIRS scheme, and predominantly using in-house resources.

3.4 DESIRED LEVELS OF SERVICE

Refer to Core Asset Management Plan.

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Table 3.4a: Community Levels of Service

KEY PERFORMANCE INDICATOR	COMMUNITY LEVEL OF SERVICE	PERFORMANCE MEASUREMENT PROCESS	TARGET PERFORMANCE	CURRENT PERFORMANCE
Sustainability	Facilities are managed for future generations.	Long-Term Financial Plan.	Key TCORP Financial Ratios are maintained	The infrastructure backlog ratio for bridges is 7%.
Cost effectiveness	Planned scheduled maintenance	Percent of maintenance done by planned repairs	90% of planned maintenance activities	95% of work in the current financial year is planned activity or resulting from natural disasters.

Table 3.4b: Technical Levels of Service

KEY PERFORMANCE INDICATOR	TECHNICAL LEVEL OF SERVICE	PERFORMANCE MEASUREMENT PROCESS	TARGET PERFORMANCE	CURRENT PERFORMANCE
Cost effectiveness	Unit rate	Price per square metre of renewal and additions measured on a yearly basis reported by bridge type.	Unit rate from June 2020 revaluation: \$2048 (Engineered Timber) and \$4020 (All Concrete)	Not determined due to current demand in supply chain.
Accessibility	Provide advance signage of road closures affecting village residents.	Coverage of signs.	Signs in place on Emmaville Road and Strathbogie Road to provide advance warning of road closure when Severn River is in flood.	Signs in place on Emmaville Road and Strathbogie Road to provide advance warning of road closure when Severn River is in flood.

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Table 3.4c: Community Levels of Service

KEY PERFORMANCE MEASURE	LEVEL OF SERVICE / OUTCOME	PERFORMANCE MEASURE PROCESS	PERFORMANCE TARGET	CURRENT PERFORMANCE
Quality	Provide reliable and safe access and connectivity	Customer Service Requests Community forums feedback	< 20 complaints per annum	Complaints FY 2022: 0
Function	Meets user requirements for: <ul style="list-style-type: none"> • Geometry • Accessibility 	Customer Service Requests Austroads technical specifications and guidelines	Compliance with current standards and Specs	Compliance with current standards and specs
Safety	Increase public safety	Accident reports	Zero reported crashes attributed to bridge condition	One vehicle washed off flooded bridge in reporting period.
Reliability	Bridges & major culverts available at all times & free of mass limits.	Periodic bridge & major culvert audit	Audit undertaken every 3 to 5 years	Load limit is current on Wentworth Street and Shannon Vale Road. Speed limits to reduce dynamic loading are in place on Mt Mitchell Road over two bridges.

Table 3.4d: Technical Levels of Service

KEY PERFORMANCE MEASURE	LEVEL OF SERVICE OUTCOME	PERFORMANCE MEASURE PROCESS	PERFORMANCE TARGET	CURRENT PERFORMANCE
Condition	No restriction on use	Condition rating	All bridges have a condition rating of 'Satisfactory' or greater	The previous backlog of works has been significantly reduced through major capital renewal upgrades. All bridges with known deficiencies have either been renewed or are funded for renewal within the next two years.
Function	Adequate capacity and structural strength	Regular compliance inspection	All bridges inspected annually	Bridges have been inspected and scheduled for required works.

4. FUTURE DEMAND

4.1 DEMAND FORECAST

Refer to Core Asset Management Plan.

4.1.2 DEMAND FACTORS – TRENDS AND IMPACTS

Developers will contribute to bridge upgrades that are required to facilitate freight or access to significant developments. Upgrade works that were completed for the Sapphire Wind Farm were subsequently de-rated at the end of the project, much to Council's dismay. An upgrade was completed at Cam Creek on the Rangers Valley Road to convert the bridge to dual lane from single lane. Those works are funded by developer contributions from Ranger's Valley feedlot with matching grant funding.

Table 4.1.2: Demand Factors, Projections and Impact on Services

FACTOR	IMPACT
Population changes in townships/rural areas	Expectations on level of service independent of number of properties serviced, particularly on very low-traffic roads.
Rural freight task increasing	Last mile issues associated with higher mass limit vehicles place an increased expectation for bridge load capacity.

4.2 CHANGES IN TECHNOLOGY

Technological changes (as distinct from changes to installations brought about by external, e.g. environmental, forces) will impact on the asset classes in this AMP over the 20-year timeframe.

Emerging local construction ability will see more pre-cast components to minimise community disruption. Major culverts will likely be replaced 'like-for-like', with improved end walls and erosion projection.

4.3 DEMAND MANAGEMENT PLAN

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

Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this asset management plan.

Table 4.3: Demand Management Plan Summary

SERVICE ACTIVITY	DEMAND MANAGEMENT PLAN
Safety Improvement Plan	Upgrades to improve user safety generally only apply when significant development is occurring, and the cost of those upgrades are borne by the developer.
Road Hierarchy Review Plan	Review of the Roads Hierarchy will examine utilisation patterns and network links, within next review period. Consideration of freight routes and last mile implications will also occur as part of the current review. Local bridge capacities can be the limiting factor for heavy freight vehicles.

4.4 NEW ASSETS FROM GROWTH

No new bridge assets from growth are anticipated within the current term of this plan.

5. LIFECYCLE MANAGEMENT PLAN

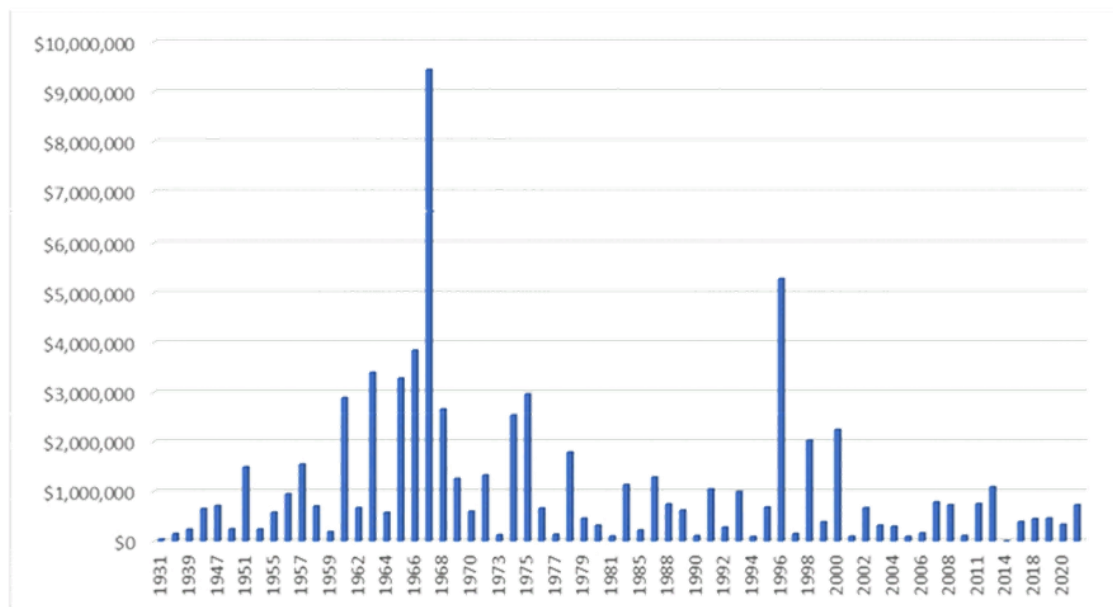
The lifecycle management plan details how Council plans to manage and operate the assets at the agreed levels of service (defined in section 3) while optimising life cycle costs.

5.1 BACKGROUND DATA

5.1.1 PHYSICAL PARAMETERS

The age profile of Council's assets is shown below. The bulk of assets constructed from 1960 to 1970 is apparent. These assets typically comprise a low-level timber superstructure on concrete piers, often constructed above a previous concrete causeway. The nature of these assets tends to make timber superstructure renewal the most cost-effective option, as the foundations are rarely of sufficient capacity to carry a concrete superstructure.

Fig 5.1.1: Asset Age Profile



5.1.2 ASSET CAPACITY AND PERFORMANCE

Council's services are generally provided to meet design standards where these are available.

Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

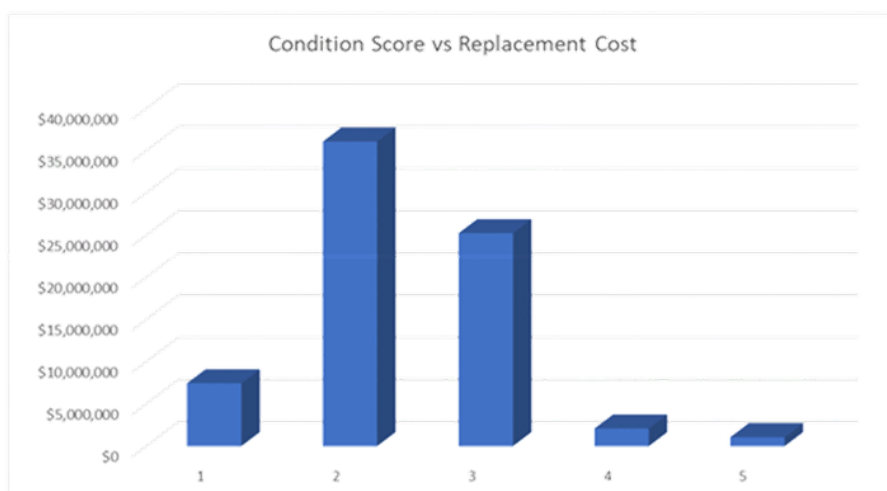
Table 5.1.2: Known Service Performance Deficiencies

LOCATION	SERVICE DEFICIENCY
Timber bridges	Lack of proper maintenance of timber bridges has compromised the integrity of some components earlier than should have been the case.
Concrete bridges	Lack of modern design and poor construction quality of some older concrete bridges has compromised the integrity of some components earlier than should have been the case.

5.1.3 ASSET CONDITION

The condition profile of Council's assets is shown below.

Fig 5.1.3: Asset Condition Profile



Condition is measured using a 1 – 5 rating system.¹

¹ IIMM 2006, Appendix B, p B:1-3 ('cyclic' modified to 'planned')

Rating	Description of Condition
1	Excellent condition: Only planned maintenance required.
2	Very good: Minor maintenance required plus planned maintenance.
3	Good: Significant maintenance required.
4	Average: Significant renewal/upgrade required.
5	Poor: Unserviceable.

5.1.4 ASSET VALUATIONS

The values of assets are shown below for bridge infrastructure assets as at 30 June 2021. Note: a full independent revaluation was completed in October 2020. Assets are valued at greenfield rates.

Table 5.1.4a: Asset Summary

Asset Type	Quantity	Replacement Value	Annual Depreciation
Timber Bridges	11	\$ 2,410,800	-\$ 35,099
Concrete/Steel Bridges	77	\$ 51,607,619	-\$ 541,338
Culverts	33	\$ 10,821,980	-\$ 137,648
Causeways	134	\$ 7,165,619	-\$ 83,972
Total	222	72,006,019	-\$ 798,057

Council's sustainability reporting reports the rate of annual asset consumption and compares this to asset renewal and asset upgrade and expansion.

Table 5.1.4b: Financial Reporting Ratios

FINANCIAL REPORTING CRITERION	BRIDGES INFRASTRUCTURE
Asset Consumption Rate (Annual)	1%
Asset Renewal Rate (Annual)	1%
Asset Upgrade Expansion Rate (Annual)	0%

5.2 RISK MANAGEMENT PLAN

The risk assessment process identified credible risks, the likelihood of the risk event and the consequences should the event occur. Future refinements will use these factors to develop risk ratings, incorporating a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' - requiring immediate corrective action and 'High' – requiring prioritised corrective action identified in the infrastructure risk management plan are summarised in Table 5.2.

Table 5.2: Critical Risks and Treatment Plans

ASSET AT RISK	WHAT HAPPEN CAN	RISK RATING (VH, H)	RISK TREATMENT PLAN
Bridges	Bridges may fail structurally	VH	A comprehensive bridge inspection programme combined with an increase in capital renewal funding and maintenance mitigates this risk.
Bridges	Long term funding may be insufficient to renew and maintain bridges	VH	Detailed modelling of individual bridge performances will provide increasing knowledge of asset lives. Long term financial planning is used to prepare for periods when a bulk of assets reach maturity around the same time, as will occur for bridges in the ten-year forecast period of this plan.

5.3 ROUTINE MAINTENANCE PLAN

Routine maintenance is the regular ongoing 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.

5.3.1 MAINTENANCE PLAN

Maintenance includes reactive, planned and cyclic maintenance work activities.

Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions.

Planned maintenance is repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown experience, prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Cyclic maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, building roof replacement, etc. This work generally falls below the capital/maintenance threshold.

Planned maintenance work is very high at approximately 95% of total maintenance expenditure.

Maintenance expenditure levels are adequate to meet required service levels. Future revision of this asset management plan will include linking required maintenance expenditures with required service levels.

Assessment and prioritisation of reactive maintenance is undertaken by trained (level 1 certified) Council staff using training, experience and judgement.

5.3.2 STANDARDS AND SPECIFICATIONS

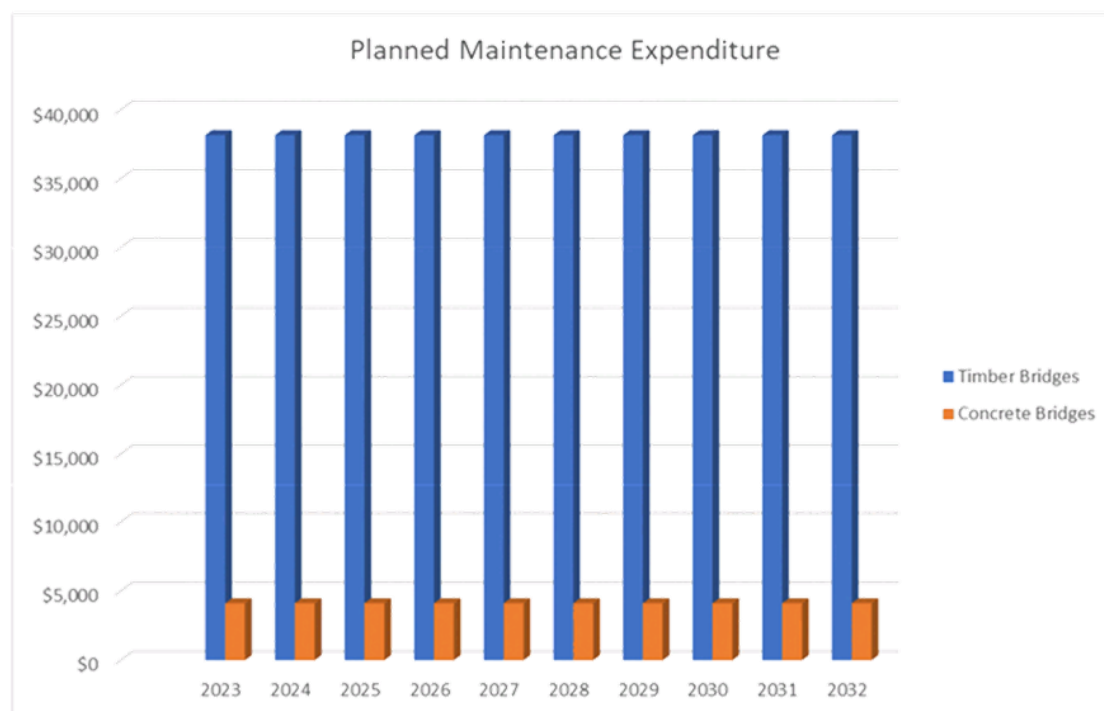
Maintenance work is carried out in accordance with the following Standards and Specifications.

- NSW RMS Timber Bridges manual
- GISC Work Method Statements
- Requirements by manufacturers for the use of proprietary products
- Traffic control at Works on Roads
- Project-specific Technical Specifications
- AS5100.1-2017 Bridge design-scope and general principles

5.3.3 SUMMARY OF FUTURE MAINTENANCE EXPENDITURES

Future maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Fig 5.3.3. Note that all costs are shown in current dollar values.

Fig 5.3.3: Planned Maintenance Expenditure



Deferred maintenance, i.e. works that are identified for maintenance and unable to be funded, are to be included in the risk assessment process in the infrastructure risk management plan.

Maintenance is funded from Council's operating budget and grants where available. Maintenance allocations have been able to be reduced as major capital work is being undertaken on bridges that would have been inefficiently patched in previous years.

5.4 RENEWAL/REPLACEMENT PLAN

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.

5.4.1 RENEWAL PLAN

Renewal will be undertaken using 'low-cost' renewal methods where practical. The aim of 'low-cost' renewals is to restore the service potential or future economic benefits of the asset by renewing the assets at a cost less than replacement cost.

In particular, low-level timber bridges on concrete foundations will be renewed using laminated timber carpentry methods which have shown to be more cost effective than full concrete replacement. Timber components are either reused for maintenance (if in as new condition), sold into the recycled timber market or discarded (<20% of components).

5.4.2 RENEWAL STANDARDS

Renewal work is carried out in accordance with the Standards and Specifications noted in Section 5.3.1.

5.4.3 SUMMARY OF OPTIMAL RENEWAL EXPENDITURE

Projected future renewal expenditures are forecast to increase over time as the asset stock ages. The costs are summarised in Fig 5.4.3a. Note that all costs are shown in current dollar values

Fig 5.4.3a: Projected Capital Renewal Expenditure

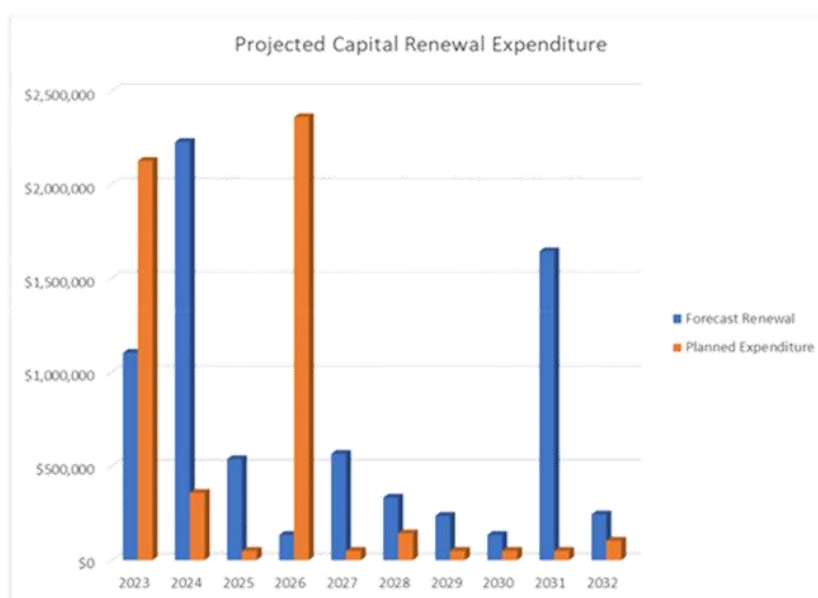
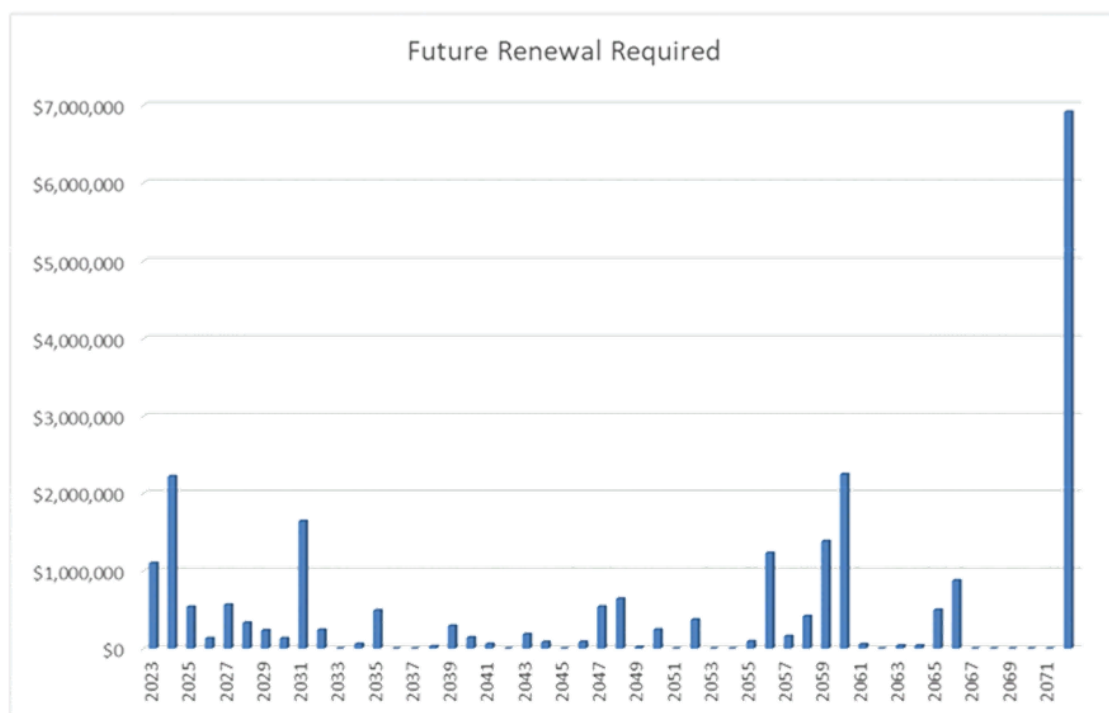


Fig 5.4.3b: 50-Year Future Renewal



Deferred renewal, i.e. those assets projected for renewal and not planned for renewal in capital works programs are to be included in the risk assessment process in the risk management plan.

Renewals are to be funded from Council's capital works program and grants where available. This is further discussed in Section 6.2.

5.5 CREATION/ACQUISITION/UPGRADE PLAN

New works are those works that create a new asset that did not previously exist or works which upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social, or environmental needs. Assets may also be acquired at no cost to the Council from land development. These assets from growth are considered in Section 4.4.

5.5.3 SUMMARY OF FUTURE UPGRADE/NEW ASSETS EXPENDITURE

5.6 DISPOSAL PLAN

Bridge timbers are a valuable commodity even when no longer fit for service as a bridge component. A ready market exists for old timber that is sound and surplus timber is disposed of routinely through online auction sales. Typically, 50% of new value is received through these sales for timber that is sound. The cost of relocation can be prohibitive however, and at times it is more economical to dispose of the entire structure in situ by way of public expression of interest, with

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the purchaser to remove materials from site. This is especially the case for low value timber such as where decks have been overlaid with concrete.

Item 7.27

Annexure I

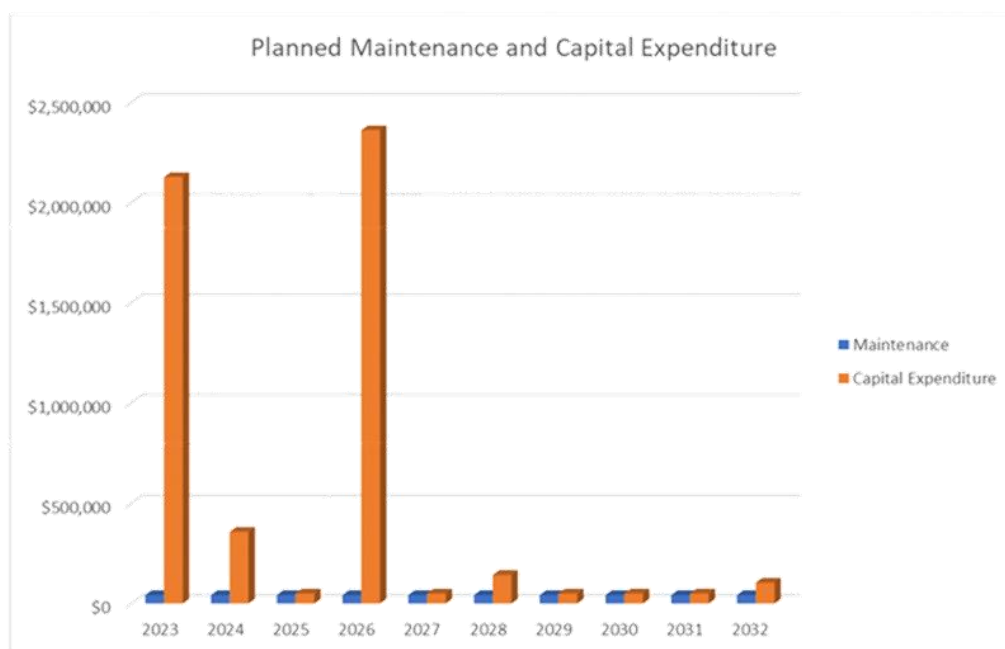
6. FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

6.1 FINANCIAL STATEMENTS AND PROJECTIONS

The financial projections are shown in Fig 6.1 for planned operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets).

Fig 6.1: Planned Operating and Capital Expenditure



Note that all costs are shown in current dollar values.

6.1.1 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators for financial sustainability that have been considered in the analysis of the services provided by this asset category, these being long term life cycle costs and medium-term costs over the 10-year financial planning period.

Long term - Life Cycle Cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the longest asset life. Life cycle costs include maintenance and asset consumption (depreciation expense). The annual average life cycle cost for the services covered in this asset management plan is \$840,000.

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes maintenance plus capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The average life cycle expenditure over the 10-year timeframe of the plan is \$577,000.

A gap between life cycle costs and life cycle expenditure gives an indication as to whether present consumers are paying their share of the assets which they are consuming each year. The purpose of this asset management plan is to identify levels of service that the community needs and can afford and develop the necessary long-term financial plans to provide the service in a sustainable manner.

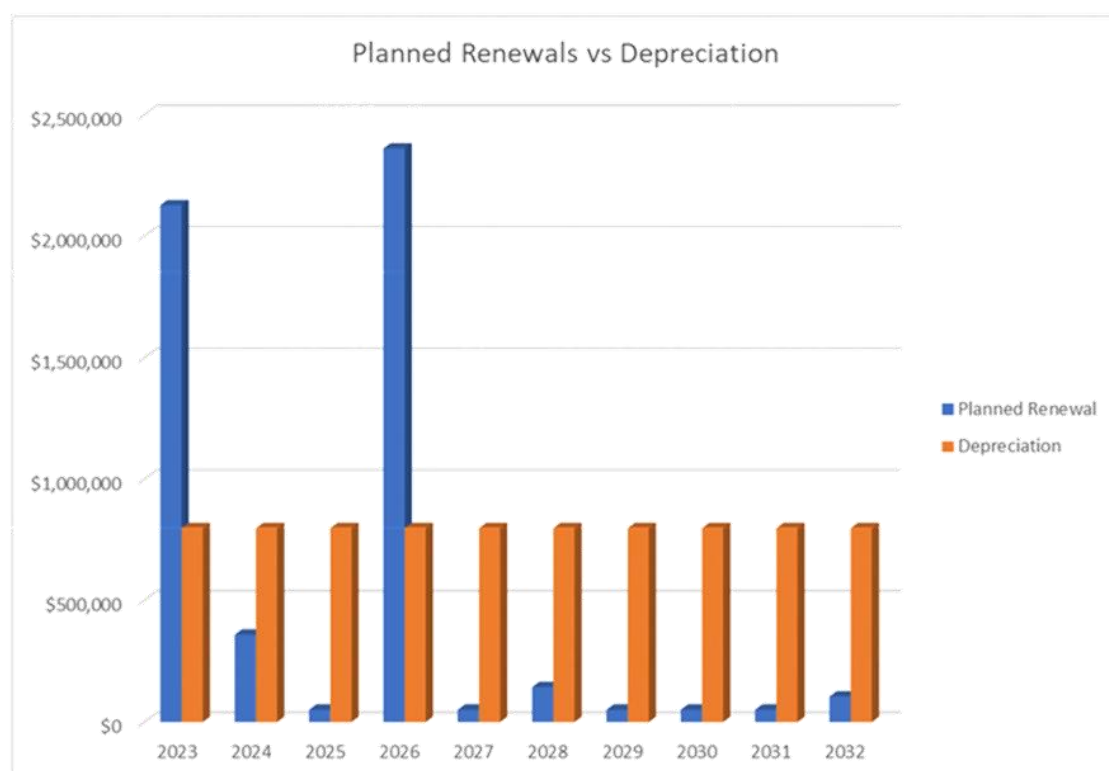
Over the 10-year horizon of this asset management plan, the average life-cycle gap for services covered by this plan is \$26,000 per annum (averaged to the nearest \$1000). The life cycle sustainability index is 69%.

Medium-term – 4 to 10 year financial planning period

Funding for the remainder of the delivery program will be adequate to keep pace with asset consumption using the previous financial modelling that is contained in the asset register. These will be reviewed, and it is hoped that actual costs will prove to be much lower than have been adopted in the past. The current iteration of this plan provides accurate modelling as project history accumulates and costs with associated variables become more accurately known.

Council will manage the 'gap' by developing this asset management plan to provide guidance on future service levels and resources required to provide these services.

Fig 6.1.1: Planned Renewals vs Depreciation



6.2 FUNDING STRATEGY

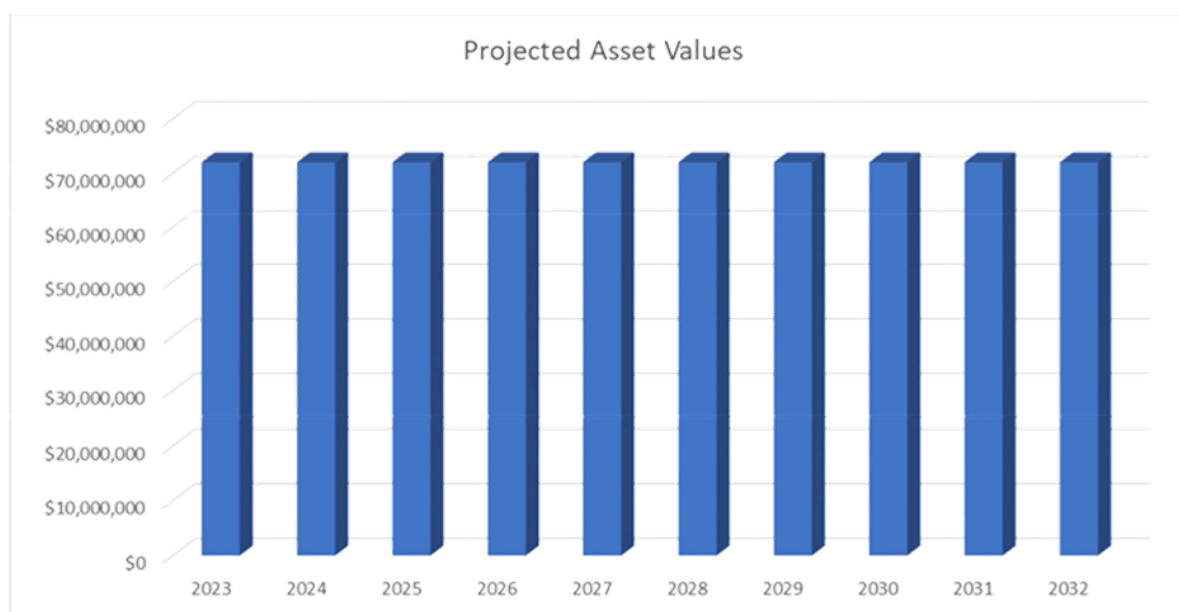
Projected costs are to be funded from Council's operating and capital budgets. The funding strategy will be detailed in the Council's LTFP.

Achieving the financial strategy will require an ongoing commitment to fund the increasing demand for asset renewals. Renewal costs may outpace increased revenue from development growth.

6.3 VALUATION FORECASTS

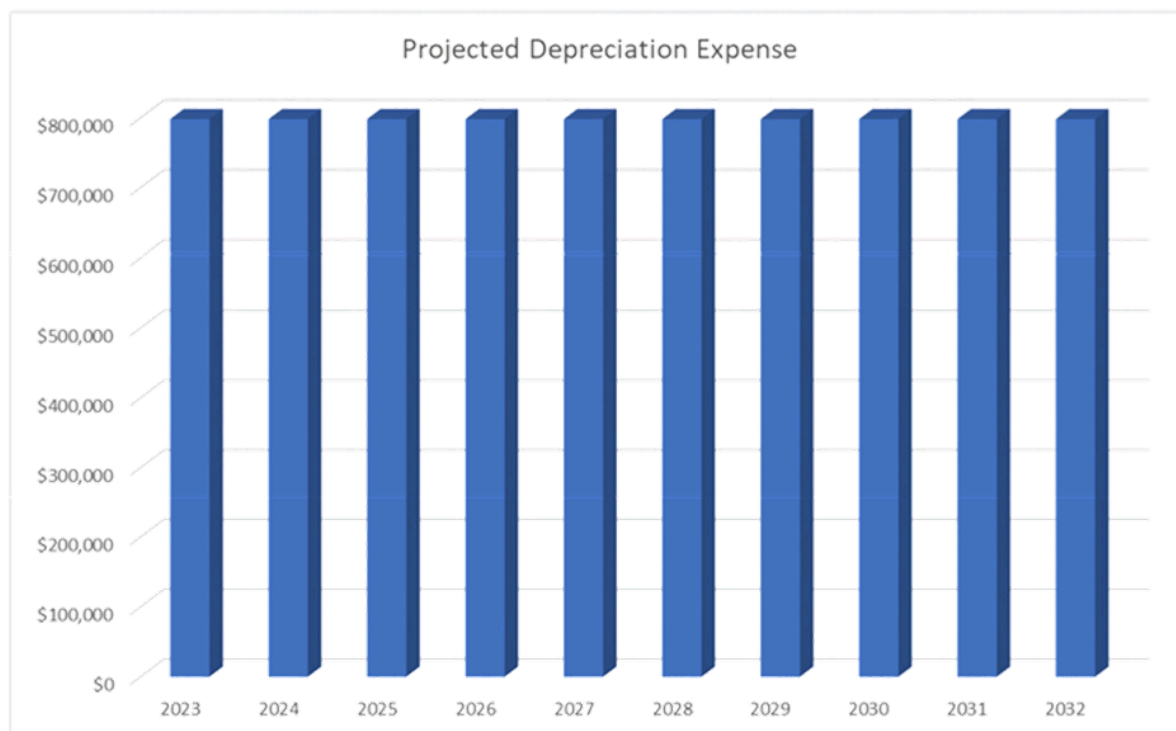
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Fig 6.3a shows the projected replacement cost asset values over the planning period in current dollar values.

Fig 6.3a: Projected Asset Values



Depreciation expense values are forecast in line with asset values as shown in Fig 6.3b.

Fig 6.3b: Projected Depreciation Expense



The depreciated replacement cost (current replacement cost less accumulated depreciation) will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets.

6.4 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

This section details the key assumptions made in presenting the information contained in this asset management plan and in preparing forecasts of required operating and capital expenditure and asset values, depreciation expense and carrying amount estimates. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions:

- Assumptions on the relationship between growth and increases in the asset stock.
- Assumptions on changes to useful life estimated to reflect improved maintenance and renewal practices.
- Present service levels will remain constant until revised service levels are produced in accordance with Section 3.3.
- Assumption of a normal weather conditions.

Accuracy of future financial forecasts may be improved in future revisions of this Asset Management Plan by the following actions:

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- Undertaking regular defect surveys on bridges.
- Improved information on maintenance and operating expenditures.
- Assumptions have been made as to the average useful lives and remaining lives of the asset groups based on current local knowledge and experience and historical trends. These need to be reviewed and the accuracy improved based on real time assessment of asset deterioration.
- Changes in the desired level of service and service standards from those identified in this plan.

7. ASSET MANAGEMENT PRACTICES

7.1 ACCOUNTING/FINANCIAL SYSTEMS

Refer to Core Asset Management Plan.

7.2 ASSET MANAGEMENT SYSTEMS

Refer to Core Asset Management Plan.

7.3 INFORMATION FLOW REQUIREMENTS AND PROCESSES

Refer to Core Asset Management Plan.

7.4 STANDARDS AND GUIDELINES

Refer to Core Asset Management Plan.

7.5 DATA CONFIDENCE LEVEL

Data confidence levels for this AMP are rated as B or C.

8. PLAN IMPROVEMENT AND MONITORING

8.1 PERFORMANCE MEASURES

The effectiveness of the asset management plan can be measured in the following ways:

- The degree to which the required cash flows identified in this asset management plan are incorporated into council's Long-Term Financial Plan and Community Strategic Plan;
- The degree to which 1 to 5-year detailed works programs, budgets, business plans and organisational structures take into account the 'global' works program trends provided by the asset management plan.

8.2 IMPROVEMENT PLAN

Refer to Core Asset Management Plan.

The asset management improvement plan generated from this asset management plan is shown in Table 8.2.

Table 8.2: Improvement Plan

TASK NO	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TARGET COMPLETION DATE
1	Maintenance Activities - document levels of service and Maintenance Management Plan	Manager of Infrastructure Delivery	Staff	Ongoing
2	Undertake an annual review of this Asset Management Plan.	Manager Asset Services	Staff	After revaluation or during review of the Resourcing Strategy.

3	Review costs in asset register and revalue assets	Manager Asset Services	Staff	Full revaluation of this class is to be undertaken for 2026 financial statement.
4	Review of risk management plan detailed in Section 5.2.	Manager Asset Services	Staff	Ongoing

8.3 MONITORING AND REVIEW PROCEDURES

This asset management plan will be reviewed during annual budget preparation and amended to recognise any changes in service levels and/or resources available to provide those services as a result of the budget decision process.

The Plan has a life of 10 years and is due for major revision and updating within 2 years of each Council election.

REFERENCES

Refer to Core Asset Management Plan.

GLEN INNES SEVERN COUNCIL





PLANT AND FLEET

ASSET MANAGEMENT PLAN PART 8



Version 4.0

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1. EXECUTIVE SUMMARY

Refer to Core Asset Management Plan.

2. INTRODUCTION

2.1 BACKGROUND

This asset management plan covers plant and fleet that are key to the daily operation of Glen Innes Severn Council; the number of these assets is summarised in table 2.1. While additional plant and fleet items are included on the register, these are not included in financial and lifecycle modelling due to lack of data. The items excluded from modelling include: minor plant (this is small equipment that is below the capitalisation threshold and held on the register for admin purposes only). Plant associated with Glen Innes Aggregates, all attachments, and items that are registered have been included in the plant and fleet asset management plan.

Minor equipment will be excluded until a system of identification of minor items using RFID technology is implemented. This is planned to be carried out prior to the annual review of this plan in 2022.

GIA plant and heavy fleet are now included, noting that the responsibility for funding these items remains within the GIA business unit. All operational and capital costs are charged directly to the business unit.

Relevant data for attachments, small trailers, and small mowers will be collected and reviewed prior to the next iteration of this asset management plan; allowing their inclusion in the next revision of financial and lifecycle modelling.

The 2020 plant and fleet management review focused on a capability requirements assessment, development of a ten-year procurement and disposal forecast, and verification of plant and fleet internal and external hire rates.

Currently, Council's infrastructure department uses a combination of NAMS+ IPWEA, Plant Assessor, Practical Plus, and Microsoft Excel to manage plant and fleet assets. The transition to OpenOffice will see a significant change to workflow and reporting against assets.

Table 2.1: Assets Covered by This Plan

Asset Type	Quantity	Replacement Value	Accumulated Depreciation
Heavy Fleet	30	\$ 3,930,262	-\$ 1,854,058
Light Vehicles	52	\$ 1,638,307	-\$ 1,061,139
Trailers & Attachments	50	\$ 989,785	-\$ 441,077
Major Plant	23	\$ 382,555	-\$ 121,099
Mobile Plant	47	\$ 5,435,469	-\$ 2,112,386
Total	202	\$ 12,376,378	-\$ 5,589,760

Note: increases to the Major Plant category are due to some Minor Plant (from a previous asset plan) being reclassified. Leased and Glen Innes Aggregates assets have also been included further increasing overall asset numbers.

2.2 GOALS AND OBJECTIVES OF PLANT AND FLEET MANAGEMENT

The purpose of the plant and fleet assets is to provide support for Council staff to undertake the range of services across the whole spectrum of the Community Service Plan. The specific goals outlined in Council's Community Strategic Plan are demonstrated below in Table 2.2.

Whether it be road maintenance and repairs, water services, waste management or community services, items of plant form an essential component of service delivery.

The optimisation of the fleet has multiple facets, including:

- 1) The provision of equipment that is safe, efficient, and fit-for-purpose.
- 2) Minimising the "whole of life" cost for plant and fleet assets.
- 3) Ensuring key staff are engaged in plant and fleet management processes, promoting pride and a sense of ownership/responsibility for the plant and fleet assets that they operate and/or maintain.

Table 2.2: Goals from Council's Community Strategic Plan

Goal	Objective	How Goal and Objectives are addressed in AMP
IM 3.2.2 - Provide adequate plant and fleet levels for excellence in service delivery.	Plant and Fleet items are procured and maintained to provide efficient service delivery for all Council operations.	The plan sets the framework for selection and maintenance of plant and fleet items.
IM 3.2.12 - Implement the Plant and Fleet Asset Management Plan and review as necessary.	Plant and Fleet items are identified for renewal at the optimal time.	The procurement of Plant and Fleet items identified in the annual Operational Plan is completed in a timely manner and within budget parameters.

2.3 PLAN FRAMEWORK

Refer to Core Asset Management Plan.

2.4 CORE AND ADVANCED ASSET MANAGEMENT

Refer to Core Asset Management Plan.

3. LEVELS OF SERVICE

3.1 CUSTOMER RESEARCH AND EXPECTATIONS

This Asset Management Plan is prepared to facilitate consultation prior to adoption of levels of service by the Glen Innes Severn Council. Efficient and effective management of Council's plant and fleet is a key factor in meeting the needs of the community, as expressed in the Community Strategic Plan. Safe and fit-for-purpose plant and fleet is essential for achieving and maintaining the communities desired level of service for all Council's areas of delivery.

Future revisions of the Asset Management Plan will incorporate customer consultation on service levels and costs of providing the service. This will assist the Glen Innes Council and stakeholders in matching the level of service required, service risks and consequences with the customer's ability and willingness to pay for the service.

Internal survey has highlighted that Council staff have a strong desire to be involved in plant and fleet management, particularly procurement. Relevant staff, who operate or maintain plant and fleet assets, are consulted and provide feedback on all stages of plant and fleet management processes.

3.2 LEGISLATIVE REQUIREMENTS

Refer to Core Asset Management Plan.

3.3 CURRENT LEVELS OF SERVICE

Refer to Core Asset Management Plan.

Council's present funding levels are sufficient to continue to provide existing services at current service levels in the medium term.

Council's current levels of service are set out in Table 3.3a. and Table 3.3b. Customer levels of service are considered in terms of quality, function, and capacity/use; while technical levels of services are linked to the activities and annual budgets covering acquisition, operation, maintenance and renewal. Service and asset managers plan implement and control technical service levels to influence the service outcomes.

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Table 3.3a: Levels of Service

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Condition	Plant and fleet assets are maintained to Manufacturers specification.	Scheduled maintenance, reactive repairs, regular inspection by operator and mechanic staff.	Compliant with manufacturers recommendations and fit-for-purpose for planned useful life.	Compliant with manufacturers recommendations and fit-for-purpose. Functional and available for intended use.
	Confidence levels		Medium. Professional judgement supported by data sampling.	Medium. Professional judgement supported by data sampling.
Function	Plant and fleet assets are fit-for-purpose.	Modern equipment that meets delivery and user requirements.	All Council plant and fleet assets are fit-for-purpose. Staff agree that the plant and fleet they operate/maintain is comfortable and allows them to do their jobs to the best of their ability.	Older assets have been replaced and the fleet is meeting the performance measure. Additional asset requirements are identified yearly due to evolving demands.
	Confidence levels		Medium. Professional judgement supported by data sampling	Medium. Professional judgement supported by data sampling

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Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Cost effectiveness	Cost effective fleet, with minimised whole-of-life costs.	Proactive and efficient replacement program, based on lifecycle management, whole-of-life costs, and evolving asset requirements. Effective and skilled maintenance and repairs. Correct internal/external charge out rates.	Minimised whole-of-life costs maintained for planned useful life.	Whole-of-life costs and lifecycle planned for key plant and fleet assets. Maintenance costs not minimised for some older plant and fleet assets; however, yearly replacement schedules are limited due to funding.
	Confidence levels		Medium. Professional judgement supported by data sampling	Medium. Professional judgement supported by data sampling
Renewal	Replace plant and fleet assets at a time that minimizes whole-of-life costs.	Replace plant and fleet assets at <=10years.	10-year procurement and replacement plan development.	Execute 10-year procurement and replacement plan development.

Table 3.3b: Technical Levels of Services Measures

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
Acquisition	Acquisitions will be planned on a yearly basis.	Planning will be in response to increased level of service requirements in other areas of Council, i.e. increase in km's of unsealed road maintenance/year.	New plant is acquired as and when required via operational leases or outright purchase.	
		Budget	<i>The budget for new capital assets will only be recommended if a positive business case is first presented and approved by Manex.</i>	
Operation	Provide assets that contribute towards meeting deliverables safely, efficiently and effectively. Effective hire rates.	High utilisation of assets and desired results achieved. Low running costs. Hire rates cover operational cost of assets.	Council's outdoor teams are equipped with plant and fleet assets that allow their teams to achieve desired results. Operational costs within budget. Effective hire rates. Critical assets utilised well.	Further refine plant and fleet assets to increase utilisation and efficiency.

GLEN INNES SEVERN COUNCIL – PLANT & FLEET ASSET MANAGEMENT PLAN

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Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
		Budget	\$ 730,000	\$730,000
Maintenance	Proactive maintenance. Efficient reactive maintenance. Fuel and lubricant efficiency. Effective hire rates.	Low maintenance costs. High fuel and lubricant efficiency. Hire rates cover maintenance cost of assets.	Maintenance costs within budget. Effective hire rates.	Refine fuel and lubricant monitoring.
		Budget	\$744,000	\$744,000
Renewal	Replace plant and fleet assets at a time that minimizes whole-of-life costs.	Replace plant and fleet assets at <=10years.	10-year procurement and replacement plan development.	Execute 10-year procurement and replacement plan development.
		Budget	\$ 937,499 ave. over 10 yr planning period.	\$937,499 ave. over 10 yr planning period.

4. FUTURE DEMAND

4.1 DEMAND FORECAST

Refer to Core Asset Management Plan.

4.1.2 DEMAND FACTORS

Changes to the size and scope of Council's fleet is an ongoing issue that can be driven by changes in work practices, technology, or increasing or decreasing work loads, or client demands.

There are several unique factors that directly impact the demand for Fleet Assets and services. These factors include:

- Increased Council Service Provision (especially in unsealed road maintenance).
- The advent of new technologies/environmental awareness.
- Council's staffing structure.
- Consumer preferences and expectations.

Of these factors, the advent of new technologies/environmental awareness is predicted to have to have the most significant effect on Council's plant and fleet demand.

4.2 CHANGES IN TECHNOLOGY

Technology changes are forecast to affect the delivery of services covered by this plan in the following areas.

Table 4.2: Changes in Technology and Forecast effect on Service Delivery

TECHNOLOGY CHANGE	EFFECT ON SERVICE DELIVERY
Specialised Fleet Equipment	Improve efficiency in service delivery and reduce costs.
Alternative Fuel and Hybrid Vehicles	No effect on service delivery but reduction of emission.

4.3 DEMAND MANAGEMENT PLAN

Demand management strategies and techniques provide alternatives to the creation of new, or the modification of existing assets in order to meet demand. Instead, these strategies and techniques look at ways to modify customer demand so that there are increased opportunities to

maximise the utilisation rate of existing assets and therefore the need for new or modified assets is deferred or reduced.

Demand analysis of utilisation rates and availability are still to be undertaken. Demand management strategies will be developed as this analysis is undertaken.

Plant and fleet assets lifecycle forecast is analysed on a yearly basis, with forecast acquisitions and replacements being edited accordingly.

Table 4.3: Demand Management Plan Summary

SERVICE ACTIVITY	DEMAND MANAGEMENT PLAN
Financial	Develop a long term financial plan to ensure financial sustainability.
Service Delivery	Ensure services required and utilisation are driving demand for Fleet Assets.
Environmental	Anticipated increasing price of fossil fuel derived energy and ensure acquisitions and renewals incorporate necessary modern technology.

4.4 NEW ASSETS FROM GROWTH

Changes to the size and scope of Council's fleet is an ongoing issue that can be driven by changes in work practices, technology, staffing levels, or increasing workloads due to a number of factors. Current strategies to address this are triggered when the item of fleet is due for renewal and consultation with the users of the plan occurs.

5. LIFECYCLE MANAGEMENT PLAN

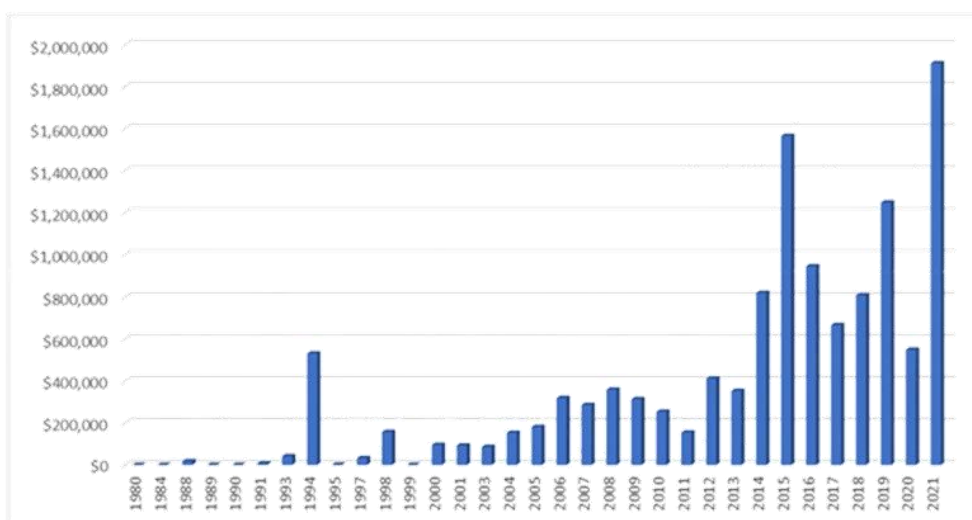
The lifecycle management plan details how Council plans to manage and operate the assets at the agreed levels of service (defined in section 3) while optimising life cycle costs.

5.1 BACKGROUND DATA

5.1.1 PHYSICAL PARAMETERS

The age profile of assets included in this AMP are shown in Figure 5.1.1a.

Figure 5.1.1a: Asset Age Profile



5.1.2 ASSET CAPACITY AND PERFORMANCE

Council's services are generally provided to meet design standards where these are available.

Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

Table 5.1.2. Known Service Performance Deficiencies

LOCATION	SERVICE DEFICIENCY
Age of equipment	The average age of plant items in the fleet is 2 years.

Utilisation	Utilisation of assets has improved over the past five years, particularly in relation to critical assets i.e. assets covered by this AMP. The 10-year procurement plan developed in conjunction with this AMP review aims to increase utilisation further by disposing but not replacing underutilised assets.
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5.1.3 ASSET CONDITION

Due to relative short life of Fleet assets condition is not a key driver for renewal, whole of life costs, policies and service drive requirements is the performance measure. Future revision of this document will contain a table showing percentage distribution of fleet assets according to condition rating.

5.1.4 ASSET VALUATIONS

The value of assets as at 30 June 2021 covered by this asset management plan is summarised below in table 5.1.4a.

Table 5.1.4.a: Asset Summary

Asset Type	Quantity	Replacement Value	Annual Depreciation
Heavy Fleet	30	\$ 3,930,262	-\$ 216,932
Light Vehicles	52	\$ 1,638,307	-\$ 202,056
Trailers & Attachments	50	\$ 989,785	-\$ 90,624
Major Plant	23	\$ 382,555	-\$ 31,570
Mobile Plant	47	\$ 5,435,469	-\$ 396,316
Total	202	\$ 12,376,378	-\$ 937,499

Council's sustainability reporting reports the rate of annual asset consumption and compares this to asset renewal and asset upgrade and expansion. These figures are outlined in table 5.1.4.2.b.

Table 5.1.4b: Financial Reporting Ratios

FINANCIAL REPORTING CRITERION	
Asset Consumption Rate	8%
Asset Renewal Rate	69%
Asset Addition Upgrade Rate	0%

An asset renewal percentage that is 100% indicates a sustainable plant and fleet lifecycle i.e. assets are being renewed at the same rate that they are being depreciated.

5.2 RISK MANAGEMENT PLAN

An assessment of risks¹ associated with service delivery from plant and fleet assets has identified 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, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

Critical risks, being those assessed as 'Very High' - requiring immediate corrective action and 'High' – requiring prioritised corrective action identified in the infrastructure risk management plan are summarised in Table 5.2. There are no critical risks for plant at this time. Although not identified as critical, medium and low risks have also been included in this table.

Table 5.2. Critical Risks and Treatment Plans

ASSET AT RISK	WHAT CAN HAPPEN	RISK RATING (VH, H)	RISK TREATMENT PLAN
Fleet	Physical injury to staff, public or assets	M	Safety inspections, signage, engineering, personal protective equipment and training
Fleet	Excessive downtime for repairs effecting user productivity and increase whole of life costs	M	A change in the use of the machine. Operator training, communication between Workshop and Users
Fleet	Inadequate or unsuitable plant and equipment	L	Consultation process to ensure provision of plant matches the needs of the user and is of design and standard that is fit for the purpose of intended use.

Fleet	Financial, safety, and efficiency implications of less than desired management and modelling of non-critical assets (assets omitted from this plan).	L	<ul style="list-style-type: none"> Minor equipment will be excluded until a system of identification of minor items using RFID technology is implemented. This is planned to be carried out prior to the annual review of this plan in 2022. Additional budget will need to be sought for this expense. Relevant data for attachments, small trailers, and small mowers will be collected and reviewed prior to the next iteration of this asset management plan; allowing their inclusion in the next revision of financial and lifecycle modelling. This can be managed within current budget allocations.
Fleet	Safety and efficiency implications of operating aged (10+ years) plant and fleet assets.	M	<ul style="list-style-type: none"> All Council's critical plant and fleet assets are workplace health and safety risk assessed by an external contractor, Plant Assessor, on a yearly basis. Assets aged 10+ years were given priority in the 10 year procurement plan development.

5.3 OPERATIONS AND ROUTINE MAINTENANCE PLAN

Routine 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.

5.3.1 OPERATIONS AND MAINTENANCE PLAN

Operations include regular activities to provide services.

Maintenance includes reactive, planned and cyclic maintenance work activities.

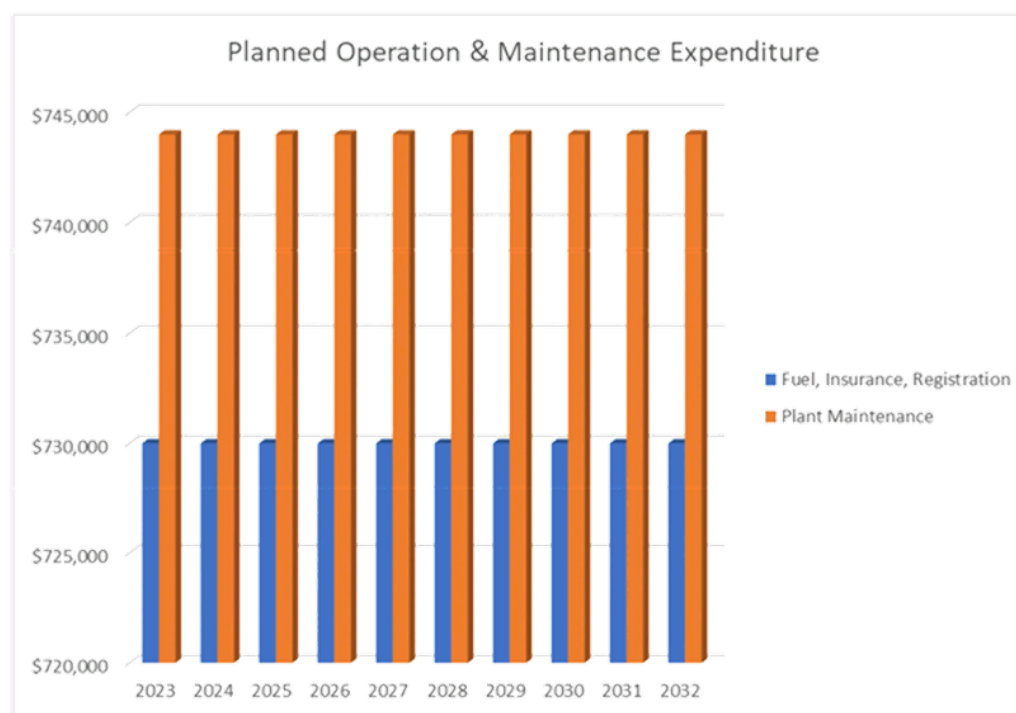
Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions.

Planned maintenance is repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown experience, prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Cyclic maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, building roof replacement, etc. This work generally falls below the capital/maintenance threshold.

Operations and maintenance expenditure budgets over the ten-year period covered by this plan are outlined in Figure 5.3.1. All figures are shown in current dollars.

Figure 5.3.1: Operation and Maintenance Summary



Operations and maintenance expenditure levels are considered to be adequate to meet required service levels. Assessment and prioritisation of reactive maintenance is undertaken by GIS staff using experience and judgement.

5.3.2 STANDARDS AND SPECIFICATIONS

Maintenance work is carried out in accordance with the following Standards and Specifications.

All vehicles are either serviced from Council's depot or drivers are provided with fuel cards and the odometer reading must be supplied to the service station attendant. Drivers must also carry out pre-start checks using Plant Assessor software.

Periodic servicing of vehicles shall be in accordance with the manufacturer specifications or lease agreement specifications for the particular vehicle. The leaseback driver of a vehicle is responsible to notify and book in the vehicle for servicing with the Plant & Fleet Coordinator. The department manager, in collaboration with the workshops, is responsible for ensuring that the service schedule is maintained.

Accidents must be reported promptly using the appropriate accident report form. Any damage, malfunction or incorrect operation of equipment within the vehicle must be reported and rectified as soon as practicable.

Deferred maintenance i.e. works that are identified for maintenance and unable to be funded are to be included in the risk assessment process in the infrastructure risk management plan.

Maintenance is funded from Council's operating budget and grants where available. This is further discussed in Section 6.2.

5.4 RENEWAL/REPLACEMENT PLAN

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.

5.4.1 RENEWAL PLAN

Assets requiring renewal are identified from estimates of remaining life obtained from the asset register through the 'Renewal Model'. Renewal timings for assets purchased prior to 2017 have been set based on age, condition, and staff judgment. A Renewal ranking criteria is outlined in table 5.4.1. Asset purchased from 2017 onwards are and will be set in a 10-year renewal lifecycle, except for staff leasebacks, which will be renewed yearly. Where the 10-year life-cycle needs to be deviated from due to changes in requirements, unforeseen breakdowns etc., the renewal ranking criteria will be utilised

Table 5.4.1 Renewal Priority Ranking Criteria

Criteria	Weighting
Condition (safety)	34%
Age	22%
Fit-for-purpose	22%
Utilisation	22%
Total	100%

Renewals are based on 'capability requirements' i.e. the best fit asset rather than a like-for-like renewal. Safety, cost, useful life, and quality are all important factors in determining the best renewal purchase.

5.4.2 RENEWAL STANDARDS

GISC vehicles and plant are generally to be replaced in accordance with the philosophy set out hereunder.

As a first priority, any and all legislative requirements will be adhered to. In particular vehicles and items of plant will be selected, maintained and replaced in such a manner as to provide the safest working environment that is practicable in accordance with the SafeWork NSW requirements. All critical plant and fleet assets are risk assessed yearly by Plant Assessor, which assists in ensuring that each asset meets safety legislation.

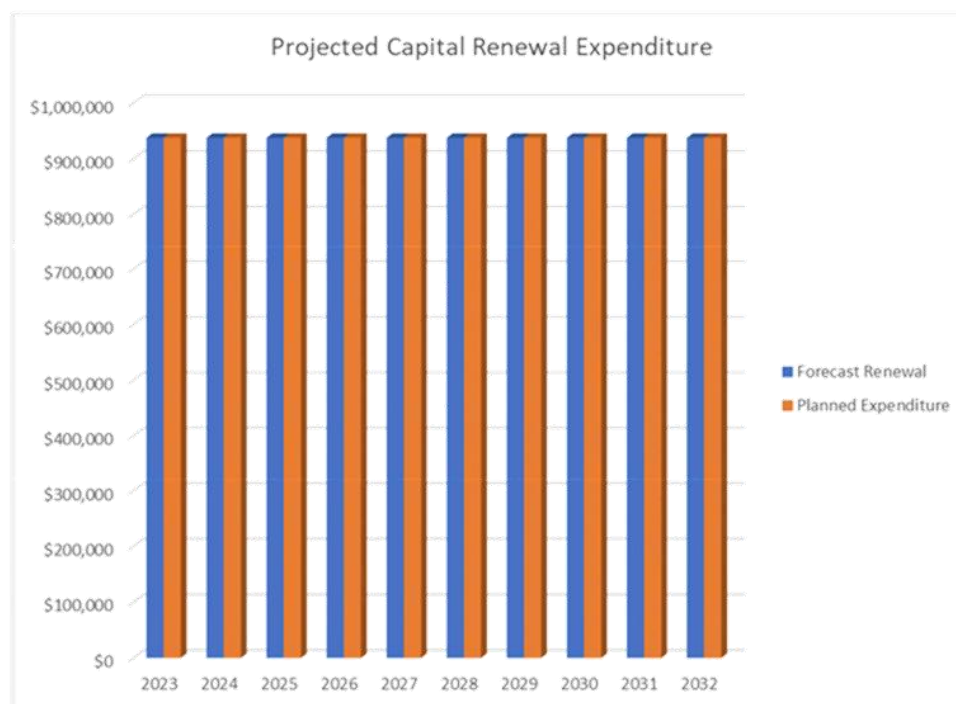
Subject to the above, and within the bounds of the capital replacement budget, plant will be renewed in consultation with relevant staff (management, operator and maintenance) to balance the relative needs of cost minimisation, increased productivity and staff engagement.

5.4.3 SUMMARY OF FUTURE RENEWAL EXPENDITURE

Projected future renewal expenditures vary over the ten-year period, due to the varying age of Council's current assets. Expenditures are summarized Fig 5.4.3a. Note that all costs are shown in current dollar values.

Each asset has been assessed individually and analysed to set a remaining useful life. By ensuring that all of Council's younger assets and future purchases are renewed within the 10-year lifecycle, yearly renewals will eventually be evened out and a uniform renewal budget set.

Fig 5.4.3a: Projected Capital Renewal Expenditure



Renewals are to be funded from Council's self-funding plant reserve and grants where available. This is further discussed in Section 6.2.

5.5 CREATION/ACQUISITION/UPGRADE PLAN

New assets are those items of fleet, plant and equipment that did not previously exist, or items which are upgraded or improved beyond their existing capacity. They may result from growth, social or environmental needs. These assets from growth are considered in Section 4.4.

5.5.1 SELECTION CRITERIA

New assets and upgrade/expansion of existing assets are identified from various sources such as councillor or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed below.

Table 5.5.1: New Assets Priority Ranking Criteria

CRITERIA	WEIGHTING
Work Health and Safety	WHS issues are given the first priority when assessing plant items for replacement.
Funding within Long Term Financial Plan	The total amount of asset replacement in any given year is set by the LTFP
Current Service Level	Operator and maintenance staff feedback is a key driver in the selection of equipment to be replaced.

5.5.2 STANDARDS AND SPECIFICATION

Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2

5.5.3 SUMMARY OF FUTURE UPGRADE/NEW ASSETS EXPENDITURE

Currently and into the foreseeable future, new asset acquisitions are procured via operational leases and therefore not included in the capital budget. If Council's plant and fleet assets increased significantly in size, the operations and maintenance budgets would be affected; however, this is not expected to happen over the planning period of this AMP.

5.6 DISPOSAL PLAN

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition, or relocation.

Assets to be disposed but not replaced within the 10-year planning period are minimal. An estimated residual of \$56,000.00 has been made on the sale/disposal of these assets. The majority of Council's critical plant and fleet assets are highly utilised the 10-year replacement plan focuses on maintaining a critical fleet that is essential for meeting service demands.

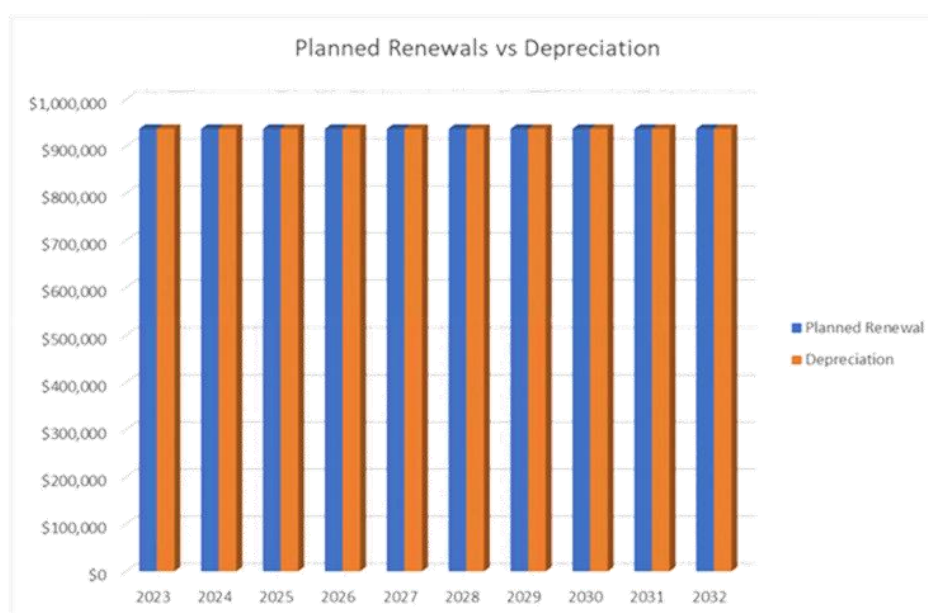
6. FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

6.1 FINANCIAL STATEMENTS AND PROJECTIONS

The financial projections are shown in Fig 6.1 for planned operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets).

Fig 6.1: Planned Operating, Maintenance, and Capital Expenditure



6.1.1 SUSTAINABILITY OF SERVICE DELIVERY

This section contains the financial requirements resulting from the information presented in the previous sections of this Asset Management Plan. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

Replacement Cost	\$12,376,378
Depreciable Amount	\$12,376,378
Depreciated Replacement Cost	\$6,786,618
Depreciation	\$ 937,499

6.1.2 SUSTAINABILITY OF SERVICE DELIVERY

There are two key indicators of sustainable service delivery that are considered in the Asset Management Plan for this service area. The two indicators are the:

- asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years), and
- medium term forecast costs/proposed budget (over 10 years of the planning period).

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio 100%

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have 100% of the funds required for the optimal renewal of assets.

Medium term – 10-year financial planning period

This Asset Management Plan identifies the forecast operations, maintenance and renewal costs required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

This forecast work can be compared to the proposed budget over the 10 year period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs over the 10 year planning period is \$2,411,499 on average per year.

The proposed (budget) operations, maintenance and renewal funding is \$ 2,411,499 on average per year giving a 10 year funding shortfall or funding excess of \$0 per year. This indicates that 100% of the forecast costs needed to provide the services documented in this Asset Management Plan are accommodated in the proposed budget. This excludes acquired assets.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately 1.0 for the first years of the Asset Management Plan and ideally over the 10 year life of the Long-Term Financial Plan.

6.1.3 FORECAST COSTS (OUTLAYS) FOR THE LONG-TERM FINANCIAL PLAN

Fig 6.1 shows the forecast costs (outlays) for the 10 year long-term financial plan.

6.2 FUNDING STRATEGY

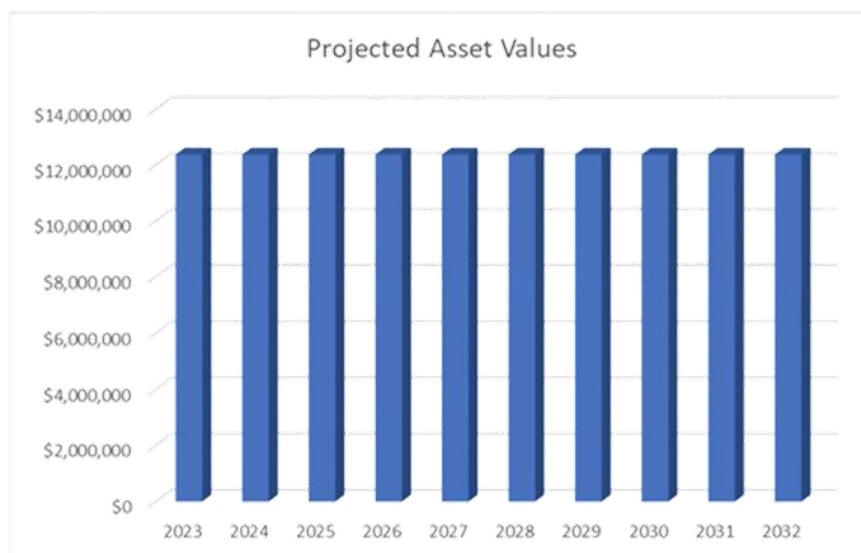
Projected expenditure identified in Section 6.1 is to be funded from Council's operating and capital budgets. The funding strategy is detailed in the Council's 10-year long term financial plan.

Achieving the financial strategy will require internal plant and fleet hire rates to be set at a level commensurate with projected average capital and maintenance expenditure. A plant replacement reserve is to be maintained to buffer against variations.

6.3 VALUATION FORECASTS

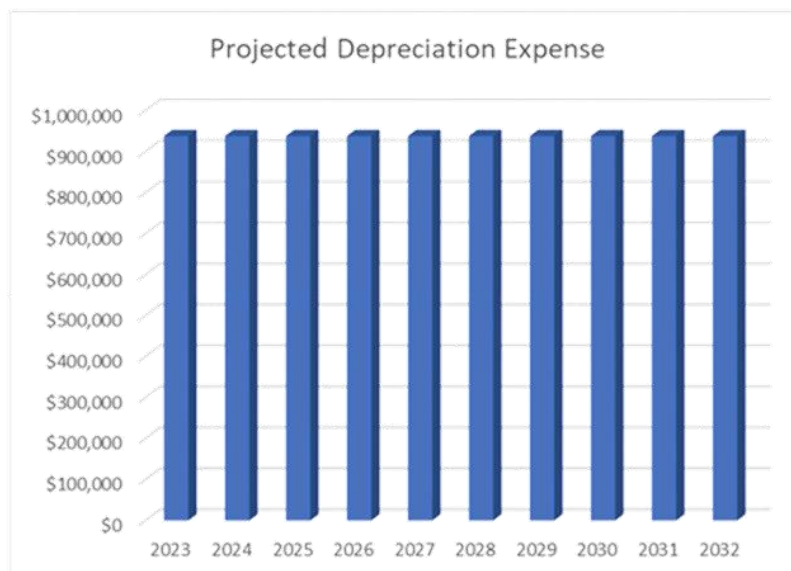
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Fig 6.3a shows the projected replacement cost asset values over the planning period in current dollar values.

Fig 6.3a: Projected Asset Values



Depreciation expense values are forecast in line with asset values as shown in Fig 6.3b.

Fig 6.3b: Projected Depreciation Expense



The depreciated replacement cost (current replacement cost less accumulated depreciation) will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets.

6.4 KEY ASSUMPTIONS MADE IN FINANCIAL FORECASTS

This section details the key assumptions made in presenting the information contained in this asset management plan and in preparing forecasts of required operating and capital expenditure and asset values, depreciation expense and carrying amount estimates. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Table 6.4: Key Assumptions

PARAMETER	DOCUMENT SECTION	ASSUMPTION
Asset Values	Part 5, Section 5	Assets that are currently leased will be replaced with operational leases. All new acquisitions of significant value will be procured vi operational leases
Depreciation	Part 1, Section 7	Straight-line method as AASB116 with reviewed useful lives applicable as at June 30 of previous year
Levels of service	3	That our current fleet activities are our current service level
Demand	4	That our current fleet replacement program is based on replacement of existing fleet
Maintenance and Renewal Expenditure	5	Similar pattern to previous years

Accuracy of future financial forecasts may be improved in future revisions of this asset management plan by the following actions.

- Improved information systems on maintenance, usage and operating expenditures.
- Assumptions have been made as to the average useful lives and remaining lives of the asset groups based on current local knowledge and experience and historical trends. These need to be reviewed and the accuracy improved based on real time assessment of asset deterioration.

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- Review of the effective economic life which has the potential for greatest variance in cost predictions.
- Changes in the desired level of service and service standards from those identified in this plan

Item 7.27

Annexure J

7. ASSET MANAGEMENT PRACTICES

7.1 ACCOUNTING/FINANCIAL SYSTEMS

Refer to Core Asset Management Plan.

7.2 ASSET MANAGEMENT SYSTEMS

Refer to Core Asset Management Plan.

7.3 INFORMATION FLOW REQUIREMENTS AND PROCESSES

Refer to Core Asset Management Plan.

7.4 STANDARDS AND GUIDELINES

Refer to Core Asset Management Plan.

7.5 DATA CONFIDENCE LEVEL

Data confidence levels for this AMP are rated as B or C.

8. PLAN IMPROVEMENT AND MONITORING

8.1 PERFORMANCE MEASURES

Refer to Core Asset Management Plan.

8.2 IMPROVEMENT PLAN

The asset management improvement plan generated from this asset management plan is shown in Table 8.2.

Table 8.2: Improvement Plan

TASK NO	TASK	RESPONSIBILITY	RESOURCES REQUIRED	TIMELINE
1	Investigate utilisation and develop benchmarks annually.	Manager Asset Services	Staff	Ongoing
2	Undertake an annual review of this Asset Management Plan.	Manager Asset Services	Staff	Ongoing
3	Review costs and internal hire rates annually.	Manager Asset Services	Staff	Ongoing
4	Improved data collection to assist in life cycle cost reduction.	Manager Asset Services	Staff	Ongoing

8.3 MONITORING AND REVIEW PROCEDURES

Refer to Core Asset Management Plan.

REFERENCES

Refer to Core Asset Management Plan.