Asset Management Plan

ROADS

2025

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Related documents	Asset Management Policy Asset Management Strategy Asset Management Plans Delivery Program and Operational Plan Community Strategic Plan 2032 Integrated Planning and Reporting requirements
Responsible officer	Manager Strategic Assets
Department/Section	Strategic Assets
Category	Financial & Asset Management
Community Strategic Plan Priority	**Goal 2** Protected Environment **Goal 4** Quality Infrastructure
	SO 2.1 Advocate for, facilitate and support programs that protect and sustain our diverse environment for future generations **SO 4.1** Provide for replacement, improvement and additional Community and open space infrastructure through investment, best practice and risk management. **SO 4.4** Upgrade and maintain the road network and bridges

Contents

1 EXECUTIVE SUMMARY

1.1 The Purpose of the Plan

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

1.2 Asset Description

This plan covers the infrastructure assets that provide transportation services throughout the Council area. The primary objective for managing road infrastructure is to facilitate the movement of vehicular traffic for the local community, businesses, industries, and visitors, both within the Council region and to neighbouring areas, and to provide parking facilities to the community.

The Roads network comprises:

- Sealed Roads: road surface (bitumen seal, asphalt), road structure (pavement) and earthworks
- Unsealed Roads: gravel surface, road structure and earthworks
- Kerb & Gutter: Concrete and earthworks
- Footpaths/Cycle ways: Concrete or asphalt and earthworks
- Rural stormwater networks and structures

The above infrastructure assets have replacement value estimated at $859,008,000.

1.3 Levels of Service

The allocation in the planned budget is insufficient to continue providing existing services at current levels for the planning period. When compared to depreciation, this plan will show a lower than 100% renewal ratio, which is a result of the conflict between asset management planning, and the prevailing accounting standards.

The main service consequences of the Planned Budget are:

- Reliant on grant funding to deliver new and upgraded road infrastructure
- Reliant on grant funding to deliver renewal and replacement of existing road infrastructure assets
- Increased maintenance costs due to unfunded preventative practices
- Increased capital and renewal costs due to market demands
- Reduced road quality from deferred renewal activities
- Shortened asset lives due to Climate Change impacts (refer to Section 5.5)

1.4 Future Demand

The factors influencing future demand and the impacts they have on service delivery are created by:

- Increase in community expectations
- Changes in Technology
- Climate Change

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

- Communication of services Council can sustainably deliver to community
- Implementation of changes to be assessed on merit and applied where a reduction in construction and maintenance costs, improved efficiency, quality and WH&S can be achieved
- Significant spending required to maintain access and condition (though generally funded)

1.5 Lifecycle Management Plan

1.5.1 What does it Cost?

The forecast lifecycle costs necessary to provide the services covered by this AM Plan includes operation, maintenance, renewal, acquisition, and disposal of assets. Although the AM Plan may be prepared for a range of time periods, it typically informs a Long-Term Financial Planning period of 10 years. Therefore, a summary output from the AM Plan is the forecast of 10 year total outlays, which for the roads asset class is estimated as $25,443,754 on average per year.

1.6 Financial Summary

1.6.1 What we will do

Estimated available funding for the 10 year period is $20,545,290 on average per year as per the Long-Term Financial plan or Planned Budget. This is 58.44% of the cost to sustain the current level of service at the lowest lifecycle cost.

The infrastructure reality is that only what is funded in the long-term financial plan can be provided. The Informed decision making depends on the AM Plan emphasising the consequences of Planned Budgets on the service levels provided and risks.

Forecast Lifecycle Costs and Planned Budgets

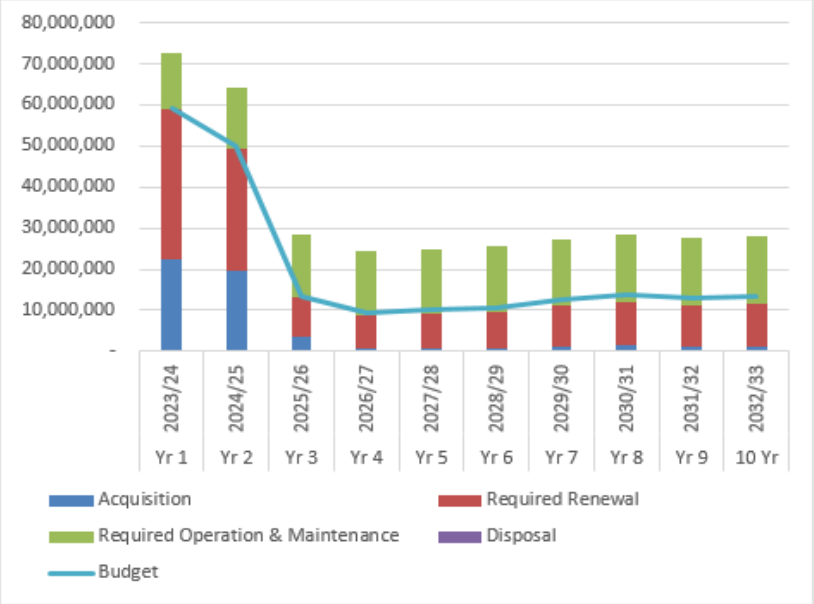


Figure Values are in current dollars.

We plan to provide road infrastructure services for the following:

- Operation, maintenance, renewal and acquisition of road infrastructure assets to meet service levels set by Upper Hunter Shire in annual budgets.

1.6.2 What we cannot do

We currently do not allocate enough budget to sustain these services at the proposed standard or to provide all new services being sought. Works and services that cannot be provided under present funding levels are:

- Extension of the sealed road network
- Assess and improve all road safety concerns
- Major upgrade works on the local and regional road network

1.6.3 Managing the Risks

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

The main risk consequences are

- Deterioration of the road network due to
  - heavier vehicles
  - Increased traffic movements
  - warmer temperatures with reduced rainfall
  - more frequent significant rain events
  - inefficient and ineffective storm water management
- Increased accidents and vehicle damage due to poor quality roads
- Litigation from public injury/fatality

We will endeavour to manage these risks by:

- Prioritise works based on
  - traffic volumes and composition
  - heavy vehicle and school bus routes
  - safe travel speed
  - roadside and corridor environment
- Continually seeking external funding for further works
- Road Safety Audits and Road Safety Strategy

1.7 Asset Management Planning Practices

Key assumptions made in this AM Plan are:

- Council's current asset register is complete
- Current valuation data is accurate

Assets requiring renewal are identified from either the asset register or an alternative method.

- The timing of capital renewals based on the asset register is applied by adding the useful life to the year of acquisition or year of last renewal,
- Alternatively, an estimate of renewal lifecycle costs is projected from external condition modelling systems and may be supplemented with, or based on, expert knowledge.

The alternate method was used to forecast the renewal lifecycle costs for this AM Plan.

This AM Plan is based on a reliable level of confidence information.

1.8 Monitoring and Improvement Program

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

- Complete the comprehensive condition survey of all road infrastructure assets
- Review the currently used asset useful lives prior to the next major asset revaluation
- Implement adequate resourcing and capability for updating the road infrastructure services asset inventory, collection of asset repair data, and updating asset condition assessment records
- Develop data collection methods to ensure consistency and ongoing improvement of condition data

2 INTEGRATED PLANNING AND REPORTING FRAMEWORK

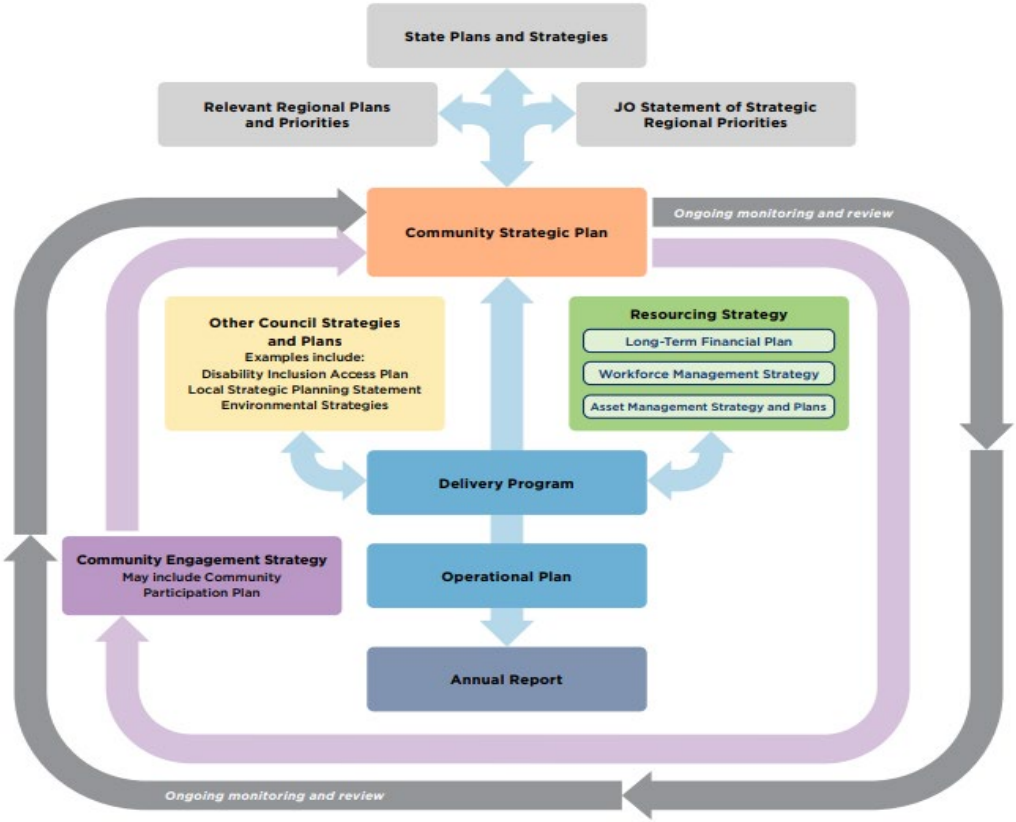
The Local Government Integrated Planning and Reporting (IP&R) Framework aims to ensure a more sustainable Local Government sector. The Local Government Act 1993 requires Council to work with the community to review the Community Strategic Plan and other documents within the Integrated Planning and Reporting Framework after the commencement of each four-year elected Council term.

Councils need to take a long term view and consider social, economic and environmental aspects and the needs of the current and future generations when making decisions. This underpins the Integrated, Planning and Reporting Framework. The importance of Civic Leadership and accountability and transparency in decision making should also underpin the Plan.

All NSW Councils are required to develop a Community Strategic Plan along with a Delivery Program (4 years) and Operational Plan (1 year). The CSP 2032 and its strategic objectives provide a foundation for our Delivery Program and Operational Plan. The Delivery Program and Operational Plan detail how each service addresses the CSP 2032 objectives, ongoing activities, priority projects and the strategies supporting this work.

These documents are informed by a Resourcing Strategy that is made up of a Long Term Financial Plan, Asset Management Strategy and Plans and Workforce Management Strategy. In order to achieve the integration envisaged by the IP&R Framework, there is an alignment between the CSP 2032, Delivery Program, Operational Plan and the other key documents. This is identified in the Upper Hunter Shire Integrated Planning and Reporting Framework.

The essential elements of the IP&R Framework are:



3 INTRODUCTION

3.1 Background

This AM Plan communicates the requirements for the sustainable delivery of services through management of assets, compliance with regulatory requirements, and required funding to provide the appropriate levels of service over the planning period.

The AM Plan is to be read with the Upper Hunter Shire Council planning documents. This should include the Asset Management Policy and Asset Management, along with the following key planning documents:

- Community Strategic Plan 2032
- Long Term Financial Plan 2020-2030
- Delivery Program 2022-2025 and Operational Plan 2023-2024
- Workforce Management Strategy 2022-2025

The infrastructure assets covered by this AM Plan include a road infrastructure network comprising of sealed and unsealed rural and regional roads plus urban streets, kerb & gutter and footpaths/cycle ways (where applicable) in the towns of Aberdeen, Merriwa, Murrurundi, Scone and the villages in the local government area as shown in Figure 1.

The infrastructure assets included in this plan have a total replacement value of $859,008,000.

Figure 1: Map of Upper Hunter Shire Towns and Villages

Key stakeholders in the preparation and implementation of this AMP are shown in Table 3.1.

Table 3.1: Key Stakeholders in the AM Plan

Key Stakeholder	Role in Asset Management Plan
Councillors	• Represent needs of community/shareholders • Endorsement of the asset management policy and plans • Allocate financial resources to meet planning objectives in providing services while managing risks • Ensure service is sustainable
General Manager	• Provide leadership and coordination for the implementation of asset management across the business units • Raise awareness and provide education of asset management across Council
Director Infrastructure Services	• Allocate human resources to meet planning objectives in providing services while managing risks • Ensure all staff are educated in asset management and that responsibilities are communicated to staff
Manager Strategic Assets	• Develop, review and oversee the Asset Management Policy and Asset Management Plans • Implement the improvement activities identified within the plan • Ensure that all asset data is kept up to date and inspections are undertaken in accordance with the agreed levels of service • Develop 10 year Capital Works plans and budgeting
Manager Works Delivery and Manager Water and Sewer	• Operations and Maintenance management to meet agreed service levels • Liaison internally with Senior Management with regard to asset prioritisation and planning
UHSC Staff	• Verify the size, location and condition of assets • Provide local knowledge detail on all infrastructure assets • Deliver Capital Works, Operations and Maintenance programs to meet agreed service levels • Liaison with Managers with regard to asset condition, prioritisation and planning
Community	• Be aware of service levels and costs • Participate in consultation processes • Provide feedback on services • End user of the assets

3.2 Goals and Objectives of Asset Ownership

Our goal for managing infrastructure assets is to meet the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- Linking to a Long-Term Financial Plan which identifies required, affordable forecast costs and how it will be allocated.

Key elements of the planning framework are:

- Levels of service – specifies the services and levels of service to be provided,
- Risk Management
- Future demand – how this will impact on future service delivery and how this is to be met,
- Lifecycle management – how to manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices – how we manage provision of the services,
- Monitoring – how the plan will be monitored to ensure objectives are met,
- Asset management improvement plan – how we increase asset management maturity.

Other references to the benefits, fundamentals principles and objectives of asset management are:

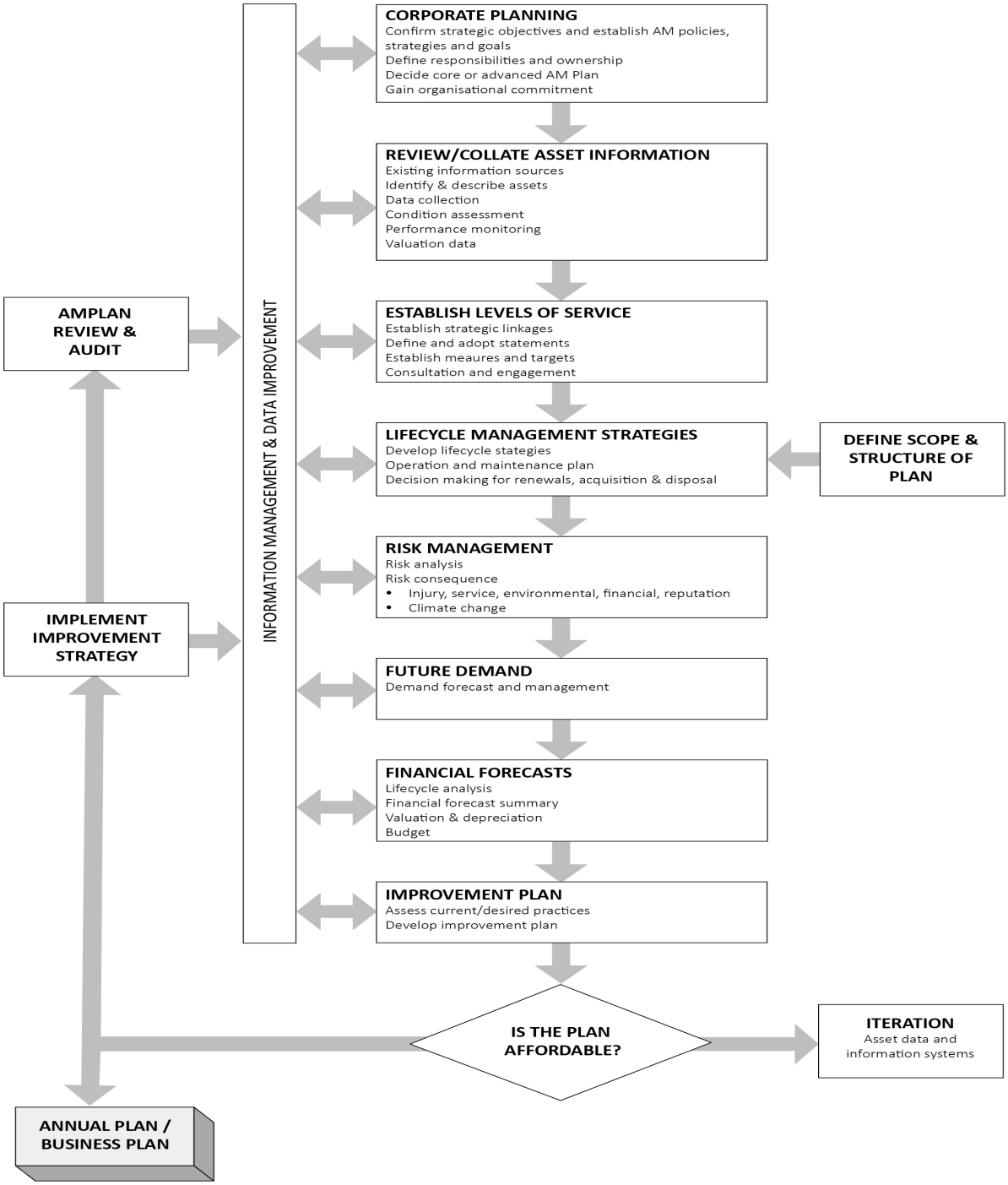
- International Infrastructure Management Manual 2015 [1]
- ISO 55000[2]

[1] Based on IPWEA 2015 IIMM, Sec 2.1.3, p 2| 13
[2] ISO 55000 Overview, principles and terminology

A road map for preparing an AM Plan is shown below.

Road Map for preparing an Asset Management Plan

Source: IPWEA, 2006, IIMM, Fig 1.5.1, p 1.11



4 LEVELS OF SERVICE

4.1 Customer Research and Expectations

This AM Plan is prepared to facilitate consultation prior to adoption of levels of service by the Council. Future revisions of the AM Plan will incorporate customer consultation on service levels and costs of providing the service. This will assist the 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.

In a broader attempt to assess the priorities and service expectations of our wider community, across all areas of performance, Council has commissioned detailed surveys through the company Micromex Research Consultants.

This survey concentrated on establishing the community's assessment of the importance of, and their satisfaction with, a number of activities, facilities and services (52 in total), including road infrastructure assets. A scale of 1 to 5 was used in all rating questions where 1 was the lowest importance or satisfaction, and 5 was the highest importance or satisfaction.

Separately, comprehensive community surveys were undertaken in 2010, 2013, 2015 and 2017 using a mix of phone and face to face surveys. Table 4.1 summarises the results from our Customer Satisfaction Survey.

Table 4.1: Customer Satisfaction Survey Levels

Performance Measure	Years	Importance	Satisfaction	Performance Gap
Road Maintenance	2010	4.66	2.37	2.29
Footpaths		4.18	3.04	1.14
Cycle ways		3.50	2.87	0.63
Road Maintenance	2013	4.73	2.31	2.42
Footpaths		4.22	3.11	1.11
Cycle ways		3.50	3.10	0.40
Road Maintenance	2015	4.69	2.56	2.13
Footpaths		4.08	3.17	0.91
Cycle ways		3.42	3.12	0.30
Road Maintenance	2017	4.64	2.52	2.12
Footpaths		4.08	3.05	1.03
Cycle ways		3.33	2.97	0.36

Source: Community Research, Micromex Research (November 2017)

4.2 Strategic and Corporate Goals

This AM Plan is prepared under the direction of the Upper Hunter Shire Council vision, mission, goals and objectives.

Our vision is:

"A quality rural lifestyle in a vibrant, caring and sustainable community"

Our values are:

- Mutual respect for people and cultures
- Ensure staff and community safety
- Efficient, effective and reliable service
- Honest, open and accountable
- Deliver on our commitments
- Improved Environmental Responsibility

Strategic goals have been set by the Upper Hunter Shire Council Community Strategic Plan 2032. The relevant goals and objectives and how these are addressed in this Asset Management Plan are summarised in Table 4.2.

Table 4.2: Goals and how these are addressed in this Plan

Goal	Strategic Objective	How Goal and objectives are addressed in the AM Plan
Protected Environment Ensuring the ongoing protection of our environment and natural resources	**2.1** Advocate for, facilitate and support programs that protect and sustain our diverse environment for future generations	By proactively surveying the asset condition of our road network we will understand and make long term plans for a sustainable infrastructure
Quality Infrastructure Maintaining and developing our infrastructure network to meet the ongoing needs of our population	**4.1** Provide for replacement, improvement and additional Community and open space infrastructure though investment, best practice and risk management **4.4** Upgrade and maintain the road network and bridges.	By providing for the cost effective development, upgrade, renewal and maintenance of road assets in the Shire and by ensuring that they are effectively managed to deliver the required services

4.3 Legislative Requirements

Council has to meet many legislative requirements including Australian and State legislation and State regulations as shown in Table 4.3.

Table 4.3: Legislative Requirements

Legislation	Requirement
Local Government Act 1993 and Local Government (General) Regulation 2021	Sets out the role, purpose, responsibilities and powers of local governments including the preparation of a long-term financial plan supported by asset management plans.
Roads Act 1993 and Roads Regulation 2008	Sets out the responsibilities and powers of Roads Authorities to undertake works on, and maintenance of, public roads. Council is a Roads Authority for all roads within the shire (excluding Crown Roads)
Civil Liability Act 2002	To manage negligence, elements of a claim, duty of care, standard of care and causation and to address the requirements of sections 42 and 45.
National Asset Management Framework	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.
Integrated Planning and Reporting (IP&R) Framework	Key requirement is to integrate community plans with operational and delivery plans.
Protection of the Environment Operations (POEO) Act 1997	Under the POEO Act, it is an offence for the operator of any facility to cause pollution, including odour.
Waste Avoidance and Resource Recovery (WARR) Act 2001	Establishes the need to avoid/minimise waste, increase resource use efficiency/reduce natural resource consumption, and minimise environmental impact through ecologically sustainable development and sustainable waste management systems.
Environmental Offences and Penalties Act 1989	Details Council's environmental responsibilities and the penalties to be applied if these are not met
Work Health & Safety Act 2011	Council must ensure a safe workplace for all workers and other persons.

4.4 Customer Values

Service levels are defined in three ways, customer values, customer levels of service and technical levels of service.
Customer Values indicate:

- what aspects of the service is important to the customer,
- whether they see value in what is currently provided and
- the likely trend over time based on the current budget provision

Table 4.4: Customer Values

Service Objective:			
Customer Values	**Customer Satisfaction Measure**	**Current Feedback**	**Expected Trend Based on Planned Budget**
That roads and bridges are suitable for heavy vehicles	Number of roads/bridges load limited, number of roads available for higher productivity vehicles	Increasing higher productivity vehicles is desired across the shire	Improvement in number of roads available for higher productivity vehicles
That roads are always available	Number of road closures per year	Not measured, but captured anecdotally	Nil change
That footpaths are available as transportation options to points of interest	Number of requests for new footpaths	Not measured	Access to points of interest to improve

4.5 Customer Levels of Service

The Customer Levels of Service are considered in terms of:

Condition How good is the service … what is the condition or quality of the service?

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

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

In table 4.5 under each of the service measure types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

There are measures of fact related to the service delivery outcome (e.g. number of occasions when service is not available or proportion of replacement value by condition %'s) to provide a balance in comparison to the customer perception that may be more subjective.

Table 4.5: Customer Level of Service Measures

Type of Measure	Level of Service	Performance measure	Current Performance	Expected Trend Based on Planned Target
Condition	Road network remains open at all times	Number of unplanned closures per year	Nil outside of extreme weather events	No increase in closures
	Nil trip hazards on footpath	Joint separation < 20mm	Not measured	Reduction in trip hazards
	Confidence levels		Medium	Medium
Function	Road network is wide enough for the traffic volume and composition	Total number of customer complaints responded to within 14 days / total number of customer complaints received	To be assessed	95% of customer complaints responded to within 14 days
	Enable freight access across the shire with higher productivity vehicles	% roads with higher productivity vehicles are permitted	Not measured	It is expected more roads will be available for higher productivity vehicles
	Minimise number of road trauma incidents on Council roads	NSW Centre for Road Safety	7 fatalities in the last 5 years	Fatalities are expected to decrease
	Confidence levels		Medium	Medium
Capacity	Traffic congestion kept to a minimum	Function and capacity of intersections	Not measured	Negligible increase in travel time
	Confidence levels		Medium	Medium

4.6 Technical Levels of Service

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

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

- **Acquistion** – the activities to provide a higher level of service (e.g. widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library)
- **Operation** – the regular activities to provide services (e.g. opening hours, cleansing, mowing grass, energy, inspections, etc.

- **Maintenance** – the activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life (e.g. road patching, unsealed road grading, building and structure repairs),
- **Renewal** – the activities that return the service capability of an asset up to that which it had originally provided (e.g. road resurfacing and pavement reconstruction, pipeline replacement and building component replacement),

Asset managers plan, implement and control technical service levels to influence the customer service levels.[1]

Table 4.6 shows the activities expected to be provided under the current 10 year Planned Budget allocation, and the Forecast activity requirements being recommended in this AM Plan.

Table 4.6: Technical Levels of Service

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance	Recommended Performance
Acquisition	Extension of the sealed network	Delivery of funded capital work priorities for local roads completed within allocated timeframes	91% as at 30/06/2023	>90%
	Extension of the footpath network	Delivery of funded capital work priorities for footpaths and cycleways completed within allocated timeframes	76% as at 30/06/2023	90%
Operation	Vegetation control	Nil encroachment to visibility or 4.6m high vehicles	Some encroachment under 4.6m across most roads	Sealed road verges below 750mm and hazard free clearzone Unsealed road verges hazard free clearzone
	Local Roads	Length of sealed pavement network inspected	475km as at 30/06/2023	>459.6km

		Length of gravel unsealed pavement network inspected	994km as at 30/06/2023	>969.6km
	Regional Roads	Length of regional networks road pavement inspected	366.28km as at 30/06/2023	174km per annum
Maintenance	Repair of trip hazards	<20mm height	Not measured	<20mm height
- Unsealed Maintenance Grading	Local Roads	Length of unsealed grading completed	649.14km as at 30/06/2023	1154km per annum
Renewal				
- Sealed Pavement Renewal or Rehabilitation	Regional Sealed Roads	Length of regional road network resealed	16km as at 30/06/2023	16km per annum
	Local Sealed Roads	Length of local road sealed network resealed	41.2km as at 30/06/2023	26km per annum

Note: Other types of routine maintenance are not programmed but carried out as required in response to inspection and report from the public.

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

5 FUTURE DEMAND

5.1 Demand Drivers

Drivers affecting demand include things such as population change, regulations, changes in demographics, seasonal factors, vehicle ownership rates, consumer preferences and expectations, technological changes, economic factors, agricultural practices, environmental awareness, etc.

5.2 Demand Forecasts

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented.

5.3 Demand Impact and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 5.3.

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 can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to date for demand management are shown in Table 5.3. Further opportunities will be developed in future revisions of this AM Plan.

Table 5.3: Demand management Plan

Demand Driver	Current Position	Projection	Impact on services	Demand Management Plan
Increase in community expectations	Moderate expectations with increased road safety awareness and advances in technology	Increased expectations of safe, smooth travel. Further desire for more footpaths and sealed roads	Increased maintenance, operation, acquisition and renewal costs	Clear, concise communication with residents about affordability of their expectations
Changes in Technology	Continual improvements in road infrastructure	Changes in construction and maintenance techniques. Introduction of new machinery, plant and equipment Asset data capture by video inspection and the transportation of this information onto Council's GIS	Decreased frequency of bitumen reseal, increased useful life Spatial location and condition of assets able to be verified from GIS reducing the need for reactive inspections	These changes will be assessed on merit and applied where a reduction in construction and maintenance costs, improved efficiency, quality and WH&S can be achieved

Climate Change	Extremes increasing	Higher intensity rainfalls in storm events	Increased flooding resulting in road closures and potential property damage	Significant spending required to maintain access and condition (though generally funded)
Market Demands	Civil construction market experiencing excessive investment	This will continue for the foreseeable future given State, Federal and private investment and funding	Significant impact in being able to deliver capitals works, maintenance and operational programs on a yearly basis	Prioritise internal recruitment and training of existing staff to deliver these programs

5.4 Asset Programs to meet Demand

The new assets required to meet demand may be acquired, donated or constructed.

The cumulative value of new contributed and constructed asset values have not been considered in any detail in this plan, as the historical and expected growth rates for Council have not been particularly high, and would not be considered to have any significant impact in the 10-year horizon of this plan.

Acquiring new assets will commit Council to ongoing operations, maintenance and renewal 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 operations, maintenance and renewal costs for inclusion in the long-term financial plan (Refer to Section 6).

5.5 Climate Change Adaptation

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

How climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which we respond and manage those impacts.[3]

As a minimum we consider how to manage our existing assets given potential climate change impacts for our region.

[3] IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

Risk and opportunities identified to date are shown in Table 5.5.1

Table 5.5.1 Managing the Impact of Climate Change on Assets and Services

Climate Change Description	Projected Change	Potential Impact on Assets and Services	Management
Temperature change	Increase in temperatures	Increasing temperatures affects road maintenance techniques and deterioration rates	Monitor with regular condition assessments
Storm intensity	More extreme weather events	Localised flooding	Ensure maintenance of kerb and gutter and roadside drainage
Less frequent rainfall, increased drought longevity, increased evaporation	Reduced secure yield from water sources	Possible reduced level of service	Ensure Drought and Emergency Response Management Plan is up to date. Augmentation of water sources, potential bulk water supply from neighbouring councils

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

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

Table 5.5.2 summarises some asset climate change resilience opportunities.

Table 5.5.2 Building Asset Resilience to Climate Change

New Asset Description	Climate Change impact These assets?	Build Resilience in New Works
Kerb & Gutter	More extreme weather events and heavier rainfall	Any new kerb and gutter works to accommodate increased flow from storm surges
Road Pavement	Degradation of pavements due to hot weather	Material types considered for reducing the fatigue rates of pavements Modify pavement design and improve design standards/guidelines for road pavements

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

6 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how Council plans to manage and operate the road infrastructure assets at the agreed levels of service (Refer to section 4) while managing the life cycle costs.

6.1 Background Data

6.1.1 Physical parameters

The assets covered by this AM Plan are shown in Table 6.1.1.

This covers all road infrastructure assets, including sealed and unsealed roads, kerb and guttering and foothpaths/cycleways under the management of Upper Hunter Shire Council.

Table 6.1.1: Assets covered by this Plan

Asset Category	Useful Life (Years)	Dimension	Replacement Value
Sealed Pavement (Depreciable)	70-80	629.6km	$294,527,000
Unsealed Pavement (Depreciable)	30-60	1,097km	$120,526,000
Kerb and Gutter	80	126.8km	$40,741,000
Footpath/Cycleway	100	30.3km	$9,676,000
Bulk earthworks			$393,538,000
Total			**$859,008,000**

Source: Council's Asset Register (as at 30 June 2023)

All figure values are shown in current day dollars.

It is proposed through this plan to undertake Council's renewals based on asset condition, with asset life estimates providing the anticipated average annual spend.

6.1.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available. However, there is insufficient resources to address all known deficiencies. Locations where deficiencies in service performance are known are detailed in Table 6.1.2.

Table 6.1.2: Known Service Performance Deficiencies

Location	Service Deficiency
Sealed regional, rural and urban roads	Sealed pavement width is below the desired width for the road classification
Unsealed regional and rural roads	Pavement thickness is below the desired thickness for the road classification
Kerb & Gutter	Kerb and gutter is not allowing storm water to run smooth into the drainage network
Footpaths/cycle ways	Footpath or cycleway width is below the desired width for the road classification

The above service deficiencies were identified from customer requests, condition assessments and technical investigations.

6.1.3 Asset condition

Condition is currently monitored through failure statistics, selected pavement investigations (rare) and video and data capture through ARRB assessments. Council has also adopted for an independent survey of the sealed road network to be undertaken on a 4-5 year cycle. This involves the video captured, GPS and detailed defect identification and measurement (international roughness index, rutting, edge breaks, cacking, pavement failures etc.) which is then used to calculate an accurate condition.

Condition is measured using a 1 – 5 grading system[4] as detailed in Table 6.1.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AM plan results are translated to a 1 – 5 grading scale for ease of communication.

Table 6.1.3: Condition Grading System

Condition Grading	Description of Condition
1	**Very Good**: free of defects, only planned and/or routine maintenance required
2	**Good**: minor defects, increasing maintenance required plus planned maintenance
3	**Fair**: defects requiring regular and/or significant maintenance to reinstate service
4	**Poor**: significant defects, higher order cost intervention likely
5	**Very Poor**: physically unsound and/or beyond rehabilitation, immediate action required

The condition profile of our assets is shown in 6.1.4. This table shows the condition profile for all Councils road infrastructure. Note that the percentages are based on replacement costs.

[4] IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

Table 6.1.4: Asset Condition Profile

Road Infrastructure Assets Component	Asset condition grade				
	1	2	3	4	5
Seal roads	36.4%	59.9%	2.7%	1.0%	0.0%
Sealed roads surface	28.6%	60.1%	8.4%	2.9%	0.1%
Unsealed roads	24.8%	42.4%	26.9%	5.3%	0.0%
Kerb and Gutter	44.0%	34.5%	17.8%	3.1%	0.6%
Footpaths	19.9%	68.0%	5.9%	5.6%	0.7%

6.2 Operations and Maintenance Plan

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

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

The trend in maintenance budgets are shown in 6.2.1.

Table 6.2.1: Maintenance Budget Trends

Year	Maintenance Budget
2022/23	$5,143,250
2023/24	$5,243,205
2024/25	$5,328,504

Maintenance budget levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance budget allocations are such that they will result in a lesser level of service, the service consequences and service risks have been identified and are highlighted in this AM Plan and service risks considered in the Infrastructure Risk Management Plan.

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

Asset hierarchy

An asset hierarchy provides a framework for structuring data in an information system to assist in collection of data, reporting information and making decisions. The hierarchy includes the asset class and component used for asset planning and financial reporting and service level hierarchy used for service planning and delivery.

The service hierarchy is shown in Table 6.2.2.

Table 6.2.2: Asset Service Hierarchy

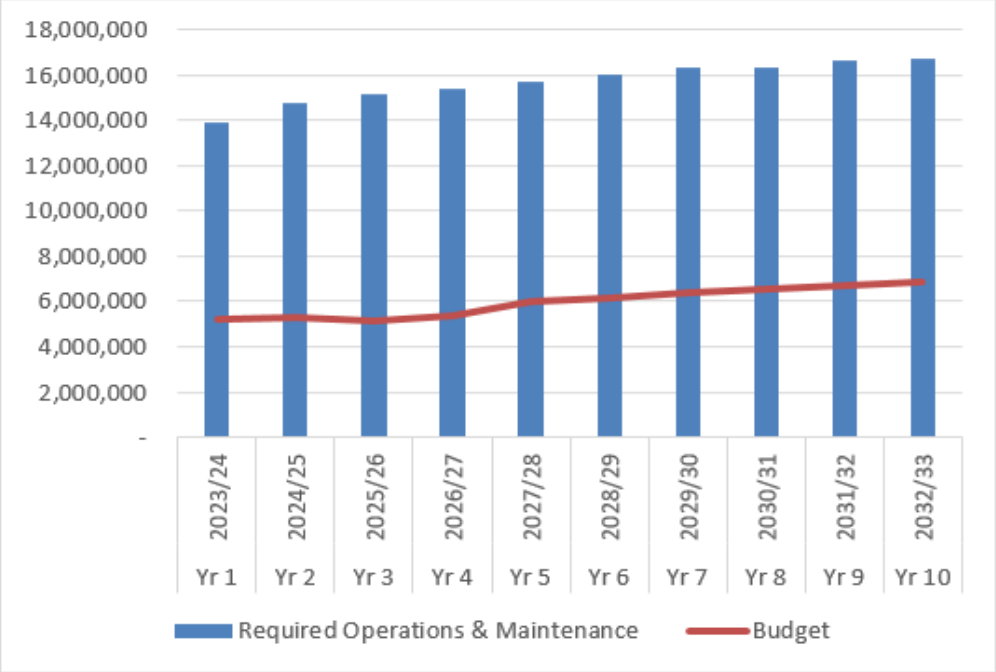
Hierarchy Type	Service Level Objective	Base Profile Standard	Typical Daily Traffic	Base Access Standards
Link Roads - Regional Roads (RR)	Strategic freight linkage routes • Heavy vehicle linkage from the State Arterial network to local commercial / industrial focal points	Two lane sealed Road with seal widening on crests & curves	> 200vpd	All weather access Hazards rectified or delineated to enable safe driver response times at sign posted speed limits
Collector Roads - Rural 1 (R1)	High usage local collector routes • Rural collector routes from local access roads to community centres or popular focal points • High usage connecter routes to the Arterial road network	Two lane sealed road	> 100vpd	All weather access Hazards rectified or delineated to enable safe driver response times at sign posted speed limits
Access Roads - Rural 2 (R2)	Medium usage property access routes • Provide property access to rural developed areas incorporating at least 20 permanent tenements • Medium usage access to rural properties generating regular & consistent vehicle usage • Bus Route minimum standard	Two lane gravel road or single lane sealed road where traffic condition warrants	> 30vpd	All weather access Delays during / following extreme weather events may be experienced Vehicle speed adjustment required to accord with road surface conditions Hazards rectified or delineated to enable safe driver response times at sign posted speed limits
Access Roads – Rural 3 (R3)	Low usage property access routes • Provide property access to rural developed areas incorporating at least 20 permanent tenements • Low usage access to rural properties generating spasmodic vehicle usage	Single lane gravel road	10-30vpd	All weather access Delays during / following extreme weather events may be experienced over storm systems
Access Roads – Rural 4 (R4)	Very low usage property access routes • Occasional usage access to rural properties generating spasmodic vehicle usage • Strategic fire access route or emergency access point	Single lane formed / unformed road	<10 vpd	Dry weather access

Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of, the forecast operation and maintenance costs are expected to decrease.

Figure 6.2 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

Figure 6.2: Operations and Maintenance Summary



All figure values are shown in current day dollars.

Planned/cyclic maintenance work is between 30 to 40% of total maintenance expenditure depending on the frequency and number of customer requests received during the year. It is Council's goal to increase this amount progressively and reduce the amount of reactive maintenance, which should then provide operational cost savings, and maximised asset performance.

There is currently a backlog of works, which indicates that existing maintenance expenditure levels are not adequate to meet required service levels.

6.3 Renewal Plan

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

Assets requiring renewal are identified from one of two approaches in the Lifecycle Model.

- The first method uses Asset Register data to project the renewal costs (current replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year), or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work (i.e. condition modelling system, staff judgement, average network renewals, or other).

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 6.3. Asset useful lives were last reviewed on June 2020.

Table 6.3: Useful Lives of Assets

Asset (Sub)Category	Useful life
Primer-seal	70-80 years
Seal	12-15 years
Sealed Pavement	70-80 years
Unsealed Pavement	30-60 years
Kerb & Gutter	80 years
Footpaths	100 years

The estimates for renewals in this AM Plan were based on the alternate method.

6.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a playground).[5]

It is possible to prioritise renewals by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have high use and subsequent impact on users would be significant,
- Have higher than expected operational or maintenance costs, and
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.[6]
- The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 6.3.1

[5] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.
[6] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

Table 6.3.1: Renewal Priority Ranking Criteria

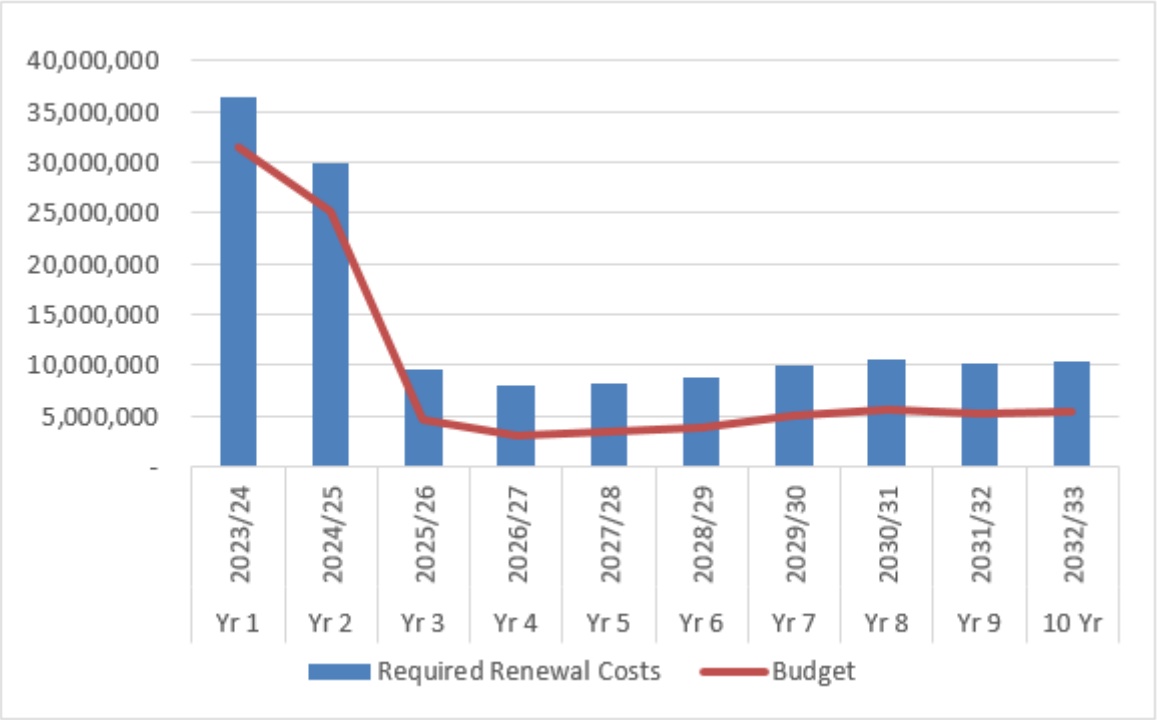
Criteria	Priority Level
Condition	1 (High)
Road Hierarchy	1 (High)
Road Surface Type	2 (Medium)
Traffic Count	2 (Medium)
Bus Route	3 (Low)
Heavy Vehicle Count	3 (Low)

Council currently prioritises renewals on its higher class assets based on condition assessment that takes into account failures and other defects.

6.4 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 6.4.1. A detailed summary of the forecast renewal costs is shown in Appendix D.

Figure 6.4.1: Forecast Renewal Costs



All figure values are shown in current day dollars.

Significantly high renewal costs in years 1 and 2 are due to State and Federal grant funding for Coulsons Creek Road rehabilitation.

Council has placed a focus on asset renewals which will go some way to managing the road infrastructure backlog.

With a continued focus on asset renewal planning this should result in improved asset conditions, customer satisfaction levels, lower maintenance expenditure and the reduction or elimination of the backlog of works.

Renewal works identified in terms of renewal strategies may be deferred if the cost (or aggregate cost) is beyond the current financial ability to fund it. This can occur when there are short term renewal profile peaks, or higher priority works are required on other infrastructure asset groups.

When renewal works are deferred, the impact of the deferral on the assets ability to still provide the required level of service will be assessed. Although the deferral of some renewal works may not impact significantly on the short-term operation of the assets, repeated deferral will create a liability (backlog) in the longer term.

6.5 Acquisition Plan

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

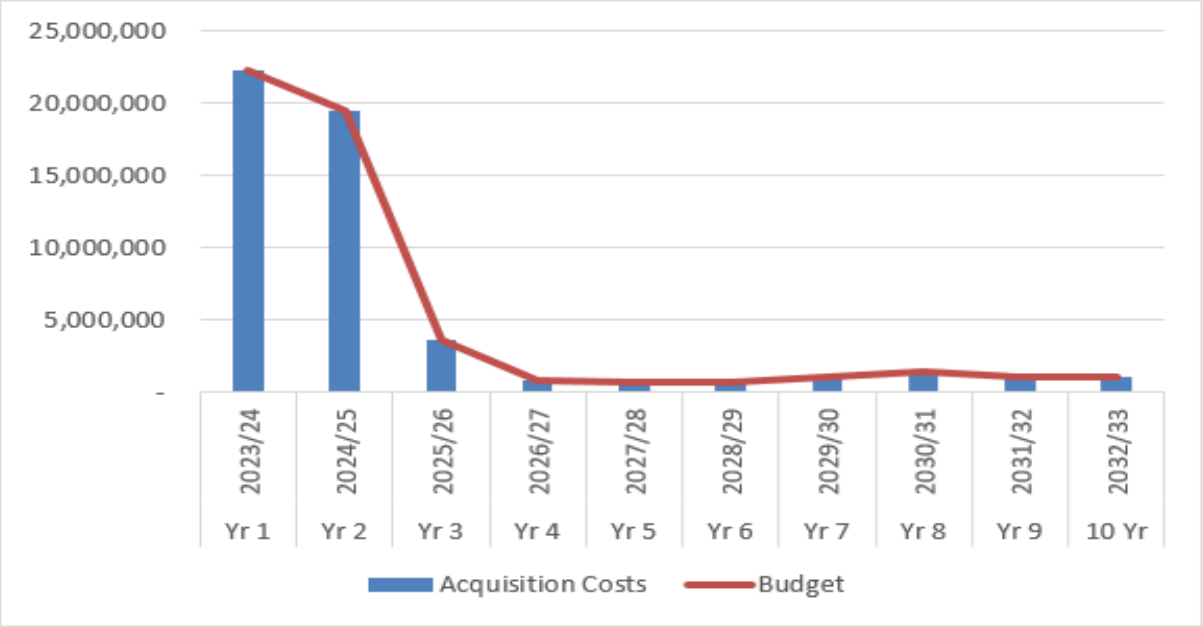
6.5.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to Council's needs. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programmes. Council does not currently have criteria for the ranking of acquisitions.

Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised / summarized in Figure 6.5.1 and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix A.

Figure 6.5.1: Acquisition Summary



All figure values are shown in current day dollars.

Significantly high acquisition costs in years 1 and 2 are due to State and Federal grant funding for Coulsons Creek Road rehabilitation and Kelly Street CBD Revitalisation.

When an Entity commits to new assets, they must be prepared to fund future operations, maintenance and renewal costs. They must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity.

6.6 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. It is unlikely that any constructed sealed road would be disposed of while it is still in service. It is possible that if a sealed road is deemed underutilised then it may revert back to an unsealed road.

In the carrying out of road realignment works existing road pavement materials may be ripped up and left in-situ or removed and reused elsewhere. For all practical purposes, the value of salvaged road and footpath materials is of little consequence.

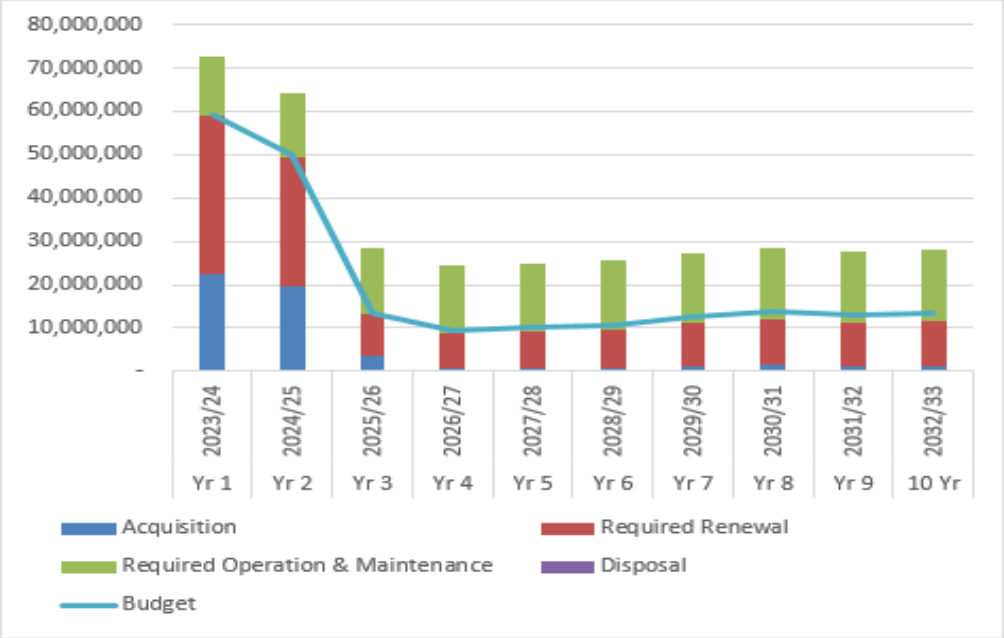
Upper Hunter Shire Council has not identified any road assets for disposal.

6.7 Summary of asset forecast costs

The financial projections from this asset plan are shown in Figure 6.7.1. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimise the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

Figure 6.7.1: Lifecycle Summary



All figure values are shown in current day dollars.

As this plan is based on the alternate method, the budget levels are very stable. Without accurate condition data, it is likely that some renewals may need to be deferred to manage Council's cashflow. Deferral will be based on condition assessment, with Council prioritising the poorest condition assets for renewal.

7 RISK MANAGEMENT PLANNING

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'[7].

An assessment of risks[8] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

7.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Similarly, critical failure modes are those which have the highest consequence.

Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarised in Table 7.1. Failure modes may include physical failure, collapse or essential service interruption.

Table 7.1 Critical Assets

Critical Assets	Failure Mode	Impact
Road Pavement	Potholes	Loss or reduction of service, restricted access, casualties to users or property damage.
Road Pavement	Edge breaks	Loss or reduction of service, casualties to users or property damage.
Road Pavement	Rutting/shoving	Loss or reduction of service, casualties to users or property damage.

By identifying critical assets and failure modes an organisation can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

[7] ISO 31000:2009, p 2
[8] Appendix E – Road Infrastructure Risk Register

7.2 Risk Assessment

The risk management process used is shown in Figure 7.2 below.

It is an analysis and problem-solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

The process is based on the fundamentals of International Standard ISO 31000:2018.

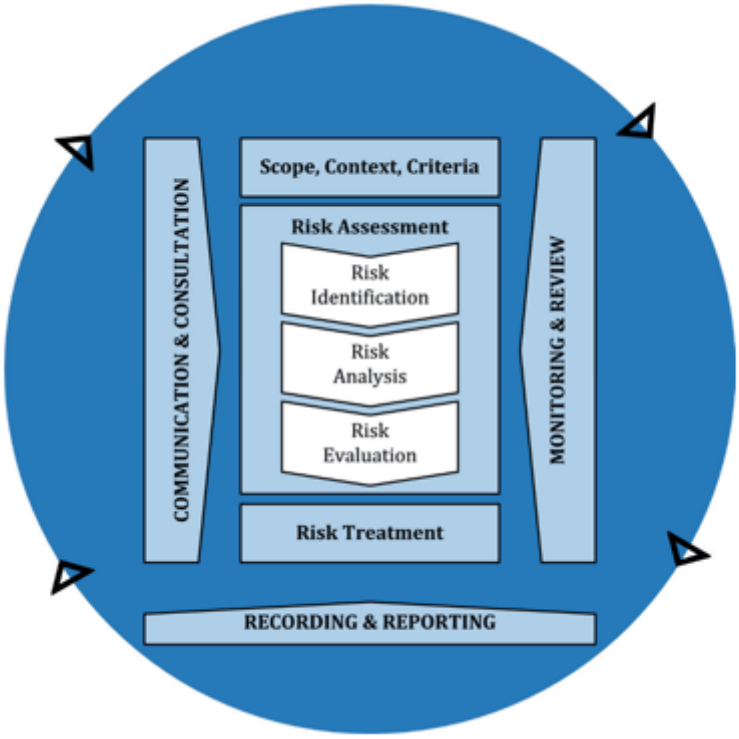


Fig 7.2 Risk Management Process - Abridged
Source: ISO 31000:2018, Figure 1, p9

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks[9] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 7.2. It is essential that these critical risks and costs are reported to management and Council.

[9] Appendix E – Road Infrastructure Risk Register

Table 7.2: Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *
Roads	Flooding/inundation leading to pavement failure	H	Adequate drainage maintenance, initial design considerations	M
Footpath	Movement in footpath creating a trip hazard	H	Regular inspections and routine maintenance	M

Note * The residual risk is the risk remaining after the selected risk treatment plan is implemented

7.3 Infrastructure Resilience Approach

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

Resilience recovery planning, financial capacity, climate change risk assessment and crisis leadership.

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

7.4 Service and Risk Trade-Offs

The decisions made in adopting this AM Plan are based on the objective to achieve the optimum benefits from the available resources.

7.4.1 What we cannot do

There are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years. These include:

- Extend the sealed road network
- Major upgrade works on the Regional road network

7.4.2 Service trade-off

If there is forecast work (operations, maintenance, renewal, acquisition or disposal) that cannot be undertaken due to available resources, then this will result in service consequences for users. These service consequences include:

- Reduction in service level due
- Potential load limiting of roads
- Restriction of access for Higher Productivity Vehicles

7.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Increasing reactive maintenance costs
- Exposure to claims and litigation against Council for public liability breaches
- Political pressure for improved levels of service
- Lower performance on asset and financial indicators

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

8 FINANCIAL SUMMARY

This section contains the financial requirements resulting from all the information presented in the previous sections of this AM Plan. The financial projections will be improved as discussion on desired levels of service and asset performance matures.

8.1 Financial Sustainability and Projections

8.1.1 Sustainability of service delivery

There are two key indicators of sustainable service delivery that are considered in the AM 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[10] 100%

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have 65.54% of the funds required for the optimal renewal of assets.

The forecast renewal work along with the proposed renewal budget, and the cumulative shortfall, is illustrated in Appendix D.

Medium term – 10 year financial planning period

This AM 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 first 10 years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs over the 10 year planning period is $29,901,253 on average per year.

The proposed (budget) operations, maintenance and renewal funding is $15,289,690 on average per year. This indicates that 51.13% of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget. Note, these calculations exclude 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 AM Plan and ideally over the 10 year life of the Long-Term Financial Plan.

[10] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

8.1.2 Forecast Costs (outlays) for the long-term financial plan

Table 8.1.2 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the long-term financial plan.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan (including possibly revising the long-term financial plan).

Forecast costs are shown in 2023/24 dollar values.

Table 8.1.2: Forecast Costs (Outlays) for the Long-Term Financial Plan

Year	Acquisition	Operation & Maintenance	Renewal	Disposal
2023/24	22,237,000	13,887,647	36,411,464	0
2024/25	19,450,000	14,764,062	29,988,464	0
2025/26	3,669,000	15,110,772	9,579,464	0
2026/27	845,000	15,397,359	8,048,464	0
2027/28	745,000	15,689,969	8,263,464	0
2028/29	700,000	15,994,319	8,798,464	0
2029/30	1,090,000	16,327,084	9,998,464	0
2030/31	1,470,000	16,341,559	10,583,464	0
2031/32	1,090,000	16,666,040	10,078,464	0
2032/33	1,060,000	16,685,082	10,398,464	0

8.2 Funding Strategy

The proposed funding for assets is outlined in Council's budget and Long-Term financial plan.

The financial strategy of Council determines how funding will be provided, whereas the AM Plan communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

It must be noted that in the 2023/24 year over $25 million (approximately 47.5%) of the total capital expenditure budget is either partially or wholly dependent on funding secured through State and Federal Governments and other appropriate sources. Should a significant portion of this funding be unsuccessful or have considerable changes made to existing funding agreements or arrangements it will pose a

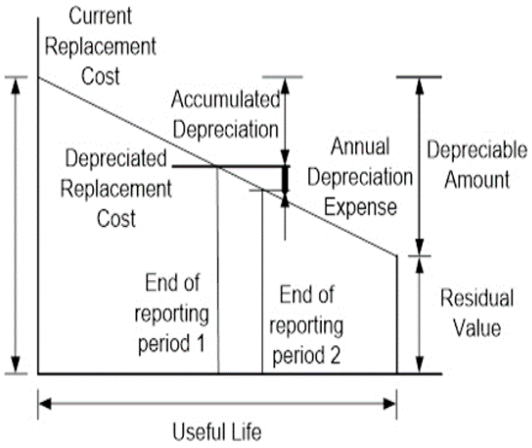
substantial risk to the assets condition and desired level of services. Furthermore, and potentially more concerning would be impacts on Councils workforce.

8.3 Valuation Forecasts

8.3.3 Asset valuations

The best available estimate of the value of assets included in this AM Plan are shown below. The assets are values at $859,008,000 as at June 2023.

Current (Gross) Replacement Cost	$859,008,000
Depreciable Amount	$465,470,000
Depreciated Replacement Cost[11]	$373,052,000
Annual Depreciation	$ 4,901,967



It must be noted that the current market for construction works in the civil industry has seen a significant rise over the last 12 to 18 months. This is mainly due to both the State and Federal Government funding initiatives in renewing and upgrading various civil transportation infrastructure. This has seen a sharp increase in the cost of completing these types of projects, which subsequently will increase the valuation forecasts.

8.3.4 Valuation Forecast

Asset values are forecast to increase as additional assets are added to service.

Additional assets will generally add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts.

8.4 Key Assumptions Made in Financial Forecasts

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

[11] Also reported as Written Down Value, Carrying or Net Book Value.

- Council's current asset register is complete
- Current valuation data is accurate

8.5 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is classified on a A - E level scale12 in accordance with Table 8.5.1.

Table 8.5.1: Data Confidence Grading System

Confidence Grade	Description
A. Very High	Data based on sound records, procedures, investigations and analysis, documented properly and recognised as the best method of assessment. Dataset is complete and estimated to be accurate ± 2%
B. High	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate ± 10%
C. Medium	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated ± 25%
D. Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete and most data is estimated or extrapolated. Accuracy ± 40%
E. Very Low	None or very little data held.

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 8.5.2.

Table 8.5.2: Data Confidence Assessment for Data used in AMP

Data	Confidence Assessment	Comment
Demand drivers	B	Derived from Census data and looking at historical drivers
Growth projections	B	Multiple scenarios developed and considered during 30 year financial modelling
Acquisition forecast	A	Currently planned acquisitions, minimal gifted assets
Operation forecast	B	Current levels generally known and recorded, scenarios considering additional resourcing need to be developed

Maintenance forecast	B	Based on historic expenditure, however maintenance history not recorded at asset ID level. Need to start recording work history to asset lengths in CONFIRM to improve renewal planning
Renewal forecast		
- Asset values	B	Asset revaluation completed in June 2020. Major revaluation scheduled for every five years and due 2025
- Asset useful lives	B	Useful lives were last reviewed in June 2020 and will be reviewed in 2024/25 prior to the major asset revaluation planned for 2025
- Condition modelling	D	There has been limited condition information collected and therefore no modelling undertaken to date
Disposal forecast	A	No disposals expected

The estimated confidence level for and reliability of data used in this AM Plan is considered to be high.

9 PLAN IMPROVEMENT AND MONITORING

9.1 Status of Asset Management Practices[12]

9.1.1 Accounting and financial data sources

This AM Plan utilises accounting and financial data. The source of the data is Authority.

9.1.2 Asset management data sources

This AM Plan utilises asset management data. The source of the data is excel database, supplemented by spreadsheets and Content Manager documentation. There is a need to transfer this into Confirm so that all asset classes will be into this asset management system. There is also a need to increase the skills and training of a number of Council officers who either presently, or could in future, use the Confirm system. Currently, there is no link between asset management systems and accounting systems.

9.2 Improvement Plan

It is important that an entity recognise areas of their AM Plan and planning process that require future improvements to ensure effective asset management and informed decision making. The improvement plan generated from this AM Plan is shown in Table 9.2.

Table 9.2: Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
1	Undertake ground truthing of asset register to confirm assets owned by Council	Strategic Assets	Internal allocations	2024/25
2	Implement adequate resourcing and capability for updating the road infrastructure asset inventory, collection of asset repair data, and updating asset condition assessment records	Strategic Assets	Internal allocations	2024/25
3	Undertake roads revaluation	Strategic Assets	Internal allocations	2024/25
4	Develop an Emergency Response Plan for the critical road assets.	Strategic Assets, Internal Auditor/Risk Co-coordinator	Internal allocations	2024/25
5	Undertake proactive and regular analysis of the road infrastructure network	Strategic Assets, Operations Services	Internal allocations	2024/25

[12] ISO 55000 Refers to this as the Asset Management System

6	Revise and improve the effectiveness of the current road renewal program	Strategic Assets, Operations Services	Internal allocations	2024/25
7	Maintenance Service Agreement – review current levels of service, covering maintenance activities and service standards, to reflect the work undertaken with the current budget	Strategic Assets, Information Technology, Operations Services Technology, Operations Services	Internal allocations	2024/25

9.3 Monitoring and Review Procedures

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated annually to ensure it represents the current service level, asset values, projected operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets.

These forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

The AM Plan has a maximum life of 4 years and is due for complete revision and updating within 1 year of each Council election.

9.4 Performance Measures

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

- The degree to which the required projected expenditures identified in this AMP are incorporated into the long-term financial plan,
- The degree to which 1-5 year detailed works programs, budgets, business plans and corporate structures consider the ‘global’ works program trends provided by the AM Plan,
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans,
- The Asset Renewal Funding Ratio achieving the target of 100%

10 REFERENCES

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11 APPENDICES

Appendix A - Projected 10-year Capital Renewal, Replacement and New Works Program

PROJECT	Type of Works			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	TOTAL 10 YEARS
	Improved LOS	Growth	Renewals	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	
LOCAL ROADS														
0892. Additional Sealed Rds Reconstruction	20%		80%	-	-	-	-	-	1,000,000	2,350,000	2,450,000	2,150,000	2,400,000	10,350,000
0834. Timor Rd, Mdi	20%		80%	-	-	500,000	-	-	-	-	-	-	-	500,000
1283. Urban Rd Reseals			100%	420,000	460,000	470,000	480,000	490,000	500,000	510,000	520,000	530,000	540,000	4,920,000
1284. Rural Rd Reseals			100%	770,000	810,000	820,000	830,000	840,000	850,000	860,000	870,000	880,000	890,000	8,420,000
4861. Village Streets Initial Seal	50%	50%		50,000	-	100,000	-	100,000	-	100,000	-	100,000	-	450,000
4862. Village Streets Shoulder Initial Seal	50%	50%		50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	500,000
4894. Comiala Road Rehabilitation	30%	20%	50%	450,000	-	-	-	-	-	-	-	-	-	450,000
4986. Local Sealed Road Heavy Patching	20%		80%	1,800,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	3,150,000
4987. Local Unsealed Roads Resheet	20%		80%	1,150,000	1,050,000	400,000	450,000	550,000	650,000	750,000	850,000	950,000	1,050,000	7,850,000
4989. Local Roads & Streets ARRB	100%			-	-	-	200,000	-	-	-	200,000	-	-	400,000
5247. Moonan Brook Rd MR105 Seal & Upg	30%	40%	30%	3,600,000	-	-	-	-	-	-	-	-	-	3,600,000
5259. Urban Streets K&G Renewal	50%		50%	100,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	1,900,000
5392. Culvert Subsidence	20%		80%	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,000,000
5407. Hunter Rd - Naracoote to Glenmore Brg	30%	40%	30%	5,400,000	-	-	-	-	-	-	-	-	-	5,400,000
5408. Hunter Rd - Shallow Crossing-Ellerston	30%	40%	30%	-	-	4,170,000	-	-	-	-	-	-	-	4,170,000
5409. Barrington Forest Rd - Initial Seal Stg1	30%	40%	30%	-	6,500,000	-	-	-	-	-	-	-	-	6,500,000
5410. Barrington Forest Rd - Initial Seal Stg2	30%	40%	30%	-	3,100,000	-	-	-	-	-	-	-	-	3,100,000
5454. Gummun Lane Mwa			100%	250,000	-	-	-	-	-	-	-	-	-	250,000
5549. Bow St (fr Blaxland St to MacCartney St)	20%		80%	260,000	-	-	-	-	-	-	-	-	-	260,000
5550. Idaville Rd Rehabilitation	20%		80%	-	400,000	-	-	-	-	-	-	-	-	400,000
5551. Cullingral Rd Rehabilitation	20%		80%	-	350,000	-	-	-	-	-	-	-	-	350,000
5552. Solleys Lane (Bow St Intersection) Upg	20%		80%	200,000	-	-	-	-	-	-	-	-	-	200,000
5553. Moobi Rd Rehabilitation	30%	20%	50%	1,400,000	-	-	-	-	-	-	-	-	-	1,400,000
5556. Yarrandi Rd - Initial Design/Studies	30%	40%	30%	-	1,000,000	-	-	-	-	-	-	-	-	1,000,000

PROJECT	Type of Works			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	TOTAL 10 YEARS
	Improved LOS	Growth	Renewals	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	
LOCAL ROADS – ROAD SAFETY PROGRAMME														
5540. RSP Glenbawn Rd - Shoulder Wide & Guardrail	100%			500,000	279,476	-	-	-	-	-	-	-	-	779,476
REGIONAL ROADS														
1285. Regional Rd Reseals			100%	530,000	550,000	570,000	590,000	610,000	630,000	650,000	670,000	690,000	710,000	6,200,000
4773. MR105 Repair Works	30%		70%	-	-	-	-	550,000	-	-	550,000	-	-	1,100,000
4914.MR62 Repair - Halls Crk to Murdering Hut	30%		70%	500,000	500,000	500,000	500,000	-	-	-	-	-	-	2,000,000
4984. Regional Heavy Patching Program	20%		80%	1,000,000	150,000	150,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	2,700,000
4985. Regional Roads ARRB	100%			-	-	-	75,000	-	-	-	75,000	-	-	150,000
5262. MR105 Culvert Subsidence Repairs	40%		60%	100,000	50,000	50,000	50,000	150,000	150,000	150,000	150,000	150,000	150,000	1,150,000
5288. MR358 - Coulsons Creek Rd Rehab	20%		80%	25,000,000	20,000,000	-	-	-	-	-	-	-	-	45,000,000
TRANSPORT ANCILLARIES														
0747. Bus Shelter Capital Works	50%	50%		20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	200,000
0753. Town Revitalisation - Scone	40%	40%	20%	9,000,000	9,000,000	-	-	-	-	-	-	-	-	18,000,000
1192. Town Revitalisation – Merriwa	50%	50%		200,000	-	-	-	-	-	-	-	-	-	200,000
0775. Regional Rd Guardrail Replacement		50%	50%	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	600,000
4079. Street Signs	50%		50%	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	150,000
5498. St Aubins St Town Square Green	50%	50%		1,000,000	-	-	-	-	-	-	-	-	-	1,000,000
FOOTPATH AND CYCLEWAYS														
4327. Kerb Ramp Upgrade	50%		50%	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	250,000
4929. Ftpth - Bedford St (Hwy - Segenhoe)	50%	50%		80,000	-	-	-	-	-	-	-	-	-	80,000
4930. Ftpth - Footpath/Cycleway Expansion	50%	50%		120,000	-	-	-	-	-	-	-	-	-	120,000
TOTAL CAPITAL WORKS EXPENDITURE PROPOSED FOR TEN YEAR PERIOD				53,950,000	44,540,000	8,350,000	3,995,000	4,110,000	4,600,000	6,190,000	7,155,000	6,270,000	6,560,000	145,720,000

Appendix B - Operational & Maintenance Expenditure

Table B.1: Operational & Maintenance Expenditure Summary

Roads Summary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10 Year Total
	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	
Direct Asset Costs											
Local Roads	4,576,580	4,638,291	4,399,758	4,660,156	5,246,507	5,393,846	5,545,352	5,701,145	5,851,952	6,006,778	52,020,365
Regional Roads	494,300	511,587	529,484	547,356	563,083	578,566	594,478	610,832	626,868	643,329	5,699,883
Transport Ancillaries	99,825	103,513	107,837	112,094	116,218	120,237	123,592	127,041	130,288	133,600	1,174,245
Footpaths /Cycleways	72,500	75,113	77,820	80,477	82,866	85,167	87,533	89,965	92,290	94,677	838,408
Total	5,243,205	5,328,504	5,114,899	5,400,083	6,008,674	6,177,816	6,350,955	6,528,983	6,701,398	6,878,384	59,732,901
Indirect Asset Costs											
Depreciation	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	48,984,640
Loan interest	98,726	93,286	88,256	83,111	77,847	72,462	66,953	61,318	55,553	49,656	747,168
Corporate Admin Overheads	1,605,102	1,715,733	1,790,950	1,847,036	1,758,501	1,802,463	1,847,525	1,893,713	1,941,055	1,989,582	18,191,660
Total	11,845,497	12,035,987	11,892,569	12,228,694	12,743,486	12,951,205	13,163,897	13,382,478	13,596,470	13,816,086	127,656,369

Table B.2: Operational & Maintenance Expenditure - Local Roads

Local Roads	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10 Year Total
	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	
Direct Asset Costs											
Administration Costs	223,325	231,382	239,731	248,068	254,975	261,742	268,690	275,824	282,781	289,914	2,576,432
Rural Roads (Sealed) Maintenance	60,000	62,250	64,585	66,845	68,852	70,747	72,695	74,697	76,564	78,478	695,713
Rural Roads (Unsealed) Maintenance	1,105,000	1,143,325	1,182,997	1,222,359	1,258,548	1,294,003	1,330,464	1,367,961	1,404,527	1,442,079	12,751,263
Urban Roads (Sealed) Maintenance	2,492,375	2,480,473	2,165,697	2,350,696	2,869,054	2,950,175	3,033,605	3,119,411	3,202,439	3,287,694	27,951,619
Urban Roads (Unsealed) Maintenance	669,150	693,185	718,092	742,573	764,563	785,796	807,621	830,057	851,565	873,633	7,736,235

Local Roads	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10 Year Total
	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	
Total	4,576,580	4,638,291	4,399,758	4,660,156	5,246,507	5,393,846	5,545,352	5,701,145	5,851,952	6,006,778	52,020,365
Indirect Asset Costs											
Depreciation	3,956,685	3,956,685	3,956,685	3,956,685	3,956,685	3,956,685	3,956,685	3,956,685	3,956,685	3,956,685	39,566,850
Loan Interest – Rural Roads	523	-	-	-	-	-	-	-	-	-	523
Corporate Admin Overheads	1,007,820	1,097,546	1,151,127	1,184,818	1,079,728	1,106,721	1,134,389	1,162,749	1,191,817	1,221,613	11,338,328
Total	14,118,188	14,330,813	13,907,328	14,461,815	15,529,427	15,851,098	16,181,778	16,521,724	16,852,406	17,191,854	154,946,431

Table B.3: Operational & Maintenance Expenditure - Regional Roads

Regional Roads Summary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	10 Year	10 Year Total
	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	
Direct Asset Costs											
Bridge & Culvert Maintenance (Sealed)	15,500	16,080	16,682	17,258	17,798	18,304	18,824	19,359	19,852	20,358	180,015
Regional Rds Maintenance	478,800	495,507	512,802	530,098	545,285	560,262	575,654	591,473	607,016	622,971	5,519,868
Total	494,300	511,587	529,484	547,356	563,083	578,566	594,478	610,832	626,868	643,329	5,699,883
Indirect Asset costs											
Depreciation	858,302	858,302	858,302	858,302	858,302	858,302	858,302	858,302	858,302	858,302	8,583,020
Corporate Admin Overheads	448,047	463,729	479,959	496,758	509,177	521,906	534,954	548,328	562,036	576,087	5,140,981
Road Infrastructure No. 1 – Loan interest	98,203	93,286	88,256	83,111	77,847	72,462	66,953	61,318	55,553	49,656	746,645
Total	2,393,152	2,438,491	2,485,485	2,532,883	2,571,492	2,609,802	2,649,165	2,689,612	2,729,627	2,770,703	25,870,412

Table B.4: Operational & Maintenance Expenditure – Transport Ancilliaries

Transport Ancilliaries Summary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	10 Year	10 Year Total
	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	
Direct Asset Costs											
Bus Shelter Maintenance	7,000	7,240	7,488	7,737	7,961	8,183	8,411	8,645	8,877	9,115	80,657
Road Furniture Maintenance	3,000	3,110	3,224	3,334	3,437	3,535	3,635	3,738	3,834	3,933	34,780
Signs and Marking - Local Roads	60,000	62,275	65,051	67,772	70,457	73,064	75,099	77,192	79,121	81,100	711,131
Parking Area Maintenance	2,825	2,928	3,119	3,320	3,534	3,758	3,857	3,958	4,067	4,159	35,525
Traffic Facilities (Block Grant)	27,000	27,960	28,955	29,931	30,829	31,697	32,590	33,508	34,389	35,293	312,152
Total	99,825	103,513	107,837	112,094	116,218	120,237	123,592	127,041	130,288	133,600	1,174,245
Indirect Asset Costs											
Administration Overheads	55,604	55,604	55,604	55,604	55,604	55,604	55,604	55,604	55,604	55,604	556,040
Depreciation	149,235	154,458	159,864	165,460	169,596	173,836	178,182	182,636	187,202	191,882	1,712,351
Total	404,489	417,088	431,142	445,252	457,636	469,914	480,970	492,322	503,382	514,686	4,616,881

Table B.5: Operational & Maintenance Expenditure – Footpaths/Cycleways

Footpaths/Cycleways Summary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	10 Year	10 Year Total
	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	
Direct Asset Costs											
Footpath/Cycleway Maintenance	72,500	75,113	77,820	80,477	82,866	85,167	87,533	89,965	92,290	94,677	838,408
Total	72,500	75,113	77,820	80,477	82,866	85,167	87,533	89,965	92,290	94,677	838,408
Indirect Asset Costs											
Depreciation	27,873	27,873	27,873	27,873	27,873	27,873	27,873	27,873	27,873	27,873	278,730
Total	100,373	102,986	105,693	108,350	110,739	113,040	115,406	117,838	120,163	122,550	1,117,138

Appendix C - Disposal Summary

There are no disposals projected in this plan.

Appendix D - Renewal Forecast Summary

D.1 – Renewal Forecast Assumptions and Source

The renewals forecast is based on expected renewal quantities required given the useful lives of the asset components. It is assumed that prioritisation will be undertaken each financial year to ensure the assets with most need are renewed as required.

This is subject to our annual review as new works are identified or as budgets and priority change.

D.2 – Renewal Forecast Summary

D2 – Renewal Forecast Summary

Year	Renewal Forecast	Renewal Budget
2023/24	$36,411,464	$31,513,000
2024/25	$29,988,464	$25,090,000
2025/26	$9,579,464	$4,681,000
2026/27	$8,048,464	$3,150,000
2027/28	$8,263,464	$3,365,000
2028/29	$8,798,464	$3,900,000
2029/30	$9,998,464	$5,100,000
2030/31	$10,583,464	$5,685,000
2031/32	$10,078,464	$5,180,000
2032/33	$10,398,464	$5,500,000

Appendix E - Risk Register

Risk	Consequence	Likelihood	Risk Rating	Proposed Treatment	Responsibility	Completion Date
Road condition	Major	Likely	High	Future planning improvements can be made by further documented service level risks and utilisation of these in establishing future renewal priorities	Engineering, Strategy and Assets	Ongoing
Road storm and flood damage	Catastrophic	Almost certain	Very High	Seek assistance from other tiers of government, which relies on Natural Disaster declarations	Engineering, Strategy and Assets Operations Services	Ongoing
Transport asset renewals not funded when required	Major	Almost certain	High	High reliance on funding from other tiers of government. Reduction in funding from these sources will lead to a reduction in service level. Sealed roads may revert to gravel roads and gravel roads may become formed earth roads	Engineering, Strategy and Assets Operations Services	Ongoing
Increases in environmental standards through regulation and changing public expectations	Minor	Rare	Low	Upgrade assets to meet new Standards during renewal	Open Space, Recreation and Property	Ongoing
The quality of data on management information systems (Specifically GIS) The failure of Stormwater Quality Improvement Devices	Minor	Possible	Moderate	Ongoing program of updating data through Capital Works Program/ inspections	Engineering, Strategy and Assets	Ongoing
Ongoing changes to weather patterns	Moderate	Possible	Moderate	Forward planning to ensure capacity is adequate	Engineering, Strategy and Assets	Ongoing

Appendix F - Budget Summary by Lifecycle Activity

The budget is based on known approved grants.

Table F1 – Budget Summary by Lifecycle Activity

Year	Acquisition	Operation & Maintenance	Renewal	Disposal	Total
2023/24	22,437,000	5,243,205	31,513,000	0	59,193,205
2024/25	19,450,000	5,328,504	25,090,000	0	49,868,504
2025/26	3,669,000	5,114,899	4,681,000	0	13,464,899
2026/27	845,000	5,400,083	3,150,000	0	9,395,083
2027/28	745,000	6,008,674	3,365,000	0	10,118,674
2028/29	700,000	6,177,816	3,900,000	0	10,777,816
2029/30	1,090,000	6,350,955	5,100,000	0	12,540,955
2030/31	1,470,000	6,528,983	5,685,000	0	13,683,983
2031/32	1,090,000	6,701,398	5,180,000	0	12,971,398
2032/33	1,060,000	6,878,384	5,500,000	0	13,438,384

Appendix G – Forecast of Ratios to Local Government Benchmarks

		2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
		Actual	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
INFRASTRUCTURE RENEWAL												
Asset Renewals		6,147,598	31,513,000	25,090,000	4,681,000	3,150,000	3,365,000	3,900,000	5,100,000	5,685,000	5,180,000	5,500,000
Depreciation Expense		4,901,967	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464
INFRASTRUCTURE BACKLOG												
Estimated Cost to bring back to Satisfactory		15,302,000	19,836,189	20,128,337	20,449,912	20,735,110	21,076,859	21,379,073	21,687,810	21,707,037	21,999,173	21,968,691
Closing Value of Assets		763,877,000	812,928,536	852,570,072	856,021,608	855,118,144	854,329,680	854,031,216	855,322,752	856,287,752	856,694,288	857,949,288
ASSET MAINTENANCE												
Asset Maintenance Expense		6,026,000	5,243,205	5,328,504	5,114,899	5,400,083	6,008,674	6,177,816	6,350,955	6,528,983	6,701,398	6,878,384
Required Asset Maintenance		5,321,000	13,887,647	14,764,062	15,110,772	15,397,359	15,689,969	15,994,319	16,327,084	16,341,559	16,666,040	16,685,082
CAPITAL EXPENDITURE												
Annual Acquisition Expenditure		12,932,737	53,950,000	44,540,000	8,350,000	3,995,000	4,110,000	4,600,000	6,190,000	7,155,000	6,270,000	6,560,000
Annual Depreciation Expense		4,901,967	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464	4,898,464
SS7 Data												
Gross Replacement Cost (GRC)		859,008,000	925,843,120	984,270,767	1,007,384,829	1,026,490,601	1,045,997,960	1,066,287,929	1,088,472,248	1,089,437,248	1,111,069,332	1,112,338,807
% Infrastructure Condition 4 and above		1.70%	1.60%	1.53%	1.52%	1.51%	1.51%	1.50%	1.49%	1.49%	1.48%	1.47%
% Infrastructure Condition 3 and above		7.40%	6.97%	6.65%	6.60%	6.57%	6.55%	6.52%	6.48%	6.48%	6.44%	6.43%
RATIOS BASED ON 3YR AVERAGE	Benchmark											
Infrastructure Renewal	100%	125.41%	312.08%	426.91%	417.03%	224.02%	76.19%	70.87%	84.14%	92.12%	101.38%	109.55%
Infrastructure Backlog	2%	2.00%	2.28%	2.27%	2.40%	2.39%	2.43%	2.47%	2.50%	2.51%	2.54%	2.55%
Asset Maintenance	1.00	1.13	0.71	0.49	0.36	0.35	0.36	0.37	0.39	0.39	0.39	0.40
Acquisition Expenditure	1.10	2.64	5.53	7.58	7.27	3.87	1.12	0.86	1.01	1.13	1.24	1.34
ACTUAL RATIO MEETING BENCHMARK												
Infrasturcture Renewal		✓	✓	✓	✓	✓	✗	✗	✗	✗	✓	✓
Infrastructure Backlog		✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Asset Maintenance		✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Acquisition Expenditure		✓	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓

Version History

Rev No	Date	Revision Details	Author	Reviewer	Approver
1	May 2011	Initial draft	JB/GD	JB	JB
2	February 2013	Update asset inventory and financial data	JB/GD	JB	JB
3	March 2017	Update asset inventory and financial data	JB/GNS	JB/WP/ST	
4	January 2019	Update asset inventory and financial data	GNS/AG	JB/WP	
5	May 2020	Update asset inventory and financial data on	GNS/KW	JB/WP	
6	June 2021	Update asset inventory and financial data	GNS/KW	JB/WP	
7	February 2022	Update asset inventory and financial data	KW	JB	RVU
8	May 2023	Update asset inventory and financial data	KW	JB	RVU