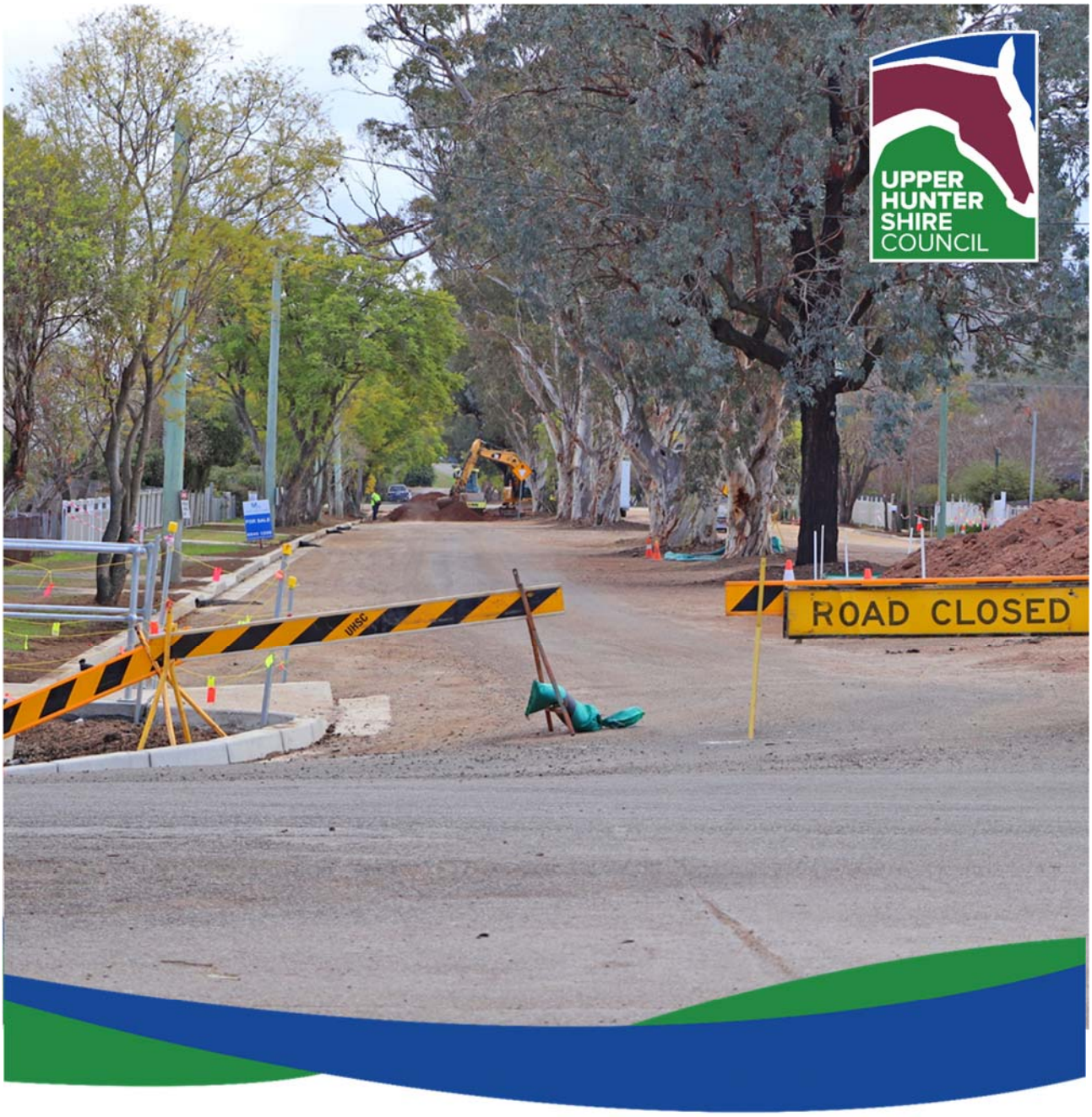


Asset Management Plan

ROADS

2022

Date adopted by Council	27 June 2022
Minute number	SCR06.22
CM Ref	INT-23945/22
Due for review	June 2023
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	Maintaining and developing our infrastructure network to meet the ongoing needs of our population. **SO 4.1** Provide for replacement, improvement and additional Community and open space infrastructure through investment, best practice and risk management. **SO 4.2** Provide inviting public spaces that are clean, green, properly maintained, well designed, encourage active participation, family friendly and accessible to all. **SO 4.3** Provide safe and reliable water and sewerage services to meet the demands of current and future generations. **SO 4.4** Maintain and upgrade the road network and bridges. **SO 4.5** Advocate and improve access to communication services.

Contents

1 EXECUTIVE SUMMARY

1.1 Context

Upper Hunter Shire is located in the Hunter Region of NSW, approximately 250km north of Sydney. The Shire is predominantly rural and encompasses 8,100km2. The Upper Hunter Local Government Area is home to a diverse mix of businesses such as agriculture, thoroughbred horse studs, retail, light and heavy industry. Council supplies Road Infrastructure Assets to residential, commercial and industrial customers in the towns of Aberdeen, Merriwa, Murrurundi, Scone and villages within the shire.

Council plans to operate and maintain its road assets to achieve the following strategic objectives:

- Deliver the required level of service to existing and future customers in the most cost effective way
- Anticipate, plan and prioritise spending on the assets
- Optimise the life of assets at the most economic cost over time (lifecycle approach)
- Undertake a risk based approach to identify operational, maintenance, renewal and capital development needs and apply economic analysis to select the most cost effective work program

The contribution towards the achievement of theses strategic goals and asset management objectives will be achieved by:

- Stakeholder consultation to establish and confirm service standards.
- A regular program of inspections and monitoring activities to assess asset condition and performance.
- Application of a systematic analysis to prioritise renewals and establish the most cost effective works programs.
- Continuously reviewing and improving the quality of Asset Management practices.

1.2 What does it cost?

The projected expenditure necessary to provide the services covered by this Road Asset Management Plan (RAMP) includes operations, maintenance, renewal and upgrade of existing assets.

The total amount of forecasted expenditure for road infrastructure operations, maintenance and capital over the next ten years will be approximately $240.9 million (as shown in Figure 1) with annual forecasted expenditure varying between $15.8 and $55.9 million per annum.

Forecasted operational expenditure (OPEX) for the ten-year cycle will be approximately $121.2 million which equates to 50.3% of the total forecasted expenditure. The indirect OPEX includes depreciation, loan repayments and administration overheads totalling $68.9 million (56.82%), whilst the direct OPEX equates to $52.3 million (43.18%).

It must be noted that over $53.8 million (approximately 44.92%) 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.

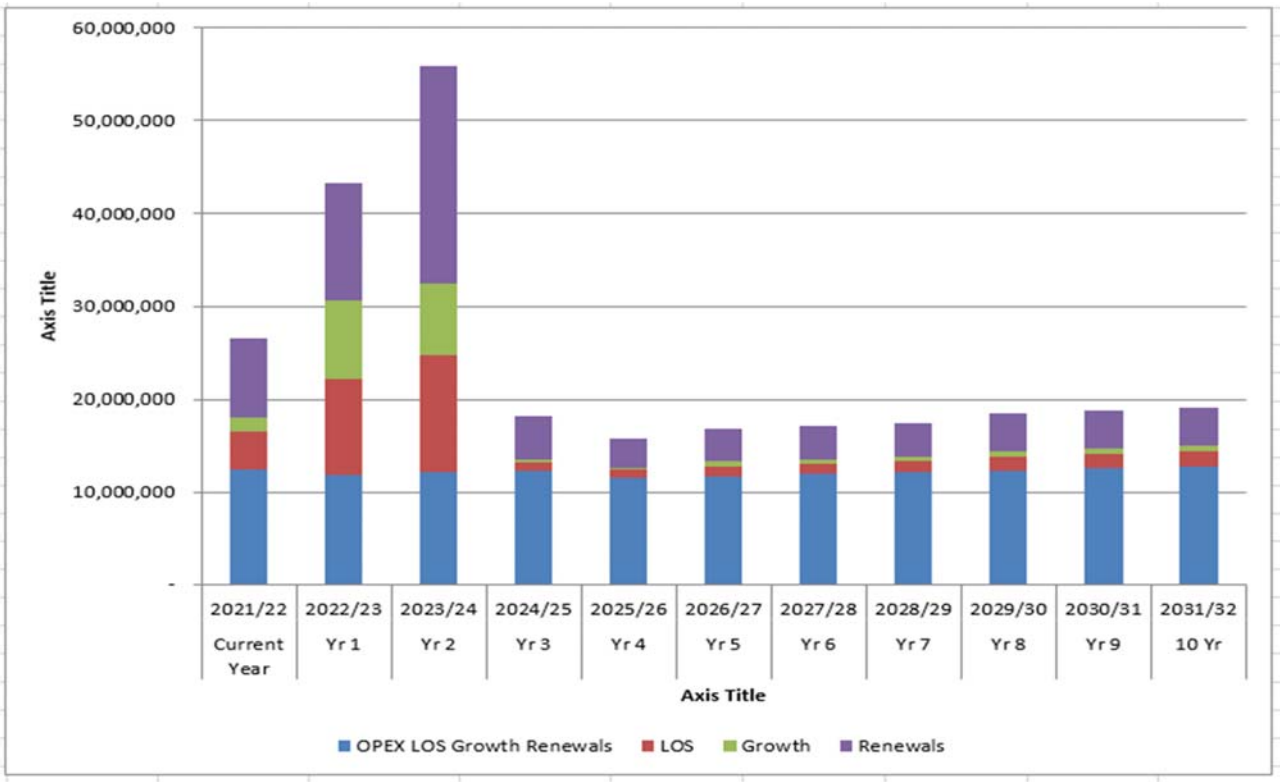


Figure 1: Summary of Road Infrastructure Total Expenditure Forecast

1.3 What we will do

Council seeks to manage infrastructure in the most cost effective way over the life of the asset. This is done in a number of ways including the following:

- Operation, maintenance, renewal, upgrade and monitoring of Upper Hunter road infrastructure assets to meet the service levels set in this plan
- Inspect the road infrastructure annually to ensure that they are performing and reassess their condition grading
- Plan any works to address the defects found from asset inspections
- Plan road infrastructure renewals based on statistics.
- Renewals planned within the ten year planning period have been identified to ensure that this is an acceptable backlog
- Investigate poor performing assets based on service failure and customer requests to ensure service continuity.
- Maximise community benefits against costs.
- Develop options, costs and priorities for future asset management activities.
- Consult with the community to plan future services to match the community service needs with ability to pay for services.

1.4 Managing the Risks

There are risks associated with providing the service and not being able to complete all identified activities and projects. We have identified major risks as:

- Poor or incomplete asset management practices including Asset Management Plans (AMP), lifecycle management plans (LCMP) and asset condition assessments.
- Overall asset life and condition is compromised due to maintenance and renewal programs not well targeted or limited in scope.
- Financial implications with inaccurate asset valuation and long term planning including renewal forecasts.

We will endeavour to manage these risks by:

- Complete the actions identified in the Road Infrastructure AMP including lifecycle management plans (LCMP); complete the resourcing levels for Road Infrastructure Assets Services asset management and complete the asset condition survey.
- Complete the full revision of the Road Infrastructure Assets Services AMP; complete the asset condition assessment program.
- Implement the asset management improvement program; continue with regular inspections and reporting on assets; start proactively analysing and reporting on data availability; start building core asset management capability; complete asset condition survey.

1.5 The Next Steps

The actions resulting from the Road Infrastructure AMP 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.
- Revise and improve the effectiveness of the current renewal programs.
- Integrate road infrastructure assets into CONFIRM to improve renewal and maintenance planning.
- Complete a formal AM Maturity Assessment of the road infrastructure assets.
- Improve the delineation between planned, cyclic and reactive maintenance.
- Develop data collection methods to ensure consistency and ongoing improvement of condition data collection.

1.6 Questions you may have

What is an asset?

An asset is an item of property owned by the Council regarded as having value. Council's assets range from roads and footpaths/cycle ways to buildings, playgrounds and street furniture.

What is an Asset Management Plan?

Asset management planning is a comprehensive process to ensure delivery of services from infrastructure is provided in a financially sustainable manner.

An AMP details information about infrastructure assets including actions required to provide an agreed level of service in the most cost effective manner. The plan defines the services to be provided, how the services are provided and what funds are required to provide the services.

What are the objectives of asset management?

The basic premise of infrastructure asset management is to intervene at strategic points in an asset's life cycle to extend the expected service life, and thereby maintain its performance. Generally speaking, the cost of maintaining an asset decreases with planned maintenance rather than unplanned maintenance, however,

excessive planned maintenance increases costs. An objective of asset management is to strategically time infrastructure renewals before unplanned maintenance costs become excessive, but not so soon that assets are renewed before it is really needed.

Council's goal in managing infrastructure assets is to meet the required levels of service in the most cost effective manner for present and future customers. The key elements of 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, and
- Continuous improvement in asset management practices.

How do we determine when renewals are required?

Renewals are determined by considering the ability of an asset to meet an agreed standard of service. This is done by regularly reviewing the condition of assets and using this information as a basis to prioritise renewals.

How do we determine our levels of service?

Our levels of service have been developed based on legislative requirements, customer research and expectations, and strategic goals.

Why does Council need an Asset Management Plan?

Under section 122 of the Local Government Act, the Upper Hunter Shire Council has a legislative requirement to develop Asset Management Plans. In addition to the legislative requirement, there is a need for the Council to ensure effective investment in assets which need it most by having a planned, systematic approach to Asset Management.

How does Council include community feedback into the Plan?

We will be pleased to consider your thoughts on the issues raised in this asset management plan and suggestions on how we may change or reduce the mix of services we provide to ensure that the appropriate level of service can be provided to the community at the lowest possible cost.

2 INTEGRATED PLANNING AND REPORTING FRAMEWORK

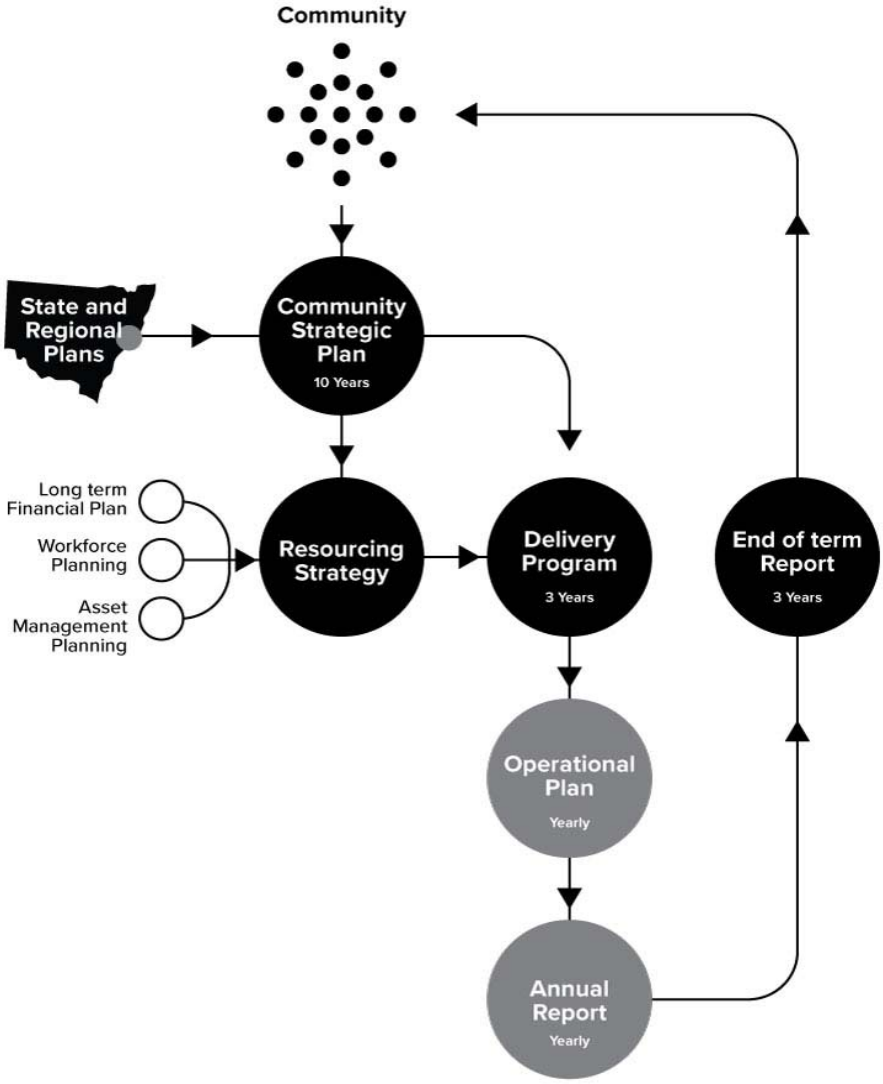
The Local Government Integrated Planning and Reporting (IP&R) Framework aims to ensure a more sustainable Local Government sector. The Local Government Act 1993 requires Council to work with the community to review the Community Strategic Plan and other documents within the Integrated Planning and Reporting 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 Plans and Workforce Management Plan. 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 on the Upper Hunter Shire Integrated Planning and Reporting Framework.



3 INTRODUCTION

3.1 Background

About this Plan

The Road Infrastructure AMP is to demonstrate responsible management of assets (and services provided from assets), compliance with regulatory requirements and to communicate funding needed to provide the required levels of service over a 10 year planning period.

The Road Infrastructure AMP is to be read with Council's Asset Management Policy and Strategy and the following associated planning documents:

- Revised current year budget 2021/22
- Delivery Program 2018/19-2022/23 and Operational Plan 2022/2023
- Community Strategic Plan 2032
- Infrastructure Asset Revaluation Supporting Documentation
- Council files on Road Infrastructure Assets
- Upper Hunter Shire Council Resident Satisfaction Survey Results

Scope of Services

Upper Hunter Shire is located in the Hunter Region of NSW, approximately 250km north of Sydney. The Shire is predominantly rural and encompasses 8,100km2. Council supplies 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 2.

Figure 2: Map of Upper Hunter Shire Towns and Villages

Council's road infrastructure assets comprise of:

- 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

Refer to sections 5 and 8 for road infrastructure asset details and valuation.

3.1.1 Our Stakeholders

Key stakeholders interested in Road Infrastructure Assets are shown in Table 1.

Table 1: Key Stakeholders in Road Infrastructure Assets

Key Stakeholder	Area of Interest and Role in AMP
Councillors	Represent needs of community/stakeholders
	Allocate resources to meet the organisation's objectives in providing services while managing risks
	Ensure organisation is financially sustainable
	Set policy
General Manager	Provide leadership and community engagement
Senior Management Group	Development of overall strategy
Director Infrastructure Services	Oversee development of strategies and liaison with all relevant parties
Strategic Assets	Owner of Asset Management Policies and Strategies
Local Resident's	Users of Council Assets and Services
Local Businesses	As User of Council Assets
	Future of new commercial and community growth
Regional Businesses	As User of Council Assets
	Route development and upgrade strategies
Freight and Transport Industries	As User of Council Assets
	Route development and upgrade strategies
Land Developers	Users of Council's infrastructure and services
	Build infrastructure and hand over to Council ownership
Environmental groups	Interested in improvement to the natural environment and efficiency initiatives
Council's Works Delivery Team	Interested in the coordination of the capital programs in the road corridor
State Government Departments	Development of local and regional strategies
	Provide financial assistance

Key Stakeholder	Area of Interest and Role in AMP
Federal Government Departments	Development of State and Federal strategies
	Provide financial assistance

3.2 Goals and Objectives of Asset Management

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

Our goal in 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 associated with asset failure
- Having a long-term financial plan which identifies required, affordable expenditure and how it will be financed
- Continuous improvement in asset management practices.

The Road Infrastructure AMP is prepared under the direction of Council's Vision, Charter and Corporate Values contained within Council's:

- Asset Management Policy
- Asset Management Strategy
- Community Strategic Plan 2032

Council's goal is to achieve this in an efficient, cost effective manner while remaining ecologically sustainable and to investigate the future delivery of services.

Council's vision is:

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

Our commitment to the Community:

- We will deliver high quality, innovative, consistent and responsive services to the community.
- We respect the rights of everyone to be treated fairly.
- We will keep our community informed about Council services and financial position.
- We will continually strive to improve our services to the community and encourage community engagement.
- We will deliver increased effort in the protection of the environment.

Council's relevant community strategic objectives (as stated in the Community Strategic Plan 2032) and how these are addressed in this AMP are outlined in Table 2.

Table 2: Organisation objectives and how these are addressed in this Plan

COMMUNITY PRIORITY	STRATEGIC OBJECTIVES	HOW OBJECTIVES AND INITIATIVES ARE ADDRESSED IN AMP
Maintaining and developing our infrastructure network to meet the ongoing needs of our population	Provide for replacement, improvement and additional Community open space infrastructure through best practice and risk management.	By providing for the cost effective development, upgrade, renewal and maintenance of road infrastructure assets in the Shire.
	Upgrade and maintain the road network and bridges.	By proactively surveying the asset condition of our road network we will understand and make long term plans for a sustainable infrastructure

4 LEVELS OF SERVICE

Levels of service relate to outcomes the customer receives in terms of quality, quantity, responsiveness and performance as it is provided by the asset utilised by Council to provide the service. To achieve and maintain acceptable levels of service for Council's road network, a system of setting, recording and reviewing service levels achieved with the assistance of Community is required. Future iterations of this plan will involve further and more detailed community consultation in this regard. The levels of service have been reviewed as part of the AMP development. They support Council's strategic goals and are based on user expectations, statutory and state standard requirements.

4.1 Community Consultation

Future revisions of the Road AMP will incorporate community consultation on service levels and costs of providing the service. This will assist the Council and the community in matching the level of service needed by the community, service risks and consequences with the community's ability and willingness to pay for the service.

4.2 Customer Research and Expectations

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. The results for road infrastructure assets combined are summarised in Table 3 and show that the performance gap is reducing.

Table 3: Survey Results for Road Infrastructure Assets

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

Road maintenance has consistently been the service with the highest performance gap since 2010 and, when benchmarked against other local governments, has the third highest variance in satisfaction of -0.38 with cycle ways also listed as twelfth at -0.26.

4.3 Strategic and Corporate Goals

The Road Infrastructure AMP is prepared under the direction of Council's Vision, Charter and Corporate Values. It is intended to expand on the strategies defined in Council's Publication "Community Strategic Plan 2032". Table 4 shows the areas of focus and key objectives.

The Council will exercise its duty of care to ensure public safety in accordance with the infrastructure risk management plan prepared in conjunction with this AMP. Management of infrastructure risks is covered in Section 6.2.

Table 4: Road Assets

Focus Areas	Objectives
Customer Service	Meet Levels of Service to which customers have agreed and can afford
	Establish affordable service areas and solutions
	informed and be responsive to its needs
	Community consulted and considered on all major expenditure decisions
Financial Management	Evaluate options to achieve capital and maintenance programs with affordable rates and relatively low levels of reserves
	Set up the sewer fund as an independent business

Focus Areas	Objectives
	Promote and assist establishment of industry and developers in the Upper Hunter Shire Council area
Asset Management	Ensure reliable, secure and cost effective service using latest technology
	Ensure the system provides levels of service agreed
	Provide a Capital Works Program which supplies system needs
Human Resources	Maintain a capable, motivated and skilled workforce
Environment	Manage the system to prevent adverse environmental impacts
	Promote and assist establishment of industry and developers in the Upper Hunter Shire Council area.

4.4 Legislative Requirements

Council has to meet many legislative requirements including Australian and State legislation and State regulations as shown in Table 5.

Table 5: Legislative Requirements

Legislation	Requirement
Local Government Act, 1993 and Local Government (General) Regulation 2005	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.
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.
OLG Integrated Planning NSW	Key requirement is to integrated community plans with operational and delivery plans.
Protection of 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 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 and Penalties Act 1989	Details Council's environmental responsibilities and the penalties to be applied if these are not met
WHS Act and Regulations	Council must ensure a safe workplace for all its employees and the public

4.5 Current Levels of Service

There are two defined service levels, Community LOS and Technical LOS.

Community Levels of Service

Measure how the community receives the service and whether the organisation is providing community value.

Community levels of service measures used in the AMP are:

Quality	How good is the service?
Function	Does it meet users' needs?
Capacity/Utilisation	Is the service over or under used?

Technical Levels of Service

Supporting the community service levels are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities that the organisation undertakes to best achieve the desired community outcomes and demonstrate effective organisational performance.

Technical service measures are linked to annual budgets covering:

- Operations – the regular activities to provide services to meet legislative requirements and environmental outcomes.
- Maintenance – the activities necessary to retain an asset as near as practicable to an appropriate service condition (e.g. maintenance grading, heavy patching, pothole repairs etc.)
- Renewal – the activities that return the service capability of an asset up to that which it had originally (e.g. bitumen resealing, gravel re-sheeting, rehabilitation etc.)
- Upgrade – the activities to provide a higher level of service (e.g. widening roads, extension of bitumen seal).

The road infrastructure assets level of service are summarised in Table 6. The full levels of service (LOS) table including performance measures and targets are detailed in Section 8.2.

Table 6: Road LOS

Key Service Attribute	Customer LOS	Performance measure	Performance Target	Current Performance
Community Levels of Service				
Quality	Assets are maintained to a satisfactory level of service	Complaints from residents regarding road maintenance	< 300 complaints per year	To be assessed
		Community Surveys	Rise in community satisfaction (close the performance gap)	

Key Service Attribute	Customer LOS	Performance measure	Performance Target	Current Performance
Function/ Capacity	Road network is available, functional and consistent for the required road classification and hierarchy	Complaints from resident's functionality or capacity of the road network (width, surface type, alignment)	< 50 complaints per year	To be assessed
		Community Surveys	Rise in community satisfaction (close the performance gap)	
Safety	Roads are free from obstructions and hazards	Customer complaints relating to safety/ obstruction issues not being rectified in a timely manner	< 20 complaints per year	To be assessed
		Regularly convene a local road safety committee	Regular quarterly meetings	
Cost Effectiveness	Provide service in cost effective manner	Customer complaints relating to specific cost effectiveness issues	< 20 complaints per year	To be assessed
		Community Surveys	Rise in community satisfaction (close the performance gap)	
Technical Levels of Service				
Condition	Provide timely maintenance in accordance with RAMP	Outstanding defects from customer requests and condition assessments	Customer requests were completed in the response time	To be assessed
	Undertake condition assessments every 5 years	Assessments completed and outstanding defects logged	Assessments completed every 5 years and all defects logged	Largely compliant
Function/ Accessibility	Maintain access and amenity in accordance with use as per RAMP	Customer complaints related to road access	< 50	To be assessed
		New and upgraded road segments to be constructed to required standards and in accordance with road hierarchy	All new and upgraded roads meet required standards and consistent with Road Management Plan	Compliant
Safety	Maintain roads free from safety	RAMP Compliance	Meet RAMP requirements	Largely compliant

Key Service Attribute	Customer LOS	Performance measure	Performance Target	Current Performance
	defects and hazards	Undertake road inspections, in accordance with schedule in RAMP	Complete inspections in accord with RAMP requirements	
		Outstanding defects from customer requests	Complete inspections and defects in accord with RAMP requirements	
Cost Effectiveness	Provide service in cost effective manner	Road maintenance and capital works costs within budget	Meet budget expenditure with 100% planned maintenance and capital works completed	To be assessed

4.6 Desired Levels of Service

Indications of desired levels of service are obtained from community consultation/engagement. The road asset management planning process includes the development of scenarios to assist in planning future levels of service that are financially sustainable, and provide what the community wants at an affordable price.

Table 7: Maintenance Activity - Desired Level of Service

Maintenance Activity	Road Classification	Desired Frequency
Unsealed Road Grading	Rural Collector (R1)	2 per annum
	Rural Access (R2)	2 per annum
	Rural Access (R3)	1 per annum or as programmed
	Rural Access (R4)	As programmed
Sealed Road – Shoulder Grading	Single lane sealed roads	2 per annum
	Dual lane sealed roads	1 per annum
Sealed Road - Potholes	All sealed roads	2 per annum
Sealed Road – Edge Breaks		

Table 8: Capital Activity - Desired Level of Service

Capital Activity	Road Classification	Desired Frequency
Unsealed Road Resheet	Rural Collector (R1)	20 year Cycle (4km per annum)
	Rural Access (R2)	20 year Cycle (12km per annum)
	Rural Access (R3)	30 year Cycle (18km per annum)

Capital Activity	Road Classification	Desired Frequency
	Rural Access (R4)	Gravel patching
Sealed Pavement Renewal or Rehabilitation	Regional Sealed Roads	35 year Cycle (5km per annum)
	Rural Sealed Roads	40 year Cycle (8km per annum)
	Urban Sealed Roads	40 year Cycle (3km per annum)
Bitumen Reseal	Regional Sealed Roads	12 year Cycle (15km per annum)
	Rural Sealed Roads	15 year Cycle (22km per annum)
	Urban Sealed Roads	15 year Cycle (8km per annum)
Footpath & Cycleway Renewal	Footpath and cycleway network	80-year useful life
		(0.4km per annum)
Kerb and Gutter Renewal	Urban Sealed Roads	80-year useful life
		(1.6km per annum)

5 FUTURE DEMAND

5.1 The Shire's Growth

The total population of Upper Hunter Shire as reported by the 2016 Census was 14,350. Population projections for the Shire, as published by the NSW Department of Planning and Infrastructure, are shown in Table 9: Population Projections for Upper Hunter Shire reflecting an average annual growth rate of -0.50% pa.

Table 9: Population Projections for Upper Hunter Shire

Population	2016 Census	2021	2026	2031	2036	2041	Total Change	Annual % Change
UHSC	14,350	14,200	13,950	13,600	13,200	12,700	-1,650	-0.50%

Source: Population Estimates & Projections for Local Areas NSW; NSW Planning & Infrastructure, 2019

5.2 Demand Forecast

The key factors that directly impact the demand for road infrastructure assets are:

- Population growth
- Demographic changes
- Residential development
- Extension of services to towns and villages

Demand factor trends and impacts on service delivery are summarised in Table 10.

Table 10: Demand Factors

Demand Factor	Present position	Projection	Impact on services
Population	Upper Hunter Shire Council's population in 2016 was 14,350	Upper Hunter Shire Council's population is predicted to decline over the next 10 years.	Negative growth rate will have a small decrease in demand
Demographics	28.6% of the Shire's population is aged between 15 – 39 years. This is lower than the national average of 35.5% and can be attributed to fewer job opportunities and lack of higher educational institutions in the area	The percentage of the population in this age group is expected to remain static or increase slightly.	Insignificant
Housing occupancy ratios	There has been a long term trend to lower ratios over 20 plus years. Currently about 2.7 people per household	Whilst this has had a marked effect on housing demand in the past, it has stabilised somewhat with the trend towards young people staying at home much longer than in the past	Insignificant
Residential development	Low growth rate reflects demand for residential development	Future growth rate is likely due to the proximity to the coal mining industry	Small increase in demand
Climate Change	Awareness that climate change is occurring and its impact on road infrastructure	Increasing temperatures affects road maintenance techniques and deterioration rates	Development of new and improved techniques, policies and procedures
Climate Change	Extremes increasing	Higher intensity rainfalls in storm events	Significant spending required to maintain access and condition (though generally funded)

5.3 Changes in Technology

Technology changes are forecast to affect the delivery of services covered by this plan as shown in Table 11: Changes to Technology.

Table 11: Changes to Technology

Technology Change	Effect on Service Delivery
Changes in construction and maintenance techniques	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
Introduction of new machinery, plant and equipment	
Introduction of new bitumen seal techniques and materials	Decreased frequency of bitumen reseal, increased useful life
Continual improvements in road infrastructure design principles	Increased useful life
Asset data capture by video inspection and the transportation of this information onto Council's GIS	Spatial location and condition of assets able to be verified from GIS reducing the need for reactive inspections

5.4 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 12: Demand Management Plan. Further opportunities for demand management will be developed in future revisions of this AMP.

Table 12: Demand Management Plan

Service Activity	Demand Management Plan
Road infrastructure maintenance	Routine inspections and repairs carried out in accordance with best practice principals.
Capital works	Schedule long term capital works plan
Development	Identify areas that may be subject to development

5.5 Asset Programs to meet Demand

The new assets required to meet growth will either be acquired free of cost from land developments (in most cases) or funded by Section 94 contribution plans and constructed by the Council or its nominated contractor.

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 these new assets will commit the organisation to fund ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs will be more accurately identified, and options considered, as part of the revision process. In particular, there will be full financial provision for maintenance and renewal costs of these new assets in the revised financial plan. This information will be incorporated in future versions of the Road Infrastructure AMP.

5.6 Growth and Demand Assumptions

The key growth and demand assumptions are as follows:

- Population projections are based on Population Estimates and Projections for Local Areas NSW; NSW Planning and Infrastructure, 2019.
- Projections have been based on historic census data and it has been assumed that the trends that have been observed will continue.

6 LIFECYCLE MANAGEMENT PLAN

Overview

The lifecycle management plan details how Council plans to manage and operate the road infrastructure assets at the agreed levels of service defined in Section 3 while optimising life cycle costs. The road infrastructure assets and facilities are maintained and developed in a way that is fit for purpose and sustainable over time and consistent across the Shire.

Council's key asset management principle is meeting the service levels and managing risk while minimising whole-of-life costs. It is important that asset lifecycle costs are considered in decision making as they are typically several times greater than the initial development costs.

The Asset Lifecycle

Figure 3 below provides a graphical representation of the asset lifecycle including each of the stages an asset passes through during its life.

Figure 3: Asset Lifecycle

6.1 Background Data

6.1.1 Physical parameters

The summary of the road infrastructure asset classes covered by this AMP are shown in Table 13: Road Components. The most recent information available for the quantities and total values are detailed in Section 8.

Table 13: Road Components

Road Infrastructure Assets Components	Useful Life (Years)	Length (km)
Primer-seal	70-80	630.64
Seal	12-15	630.64
Sealed Pavement (Non-Depreciable)	NA	630.64
Sealed Pavement (Depreciable)	70-80	630.64
Unsealed Pavement (Non-Depreciable)	NA	1,092.34
Unsealed Pavement (Depreciable)	30-60	1,092.34
Kerb and Gutter	80	125.67
Footpath/Cycleway	100	29.88

Road Infrastructure Assets Components	Useful Life (Years)	Length (km)
Earthworks	NA	1,722.98

6.1.2 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 14: Known Service Performance Deficiencies.

Table 14: 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 service deficiencies for road infrastructure network were identified from customer requests, condition assessments and technical investigations.

6.1.3 Asset condition

Condition surveys

Asset condition is an important determinant for Council's asset renewal planning. Condition is monitored through failure statistics, selected pavement investigations (rare) and video and data capture through ARRB assessments.

The frequency of condition assessments will depend on a number of factors including the age, life, risk and criticality of the asset. In taking these factors into account and the current revaluation cycle for assets Council has determined a condition inspection frequency for each asset class. The following inspection frequency has been adopted for each asset class for future condition surveys are shown in Table 15: Road Inspection Regime.

Table 15: Road Inspection Regime

Road Classification	Inspection Frequency	Delivery	Comment
Regional Sealed	100% every 5 years	External Supply	To be coordinated with the revaluation cycle
Regional Unsealed	100% every year	Internal	In accordance with IPWEA practice note 9
Rural Sealed	100% every 5 years	External Supply	To be coordinated with the revaluation cycle

Road Classification	Inspection Frequency	Delivery	Comment
Rural Unsealed	50% every year	Internal	In accordance with IPWEA practice note 9
Urban Sealed	100% every 5 years	External Supply	To be coordinated with the revaluation cycle
Urban Unsealed	50% every year	Internal	In accordance with IPWEA practice note 9
Kerb & Gutter	100% every 5 years	Internal	To be completed the year before the roads condition inspection
Footpath/Cycleway	100% every 5 years	Internal	To be carried out in conjunction with the sealed roads condition assessment

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.

The visual condition assessments are measured using a 1-5 rating system as shown in Table 16: Visual Condition Assessment.

Table 16: Visual Condition Assessment

Rating	Condition	Description	Guide
1	Excellent	Sound physical condition. Asset likely to perform adequately without major work.	Normal maintenance required
2	Good	Acceptable physical condition, minimal short term risk of failure.	Normal maintenance plus minor repairs required (to 5% or less of the asset)
3	Satisfactory	Deterioration evident, failure in the short term unlikely. Minor components need replacement or repair now but asset still functions safely.	Significant maintenance and/or repairs required
			(to 10 - 20% of the asset)
4	Worn	Deterioration of the asset is evident and failure is possible in the short term. No immediate risk to health and safety.	Significant renewal required
			(to 20 - 40% of the asset)
5	Poor	Failed or failure is imminent or there is significant deterioration of the asset. Health and safety hazards exist which present a possible risk to public safety.	Over 50% of the asset requires renewal

Condition assessment

A desktop assessment of asset condition has been completed for the purposes of developing this AMP using the following method:

- Age and remaining life (based on design life)

- Construction plans not yet updated in MapInfo
- 2012 survey information for the complex assets
- Council knowledge on a township and asset category basis.

This high level assessment of asset condition is summarised in Table 17: Assessed Road Infrastructure Condition Summary. Note that the percentages are based on replacement costs.

Table 17: Assessed Road Infrastructure Condition Summary

Road Infrastructure Assets Component	Asset condition grade				
	1	2	3	4	5
Seal (Primer-seal and Seal)	26.0%	60.0%	2.0%	1.0%	11.0%
Sealed Pavement (Depreciable & Non-depreciable)	33.0%	61.0%	3.0%	2.0%	1.0%
Unsealed Pavement (Depreciable & Non-depreciable)	21.0%	47.0%	26.0%	6.0%	0.0%
Kerb and Gutter	30.0%	44.0%	21.0%	4.0%	1.0%
Footpath	85.0%	12.0%	2.0%	1.0%	0.0%

6.1.4 Asset valuations

The value of assets as at 30 June 2021 covered by this asset management plan is summarised below. Assets are valued at Brownfield rates with the unit rates for each asset type based on recent similar construction projects.

- Gross Replacement Cost $709,326,129
- Accumulated Depreciation $ 64,789,736
- Depreciable Written Down Value $ 315,099,013
- Earthworks Value $329,437,380

The assets recorded in the asset register are on a valuation basis with any additions constructed by Council for new and/or renewed assets, since this valuation, recorded at cost or for any assets received by Council on an "in-kind" basis from property developer's (i.e. free of cost to Council) valued using industry data to estimate the cost of their construction. It also noted that where applicable, adjustments are made to the asset register for the value of any corresponding redundant assets that have been renewed.

The written-down value of assets are based on the useful life of the asset class within their asset lifecycle. This predominantly entails the use of a consumption based curve which shows an increase in the deterioration of the asset in the later part of its lifecycle as depicted in Figure 4: Typical Road Pavement Consumption Depreciation Model.

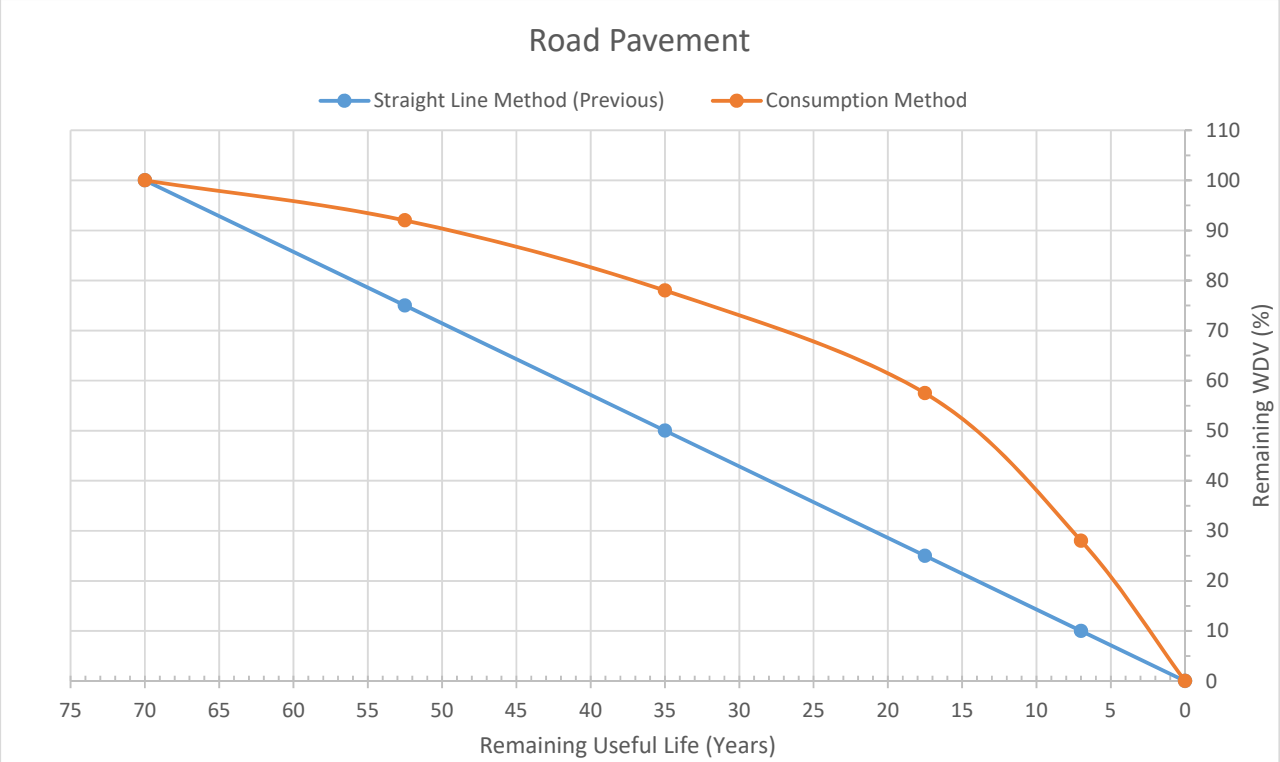


Figure 4: Typical Road Pavement Consumption Depreciation Model

The value of the road infrastructure assets recorded in the asset register are updated and valued annually with a major revaluation in completed every five years. The major revaluation considers suitability of design useful lives and changes them if necessary. It also uses the road infrastructure industry to estimate replacement costs and corrects the current replacement costs used where necessary.

The road infrastructure assets were revalued in June 2020, refer to the Upper Hunter Shire Council Road and Bridge Revaluation 2019/20. In preparation for the next major revaluation programmed for 2025/26 the road infrastructure assets will be reviewed in 2024/25.

Key assumptions made in preparing the valuations were:

- Industry standard design lives are used for all asset classes
- NSW Reference rates used for most assets replacement cost estimate.

There were major changes from previous valuations are:

- The adoption of the 'consumption curve' depreciation model (which replaced the straight line depreciation method)
- The componentisation of the bitumen seal into primer-seal and seal/reseal
- The development of a non-depreciable and depreciable pavement

6.2 Infrastructure Risk Management Plan

The objective of the risk management process with regards to road infrastructure assets is to ensure that:

- All significant operational and organisational risks are understood and identified.
- The highest risks that need to be addressed in the short to medium term are identified.
- Strategies and treatments to address risks are identified and applied.

An assessment of risks associated with service delivery from infrastructure assets has identified the most critical risks to Council. The risk assessment process identifies and assesses risks, develops a risk rating and develops a risk treatment plan for non-acceptable risks.

The key risk management criteria relating to Council's road infrastructure assets include:

- Public health and safety
- Service provision
- Environmental and legal compliance
- Security, theft and vandalism
- Business interruption
- Financial risk (escalating costs in deterioration)
- Asset damage through storms, flooding, bush fire or events such as events.

Risk identification for road infrastructure assets can be identified from a number of resources such as:

- Routine inspections
- Reports and complaints from general public
- Information obtained from incidents
- Advice from professional bodies
- Past experience.

Once risks have been assessed and rated, the most significant risks (those rated as high or extreme) are isolated for treatment and/or control. Those identified as moderate or low will continue to be monitored and reviewed if circumstances change.

Options to treat risk posed by road infrastructure assets include (but not limited to):

- Risk elimination.
- Reduction in the cause or likelihood of the event occurring.
- Reduction in the consequence or severity of the event if it were to occur.
- Increasing the maintenance regime.
- Initiating council improvements.
- Changing operating processes and procedures.
- Sharing the risk through insurance or contracts.
- Doing nothing and accepting the risk.

Asset risks have been identified for the road infrastructure activity using the NAMS risk management framework including the likelihood and consequence tables. The full activity risk register is detailed in Appendix E.

Table 18: Critical Risks and Treatment Plan shows the very high and high risks identified (top 3 only shown), the current controls and additional controls through mitigation strategies which will be implemented to result in the mitigated risk rating.

Table 18: Critical Risks and Treatment Plan

Asset at Risk	What can happen	Risk Rating	Risk treatment plan
Road infrastructure	Failure of segments of the road network	Loss of network connectivity	Condition inspections on 4-5 year basis.
		Greater travel time Loss of emergency access	Update Roads register, review funding required for future years
Road infrastructure	Road pavement / surface failure	Hazards to vehicular traffic	Roads designed and constructed to VicRoads and Council standards (Infrastructure Design Manual).
			Network inspected and maintained in accordance with RAMP.
Road infrastructure	Road delineation / sight distances	Hazards to vehicular traffic	Network inspected and maintained in accordance with RAMP.
	Obstructions	Hazards to vehicular traffic	Network inspected and maintained in accordance with RAMP.

6.3 Routine Operations and Maintenance Plan

Operations include regular activities to provide services at the agreed service levels such as responding to failures and defects.

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.

6.3.1 Operations and Maintenance Plan

Maintenance includes reactive, planned and cyclic maintenance work activities.

Reactive maintenance is unplanned repair work carried out in response to service requests, risk assessment priorities and management/supervisory directions. Assessment and prioritisation of reactive maintenance is undertaken by Council staff using experience and judgement, and risk management procedures.

Planned maintenance is repair work that is identified and managed through a maintenance program. 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. This work generally falls below the capital/maintenance threshold.

Maintenance expenditure trends are shown in Table 19: Maintenance Expenditure Trends.

Table 18: Maintenance Expenditure Trends

Maintenance Expenditure	
Planned and Specific	**Unplanned**
30-40%	60-70%

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. Somewhat more disconcerting, with reference to Appendix D, is the Asset Maintenance Ratio is declining against the benchmark of 100%. Once again this suggests a lack of funding of both capital and operational expenditure on road assets which, as a result, has led to a backlog of works and a deterioration of the networks condition.

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

Table 19: Required Maintenance and Cost to Bring to Satisfactory

Road Infrastructure Asset Components	Required Maintenance ($)	Cost to Bring to Satisfactory Standard ($)	Cost to Bring to Agreed Level of Service ($)
Seal (Primer-seal & Seal)	-	-	-
Sealed Pavement (Non-Depreciable & Depreciable)	1,732,000	2,000,000	2,000,000
Unsealed Pavement (Non-Depreciable & Depreciable)	2,147,000	3,500,000	3,500,000
Kerb and Gutter	-	500,000	500,000
Footpath/Cycleway	70,000	250,000	250,000
TOTAL	3,949,000	6,250,000	6,250,000

6.3.2 Operations and Maintenance Strategies

The organisation will operate and maintain assets to provide the defined level of service to approved budgets in the most cost-efficient manner. The operation and maintenance activities include:

- Scheduling operations activities to deliver the defined level of service in the most efficient manner
- Maintain and review on an annual basis a current infrastructure risk register for assets. Present service risks associated with providing services from infrastructure assets and reporting Very High and High risks and residual risks after treatment to management and Council
- Review current and required skills base and implement workforce training and development to meet required operations and maintenance needs
- Review asset utilisation to identify underutilised assets and appropriate remedies, and over utilised assets and customer demand management options
- Maintain a current hierarchy of critical assets and required operations and maintenance activities

- Review management of operations and maintenance activities to ensure Council is obtaining best value for resources used

6.3.3 Critical Assets

Critical assets are those assets which have a high consequence of failure but not necessarily a high likelihood of failure. By identifying critical assets and critical failure modes, organisations can target and refine investigative activities, maintenance plans and capital expenditure plans at the appropriate time.

Operations and maintenances activities may be targeted to mitigate critical assets failure and maintain service levels. These activities may include increased inspection frequency, higher maintenance intervention levels, etc.

A high level criticality assessment was completed in 2015 for Council's infrastructural asset groups including the road infrastructure network. Different road infrastructure asset elements were assessed as high, medium or low criticality rating and are detailed in Table 20: Critical Road Infrastructure Assets. The next step is to identify and rank the critical assets using this methodology across the asset inventory.

Table 20: Critical Road Infrastructure Assets

	High	Medium	Low
Road classification	Regional Roads & Rural 1 Roads	Rural 2-3 Roads & Urban Streets	Rural 4 Roads
Waterway proximity	Road runs parallel to waterway	Road runs perpendicular to waterway	
Emergency services	Police, Fire brigade & Ambulance	Rural Firefighting Service & State Emergency Service	Airfield & Council Depots
Schools	40km/hr Zones		Yes
Bus routes	School bus route		Other bus route
Accident history	Fatality	Accident/Hospitalisation (>5)	Accident/Hospitalisation

6.3.4 Standards and Specifications

Maintenance work is carried out by council staff in accordance with the Council standards and standard drawings.

6.3.5 Future Maintenance Expenses

Future maintenance costs are forecast to trend in line with the value of the road infrastructure network, plus an allowance for increase in levels of service over the planning period. Asset values are forecast to increase as additional assets are added to the network from construction and acquisition by Council and from assets constructed by land developers and others that are donated to Council.

6.4 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.

6.4.1 Renewal plan

Assets requiring renewal are identified from estimates of remaining life obtained from the condition survey and further detailed inspections. The average remaining lives of the road infrastructure components can be seen in Table 21: Average Remaining Life. Based on the age profile from the asset register the majority of the network is relatively young with considerable life reaming for the majority of the assets.

Renewals will be undertaken using 'low-cost' 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.

Table 21: Average Remaining Life

	Regional		Rural		Urban		Concrete	
Component	**Sealed**	**Unsealed**	**Sealed**	**Unsealed**	**Sealed**	**Unsealed**	**Footpath**	**Kerb & Gutter**
Pavement (Depreciable)	58	28	60	33	57	51	-	-
Seal	13	-	12	-	11	-	71	26
Concrete	-	-	-	-	-	-	80	80

The decision criteria for road infrastructure renewals include, in descending importance:

- Accident potential
- Heavy vehicle volume
- Local network significance
- Regional network significance
- Light traffic volume
- Cost/Benefit ratio
- Existing maintenance costs
- Environmental issues

6.4.2 Renewal and Replacement Strategies

Council will plan capital renewal and replacement projects to meet level of service objectives and minimise infrastructure service risks by:

- Planning and scheduling renewal projects to deliver the defined level of service in the most efficient manner
- Undertaking project scoping for all capital renewal and replacement projects to identify:
  - the service delivery 'deficiency', present risk and optimum time for renewal/replacement
  - the project objectives to rectify the deficiency
  - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency
  - evaluate the options against evaluation criteria adopted by Council
  - select the best option to be included in capital renewal programs
- Using 'low cost' renewal methods (cost of renewal is less than replacement) wherever possible

- Maintain a current infrastructure risk register for assets and service risks associated with providing services from infrastructure assets and reporting Very High and High risks and residual risks after treatment to management and Council
- Review current and required skills base and implement workforce training and development to meet required construction and renewal needs
- Maintain a current hierarchy of critical assets and capital renewal treatments and timings required
- Review management of capital renewal and replacement activities to ensure Council is obtaining best value for resources used.

Table 22: Required Renewal of Assets (by Length)

Road Infrastructure Asset Components	Useful Life (Years)	Length (km)	Required Renewal Length (km)
Seal (Primer-seal & Seal)	12-15	623.3	41.5
Sealed Pavement (Non-Depreciable & Depreciable)	70-80	623.3	7.8
Sealed Pavement (Non-Depreciable & Depreciable)	30-60	1,647.4	NA
Kerb and Gutter	80	123.5	1.5
Footpath/Cycleway	100	29.6	0.3

6.4.3 Renewal standards

Renewal work is always carried out to current standards and capacity unless a reduced capacity can be justified.

6.4.4 Summary of future renewal expenditure

On average renewals are 56.13% of the total capital expenditure for the next 10 years. Council has now placed a focus on asset renewals, with reference to Appendix D, the Infrastructure Renewal Ratio is over the benchmark of 100% for the next four years and goes someway to managing the road infrastructure backlog. Currently there is an estimated backlog of works between $5.6 and $7.3 million road infrastructure assets.

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.

6.4.5 Impact of Deferring Renewal 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.

As previously stated Council has an estimated backlog of works for road infrastructure assets of between $5.6 and $7.3 million. Table 22: Required Renewal of Assets (by Length) provides the length of assets that require renewal on a yearly basis, determined by the asset length and useful life. Although a rudimentary method, not taking into account asset conditions, this provides a simplistic guide of what should be achieved each year regarding renewals. Currently, the Infrastructure Backlog Ratio benchmark of 2% will not be met in the 10-year

period, although progress will be made with a focus now placed on asset renewals. To further complicate the subject, the fact that over 30% of the capital expenditure budget is reliant on Government Grants or other funding sources must be recognised and reinforced to pay the utmost importance and significance of successful applications. This may be acceptable together with alternative funding sources, unfortunately in many instances this is not the case. Therefore, if funding is either unsuccessful, lost or reduced those works will further contribute to and exponentially increase the back log of works.

6.5 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.

6.5.6 Selection criteria

New assets and upgrade/expansion of the existing road infrastructure are identified from the following:

- proposals identified by strategic plans or partnerships with other organisation
- urban and rural growth – increased development
- poor condition, under capacity road infrastructure network locations.

In preparing future works programs to upgrade/expand the road infrastructure network consideration is given to the following:

- capacity and condition of the existing road infrastructure network
- strategic locations to improve the quality of road infrastructure network

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. There are no plans to dispose of any significant lengths of sealed road at this time.

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.

7 FINANCIAL SUMMARY

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

Note that expenditure forecasts (operational and capital) are based on the Delivery Program 2018/19-2022/2023 and Operational Plan 2022/23.

The improvements proposed for condition monitoring and establishing more accurate useful lives for the road infrastructure assets system will also be an input into that process.

7.1 Financial Projections

7.1.1 Financial Summary Overview

The total amount of forecasted expenditure for road infrastructure operations, maintenance and capital over the next ten years will be approximately $240.9 million (as shown in Figure 1) with annual forecasted expenditure varying between $15.8 and $55.9 million per annum. This expenditure is divided into two main categories, being:

- Capital Expenditure (CAPEX), which is approximately $119.7 million or 49.70% of total expenditure, and
- Operational Expenditure (OPEX), which is approximately $121.2 million or 50.3% of total expenditure.

The CAPEX is further separated into three main subcategories being:

- Level of Service (LOS); which increases the service level delivered by the assets. This accounts for approximately $32.8 million or 27.39% of total capital expenditure.
- Renewal; which replaces the asset as new. This equates to approximately $67.2 million or 56.13% of total capital expenditure.
- Growth; refer to the expansion of the existing asset network. This accounts for approximately $19.7 million or 16.48% of total capital expenditure.

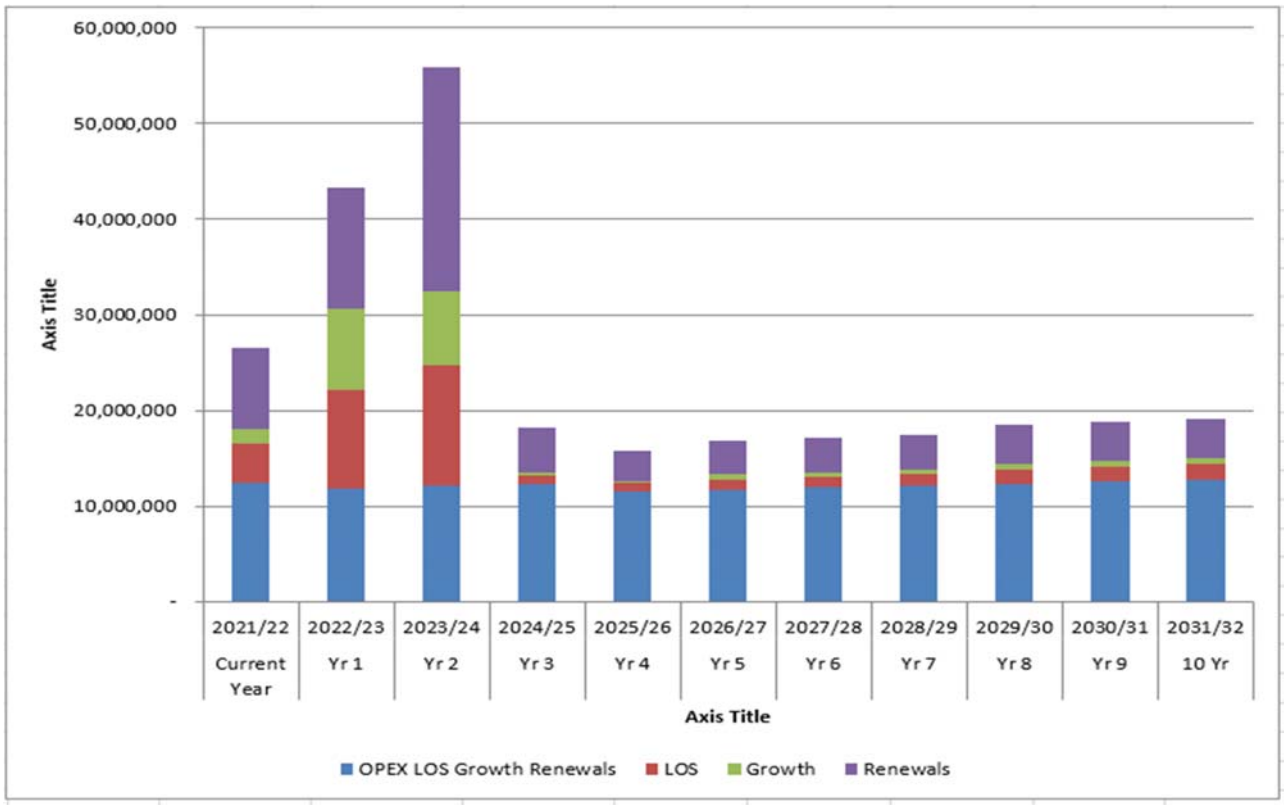


Figure 5: Summary of Road Assets Total Expenditure Forecast

Table 23: Summary of Road Assets Total Expenditure Forecast

Road Assets Summary	Current Year 2021/22	Year 1 2022/23	Year 2 2023/24	Year 3 2024/25	Year 4 2025/26	Year 5 2026/27	Year 6 2027/28	Year 7 2028/29	Year 8 2029/30	Year 9 2030/31	10 Year 2031/32	10 Year Total
OPEX	12,504,508	11,818,405	12,120,352	12,254,237	11,557,738	11,745,286	11,937,732	12,135,206	12,337,831	12,545,751	12,759,103	121,211,641
LOS	4,079,199	10,254,815	12,616,037	991,250	823,250	1,064,250	1,119,250	1,274,250	1,464,250	1,519,250	1,674,250	32,800,852
Growth	1,491,267	8,475,594	7,682,908	241,250	156,250	466,250	411,250	411,250	666,250	611,250	611,250	19,733,502
Renewals	8,429,864	12,698,348	23,486,798	4,710,000	3,308,000	3,562,000	3,592,000	3,622,000	4,052,000	4,082,000	4,102,000	67,215,145
TOTAL	**26,504,838**	**43,247,162**	**55,906,094**	**18,196,737**	**15,845,238**	**16,837,786**	**17,060,232**	**17,442,706**	**18,520,331**	**18,758,251**	**19,146,603**	**240,961,140**

7.1.2 Operational expenditure summary

The recommended ten-year operational expenditure forecast is shown in Table 23: Summary of Road Assets Total Expenditure Forecast with $240.9 million forecast over the next ten years.

Table 24: Summary of Road Infrastructure Assets – Operational Expenditure

Road Infrastructure Assets OPEX Summary	Current Year 2021/22	Year 1 2022/23	Year 2 2023/24	Year 3 2024/25	Year 4 2025/26	Year 5 2026/27	Year 6 2027/28	Year 7 2028/29	Year 8 2029/30	Year 9 2030/31	10 Year 2031/32	10 Year Total
DIRECT ASSET COSTS												
Local Roads	5,267,000	4,490,500	4,736,635	4,796,441	4,016,185	4,146,129	4,279,499	4,416,381	4,556,868	4,701,058	4,849,051	44,988,747
Regional Roads	570,500	480,500	496,115	511,937	527,956	541,824	556,059	570,671	585,669	601,064	616,866	5,488,661
Transport Management	100,630	99,750	102,888	105,993	109,059	111,896	114,805	117,792	120,856	124,001	127,227	1,134,267
Footpaths/Cycle ways	70,000	72,500	72,500	72,500	72,500	72,500	72,500	72,500	72,500	72,500	72,500	725,000
INDIRECT ASSET COSTS												
Depreciation	4,826,542	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	49,019,670
Loan Payments	134,998	111,978	98,726	93,287	88,257	83,111	77,847	72,463	66,954	61,318	55,553	809,494
Corporate Overheads	1,534,838	1,661,210	1,711,521	1,772,112	1,841,814	1,887,859	1,935,055	1,983,432	2,033,017	2,083,843	2,135,939	19,045,802
TOTAL	**12,504,508**	**11,818,405**	**12,120,352**	**12,254,237**	**11,557,738**	**11,745,286**	**11,937,732**	**12,135,206**	**12,337,831**	**12,545,751**	**12,759,103**	**121,211,641**

7.1.3 Capital expenditure

There is a total of $119.7 million for capital expenditure for the next ten years as shown in Table 24. Total annual renewals fluctuate between years with a ten-year average of $6.7 million for road infrastructure assets. It is estimated that 27.39% of the capital expenditure is for LOS.

The full capital expenditure program is detailed in Appendix B.

7.2 Forecast Reliability and Confidence

The expenditure and valuations projections in the road infrastructure assets AMP are based on the best available data. Currency and accuracy of data is critical to effective asset and financial management. Data confidence is classified on a 5 level scale, refer to Table 25: Data Confidence Grading System.

Table 25: Data Confidence Grading System

Confidence Grade	Description
A Highly reliable	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 Reliable	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 Uncertain	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 Very Uncertain	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 Unknown	None or very little data held.

The estimated confidence level for and reliability of data used in Road Infrastructure Assets Services AMP is shown in Table 26: Data Confidence Assessment for Data used in AMP.

Table 26: Data Confidence Assessment for Data used in AMP

Data	Confidence Assessment	Comment
Demand drivers	B	
Growth projections	B	Multiple scenarios developed and considered during 30 year financial modelling
Operations expenditures	B	Current levels generally known and recorded, scenarios considering additional resourcing need to be developed
Maintenance expenditures	B	Generally known but maintenance history not recorded at asset ID level. Need to start recording work history to asset lengths in CONFIRM to improve renewal planning.
Projected Renewal exps.		
- Asset values	B	Asset revaluation completed in June 2020. Major revaluation scheduled for every five years and due 2025.

Data	Confidence Assessment	Comment
- Asset useful lives	B	Useful lives were last reviewed in June 2019 and will be reviewed in 2024/25 prior to the major asset revaluation planned for 2025.
- Condition modelling	C	There has been limited condition information collected and therefore no modelling undertaken to date.
- Network renewals	C	Generally sound renewal programs based on operational knowledge and identified defects.
- Defect repairs	C	
Upgrade/New expenditures	B	Based on specific studies and/or designs.
Disposal expenditures	C	Generally, as part of a capital project or at asset component level for complex assets. Disposal costs are generally included as part of the capital project.

Over all data sources, the data confidence is assessed as uncertain confidence level for data used in the preparation of this AMP.

8 PLAN IMPROVEMENT AND MONITORING

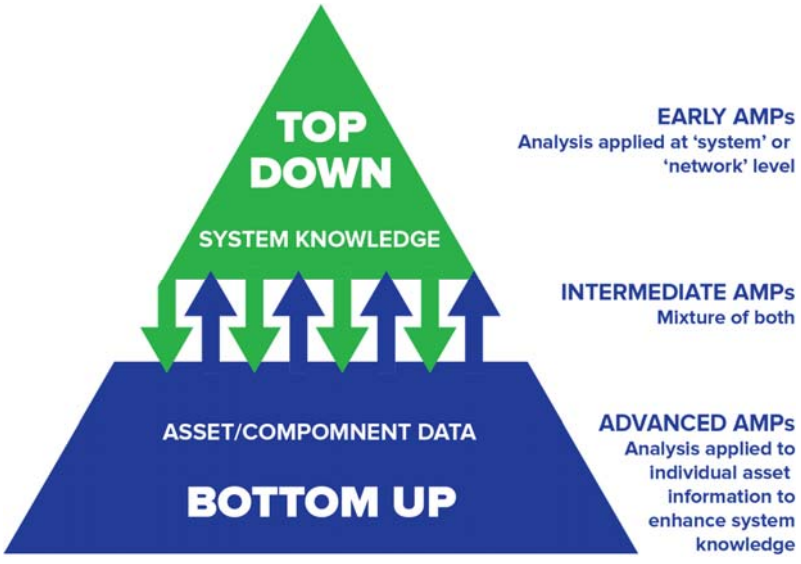
8.1 Status of Asset Management Practices

Asset Management Commitment

Through the initiatives presented in this section, Council is committed to appropriate asset management practices. This practice is being developed in line with the IPWEA NAMS practice as presented the suite of asset management publications including the 2015 IIMM. Council is committed to delivering the most appropriate levels of service balanced with affordability and good industry practice.

Core and Advanced Asset Management

This plan is prepared as a 'core' AMP over a 10 year planning period in accordance with the 2015 IIMM. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. Core asset management is a 'top down' approach where analysis is applied at the 'system' or 'network' level as shown in Figure 5.



Future revisions of this AMP will move towards 'intermediate' 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:

Figure 5: Core versus Advanced Asset Management Status

8.1.1 Accounting and financial systems

Council uses the Authority suite for its financial / accounting systems. Responsibility for the financial system lies with the Finance Manager and the Director of Corporate Services. Council currently has a maintenance/capital threshold.

Council manages and is responsible for all of the accounting, budgeting and financial aspects of all of its assets. The primary issue for the financial systems section is to:

- Ensure that asset valuations are conducted regularly
- Valuations match what is out in the field
- Ensure that updates to the system are regularly undertaken.

Accountabilities for financial systems

Under the Local Government Act 1993 the Finance Section of Upper Hunter Shire Council must meet reporting requirements. These include budget reviews with all AMP sections within the Council. They also must provide an annual report outlining the year's achievements, in terms of meeting its objectives and performance targets as it had set out. This document also outlines the amount of expenditure required to meet the standards set in the asset plans, the amount of annual maintenance required to keep the assets at the level of service specified, and Upper Hunter Shire Council's maintenance program for the year in relation to the work carried out.

Accounting standards and regulations

To effectively account for the road infrastructure assets of Upper Hunter Shire Council, the Finance Section must meet statutory and regulatory reporting protocols. These protocols are addressed in the Local Government Act 1993.

Capital/maintenance threshold

Renewal or enhancement works over $5,000 are further investigated to determine if the works upgrade or extend the lifecycle of the assets before capitalisation of the costs are recognised.

Required changes to accounting financial systems arising from this AMP

Areas that need to be investigated include establishing an integrated work orders system for road infrastructure assets. This will allow for a thorough costing of the planned, cyclic and reactive maintenance tasks. This process has advanced for other sections of Council, and now needs to be extended to the Road Infrastructure Assets System.

8.1.2 Asset registers and management systems

Currently an excel database is used, 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. In order for this AMP to grow in maturity and improve in accuracy it is vital that integration of asset register systems and financial systems be achieved.

Required changes to asset management system arising from this AMP

- Condition monitoring and obsolescence to be accounted for and recorded
- The link between the financial plan, asset plan and the works order system will be addressed in the future
- Establish recording systems where reactive maintenance can be measured in terms of frequency and scope of work undertaken
- For CONFIRM, improve the provision for, and records contained, in the large single point assets.
- The process for updating CONFIRM is currently ad hoc and under resourced. Asset updates are mainly undertaken for audit reporting purposes rather than for long term asset management planning. A sound and

complete asset inventory is essential for Council to manage Road Infrastructure Assets services sustainably. This is recognised as a very high improvement task.

8.2 Action and Improvement Program

Key improvement programmes and associated projects have been developed through a review of the gaps in developing this draft AMP and the issues identified. The three year improvement programme is summarised in Table 27.

Table 27: Improvement Plan Summary Programme

AM Improvement Area	Action	Indicative Timeframe	Priority	Responsibility
Asset Data	Develop a regime covering inspection program and reporting and recording mechanisms.	2021/22	Very High	Strategic Assets
Asset valuation	Review the currently used asset useful lives prior to the next major asset revaluation.	2024/25	High	Strategic Assets
Asset capability	Implement adequate resourcing and capability for updating the road infrastructure asset inventory, collection of asset repair data, and updating asset condition assessment records.	2021/22	Very High	Strategic Assets
Renewal planning	Undertake proactive and regular analysis of the road infrastructure network.	2021/22	High	Strategic Assets, Operations Services
	Revise and improve the effectiveness of the current road infrastructure renewal program	2021/22	High	Strategic Assets
Risk management	Develop an Emergency Response Plan for the critical road infrastructure assets.	2021/22	High	Strategic Assets, Internal Auditor/Risk Co-coordinator
Systems Improvements	Maintenance Service Agreement – review current levels of service, covering maintenance activities and service standards, to reflect the work undertaken with the current budget	2021/22	High	Strategic Assets, Information Technology, Operations Services

8.3 Monitoring and Review Procedures

This AMP will be reviewed during annual budget planning processes and amended to recognise any material changes in service levels and/or resources available to provide those services as a result of budget decisions.

The AMP will be updated annually to ensure it represents the current service level, asset values, projected operations, maintenance, capital renewal and replacement, capital upgrade/new and asset disposal expenditures and projected expenditure values incorporated into the Council's long term financial plan.

The AMP has a life of four years (Council election cycle) and is due for complete revision and updating within one year of each Council election.

8.4 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 organisation's long term financial 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 AMP
- The degree to which the existing and projected service levels and service consequences (what we cannot do), risks and residual risks are incorporated into the organisation's Strategic Plan and associated plans

9 LATEST ASSET and LOS INFORMATION

9.1 Road Infrastructure Assets asset summary

A summary of the Shire's Road Infrastructure asset class values as at 30 June 2021 are shown at Table 28 Value of Road Infrastructure Assets asset classes.

Table 28: Value of Road Infrastructure Assets asset classes

Road Asset Class	Length (km)	Earthworks	Current Replacement Value ($)	Accumulated Depreciation ($)	Written Down Value (WDV) ($)
Regional Unsealed	-	-	-	-	-
Regional Sealed	174.4	66,436,957	158,355,606	14,300,348	144,055,258
Rural Sealed	335.5	77,738,958	180,946,813	11,302,609	169,644,204
Urban Sealed	120.7	24,361,801	68,462,448	6,351,560	62,110,888
Rural Unsealed	1,070.6	158,795,451	257,354,945	25,016,409	232,338,536
Urban Unsealed	21.7	2,104,213	4,219,261	209,553	4,009,708
Kerb & Gutter	12.5	-	33,080,921	6,197,288	26,883,633
Footpath	29.6	-	6,906,135	1,411,969	5,494,166
TOTAL	**1,765**	**329,437,380**	**709,326,129**	**64,789,736**	**644,536,393**

Source: Council's Asset Register (as at 30 June 2021)

9.2 Service Level Summary

The levels of service and performance measures for Road Assets services are summarised in Table 29.

Table 29: Road Infrastructure Assets Services Level and Performance Measure Summary

Service	Statement of Commitment	Measure	Yearly Target
Footpaths and Cycleways	To provide and maintain a safe cycleway and footpath network across Council.	The percentage of network in Condition 3 (Fair) or better.	> 95%
		The percentage of capital works completed.	> 90%

Service	Statement of Commitment	Measure	Yearly Target
		The percentage of capital works completed within yearly budget allocation.	> 90%
		The number of complaints received concerning unsafe conditions of footpath and cycleway surfaces.	< 10
		The frequency of inspections on high volume footpaths and cycleways.	2
		The frequency of inspections on low to medium volume footpaths and cycleways.	1
Roads - Local	All roads will be inspected and maintained in accordance with industry standards and specifications.	The percentage of the local sealed road network inspected.	> 90% or 410km
		The percentage of the local unsealed network inspected.	> 90% or 990km
		The percentage of capital projects completed.	> 90%
		The percentage of capital projects completed within budget allocation.	> 90%
		The percentage of unsealed road grading completed.	> 90%
		The total length of reseals on the local sealed road network.	> 30km
Roads - Regional	All roads and bridges to be inspected and maintained in accordance with industry standards and specifications	The percentage of the regional road network inspected.	> 100% or 174km
		The percentage of regional bridges & major culverts inspected.	> 100% or 45
		The percentage of capital projects completed.	> 90%
		The percentage of capital projects completed within budget allocation.	> 90%
		The length of reseals on the regional sealed road network.	> 15km
Transport Ancillaries	Signs will be changed on an average of 15-year cycle and pavement markings will be repainted as required.	The percentage of traffic signs and road markings maintained in good condition.	> 90%
	Transport service assets will be maintained to acceptable standards	The percentage of capital works completed.	> 90%
		The percentage of capital projects completed within budget allocation.	> 90%

9.3 Infrastructure Asset Performance Indicators

The asset performance indicators are summarised in Table 30. The ten-year asset ratio forecasts based on three year rolling averages are detailed in Appendix D.

Table 30: Asset performance indicators

Ratio	Purpose	2020/21	Benchmarks	Achieved	Comments
Infrastructure Renewals Ratio	To assess the proportion spent on infrastructure renewals vs infrastructure deterioration	73.24%	>100%	No	Renewals planned over the next four year average will exceed benchmarks significantly This is heavily reliant on successful grant funding
Infrastructure Backlog Ratio (estimated cost to bring the assets to a satisfactory condition/ value of assets)	To assess the infrastructure backlog against the total value of council's infrastructure	1.63%	<2%	No	18% of assets are in condition >3 8% of assets are in condition >4
Asset Maintenance Ratio	To assess the actual vs required annual maintenance expenditure	116.00%	>100%	Yes	Maintenance expenditure is currently meeting the calculated required maintenance.
Capital Expenditure Ratio (assessed as annual capital expenditure/ annual depreciation)	To assess the extent to which council is expanding its asset base through capital expenditure (on both new assets and through replacement of existing assets)	1.35	>1.1	Yes	Capital expenditure planned over the next ten year average is favourable to the benchmarks

It must be noted that all these ratios are purely based on financial information not the physical infrastructure that has been renewed. That is to say, that although Council is financially meeting the benchmark of renewals but may in fact not be physically due to the increased cost of renewals. For example, the average cost for renewing one kilometre of road may have $250,000 this same work may now be costing $400,000. So financially Council is meeting its requirements and benchmarks, it may in fact be physically increasing the 'backlog of works'. This has serious consequences moving into the future regarding budgets, levels of service and overall sustainability.

Specifically the Infrastructure Renewal Ratio (Renewals/Depreciation) for 2020/21 for road infrastructure assets is 73.24% this is lower than the benchmark of 100%. Due to the amount of State and Federal Government grant funding received, renewals planned over the next three years will reach benchmarks.

Specifically the Infrastructure Backlog Ratio (Cost to Bring to Satisfactory/Written Down Value) for 2020/21 for road infrastructure assets is 1.63% which is lower than the benchmark of 2%. The cost to bring to satisfactory is calculated by using a percentage of the replacement cost for assets in condition three (25%), four (50%) and five

(70%). An increase in capital expenditure with a clear focus on renewal programs and/or an increase in operational expenditure with a strategic emphasis on efficient and effective planned maintenance regimes should assist in reducing this for the future.

Specifically the Asset Maintenance Ratio (Asset Maintenance Expense/Required Maintenance) for 2020/21 for road infrastructure assets is 95% and does not meet the agreed benchmark of 100%. Furthermore, this ratio worsens over the ten-year period. This indicates that an increase in operational expenditure is required to ensure the assets are maintained to an acceptable level of service and that premature renewals are not required. If this is not rectified the assets will have a declining condition and require much higher investments in asset renewals.

Specifically the Capital Expenditure Ratio (Capital Expenditure/ Depreciation) for road infrastructure for 2020/21 is 1.73 which is higher than the benchmark of 1.10. Much like the Infrastructure Renewal Ratio this does not provide a clear indication of capital expenditure with large proportion of projects either partially or fully reliant of external funding programs through the State and Federal Government initiatives or other sources.

10 REFERENCES

IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australia, Sydney, **www.ipwea.org.au/namsplus**.

IPWEA, 2009, 'Australian Infrastructure Financial Management Guidelines', Institute of Public Works Engineering Australia, Sydney, **www.ipwea.org.au/AIFMG**.

IPWEA, 2015, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australia, Sydney**, www.ipwea.org.au/IIMM**

(Refer to Section 2.1 for relevant Council's documents in relation to this AMP).

11 APPENDICES

- Appendix A Acronym Glossary
- Appendix B Projected 10 Year Capital Renewal, Replacement and New Works Program

- Appendix C Sealed Road Network Expansion – Initial Seal Program
- Appendix C Operational Expenditure
- Appendix D Forecast of Asset Ratios to Local Government benchmarks
- Appendix E Road Infrastructure Assets Services Activity Risk Register
- Appendix F Glossary/ Definitions

Appendix A – Acronym Glossary

Acronym	Definition
AAAC	Average annual asset consumption
AM	Asset management
AMP	Asset management plan
AMS	Asset management system
BASIX	Building Sustainability Index
CRC	Current replacement cost
CRM	Customer Request Management system
DA	Depreciable amount
DRC	Depreciated replacement cost
DPI	Department of Primary Industries Water
DPOP	Delivery Program and Operational Plan
EF	Earthworks/formation
IIMM	International Infrastructure Management Manual
IWCM	Integrated Water Cycle Management Plan
LCMP	Lifecycle Management Plan
LOS	Levels of Service
LTFP	Long term financial plan
MMS	Maintenance management system
POEO	Protection of Environment Operations Act
RV	Residual value
WARR	Waste Avoidance and Recovery Act
WDV	Written Down Value

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

PROJECT DESCRIPTION	Type of Works			COST OF RENEWALS	TOTALS	Current Year	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			2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	
LOCAL ROADS CAPITAL PROJECTS																	
0834. Timor Rd, Mdi	20%		80%	768,000	960,000	-	-	-	500,000	460,000	-	-	-	-	-	-	960,000
1001. Ringwood Road Upgrade	20%		80%	-	-	400,000	-	-	-	-	-	-	-	-	-	-	-
1283. Urban Rd Reseals			100%	4,540,000	4,540,000	105,000	400,000	420,000	430,000	440,000	450,000	460,000	470,000	480,000	490,000	500,000	4,540,000
1284. Rural Rd Reseals			100%	8,120,000	8,120,000	340,000	740,000	780,000	790,000	800,000	810,000	820,000	830,000	840,000	850,000	860,000	8,120,000
4078. Farram Lane Construction	50%		50%	-	-	270,000	-	-	-	-	-	-	-	-	-	-	-
4861. Village Streets Initial Seal	50%	50%		-	400,000	-	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	400,000
4862. Village Streets Shoulder Initial Seal	50%	50%		-	400,000	-	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	400,000
4894. Comiala Road Rehabilitation	30%	20%	50%	200,000	400,000	-	-	-	400,000	-	-	-	-	-			400,000
4986. Local Sealed Road Heavy Patching	20%		80%	1,200,000	1,500,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	1,500,000
4987. Local Unsealed Roads Resheet	20%		80%	4,880,000	6,100,000	1,550,000	1,100,000	1,100,000	1,100,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	6,100,000
4989. Local Roads & Streets ARRB	100%			-	365,000	-	125,000	-	-	80,000	-	-	80,000	-		80,000	365,000
5247. Moonan Brook Rd MR105 Seal & Upgrade	30%	40%	30%	1,562,180	5,207,268	75,000	5,207,268	-	-	-	-	-	-	-		-	5,207,268
5248. Rouchel Rd Upgrade	80%	20%		-	57,000		57,000	-	-	-	-	-	-	-			57,000
5252. Rouchel Rd Ch19.6-20.2 Rehab & Widening	20%		80%	-	-	93,000		-	-	-	-	-	-	-		-	-
5256. K&G Renewal - Mayne St Mdi	20%		80%	-	-	185,053	-	-	-	-	-	-	-	-			-
5259. Urban Streets K&G Renewal	50%		50%	1,000,000	2,000,000	-	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	2,000,000
5290. Mount St Mdi K&G	50%		50%	-	-	4,000	-	-	-	-	-	-	-	-	-	-	-
5392. Culvert Subsidence	20%		80%	400,000	500,000	-	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	500,000
5407. Hunter Rd - Naracoote to Glenmore Brg	30%	40%	30%	600,000	2,000,000	53,000	-	2,000,000	-	-	-	-	-	-			2,000,000
5408. Hunter Rd - Shallow Crossing-Ellerston	30%	40%	30%	1,251,000	4,170,000	18,000	-	4,170,000	-	-	-	-	-	-			4,170,000
5409. Barrington Forest Rd - Initial Seal Stg1	30%	40%	30%	750,000	2,500,000	30,000	2,500,000	-	-	-	-	-	-	-			2,500,000
5410. Barrington Forest Rd - Initial Seal Stg2	30%	40%	30%	941,906	3,139,687	30,000	1,500,000	1,639,687	-	-	-	-	-	-			3,139,687
5492. Stafford & Liverpool Sts Intersection	20%		80%	-	-	67,104	-	-	-	-	-	-	-	-			-
5504. Kars Springs Stormwater	50%		50%	-		100,000		-	-	-	-	-	-	-			-
5528. Pages Creek Road Upgrade	50%		50%	-		18,000		-	-	-	-	-	-	-			-
5548. Hacketts Rd Merriwa	50%		50%	-		80,000		-	-	-	-	-	-	-			-
5549. Bow St (fr Blaxland St to MacCartney St)	20%		80%	128,000		-	160,000	-	-	-	-	-	-	-			160,000
5550. Idaville Rd Rehabilitation	20%		80%	320,000		-		-	400,000	-	-	-	-	-			400,000
5551. Cullingral Rd Rehabilitation	20%		80%	280,000		-	-	-	350,000	-	-	-	-	-			350,000
5553. Moobi Rd Rehabilitation	30%	20%	50%	75,000		-	-	-	150,000	-	-	-	-	-			150,000
5555. Victoria St Mdi - Rehabilitation	30%	20%	50%	200,000		-	400,000	-	-	-	-	-	-	-			400,000
5556. Yarrandi Rd - Initial Design/Studies	30%	40%	30%	25,200		-	84,000	-	-	-	-	-	-	-			84,000
5557. Middlebrook Rd - Initial Design/Studies	30%	40%	30%	12,600		-	42,000	-	-	-	-	-	-	-			42,000

PROJECT DESCRIPTION	Type of Works			COST OF RENEWALS	TOTALS	Current Year	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			2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	
5559. Muffett Street Overpass Investigations		100%		-		-	500,000	-	-	-	-	-	-	-			500,000
LOCAL ROADS - ROADS TO RECOVERY CAPITAL PROJECTS																	
4444. R2R Capital Projects Future Yrs	40%	20%	40%	4,560,000	11,400,000	-	-	-		-	1,400,000	1,400,000	1,400,000	2,400,000	2,400,000	2,400,000	11,400,000
4734. Muffet St Reconstruction	20%		80%	-	-	500,000	-	-	-	-	-	-	-	-	-	-	-
4772. R2R Tullong Rd Rehab (0.4Km-0.9km)	20%	10%	70%	-	-	261,000	-	-	-	-	-	-	-	-			-
4988. R2R Urban Streets K&G Renewals	50%		50%	-	-	100,000	-	-	-	-	-	-	-	-	-	-	-
5816. R2R Aberdeen Public School Graeme St Upgrade	50%		50%	-	-	481,000	-	-	-	-	-	-	-	-			-
LOCAL ROADS – ROAD SAFETY PROGRAMME																	
5539. RSP Rouchel Rd - Install Guardrail	100%			-	304,515	-	-	304,515	-	-	-	-	-	-			304,515
5540. RSP Glenbawn Rd - Shoulder Wide & Guardrail	100%			-	779,476	-	500,000	279,476	-	-	-	-	-	-			779,476
5541. RSP Timor Rd - Shoulder Wide & Guardrail	100%			-	957,627	-	272,520	685,107	-	-	-	-	-	-			957,627
LOCAL ROADS – REMOTE ROADS UPGRADE PROGRAMME																	
5536. Pages Creek & Sargeants Gap Rds Upgrades	50%		50%	299,468	598,935	-	598,935	-	-	-	-	-	-	-			598,935
REGIONAL ROADS CAPITAL PROJECTS																	
1285. Regional Rd Reseals			100%	5,640,000	5,640,000	150,000	520,000	530,000	540,000	550,000	560,000	570,000	580,000	590,000	600,000	600,000	5,640,000
4771. Repair - Gundy Rd (MR105 0.8 km- 1.3km)	30%		70%	-	-	-	-	-	-	-	-	-	-	-		-	-
4773. MR105 Repair Works	30%		70%	770,000	1,100,000	-	-	-	-	-	-	550,000	-	-	550,000	-	1,100,000
4860. Repair Program Works MR62	30%		70%	1,155,000	1,650,000	-	-	-	-	550,000	-	-	550,000	-	-	550,000	1,650,000
4913. R2RMR105 Repair - 26km to Belltrees Hill	30%		70%	395,500	565,000	905,000	565,000	-	-	-	-	-	-	-			565,000
4943. R2R Glenbawn & MR105 Intersection	30%		70%	175,000	250,000	-	250,000	-	-	-	-	-	-	-			250,000
4977. R2R - Hunter Road Half Moon	50%	30%	20%	-	-	-	-		-	-	-	-	-	-			-
4978. MR358 - Repair Program Works	20%	10%	70%	350,000	500,000	-	-	-	500,000	-	-	-	-	-			500,000
4979. MR618 - Repair Program Works	20%	10%	70%	1,120,000	1,600,000	-	-	500,000	-	-	550,000	-	-	550,000			1,600,000
4984. Regional Heavy Patching Program	20%		80%	1,200,000	1,500,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	1,500,000
4985. Regional Roads ARRB	100%			-	300,000	-	75,000	-	-	75,000	-	-	75,000	-		75,000	300,000
5260. MR62 Ollerton Dr to Sophia Creek Rd	30%	30%	40%	-	-	733,000	-	-	-	-	-	-	-	-			-
5261. MR62 Sophia Crk Bridge to Cuan Shearing	30%	10%	60%	-	-	3,705,000	-	-	-	-	-	-	-	-			-
5262. MR105 Culvert Subsidence Repairs	40%		60%	270,000	450,000	150,000	-	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	450,000
5266. MR105 Hunter Rd Rehabilitation	40%		60%	-	-	-	-	-	-	-	-	-	-	-			-

PROJECT DESCRIPTION	Type of Works			COST OF RENEWALS	TOTALS	Current Year	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			2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	
5288. MR358 - Coulsons Creek Rd Rehabilitation	20%		80%	20,000,000	25,000,000	1,200,000	5,000,000	20,000,000	-	-			-	-			25,000,000
5339. Bunnan Rd Bunnan Bridge 0.07-0.97km	30%	10%	60%	-	-	320,000	-	-	-	-	-	-	-	-			-
5479. MR62 Bunnan Rd - Shoulder Widen & Seal	50%		50%	-		158,802	-	-	-	-	-	-	-	-			-
5545. MR62 - Ridgelands St Intersection Upgrade	100%			-			71,620	-	-	-	-	-	-	-			71,620
5546. MR62 - Blaydon St Intersection Upgrade	100%			-			71,620	-	-	-	-	-	-	-			71,620
5547. MR105 Gundy Rd - Guardrail	100%			-			71,620	-	-	-	-	-	-	-			71,620
TRANSPORT ANCILLARIES CAPITAL PROJECTS				700,000	1,000,000	-	-	-	500,000	-	-	-	500,000	-			1,000,000
0747. Bus Shelter Capital Works	50%	50%		-	200,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	200,000
0749. CBD & Street Furniture	50%	20%	30%	-	-	20,000											-
0753. Town Revitalisation - Scone	40%	40%	20%	3,484,291	17,421,457	428,188	8,727,000	8,694,457		-	-	-	-	-			17,421,457
0775. Regional Rd Guardrail Replacement		50%	50%	250,000	500,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	500,000
4898. 133 Kelly Street Scone	50%	50%		-	-	560,948	-	-	-	-	-	-	-	-			-
4079. Street Signs	50%	50%		-	125,000	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	125,000
5498. St Aubins St Town Square Green	50%	50%		-	2,000,000	-	100,000	1,900,000	-	-	-	-	-	-	-	-	2,000,000
FOOTPATH AND CYCLEWAYS CAPITAL PROJECTS																-	
1182. Ftpth - Pages River Walk, Mdi	50%	50%		-		-	-	-	-	-	-	-	-	-			-
4080. Ftpth - Mwa Extension	50%	50%		-		50,000	932,674	-		-	-	-	-	-			932,674
4083. Ftpth - Graeme St (McQueen to Segenhoe)	50%	50%		-	-	120,000	-	-	-	-	-	-	-	-			-
4327. Kerb Ramp Upgrade	50%		50%	100,000	200,000	-	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	200,000
4352. Scn - Moobi Rd Cycleway	50%	50%		-	30,000	86,735	30,000	-	-	-	-	-	-	-			30,000
4928. Ftpth - Waverley St East (Short to Liv)	50%	50%		-	-	-	-	-	-	-	-	-	-	-			-
4929. Ftpth - Bedford St (Hwy - Segenhoe)	50%	50%		-	50,000	-		-	-	50,000	-	-	-	-			50,000
4930. Ftpth - Footpath/Cycleway Expansion	50%	50%		-	700,000	-	-	-		100,000	100,000	100,000	100,000	100,000	100,000	100,000	700,000
4974. Ftpth - Segenhoe St Abn (NEH-Graeme)	50%	50%		-	-	100,000	-	-	-		-	-	-	-			-
4975. Footpath Renewals	20%		80%	192,000	240,000		-		-		40,000	40,000	40,000	40,000	40,000	40,000	240,000
5310. MWA TR Bettington St Footpath	50%	50%		-	-	150,000	-	-	-	-	-	-	-	-			-
5531. Ftpth - Scone VIC	50%	50%		-		20,000	-	-	-	-	-	-	-	-			-
5544. Ftpth - Cassilis Public School Coolah Rd	50%	50%		-		-	45,000	-	-	-	-	-	-	-			45,000
5558. Ftpth - Waverley St (Short to Liverpool)	50%	50%		-		-	50,000	-	-	-	-	-	-	-			50,000
TOTAL CAPITAL WORKS EXPENDITURE PROPOSED FOR TEN YEAR PERIOD					119,749,499	14,000,330	31,428,757	43,785,742	5,942,500	4,287,500	5,092,500	5,122,500	5,307,500	6,182,500	6,212,500	6,387,500	119,749,499
TOTAL RENEWALS ONLY EXPENDITURE PROPOSED FOR TEN YEAR PERIOD				67,215,145													

Appendix C – Sealed Road Network Expansion – Initial Seal Program

Priority	Road Name	Location	Length (km)
1	Hunter Road	to Ellerston	16 km
2	Middlebrook Road	to Washpools	4 km
3	Cliftlands Road	Full length	4 km
4	Yarrandi Road	Full Length	6 km

Priority	Road Name	Location	Length (km)
5	Moonan Brook Road	to Moonan Brook Camp Grounds	6 km
6	Wollar Road	Full Length	13 km
7	Forest Reserve Road	Full Length	7 km
8	Timor – Crawney Road		18 km
9	Waverley Road	Full Length	26 km
10	Kars Springs Road	Full Length	15 km
11	Upper Dartbrook Road	Full Length	
12	Barrington Forest Road	Full Length	11 km
13	Tomalla Road	to Pheasants Creek Road	20 km
14	Ridgelands Road	Full Length	17 km
15	Pembroke Road	Full Length	10 km

Appendix D – Operational Expenditure

Table 31: Operational & Maintenance Expenditure Summary

ROADS OPEX Summary	Current year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10 Year Total
Operating Expenditure	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	
Direct asset costs												
Local Roads	5,267,000	4,490,500	4,736,635	4,796,441	4,016,185	4,146,129	4,279,499	4,416,381	4,556,868	4,701,058	4,849,051	44,988,747

ROADS OPEX Summary	Current year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10 Year Total
Operating Expenditure	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	
Regional Roads	570,500	480,500	496,115	511,937	527,956	541,824	556,059	570,671	585,669	601,064	616,866	5,488,661
Transport Ancillaries	100,630	99,750	102,888	105,993	109,059	111,896	114,805	117,792	120,856	124,001	127,227	1,134,267
Footpaths and Cycleways	70,000	72,500	72,500	72,500	72,500	72,500	72,500	72,500	72,500	72,500	72,500	725,000
Indirect asset costs												
Depreciation	4,826,542	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	49,019,670
Loan interest	134,998	111,978	98,726	93,287	88,257	83,111	77,847	72,463	66,954	61,318	55,553	809,494
Corporate Admin Overheads	1,534,838	1,661,210	1,711,521	1,772,112	1,841,814	1,887,859	1,935,055	1,983,432	2,033,017	2,083,843	2,135,939	19,045,802
TOTAL	12,504,508	11,818,405	12,120,352	12,254,237	11,557,738	11,745,286	11,937,732	12,135,206	12,337,831	12,545,751	12,759,103	121,211,641

Table 32: Operational & Maintenance Expenditure - Local Roads

Local Road OPEX Summary	Current year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10 Year Total
Operating Expenditure	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	
Direct asset costs												
Administration Costs	225,000	217,000	224,260	231,617	239,068	245,099	251,283	257,623	264,123	270,788	277,621	2,478,482
Rural Rds (Sealed) Maintenance	-	60,000	61,950	63,887	65,805	67,450	69,136	70,865	72,636	74,452	76,314	682,495
Rural Rds (Unsealed) Maintenance	1,092,000	1,100,000	1,135,025	1,170,000	904,862	936,294	968,552	1,001,657	1,035,632	1,070,498	1,106,281	10,428,801
Urban Rds (Sealed) Maintenance	3,200,000	2,437,500	2,587,700	2,580,793	2,084,179	2,155,654	2,229,048	2,304,411	2,381,797	2,461,262	2,542,861	23,765,205
Urban Rds (Unsealed) Maintenance	725,000	650,000	696,750	718,239	689,409	707,894	726,842	746,263	766,169	786,573	807,488	7,295,627
Indirect asset costs												
Depreciation	3,922,864	3,888,827	3,888,827	3,888,827	3,888,827	3,888,827	3,888,827	3,888,827	3,888,827	3,888,827	3,888,827	38,888,270
Loan Interest – Local Roads	13,495	2,562	-	-	-	-	-	-	-	-	-	2,562
Loan Interest – Rural Roads	13,359	6,406	523	-	-	-	-	-	-	-	-	6,929
Corporate Admin Overheads	994,968	1,063,928	1,093,334	1,132,289	1,179,596	1,209,086	1,239,313	1,270,296	1,302,053	1,334,605	1,367,970	12,192,470
TOTAL	10,211,686	9,452,223	9,719,319	9,817,557	9,084,608	9,244,042	9,407,639	9,575,504	9,747,748	9,924,490	10,105,848	96,078,978

Table 33: Operational & Maintenance Expenditure - Regional Roads

Regional Road OPEX Summary	Current year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	10 Year	10 Year Total
Operating Expenditure	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	
Direct asset costs												
Bridge & Culvert Maintenance (Sealed)	15,500	15,500	15,990	16,475	16,954	17,391	17,840	18,301	18,773	19,258	19,755	176,237
Regional Rds Maintenance	555,000	465,000	480,125	495,462	511,002	524,433	538,219	552,370	566,896	581,806	597,111	5,312,424

Regional Road OPEX Summary	Current year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	10 Year	10 Year Total
Operating Expenditure	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	
Indirect asset costs												
Depreciation	833,911	931,344	931,344	931,344	931,344	931,344	931,344	931,344	931,344	931,344	931,344	9,313,440
Corporate Admin Overheads	404,305	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	108,144	103,010	98,203	93,287	88,257	83,111	77,847	72,463	66,954	61,318	55,553	800,003
TOTAL	1,916,860	1,962,901	1,989,391	2,016,527	2,044,315	2,065,456	2,087,156	2,109,432	2,132,295	2,155,762	2,179,850	20,743,085

Table 34: Operational & Maintenance Expenditure – Traffic Management

Transport Ancilliaries OPEX Summary	Current year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	10 Year	Total 10 Year
Operating Expenditure	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	
Direct asset costs												
Bus Shelter Maintenance	6,000	7,000	7,225	7,453	7,685	7,891	8,102	8,319	8,542	8,771	9,006	79,994
Road Furniture Maintenance	3,000	3,000	3,095	3,189	3,282	3,367	3,454	3,543	3,635	3,729	3,825	34,119
Signs and Marking - Local Roads	50,000	60,000	61,875	63,719	65,525	67,218	68,955	70,737	72,565	74,441	76,365	681,400
Parking Area Maintenance	9,630	2,750	2,833	2,910	2,983	3,058	3,134	3,213	3,293	3,375	3,460	31,009
Traffic Facilities (Block Grant) Exp	32,000	27,000	27,860	28,722	29,584	30,362	31,160	31,980	32,821	33,685	34,571	307,745
Indirect asset costs												
Administration Overheads	42,281	53,852	53,852	53,852	53,852	53,852	53,852	53,852	53,852	53,852	53,852	538,520
Depreciation	135,565	149,235	154,458	159,864	165,460	169,596	173,836	178,182	182,636	187,202	191,882	1,712,351
TOTAL	278,476	302,837	311,198	319,709	328,371	335,344	342,493	349,826	357,344	365,055	372,961	3,385,138

Table 35: Operational & Maintenance Expenditure - Footpaths & Cycleways

Footpaths & Cycleways OPEX Summary	Current year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	10 Year	Total 10 Year
Operating Expenditure	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	
Direct asset costs												
Footpath/Cycleway Maintenance	70,000	72,500	72,500	72,500	72,500	72,500	72,500	72,500	72,500	72,500	72,500	725,000
Indirect asset costs												
Depreciation	27,486	27,944	27,944	27,944	27,944	27,944	27,944	27,944	27,944	27,944	27,944	279,440
TOTAL	97,486	100,444	100,444	100,444	100,444	100,444	100,444	100,444	100,444	100,444	100,444	1,004,440

Appendix E – Identified Backlog of Works

Table 36: Kerb and Gutter Backlog of Works

Street Name	Locality	Start	End	Length (m)	K&G Type	Rating	Replacement Cost
Mayne	Murrurundi	Cohen	Boyd	40	Concrete	4	$16,000.00
Mayne	Murrurundi	Boyd	Murulla	200	Sandstone, Concrete	5	$80,000.00
Mayne	Murrurundi	Murrulla	Mount	100	Sandstone	5	$50,000.00
Mayne	Murrurundi	Adelaide	Victoria	150	Sandstone	4	$60,000.00
Murulla	Murrurundi	Causeway	Mayne	70	Open Drain	NA	$28,000.00
Haydon	Murrurundi	Victoria	End	40	Sandstone, Open Drain	NA	$16,000.00
Adelaide	Murrurundi	Liverpool	Mayne	100	Sandstone	4	$40,000.00
Mayne	Murrurundi	Boyd	Murulla	200	Sandstone	5	$80,000.00
Mayne	Murrurundi	Victoria	End	50	Sandstone, Concrete	4	$20,000.00
Murulla	Murrurundi	Shield	Causeway	100	Sandstone, Steel, Gabion	5	$40,000.00
Murulla	Murrurundi	Causeway	Mayne	70	Open Drain	NA	$28,000.00
Haydon	Murrurundi	Victoria	End	10	Open Drain	NA	$4,000.00
Adelaide	Murrurundi	Haydon	Liverpool	140	Sandstone	5	$56,000.00
Adelaide	Murrurundi	Liverpool	Mayne	140	Sandstone	5	$56,000.00
Aberdeen	Scone	Liverpool	Kingdon	100	Concrete	4	$30,000
Barton	Scone	Causeway	Mulga	100	Concrete	3	$30,000
Barton	Scone	Mulga	Birrell	80	Concrete	3	$24,000
Barton	Scone	Birrell	Alabama	0	Concrete	4	$-
Barton	Scone	Alabama	Little	30	Concrete	4	$9,000
Barton	Scone	Little	Carlyle	30	Concrete	3	$9,000
Barton	Scone	Carlyle	Bingle	30	Concrete	3	$9,000
Barton	Scone	Bingle	Askin	30	Concrete	3	$9,000
Barton	Scone	Askin	Gundy rd	20	Concrete	3	$6,000
Birrell	Scone	Waverley	Oxford rd	50	Concrete	5	$15,000
Birrell	Scone	Oxford Rd	Scott	40	Concrete	3	$12,000
Birrell	Scone	Scott	Boronia	25	Concrete	3	$7,500
Birrell	Scone	Boronia	Koala	10	Concrete	3	$3,000
Guernsey	Scone	Liverpool	Kingdon	125	Concrete	5	$37,500
Hill	Scone	Parker	Susan	50	Concrete	3	$15,000
Hill	Scone	Susan	St Aubins	100	Concrete	3	$30,000
Hill	Scone	St Aubins	Liverpool	150	Concrete	4	$45,000
Hill	Scone	Liverpool	Kingdon	175	Concrete	4	$52,500
Oxford Rd	Scone	Susan	Birrell	100	Concrete	3	$30,000
Oxford Rd	Scone	Liverpool	Short	50	Concrete	3	$15,000
Park	Scone	Susan	New	40	Concrete	3	$12,000
Park	Scone	New	Liverpool	75	Concrete	3	$22,500
Park	Scone	Liverpool	Short	150	Concrete	4	$45,000
Park	Scone	Short	Gundy Rd	100	Concrete	3	$30,000

Street Name	Locality	Start	End	Length (m)	K&G Type	Rating	Replacement Cost
Phillip	Scone	Muffett	Main	120	Concrete	4	$36,000
Phillip	Scone	Main	Waverley	150	Concrete	4	$45,000
Sydney	Scone	Waverley	End	150	Concrete	4	$45,000
Wareemba	Scone	Waverley	Sydney	150	Concrete	4	$45,000
Waverley	Scone	Phillip	Wareemba	20	Concrete	3	$6,000
Waverley	Scone	Wareemba	Sydney	20	Concrete	3	$6,000
Waverley	Scone	Sydney	Susan	50	Concrete	3	$15,000
Waverley	Scone	Fig tree G	New	75	Concrete	3	$22,500
Waverley	Scone	Liverpool	Short	200	Concrete	5	$60,000
Aberdeen	Scone	Liverpool	Kingdon	50	Concrete	3	$15,000
Barton	Scone	Causeway	Mulga	50	Concrete	3	$15,000
Barton	Scone	Mulga	Birrell	40	Concrete	3	$12,000
Barton	Scone	Birrell	Alabama	50	Concrete	4	$15,000
Barton	Scone	Alabama	Little	10	Concrete	3	$3,000
Barton	Scone	Little	Carlyle	10	Concrete	3	$3,000
Barton	Scone	Carlyle	Bingle	10	Concrete	3	$3,000
Barton	Scone	Bingle	Askin	10	Concrete	3	$3,000
Barton	Scone	Askin	Gundy Rd	10	Concrete	3	$3,000
Birrell	Scone	Waverley	Oxford Rd	30	Concrete	4	$9,000
Birrell	Scone	Oxford Rd	Scott	20	Concrete	3	$6,000
Birrell	Scone	Scott	Boronia	10	Concrete	3	$3,000
Birrell	Scone	Boronia	Koala	25	Concrete	5	$7,500
Guernsey	Scone	Liverpool	Kingdon	75	Concrete	4	$22,500
Hill	Scone	Parker	Susan	25	Concrete	3	$7,500
Hill	Scone	Susan	St Aubins	50	Concrete	3	$15,000
Hill	Scone	St Aubins	Liverpool	75	Concrete	4	$22,500
Hill	Scone	Liverpool	Kingdon	80	Concrete	4	$24,000
Oxford Rd	Scone	Susan	Birrell	50	Concrete	3	$15,000
Oxford Rd	Scone	Liverpool	Short	50	Concrete	3	$15,000
Park	Scone	New	Liverpool	40	Concrete	3	$12,000
Park	Scone	Liverpool	Short	75	Concrete	4	$22,500
Park	Scone	Short	Gundy Rd	60	Concrete	3	$18,000
Phillip	Scone	Muffett	Main	60	Concrete	4	$18,000
Phillip	Scone	Main	Waverley	75	Concrete	4	$22,500
Sydney	Scone	Waverley	End	75	Concrete	4	$22,500
Wareemba	Scone	Waverley	Sydney	200	Concrete	4	$60,000
Waverley	Scone	Phillip	Wareemba	10	Concrete	3	$3,000
Waverley	Scone	Wareemba	Sydney	10	Concrete	3	$3,000
Waverley	Scone	Sydney	Susan	15	Concrete	3	$4,500

Street Name	Locality	Start	End	Length (m)	K&G Type	Rating	Replacement Cost
Waverley	Scone	Fig tree G	New	40	Concrete	3	$12,000
Waverley	Scone	Liverpool	Short	175	Concrete	5	$52,500
Graeme Street	Aberdeen	Bridge	Kyuga (east of intersection)		Concrete	3	$15,800
Gundebri Street		Hall	River		Concrete	3	$7,250
Hall Street	Aberdeen	MacQueen	Dart		Concrete	3	$5,900
MacQueen RHS	Aberdeen	McAdam	Segenhoe		Concrete	5	$31,500
MacQueen RHS	Aberdeen	Bedford	Eldon		Concrete	3	$4,500
McAdam Street	Aberdeen	Butter Factory	End K & G		Concrete	3	$13,500
Moray Street	Aberdeen	Segenhoe	MacQueen		Concrete	3	$4,500
Segenhoe	Aberdeen	MacQueen	Moray		Concrete	3	$4,500
Segenhoe	Aberdeen	Graeme	Bedford		Concrete	4	$22,500
St Andrew	Aberdeen	Campbell	McLeod		Concrete	3	$12,400
St Andrew	Aberdeen	McLeod	Graeme		Concrete	3	$19,400
St Andrew	Aberdeen	Segenhoe	MacQueen		Concrete	3	$9,500
Ancrum	Aberdeen	Branksome	Scott		Concrete	3	$9,700
Branksome	CASSILIS	Buccleugh	Ancrum		Concrete	3	$9,500
Buccleugh	CASSILIS	Branksome	Scott		Concrete	3	$9,800
Scott	CASSILIS	Buccleugh	Ancrum		Concrete	4	$24,900
Bettington RHS	CASSILIS	Vennacher	Marquet		Concrete	3	$10,100
Bow	Merriwa	Blaxland	Bettington		Concrete	3	$9,500
Bow	Merriwa	Bettington	MacKenzie		Concrete	3	$9,500
Bow	Merriwa	MacKenzie	Cullingral		Concrete	3	$4,500
Bow	Merriwa	Cullingral	Langley		Concrete	3	$9,500
Bow	Merriwa	Langley	Hayes		Concrete	3	$9,500
Brisbane	Merriwa	Gully	Bettington		Concrete	4	$7,900
Cullingral	Merriwa	Bow	Vennachar		Concrete	3	$9,500
Dutton	Merriwa	Blaxland	Bettington		Concrete	4	$15,700
MacKenzie	Merriwa	Dutton	Bow		Concrete	3	$9,500
Vennacher	Merriwa	Blaxland	Bettington		Concrete	3	$9,500
Vennacher	Merriwa	Bettington	MacKenzie		Concrete	3	$9,500
Vennacher	Merriwa	MacKenzie	Cullingral		Concrete	3	$4,500
Vennacher	Merriwa	Cullingral	Langley		Concrete	3	$9,500
Vennacher	Merriwa	Langley	Hayes		Concrete	3	$10,100
Bedford	Aberdeen	Mount	Kyuga		Concrete	3	$5,100
Bedford	Aberdeen	Kyuga	Campbell		Concrete	3	$4,500
Graeme	Aberdeen	Bridge	Kyuga (east of intersection)		Concrete	3	$15,900
Gundebri	Aberdeen	Hall	River		Concrete	3	$7,500

Street Name	Locality	Start	End	Length (m)	K&G Type	Rating	Replacement Cost
Hall Street	Aberdeen	MacQueen	Dart		Concrete	3	$5,900
Hall Street	Aberdeen	Dart	Gundebri		Concrete	3	$1,800
MacQueen LHS	Aberdeen	Hall	McAdam		Concrete	3	$13,500
MacQueen LHS	Aberdeen	McAdam	Segenhoe		Concrete	4	$22,500
MacQueen LHS	Aberdeen	Perth	St Heliers		Concrete	3	$10,800
Segenhoe	Aberdeen	MacQueen	Moray		Concrete	3	$4,500
Segenhoe	Aberdeen	Graeme	Bedford		Concrete	3	$9,100
St Andrew	Aberdeen	Campbell	McLeod		Concrete	3	$12,400
St Andrew	Aberdeen	McLeod	Graeme		Concrete	3	$19,400
St Andrew	Aberdeen	Segenhoe	MacQueen		Concrete	3	$9,500
Bettington LHS	Merriwa	Vennacher	Marquet		Concrete	3	$9,900
Bow	Merriwa	Blaxland	Bettington		Concrete	3	$9,500
Bow	Merriwa	Bettington	MacKenzie		Concrete	3	$9,500
Bow	Merriwa	MacKenzie	Cullingral		Concrete	3	$4,500
Bow	Merriwa	Cullingral	Langley		Concrete	3	$9,500
Bow	Merriwa	Langley	Hayes		Concrete	3	$9,500
Brisbane	Merriwa	Gully	Bettington		Concrete	3	$3,200
MacKenzie	Merriwa	Dutton	Bow		Concrete	3	$9,500
Marquet	Merriwa	Blaxland	Bettington		Concrete	3	$9,900
Vennacher	Merriwa	Blaxland	Bettington		Concrete	3	$9,500
Vennacher	Merriwa	Bettington	MacKenzie		Concrete	3	$9,500
Vennacher	Merriwa	MacKenzie	Cullingral		Concrete	3	$4,500
Vennacher	Merriwa	Cullingral	Langley		Concrete	3	$9,500
Vennacher	Merriwa	Langley	Hayes		Concrete	3	$10,100
						TOTAL	**$1,772,225.00**

Appendix F – Forecast of Asset Ratios to Local Government Benchmarks

		2021/22 Current Year	2022/23 Year 1	2023/24 Year 2	2024/25 Year 3	2025/26 Year 4	2026/27 Year 5	2027/28 Year 6	2028/29 Year 7	2029/30 Year 8	2030/31 Year 9	2031/32 Year 10
INFRASTRUCTURE RENEWAL												
Asset Renewals		8,429,864	12,698,348	23,486,798	4,710,000	3,308,000	3,562,000	3,592,000	3,622,000	4,052,000	4,082,000	4,102,000
Depreciation Expense		4,826,542	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967
INFRASTRUCTURE BACKLOG												
Estimated Cost to bring back to Satisfactory		45,935,542	46,639,263	47,313,813	48,032,187	48,750,511	49,489,437	50,225,947	50,974,013	51,739,161	51,741,892	52,513,351
Closing Value of Assets		317,323,029	343,849,819	382,733,594	383,774,127	383,159,660	383,350,193	383,570,726	383,976,259	385,256,792	385,286,792	386,742,325
ASSET MAINTENANCE												
Asset Maintenance Expense		6,008,130	5,143,250	5,408,138	5,486,871	4,725,700	4,872,349	5,022,863	5,177,344	5,335,893	5,665,644	52,336,675
Required Asset Maintenance		6,025,650	6,587,467	7,343,065	7,542,348	7,719,796	7,911,980	8,107,498	8,308,722	8,526,091	8,526,541	8,749,795
CAPITAL EXPENDITURE												
Annual Capital Expenditure		14,000,330	31,428,757	43,785,742	5,942,500	4,287,500	5,092,500	5,122,500	5,307,500	6,182,500	6,212,500	6,387,500
Annual Depreciation Expense		4,826,542	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967	4,901,967
SS7 Data												
Gross Replacement Cost (GRC)		401,710,030	439,164,437	489,537,646	502,823,211	514,653,059	527,465,355	540,499,835	553,914,833	568,406,055	568,436,055	583,319,646
% Infrastructure Condition 4 and above		10.14%	9.42%	8.57%	8.47%	8.40%	8.32%	8.24%	8.16%	8.07%	8.07%	7.98%
% Infrastructure Condition 3 and above		35.60%	33.06%	30.09%	29.74%	29.49%	29.21%	28.93%	28.65%	28.34%	28.34%	28.03%
RATIOS BASED ON 3YR AVERAGE	**Benchmark**											
Infrastructure Renewal	100%	105.64%	167.71%	304.95%	278.09%	214.23%	78.74%	71.14%	73.28%	76.61%	78.27%	80.88%
Infrastructure Backlog	2%	6.13%	10.20%	13.40%	12.79%	12.53%	12.72%	12.91%	13.09%	13.27%	13.31%	13.43%
Asset Maintenance	1.00	1.03	0.95	0.83	0.75	0.69	0.65	0.62	0.62	0.62	0.63	2.01
Capital Expenditure	1.10	1.98	3.54	6.10	5.52	3.67	1.04	0.99	1.06	1.13	1.16	1.23
ACTUAL RATIO MEETING BENCHMARK												
Infrastructure Renewal		✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗
Infrastructure Backlog		✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Asset Maintenance		✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓
Capital Expenditure		✓	✓	✓	✓	✓	✗	✗	✗	✓	✓	✓

Appendix G – Road Infrastructure Assets Activity 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 H – 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 discretional 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.

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. resurfacing 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 discretional 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
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 cycleways. These are typically large, interconnected networks or portfolios of composite assets The 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) use in the production or supply of goods or services or for administrative purposes; or

(b) sale 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 Cost 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 expenditure, which was anticipated in determining the asset's useful life.

Materiality
An item is material is 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.

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 in order 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 yrs.), 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.

Source: DVC 2006, Glossary
*Note: Items shown * modified to use DA instead of CRC*
*Additional glossary items shown ***

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 Assets, Financials & Information	JB/GNS	JB/WP/ST	
4	January 2019	Update Assets, Financials & Information	GNS/AG	JB/WP	
5	May 2020	Update Assets, Financials & Information	GNS/KW	JB/WP	
6	June 2021	Update Assets, Financials & Information	GNS/KW	JB/WP	
7	February 2022	Update Assets, Financials & Information	GNS/KW	JB	