





TRANSPORT

Asset Management Plan

February 2017 (Version 6)

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Asset Management for Small, Rural or Remote Communities Practice Note

The Institute of Public Works Engineering Australia.

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1. EXECUTIVE SUMMARY

Uralla Shire

Uralla Shire is a medium sized NSW rural council with a population of 6,300 people and an area of 3,230 km² located approximately 545km Northwest of Sydney on the New England Highway. One of the major issues facing the Uralla Council is the provision of adequate funding for roads maintenance, renewals and upgrades to cope with increased traffic volume, population and higher community expectations.

This Transport Asset Management Plan is one of eight proposed Asset Management Plans covering all community assets for which Council is responsible. These fall under the Asset Management Policy and the Asset Management Strategy (see figure below).

Council's transport assets provide the community with roads, pathways, bridges and other traffic related services.

The critical issues facing Council's transport assets have been identified and include:

- Provision of adequate funding to meet both maintenance and renewal costs
- Increasing age of assets
- Community pressure to extend the existing sealed road network

Transport Services.

The Transport network comprises:

ROADS

- | | |
|---------------------------------|----------|
| • local urban sealed roads | 26.5 km |
| • local rural sealed roads | 267.3 km |
| • local unsealed roads | 497.6 km |
| • regional urban sealed roads | 3.0 km |
| • regional rural sealed road | 129.0 km |
| • regional rural unsealed roads | 9.8 km |
| • total unsealed roads (54.4%) | 507.4 km |
| • total sealed roads (45.6%) | 425.8 km |
| • Bulk earthworks | 933.2 km |

FOOTPATHS

- | | |
|-------------|-----------------------|
| • footpaths | 9,744m ² . |
|-------------|-----------------------|

KERB AND GUTTERING

- | | |
|----------------------|-------|
| • kerb and guttering | 28 km |
|----------------------|-------|

BRIDGES

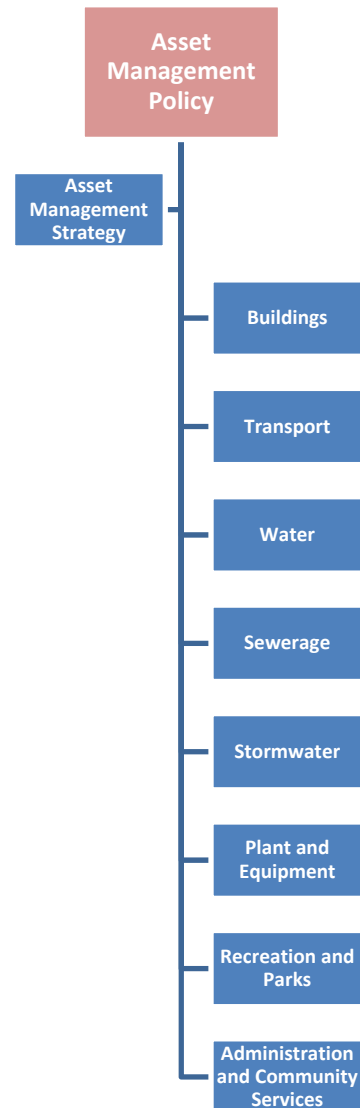
- | | |
|--|----|
| • regional road concrete/steel bridges | 30 |
| • regional road timber bridges | 0 |
| • local roads concrete/steel bridges | 44 |
| • local roads timber bridges | 2 |

FOOTBRIDGES

- | | |
|--------------------------|---|
| • pedestrian footbridges | 3 |
|--------------------------|---|

TRAFFIC FURNITURE

- | | |
|--|----|
| • items including median strips, refuges, blisters, ramps and speed bumps. | 41 |
|--|----|



OTHER STRUCTURES

- items consisting of a taxi shelter, bicycle paths, community street store, lighting, car parks including motorcycle shelter, and paved footpaths. 21

These Transport infrastructure assets have a value of **\$226,978,000** or 77% of the total value of Council Infrastructure, Property, Plant and Equipment assets of **\$294,941,000** (values from 30 June 2016 financial statements).

What is Council's underlying philosophy in respect to Road Asset Maintenance?

Uralla Shire Council has budgeted in its 10 year financial plan and proposes to budget annually in its Operational Plan for a small surplus, thus fully funding its non-cash depreciation expense. The depreciation plus the small surplus will be utilised in the Transport sector to carry out maintenance of sealed, unsealed roads and bridges. In addition, provision is made to reseal between 5% (for local roads) and 6.7% (for Regional roads) of the sealed network, and to gravel resheet between 3.3% (class D roads) and 5% (class B and C roads) of the unsealed road network annually. These annual percentages represent a resealing cycle of between 15 and 20 years and a resheeting cycle of between 20 and 30 years, depending on the road class.

This philosophy is to be implemented concurrently with the outcomes of the 2015 roads revaluation which identified the timing of required surface treatments (i.e. reseals) and base treatments (i.e. pavement rehabilitation in the case of sealed roads and gravel resheeting in the case of unsealed roads) for the different road types e.g. regional, urban, rural local and unsealed.

So for reseals and resheeting, the long-term average annual allocation will be the amount required to meet the targets outlined above. In some years, depending upon the timing of renewal works resulting from the condition assessment in the 2015 roads revaluation, the allocation required for these treatments will be higher or lower than the amount required to meet the adopted cycle times.

Whilst this philosophy will drive the preparation of future budgets, the determination of actual projects to be included in annual Operations Plans will be verified by field inspection to cater for any local changes in traffic volumes or composition and/or unexpected impacts of weather or any other factor which may have led to accelerated deterioration of pavements or seals in particular segments.

The final program of works will be determined by an inspection of the current condition of the asset with renewals deferred as late as possible until the components reach their intervention level.

The following shows an example of a Condition Level 1 sealed road - Eastern Avenue, after rehabilitation:



This Asset Management Plan supports the goals of the adopted Community Strategic Plan 2015-2025 and in particular Community Goal 7:

“A safe and efficient network of arterial roads and supporting infrastructure, and town streets, footpaths and cycleways that are adequate, interconnected and maintained.”

What does it Cost?

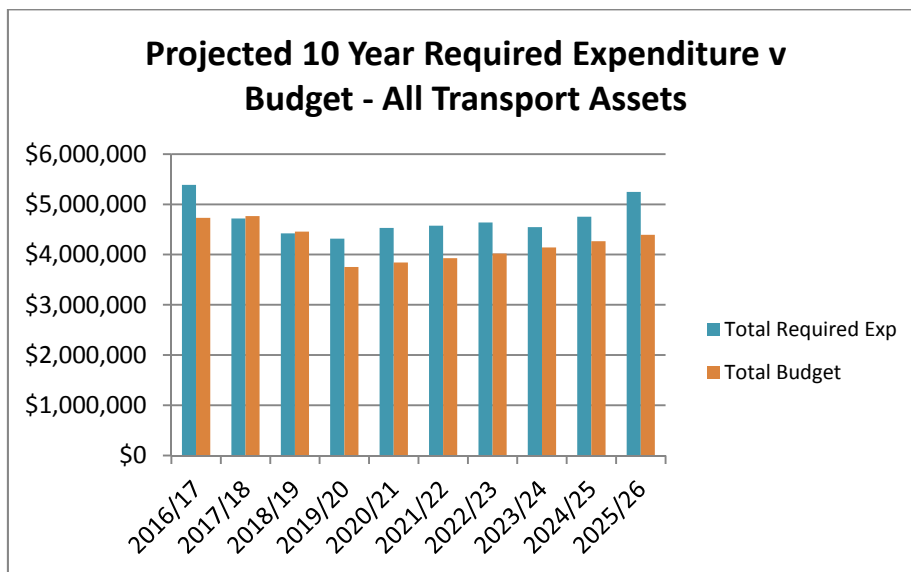
The projected cost to provide the services covered by this Asset Management Plan include \$22,172,402 for operations and maintenance (O&M) expenditure on existing assets with a current replacement value of \$226,978,000; together with capital renewal of transport assets of \$24,967,516 over the 10 year planning period. Adding these amounts gives a total of \$47,139,918 or \$4.71 million required average expenditure per year.

The breakdown of projected costs is set out in the table below:

Element	10 Year Projected costs to 2025/26	
	O&M	Capital
Bridges and culverts	\$1,344,406	\$1,320,000
Footpaths	\$672,203	\$524,140
K&G	\$268,881	\$628,000
Local Urban Streets	\$1,390,780	\$2,281,524
Unsealed Urban Streets	\$54,657	\$0
Regional Sealed Roads	\$4,570,980	\$6,740,311
Regional Unsealed Roads	\$380,140	\$151,929
Rural Sealed Roads	\$4,923,875	\$8,340,510
Rural Unsealed Roads	\$8,514,570	\$4,981,102
Parking Facilities	\$51,910	0
	\$22,172,402	\$24,967,516

Council’s projected funding from the LTFP and known additional income (excluding the non-cash expenditure of depreciation) for this period is \$18,475,033 for operations and maintenance and \$23,825,486 for capital renewals. These amounts give a total of \$42,300,519 or \$4.23 million per year; which is \$4,839,399 less than the cost of providing the service over 10 years. This represents an average shortfall of \$480,000 per year.

Figure 1-1 Projected 10 Year Required Expenditure v Proposed Budget (from LTFP) for all road assets



The chart demonstrates that Council's present funding levels are **not** sufficient to continue to provide existing services at current levels in the medium term.

What we will do? (Refer Appendix B for full details)

Council plans to provide transport services for the following within the 10 year planning period:

- Renew roads, bridges, footpaths, kerb and guttering, and footbridges before assets become unserviceable.
- Replace the two remaining timber bridges on local roads (Mihi Creek and Munsies Bridge) with concrete bridges in 2017/18.
- Construct 200m of new footpaths each year.
- Construct 210m of new kerb and gutter each year.
- Carry out upgrading works on unsealed roads previously approved by Council as follows: seal 0.64km of Jacksons Road, 0.35km of Saumarez War Service Road and 1.15km of Tulong Road and seal 2.0 km of the remaining 9.8km of Bingara Road. Other items may be added as approved by Council from time to time.

What we cannot do.

Council does not have enough funding to provide all services at the desired service levels or provide for all the new works desired by the community. The works and services that cannot be provided under present funding levels are:

- Complete the sealing of MR132 Barraba Road, particularly the "Barraba Gap" realignment of the road.
- Construct a bridge to replace the causeway over Bakers Creek on Barraba Road.
- Further extend the seal network beyond those sections of road identified above.
- Construct new paved footpaths in excess of 200m per year and kerb and gutter in excess of 210m per year unless developer funding or other grant income is received.

Managing the Risks

There are risks associated with providing the service and not being able to complete all identified activities and projects. In the case of the following critical assets, the major risks have been identified as:

- Public safety where reseal, resheeting and renewal cycle times cannot be met.
- Reduction in quality of service in the case of Bingara, Jacksons, Saumarez War Service, Tulong, Eastern Avenue, Leece and Retreat Roads.
- Public access denied or delayed in the case of Mihi and Munsies bridges and Bakers Creek on Barraba Road.

We will endeavour to manage these risks within available funding by:

- Prioritising maintenance and upgrades.
- Working efficiently to reduce delays.
- Carrying out regular inspections and monitoring.

The Next Steps

The actions resulting from this asset management plan are:

- Engage the community on service delivery and funding issues raised in this plan.
- Seek additional funding for the renewal of sealed roads. Note: Council has received advice of grant funding to enable the replacement of the Mihi Creek and Munsies timber bridges on local roads.
- Continually improve asset information, unit cost determination and fair value estimation of Council's road network.

Questions you may have

What is this plan about?

This asset management plan covers the infrastructure transport assets that serve the wider Uralla community. These assets include the roads, bridges, footbridges, footpaths and kerb and guttering throughout the Council area which enable people to move through and within the Uralla local government area to access work, education, businesses and facilities.

What is an Asset Management Plan?

Asset management planning is a comprehensive process to identify and then ensure that the delivery of services from infrastructure is provided in a financially sustainable manner, within the Community’s capacity to pay for the service.

Asset Management Plans detail 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.

Why is there a funding squeeze?

Significant expenditure is required on Regional Roads namely Thunderbolts Way, Bundarra Road and Bundarra to Barraba Road that formerly were the responsibility of the State Government. Regional Roads maintenance is funded by the RMS to a level determined by formula; however renewal and upgrading works are funded 50% by the State and 50% by Council. Council’s transport network has been constructed from a mixture of government grants and judicious application of fully funded non-cash depreciation. Even so, the cost of ongoing operations, maintenance and replacement exceeds the rate pegging percentages set by the Independent Pricing and Regulatory Tribunal (IPART).

Transport assets deteriorate with the passing of time and require maintenance, resurfacing, rehabilitation or replacement. Over time, the assets’ service levels decrease and maintenance costs increase.

Community expectations are also increasing, particularly the heavy transport sector. Agricultural businesses need the transport cost economies that high mass vehicles can provide. B Doubles and the next generation of high mass vehicle require wider sealed roads to be at their most safe and efficient operation. While the Uralla Shire Council has around 45% of its road network sealed, many of the sealed sections are narrower than required by the higher mass vehicles.

What options do we have?

Resolving the funding squeeze involves several steps:

1. Improving asset knowledge so that data accurately records the asset inventory, how assets are performing and when assets are not able to provide the required service levels,
2. Establishing the fair value of the road asset and determining the appropriate rate of depreciation of these assets
3. While living within our means, continue to improve our efficiency in operating, maintaining, replacing existing and constructing new assets to optimise life cycle costs,
4. Identifying and managing risks associated with providing services from infrastructure,
5. Making trade-offs between service levels and costs to ensure that the community receives the best return from infrastructure,
6. Identifying assets surplus to needs for disposal to make saving in future operations and maintenance costs
7. Consulting with the community to ensure that transport services and costs meet community needs,
8. Developing partnership with other bodies, where available to provide services;
9. Seeking additional funding from governments and other bodies to better reflect a ‘whole of government’ funding approach to infrastructure services.

What happens if we don’t manage the shortfall?

If the funding squeeze can not be managed, or new sources of revenue found, then it is possible that Council may have to reduce service levels, in some areas. For transport services, the service level reduction may include converting a sealed road to an unsealed surface, or a decrease in the ride quality of road pavements and seals, and a deterioration of footpaths and kerb and gutter throughout the area.

Currently, Council provides the following service levels (based on GRC of the assets):

Categories	Current Median Condition Level	Percentage at median or better
Sealed roads - surface	3	96.4%
Sealed roads - base	3	70.0%
Unsealed roads	3	66.0%
Kerb and guttering	2	52.0%
Footpaths	1	46.2%
Bridges – concrete	2	95.4%
Bridges – timber	4	100.0%

The effect of lowering the service level by one condition level is reflected in the following photographs:

Sealed road – Condition 3



Sealed road – Condition 4



What can Council do?

Council can develop options and priorities for future transport services with costs of providing the services, consult with the community to plan future services to match the community services needs with ability to pay for services and maximise benefit to the community for costs to the Community.

What can you do?

Council will be pleased to consider your thoughts on the issues raised in this asset management plan and suggestions on how Council may change or reduce its transport services mix to ensure that the appropriate level of service can be provided to the community within available funding.



Community Consultation

This 'core' asset management plan has been prepared to facilitate community consultation initially through feedback on public display of draft asset management plans prior to adoption by Council. Future revisions of the asset management plan will incorporate community consultation on service levels and costs of providing the service. This will assist Council and the Community in matching the level of service needed by the community, service risks and consequences with the community's ability to pay for the service.

The service levels and the Community capacity to pay will underline the funding, and therefore the Community contribution required, in the forward estimates within Council's ten year rolling financial plans.

2. INTRODUCTION

2.1 Background

This asset management plan is to demonstrate responsive management of assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding needed to provide required levels of service.

The asset management plan is to be read with Council’s Asset Management Policy, Asset Management Strategy and the following associated planning documents:

- Uralla Shire Council Community Strategic Plan 2015-2025
- Uralla Shire Council Ten Year Financial Plan
- Uralla Shire Council Delivery Program
- Uralla Shire Council Operational Plan.

This transport asset management plan has a direct relationship with the following associated planning process and documents:

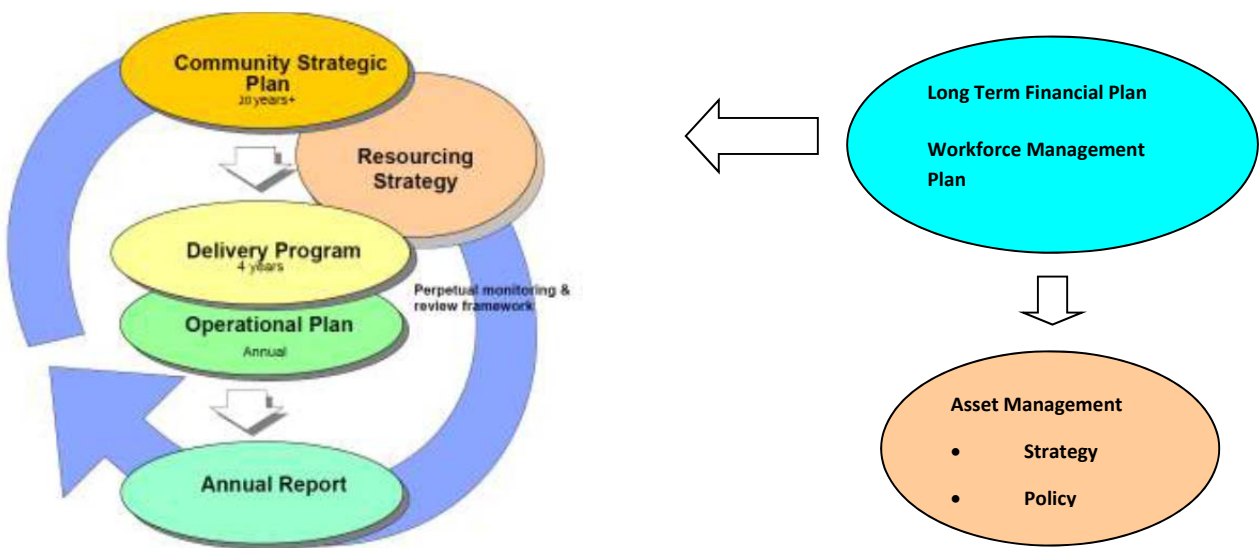
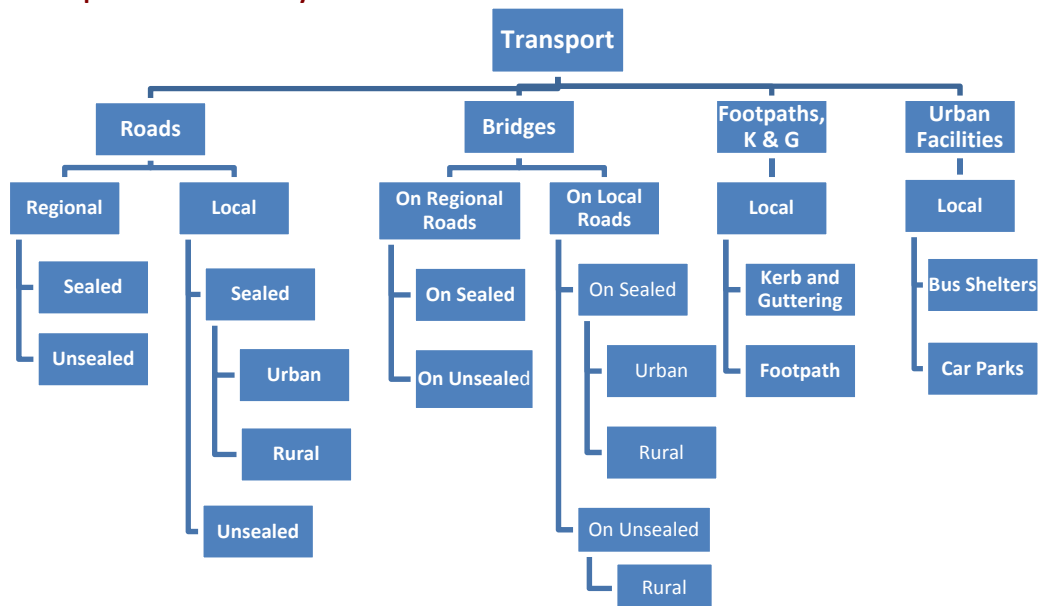


Figure 2.1: The Transport Asset Hierarchy



Council's infrastructure assets covered by this asset management plan are shown below in Table 2.1.

Table 2.1: Assets covered by this Plan

Individual Asset Categories	Dimension	Gross Replacement Cost (GRC) 2016	Accumulated Depreciation	Carrying Value
Local and Regional Sealed Roads	425.8 km	99,814,000	25,246,000	74,568,000
Unsealed roads	507.4 km	17,330,000	11,343,000	5,987,000
Bulk earthworks	933.2 km	75,894,000	0	75,894,000
Bridges	44 each	32,208,000	11,066,000	21,142,000
Footpaths	9,744m ²	1,732,000	226,000	1,506,000
Kerb and Gutter	27,972m			
Total transport Assets		226,978,000	47,878,000	179,100,000

2.2 Goals and Objectives of Asset Management

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

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

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

The goal of this asset management plan is to:

- Document the services/service levels to be provided and the costs of providing the service,
- Communicate the consequences for service levels and risk, where desired funding is not available, and
- Provide information to assist decision makers in trading off service levels, costs and risks to provide services in a financially sustainable manner.

This Asset Management Plan is prepared under the direction of Council's Mission, Goals and Objectives.

Council's mission is:

The Uralla Shire Council is committed to creating a unique environment which offers an excellent quality of life and economic opportunities for its people.

Our values:

The Uralla Shire community strives to:

- enjoy a high quality of life;
- have thriving business centres;
- have educational and job opportunities available for people with a wide range of skills and aptitudes;
- have an innovative, adaptive and diverse economy;

¹ IPWEA, 2006, *IIMM* Sec 1.1.3, p 1.3.

- have access to good public services and relevant infrastructure;
- have a continuing improvement in its socio-economic status;
- treasure its natural and built heritage and continue to be progressive;
- ensure sustainability;
- provide security and safety for its residents;
- have a growing population and a sound demographic structure; and
- retain its own independent community-based local government authority.

Council’s adopted Community Strategic Plan 2015 -2025 (CSP) contains relevant Goals and Strategies which relate to the transport assets covered by this Asset Management Plan. The Plan is consistent with the following Goals and Strategies in the Community Strategic Plan.

Goal 1.1: A proud, unique and inviting community.

Strategy 1.1.2: Embellish our community with parks, paths, cycleways, facilities and meeting places.

Goal 2.3: A safe and efficient network of arterial roads and supporting infrastructure; and town streets, footpaths and cycleways that are adequate, interconnected and maintained.

Strategies:

- 2.3.1 Provide an effective road network that balances asset conditions with available resources and asset utilisation.
- 2.3.2 Maintain, renew and replace Council bridges and culverts as required.
- 2.3.3 Ensure road network supporting assets (signs, posts, lighting, guardrails etc) are maintained adequately and renewed as scheduled.
- 2.3.4 Provide a network of town and village streets that balances asset conditions with available resources and asset utilisation.
- 2.3.5 Maintain existing walking and cycling networks across the region.
- 2.3.6 Facilitate the enhancement and expansion of accessible walking and cycling networks and interconnect them with other transport and recreational facilities.
- 2.4.2 Implement Council’s strategic asset management plans and continue to develop asset systems, plans and practices for infrastructure assets to minimise whole of life costs.
- 2.4.5 Ensure adequate public car-parking and kerb and guttering infrastructure is provided, maintained and renewed.

Goal 4.2: An efficient and effective organisation.

- 4.2.3 Develop and consistently apply an asset management framework that ensures existing and future infrastructure is affordable, funded and maintained to ensure inter-generational equity and sustainability.

Transport networks are regarded as the lifeblood of economic and social interaction throughout the Shire. There is inadequate consistent funding from governments, State and Federal, to upgrade the roads into and through the Shire. That said however, the Federal Government through Round 4 of the Regional Development Fund has provided some much needed funding to the Uralla, Walcha and Gloucester Councils for improving Thunderbolts Way, the main east-west route through the region.

The Uralla Shire Council’s identified strategies detailed above and supporting target levels of service are outlined below in Table 2.2 and are addressed throughout this Transport Asset Management Plan.

Table 2.2: Target Levels of Service

CSP Strategies Supported	Target Levels of Service
<p>2.3.1 2.3.4 2.4.2 2.4.5 4.2.3</p>	<p>To renew pavements by intervention no later than when the base layer has reached the mid point of Condition Level 4. This occurs when the asset has approximately 17% of useful life remaining. So for rural pavements with 60, 80 and 100 years of useful life, intervention should occur when the remaining life of the pavement reaches 10.3, 13.6 and 17 years respectively. Similarly, for urban streets, intervention should occur not later than when pavements reach a remaining useful life of 12 years.</p>

CSP Strategies Supported	Target Levels of Service
	To grade all formed unsealed urban roads i.e. 1km, on average once per year.
	To reseal all urban sealed pavements on average once every 15 years, i.e. 1.8km average length per year.
	To continue to kerb and gutter all urban streets on a progressive basis by constructing an average of 210m of new kerb and gutter each year.
	To grade un-grassed shoulders of rural regional sealed roads shoulders on average once every two years.
	To reconstruct 31 kilometres of sealed road pavements by 2025 and extend the rural sealed network, both local and regional, to 46% of the total road length by 2021. See Appendix A for details of 8.59km of upgrading works previously approved by Council.
	To maintain the high quality of the rural sealed road network by resealing pavements on average once every 15 years (regional) and once every 20 years (local), i.e. 22.0km average length per year.
	To grade un-grassed shoulders of rural local sealed roads shoulders on average once every two years.
	To construct and reconstruct regional roads (Thunderbolts Way, Bundarra Road and Bundarra/Barraba Road) as RMS or special Federal funding becomes available as part of the sealed road extension by 2025 (local and regional).
2.3.1 2.3.4	To maintain the unsealed regional road network at a level that provides reasonable all weather access, subject to extreme weather events.
	To improve the rural unsealed road surfaces by applying gravel (re-sheeting) to the unsealed roads on a 15 year cycle for Class B roads (average 1.5km per year) , 20 year for C roads (i.e. 9.35km per year) and a 25 year cycle for Class D roads (i.e. 8.9km per year).
	To maintain the unsealed local road network at a level that provides reasonable all weather access, subject to extreme weather events. Target is to grade approximately 620km per year.
	To maintain the existing 1km of urban unsealed road surface by applying gravel (re-sheeting) on a 20 year frequency cycle.
2.3.2	To have an all-weather road network supported by appropriate bridges, major culverts and culverts.
	To replace the two remaining rural timber bridges by the end of the 2017/18 financial year.
	To have an all-weather regional road network supported by appropriate bridges, major culverts and culverts. To achieve this goal, the causeway on Barraba Road at Bakers Creek needs to be upgraded to a bridge structure at a cost of \$1.4m. This project is currently unfunded.
2.3.5 2.3.6	To provide the urban areas of Uralla and Bundarra with an interconnected and safe footpath and walking/cycling track network.
	To have cleared and maintained footpath areas in the villages and peri-urban areas.
	To annually extend the footpath and walking/cycling track network by an average of 200m to provide connectivity and access to historical and scenic areas.
	To increase patronage of the rear of CBD car park to lessen the pressure on Bridge Street rear to kerb parking by providing a well maintained and usable parking area at the rear of the CBD in Uralla.
	To restrict the occurrences of semi-trailer, B-Double and large trucks parking overnight within the urban areas.
2.3.3	To maintain road centreline markings where they are currently used and repaint other surface markings at least once every two years.
	To have all roads adequately signposted with nameplates and that direction and warning signposting is adequate for the needs of road users.

CSP Strategies Supported	Target Levels of Service
	To prevent unnecessary damage to road pavements caused by overloaded vehicles by continued membership of the Mid North Weight of Loads group.
	To maintain and/or replace damaged and dead street trees within the urban areas of the LGA.

Through the guidelines of this plan, assets are inspected, maintained, upgraded and renewed as necessary or as specified in specific works programs to ensure they reach their expected lifecycle, perform to their maximum capability, satisfy community expectations and needs, satisfy budget limitations and meet safety and regulatory requirements.

2.3 Plan Framework

Key elements of the plan are

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

2.4 Core and Advanced Asset Management

This asset management plan is prepared as a first cut ‘core’ asset management plan in accordance with the International Infrastructure Management Manual². 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.

2.5 Community Consultation

This ‘core’ asset management plan has been prepared to facilitate community consultation initially through feedback on public display of draft asset management plans prior to adoption by Council. Future revisions of the asset management plan will incorporate community consultation on service levels and costs of providing the service. This will assist Council and the Community in matching the level of service needed by the community, service risks and consequences with the community’s ability to pay for the service.

² IPWEA, 2015.

3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

This Asset Management Plan has been developed to assist Council in achieving the goals as set out in the adopted Community Strategic Plan which was adopted following a period of public exhibition and community consultation. Council has not carried out additional research on customer expectations, other than the recording of community requests made periodically to Councillors and staff. It is intended that formal assessment of community expectations will be investigated for future updates of this asset management plan.

However, during the Community Consultation for the Community Strategic Plan in the Kentucky area, residents lobbied strongly for the sealing of the final four kilometres of Bergen Road. This work was completed in April 2016. In March 2016, Council adopted a list of priority road and bridge works which included upgrade works to seal existing unsealed sections to be funded by the next 4 years of the Roads to Recovery Program to 2018/19 (see Appendix D for details). Provision for these upgrading works has been included in this plan. Sealing of 2.0km of Retreat Road and Bakers Lane were identified for inclusion in future R2R programs, should additional funding become available.

3.2 Legislative Requirements

Council has to meet the following relevant Federal and State legislation and regulations shown in Table 3.2.

Table 3.1: Legislative Requirements

Legislation	Requirement
Australian Road Rules	Sets the requirements for vehicles and operators using roads.
Australian Standards	Provides guidance for transport asset managers in use of transport services such as ASS 1742; Manual of Uniform Traffic Control Devices.
Civil Liability Act 2002 and Civil Liability Amendment (Personal Responsibility) Act 2002	Protects Council from civil action by requiring that the Courts recognise a level of personal responsibility for the actions of individuals.
Disability Discriminations Act 1992	Provides protection for everyone in Australia against discrimination based on disability. It protects people with a disability from being treated less fairly than people without a disability and promotes the contribution of people with a disability to the workforce and wider community.
Environmental Planning and Assessment Act 1979 (EP&A Act). Environmental Planning and Assessment Amendment Act 2008	Sets out the guidelines used by Council to provide sustainable and environmentally responsible planning, development and land use.
Local Government Act 1993	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.
Native Vegetation Act 2003	Regulates the clearing of native vegetation on land in NSW.
Protection of the Environment Operations Act	Sets environmental standards, goals, protocols and guidelines to reduce pollution and environmental harm.
Public Works Act 1912 No 45	Sets the conditions of proceeding with public works, and acquiring land for the purpose of public works.
Roads Act 1993	Provides authority to Council for administration and development of roads.
Road Transport Act 2005	Sets the requirements for vehicles and operators using roads.
Work Health and Safety Act 2011	Guides employers and employees on their roles and responsibilities to provide and maintain a safe workplace which protects against harm to health, safety and welfare from hazards and risks arising from work as is reasonably practicable.

3.3 Current Levels of Service

Council has defined service levels in two terms.

(a) Community Levels of Service

This relates to the service outcomes that the community wants in terms of safety, quality, quantity, reliability, responsiveness, cost effectiveness and legislative compliance.

Community levels of service measures used in the asset management plan are:

Quality	How good is the service?
Function	Does it meet users' needs?
Safety	Is the service safe?

(b) 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 council undertakes to best achieve the desired community outcomes.

Technical service measures are linked to annual budgets covering:

- Operations – the regular activities to provide services such as opening hours, cleansing frequency, mowing frequency, etc.
- Maintenance – the activities necessary to retain an assets as near as practicable to its original condition (e.g. road patching, unsealed road grading, building and structure repairs),
- Renewal – the activities that return the service capability of an asset up to that which it had originally (e.g. frequency and cost of road resurfacing and pavement reconstruction,
- Upgrade – Upgrade existing assets and providing new assets the activities to provide an higher level of service (e.g. widening a road, sealing an unsealed road, replacing a culvert with a larger size) or a new service that did not exist previously (e.g. construction of a new paved footpath).

Council's service levels are detailed in Table 3.3 on the following pages.

3.4 Desired Levels of Service

At present, indications of desired levels of service are obtained from various sources including residents' feedback to Councillors and staff, service requests and correspondence. More work to quantify desired levels of service will be done in future revisions of this asset management plan. This item has been noted in the Improvement Plan in Sec 8.2.

Table 3.2: Service Levels

(a) Community Levels of Service

Key Performance Measure	Level of Service Objective	Performance Measure Process	Desired Level of Service	Current Level of Service
Quality	Roads are smooth	Customer service complaints relating to roughness.	<5 per month	<10 per month
Function	Access is available at all times – other than necessary closures.	Customer service complaints relating to access.	<5 per month	<5 per month
Safety	Roads are safe to drive when driven responsibly and to conditions.	Total number of accidents and injuries.	<20 per year	20-30 per year

Table 3.2: Service Levels (Continued)

(b) Technical Levels of Service

Key Performance Measure	Level of Service Objective	Performance Measure Process	Desired Level of Service	Current Level of Service
Operations	Roads are adequately serviced and maintained.	Annual condition and defects inspection carried out.	A reduction in defects and an increase in serviceability.	Under review
Accessibility	Provide all weather access to all permanently occupied residences.	Level of accessibility	All weather access, all year	Being met.
Maintenance of existing assets.	Maintain the integrity of sealed road surfaces i.e. no stripping, cracking or potholing. Surface at Condition Level 3 or better across the network.	Compliance with adopted intervention levels.	At least 90% response to intervention level.	Being met.
	Unsealed roads are not uncomfortable or unsafe for drivers and are all-weather.	Grading frequency	Grade all roads at least once per year, and twice per year for busier Class B roads – 620kms graded per year. Average estimated cost \$834,000 per year.	Approximately 580km graded in 2015/16.
			Grade Bundarra to Barraba Road and Bingara Road 3 times per year.	Target met in 2016.
		Customer service complaints/enquiries	< 5 complaints per month.	Some not met during prolonged wet weather.
	Local sealed roads are free of hazards and defects	Frequency of inspections and response time of repairs.	Response times for repairs are met. 2016/17 estimated cost \$559,977.	Being met.
		Customer service complaints.	< 5 complaints per month	< 5 complaints per month
	Bridges are free of hazards and defects	Inspection and repair program.	Inspect bridges once per year and complete identified M&R in the program year. 2016/17 cost \$120,000.	Being met
		Customer service complaints.	<2 complaints per month	Being met
	Footpaths are maintained at Condition Level 3 or better.	Footpath maintenance program.	Paved and unpaved footpaths inspected and regularly maintained. 2016/17 cost \$76,000.	Current focus is on paved footpaths.
		Customer service complaints.	Complaints received on paved surface defects acted upon within 2 hours with barriers, and repairs made within 3 working days.	Currently being met with some exceptions.

(b) Technical Levels of Service (Continued)

Key Performance Measure	Level of Service Objective	Performance Measure Process	Desired Level of Service	Current Level of Service	
Maintenance (Continued)	Maintain all kerb and guttering at Condition Level 3 or better.	K&G maintenance program.	Complaints acted upon within 1 month. 2016/17 cost \$34,000.	Being met.	
	Maintain road centreline markings	Program of line markings	Re-mark lines when necessary or at least once every two years.	Being met	
		Customer service complaints.	Less than 3 complaints per year	Being met	
	Maintain traffic furniture in good condition	Maintenance program	Replace warning signs on annual basis. 2016/17 cost \$10,000.	Review condition of signs. Inventory required.	
		Customer service enquiries	< 2 enquiries per month.	Being met	
Renewal of deteriorating assets	Reseal all rural sealed roads on average once every 15 years (regional) and 20 years (local)	Frequency of resealing.	Reseal the network by completing 6.7% (for Regional roads i.e. 8.8km) and 5% (for local roads i.e. 13.4km) annually. Average cost \$655,000 per year over 10 years. 2016/17 allocation \$629,403.	8.0km of regional and 13.9km of local roads completed in 2015/16.	
	Renew the pavements of all road types before they reach the end of economic life.	Compliance with rehabilitation program	Renew road pavements no later than mid point of Condition level 4.	Works program depends on level of available grant funding.	
		Renewal Budget	2016/17 proposals are: Regional = \$400,000 Urban Local = \$212,000 Rural local = \$531,000 Total = \$1.14m		
	Improve gravel roads through re-sheeting. Roads at average Condition Level 3 across the network.	Compliance with re-sheeting program.	Re-sheeting of local Class B and C roads at 5% each year (i.e. 10.5km), Class D at 3.3% per year (i.e. 10.0km) and regional gravel roads at 5% per year (i.e. 0.5km). Total of 21.0km per year.	<5% of network re-sheeted annually.	
		Re-sheeting budget	Regional: 0.5km/year = \$15k Local: 19.8km/year = \$498k Total average exp = \$513k per year over 10 years.		
	Upgrade existing assets and provide new assets.	Provide sealed roads where feasible and affordable.	Percentage of network sealed.	Only those rural roads approved by Council. Urban Class A, B and C streets sealed by 2030.	No recent funding for urban street sealing.
		Kerb and guttering is provided to all Class B,	Kerb and guttering program	Progressive kerb and guttering of all streets by	200m in some years but mostly

Key Performance Measure	Level of Service Objective	Performance Measure Process	Desired Level of Service	Current Level of Service
	C and D street segments which have 6 or more occupied residences with frontages to the segment.		construction of 210m per year.	provided by developers.
		Customer service enquiries.	<2 enquiries per month.	Being met
		Budget		O&M - \$22,669 Capital - \$50,000
	Replace timber bridges with concrete/steel bridges	Replacement program.	Replace 2 existing timber bridges by the 2017/2018 financial year.	Program on track
		Budget	2017/18 Capital budget \$1.32m.	

3.5 Level of Service Options

Whilst Levels of Service have been adopted in the preparation of this Plan, these may be subject to review from time to time. As the adopted level of service has a direct impact on the required funding levels, Council may adopt levels of service which are higher or lower than those in the Plan.

For example, if the reseal cycle time for rural roads was reduced from 20 years to 15 years, the impact on the annual budget would be to require an additional \$111,000 per year. Similarly, if the intervention point for pavement renewals was moved from the mid-point to the end-point of Condition Level 4, this would defer the requirement to rehabilitate pavements earlier and save an estimated \$319,000 average per year over the 10 year life of this Plan.

If both the above options were implemented concurrently, the shortfall would reduce from the proposed \$480,000 to \$272,000 annually.

3.6 Condition Assessment and Service Potential – Roads

The following road classifications have been used in the Asset Management Plan to distinguish road functionality:

Rural Road Class	Description of Class
A – Regional Roads	Regional roads form part of the State-wide Regional network of roads, providing transport links between major towns and cities. They are roads classified in accordance with the NSW State Government’s classification.
B – Primary Rural	Primary Rural roads are the highest priority rural local roads and carry higher traffic volumes greater than 75 vehicles per day. Historically continuous school bus routes and roads which carry 50 to 75 vehicles per day and carry greater than 3% heavy vehicles are eligible for classification as Primary Rural.
C – Secondary Rural	Secondary Rural roads are mid priority rural local roads and carry traffic volumes less than 75 vehicles per day but which service more than 10 different property owners and have an average traffic volume greater than 20 vehicles per day. Secondary rural roads may also serve as bus routes.
D – Local Access	Local access roads are the lowest priority local roads servicing less than 10 different property owners or have average traffic volumes of 20 vehicles or less per day.

The urban streets hierarchy has been based on the AUSTRROADS publication “Guide to Traffic Engineering Practice” and provides for five classifications of street as follows:

Urban Class	Street Description
A	Arterial
B	Sub-arterial
C	Collector
D	Local access
E	Lanes

Class A – Arterial

Arterial Streets provide principal avenues of communication and links between parts of large cities or between major towns and cities. Within the towns and villages of Uralla Shire, only the New England Highway performs this function. This road is classified as National in accordance with the State Government’s classification system. Maintenance on the central portion of the road is the responsibility of State and Federal Governments. However, Council has a maintenance responsibility for the parking lanes, footpaths and road reserve of this road.

Class B – Sub – Arterial Streets

Sub-Arterial Streets are those streets which connect arterial streets to areas of development and other major areas of the town or shire. These streets carry high traffic volumes with a broad range of vehicle types. In the towns and villages of Uralla Shire, only the Regional Roads meet these requirements.

Class C – Collector Streets

Collector streets are those streets which provide a link for traffic from the residential street system, some rural areas, industrial areas and other trip generators to other collector streets, sub-arterial or arterial streets.

Class D – Local Access Streets

Local Access Streets are streets which principally provide access to and from property. These streets generally carry low traffic volumes and form the bulk of streets within Uralla and Bundarra.

Class E – Lanes

These streets generally provide alternative access to properties. They are narrower than Class D streets and generally have very low traffic volumes.

Useful Life

The useful life of an asset is the estimated length of time during which the asset is able to deliver a given level of service. The useful life of an asset is not necessarily equivalent to its physical life or economic life, a number of other factors may result in an assets useful life being reduced, including:

- Obsolescence
- Weather
- Construction techniques
- Overloaded vehicles
- Changes in community expectations
- Increased demand on capacity
- New legal requirements

The Asset Useful Lives Report was prepared by Tonkin Consulting in March 2009 for the Local Government Association of South Australia. The full title of the report is “Infrastructure Asset Useful Lives – SA Council’s Current Practices” and it collates asset useful life data contributed by 14 South Australian councils. The results were presented as the Lowest, Highest and Median. This data was considered along with the local experience of USC staff and following consultation with adjoining councils, the following useful life of assets was adopted:

Table 3.3:- Summary of adopted surface and pavement life for various classes of roads.

Road Type	Class	Surface life (years)	Pavement Life (years)
Regional	A	15	60
Urban	B, C	15	70
	D, E	15	80
Rural	B	20	80
	C	20	80
	D	20	100
Unsealed	B	na	15
	C	na	20
	D	na	25

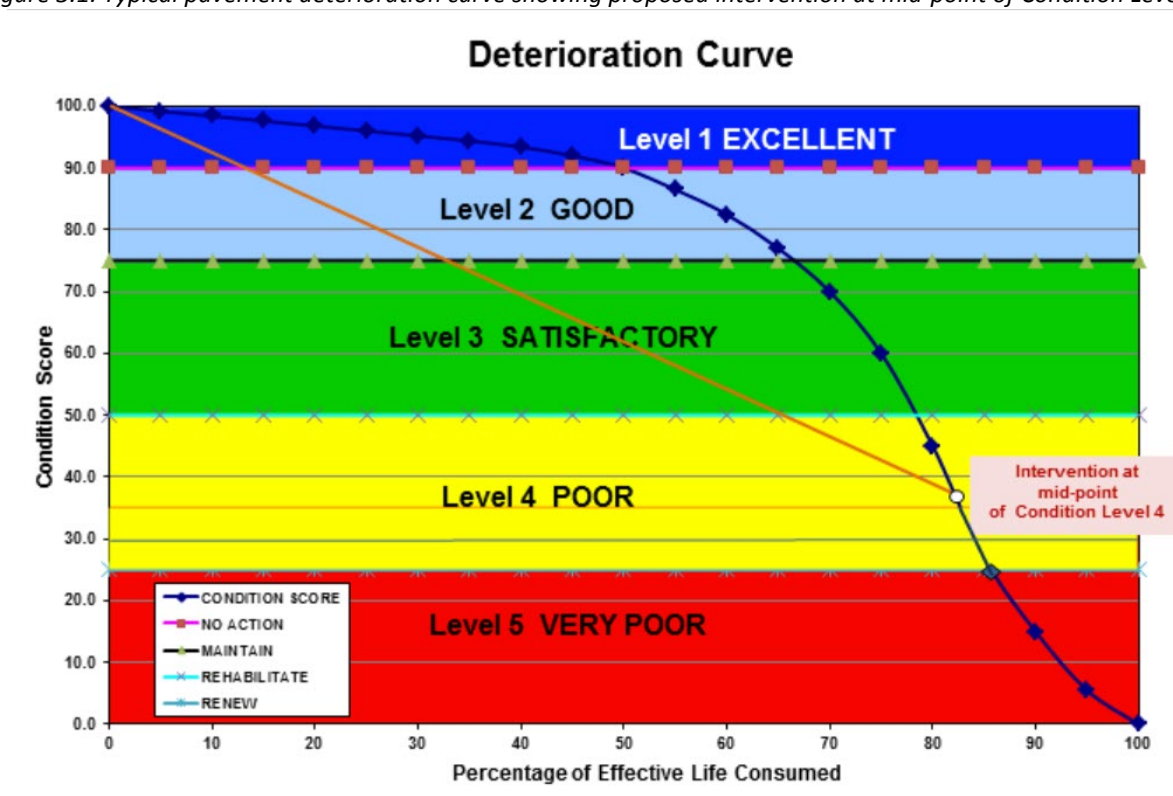
Consumption Curves

Council has adopted the asset condition rankings as set out in the table contained in the IPR Manual for local government in NSW with the exception that the description applying to Level 3 has been changed from “average” to “satisfactory. This level has been adopted as the agreed satisfactory service level.

The following typical pavement deterioration curve has been adopted as being representative of the rate of deterioration of road pavements and IPR Condition Levels have been assigned as follows:

IPR Condition Level	Condition Score
1. Excellent	90 to 100
2. Good	75 to 89
3. Average	50 to 74
4. Poor	25 to 49
5. Very Poor	less than 25

Figure 3.1: Typical pavement deterioration curve showing proposed intervention at mid-point of Condition Level 4.



4. FUTURE DEMAND

4.1 Demand Forecast

Factors affecting demand include population change, changes in demographics, seasonal factors, vehicle ownership, consumer preferences and expectations, economic factors, agricultural practices, environmental awareness, etc.

Demand factor trends and impacts on service delivery are summarised in Table 4.1.

Table 4.1: Demand Factors, Projections and Impact on Services

Demand factor	Present position	Projection	Impact on services
Population	Uralla LGA population is 6,300 with the population of Uralla estimated at 2460 by the ABS in 2014.	2016 Department of Planning Projections predict minor increases annually over the next 15 years to 6550 in 2031.	Uralla urban population is expected to remain relatively stable as residents move from rural areas to town. Impact is considered to be marginal.
Demographics	Median age of population is 43 years.	There will be a concentration of older residents in the next two decades.	As the population ages there is greater pressure on Council to provide additional services e.g. pathways suitable for use by gophers.
Environmental awareness	The Community and Council are more environmentally aware and responsible.	Council will be required to implement further sustainability measures.	This will require a greater allocation of funds towards improving facilities and services to meet environmental standards and regulations.
Vehicle mass limits	9t single axle limit with some HML routes	Increase of 10% included in axle limits.	Potential increase in damage to pavement. Increased demand for upgraded local roads (wider and stronger) to accept the higher mass vehicles.
Fuel costs	Fuel costs are currently high	Costs are expected to continue to rise.	Council will need to progressively increase budget allocations to cover fuel costs.
	Any future carbon tax or ETS could be added to the cost of diesel.	Diesel costs will continue to rise in line with tax increases.	This will increase the costs of service provision.

4.2 Changes in Technology

Technology changes forecast to affect the delivery of services covered by this plan are detailed in Table 4.2.

Table 4.2: Changes in Technology and Forecast effect on Service Delivery

Technology Change	Effect on Service Delivery
Material stabilisation for gravel	positive - improved quality and useful life of pavements.
Development of new bitumen products	positive - improved quality, reduced environmental impact.
	negative -increased costs.

4.3 Demand Management Plan

The Council’s strategic objectives are to have greater than 46% of the road network sealed by 2021 and to have all timber bridges replaced with concrete structures by 2018. These objectives are designed to meet the direction provided during the Community Strategic Plan community engagement meetings. The meetings indicated specific roads that were identified for sealing and these are listed in Appendix C, “Planned upgrade or new Transport Infrastructure in the 10 year Capital Works Program”.

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

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

Table 4.3: Demand Management Plan Summary

Service Activity	Demand Management Plan
Maintenance	Conduct routine inspections and repairs to assets according to work plans and community enquiries.
Upgrades	Monitor the condition and lifespan of assets and plan upgrades accordingly.
Customer Service requests	Record all customer service requests relating to transport assets and analyse the data collected to identify shortfalls in assets or services, and implement solutions.

4.4 New Assets for Growth

The new assets required to meet growth will be acquired free of cost from land developments and constructed/acquired by Council. Recently contributed and constructed asset values are summarised in Figure 1.

Table 4.4: New Assets for Growth

Road Name	Length km	Value
MacLeay Way	0.76	\$260,000
Welbourn Close	0.10	\$80,000
Lighthorse Parade ‘Satinvale’ Estate	1.25	\$375,000
Tobruk Road ‘Satinvale’ Estate	0.25	\$75,000
Panhandle Road	0.65	\$160,000

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

5. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how Council plans to manage and operate the assets at the agreed levels of service (defined in Section 3) while optimising life cycle costs. To understand the management of infrastructure assets there is a need to understand that a level of service provided primarily depends upon the condition of the asset that provides the service. Condition is a suitable assessment for assets with a direct relation of the long term surface condition to service, such as sealed roads, bridges, kerb and guttering and footpaths. Therefore these council assets are reviewed from time to time for their condition using the following Condition rating System. The Asset Condition is measured using a 1 – 5 rating system³ as detailed in Table 5.1.

Table 5.1: IIMM Description of Condition

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

Another rating used is the age of the asset or date from which rehabilitation has been carried out on that asset. This is most appropriately used where the surface condition of the asset may change over a short period of time, while the underlying asset has a longer maintainable condition. This is applicable to unsealed roads. The level of service for unsealed roads is dependent principally upon the grading frequency applied to that asset. Uralla Shire Council historically has had a high frequency of grading over its 507 kilometres of unsealed roads and this plan makes provision for the frequency of grading to be further improved.

5.1 Background Data

5.1.1 Physical parameters

The breakdown of Council's current road network is shown in Table 5.2:

Table 5.2: Road network by surface type

Road Type	Type of Surface		Total km
	Sealed km	Unsealed km	
Urban Local	26.5	1.0	27.5
Rural Local	267.3	496.6	763.9
Sub total Local Roads	293.8	497.6	791.4
Urban Regional	3.0	0.0	3.0
Rural Regional	129.0	9.8	138.8
Total All Roads	425.8	507.4	933.2
Percentage	45.6%	54.4%	100.0%

The Technical Levels of Service Section 3.3 (b) indicated that there were measures linked to the compilation of the annual budget that determines whether the activity and resultant expenditure is an Operational or a Capital Activity. The following table (courtesy of Dubbo Regional Council) provides definitions of the various activities.

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

5.1.2 Work Category Definitions

Maintenance

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. Examples include: repairing a pothole in a road, repairing the decking on a timber bridge, repairing a single pipe in a drainage network, repair work to prevent early failure of an asset.

Capital – Renewal

Expenditure on an existing asset or on replacing an existing asset, which returns the service capability of the asset up to that which it had originally. As it reinstates existing service potential, it may reduce future operating and maintenance expenditure if completed at the optimum time. Examples include: pavement rehabilitation on a material part of a road network, replacing a material section of a drainage network with pipes of the same capacity, resealing an existing sealed road, etc.

Capital – Upgrade

Expenditure which enhances an existing asset to provide a higher level of service. Upgrade expenditure is discretionary. It will increase operating and maintenance expenditure in the future because of the increase in the organisation's asset base. Examples include: sealing an existing unsealed road or widening the sealed area of an existing road, replacing drainage pipes with pipes of a greater capacity, enlarging a grandstand at a sporting facility.

Capital – New

Expenditure which creates a new asset providing a new service/output that did not exist beforehand. As it increases service potential it will increase future operating and maintenance. Examples include: extending a drainage or road networks, constructing a new public toilet.

Operating Expenditure

For Asset Management purposes, it is recurrent expenditure which is continuously required to provide a service. Examples include: power, fuel, staff, plant equipment, on-costs and overheads but excludes maintenance and depreciation.

Planned regular maintenance, if fully funded and carried out to plan, will preserve our assets. Council has maintained a commitment to fully funding maintenance of its road asset as demonstrated in Table 6.1.1.

The age profile of the assets include in this Asset Management Plan is described below.

5.1.3 Asset Age Profile

A sealed road consists of "surface", with a maximum life of 15 years for Regional and urban roads and 20 years for rural local roads, "base" with a maximum life of 60 years for Regional Roads, 70 years for urban streets and between 80 and 100 years for rural local roads, depending on the road class. The pavement sub-base layer (i.e. the lower section of the pavement under the base) and "bulk earthworks" have an indefinite life. The surface is the observable bitumen and aggregate coating of a sealed road and the pavement is the compacted gravel base support for the traffic loads. For unsealed roads, the pavement has a life of between 20 and 30 years depending on the road class.

The 2016 replacement values of the road asset group categories are shown in Table 2.1.

The Accumulated Depreciation, in the revaluation, was calculated on the basis of age and condition for sealed roads and bridges and condition for unsealed roads, kerb and guttering and footpaths.

Pie charts showing the condition assessment of assets based on the percentage of replacement cost in each condition level for the two components of the sealed road network are at Figures 5.1. and 5.2 below, for unsealed roads at

Figure 5.4 and bridges at Figure 5.6 together with footpaths at Figure 5.8 and kerb and gutter at Figure 5.10 on subsequent pages.

The condition of the road surface is dependent on the remaining life of the seal. Table 5.3 below shows the relationship between remaining seal life and IPR Condition Level for seals with a nominal useful life of 15 years and 20 years.

Table 5.3: Relationship of remaining seal life to IPR Condition Level

SEAL HEALTH		
Nominal Life (years)	Remaining Life (years)	IPR Condition level
15	>=13.5	1
	<13.5	2
	<11	3
	<4.5	4
	<1	5
20	>=18	1
	<18	2
	<15	3
	<6	4
	<1	5

The condition of Council’s transport assets based on the current replacement cost in each condition level is shown below in Figures 5.3, 5.5, 5.7, 5.9 and 5.11.

The condition of the road pavement or base is dependent on the governing distress of either roughness or rutting which are measured by the calculated indices PHNI for roughness and PHRI for rutting from the field assessment data. The relationship between these indices and IPR Condition Levels are shown below in Table 5.4.

Table 5.4: Relationship of PHNI/PHRI pavement indices to IPR Condition Level

PAVEMENT HEALTH	
PHNI or PHRI	IPR Condition Level
>90	1
76 to 90	2
51 to 75	3
25 to 50	4
<25	5

The condition of unsealed road pavements is dependent on the percentage effective life of the gravel base compared to a default thickness of 100mm. The relationship between remaining effective life and IPR Condition Level is shown below in Table 5.5. It should be noted that whilst some unsealed roads have nil gravel remaining, none were deemed to be “unserviceable”. These are generally Class D roads at the ends of the network which are built on natural subgrade material of sufficient quality to provide all-weather access.

Table 5.5: Relationship between % effective life and IPR Condition Level

UNSEALED HEALTH	
% Effective Life	IPR Condition level
>75	1
<=75	2
<=50	3
<25	4
0	5

Age profile information is not currently available for all transport assets. An age profile will be developed in future revisions of the asset management plan.

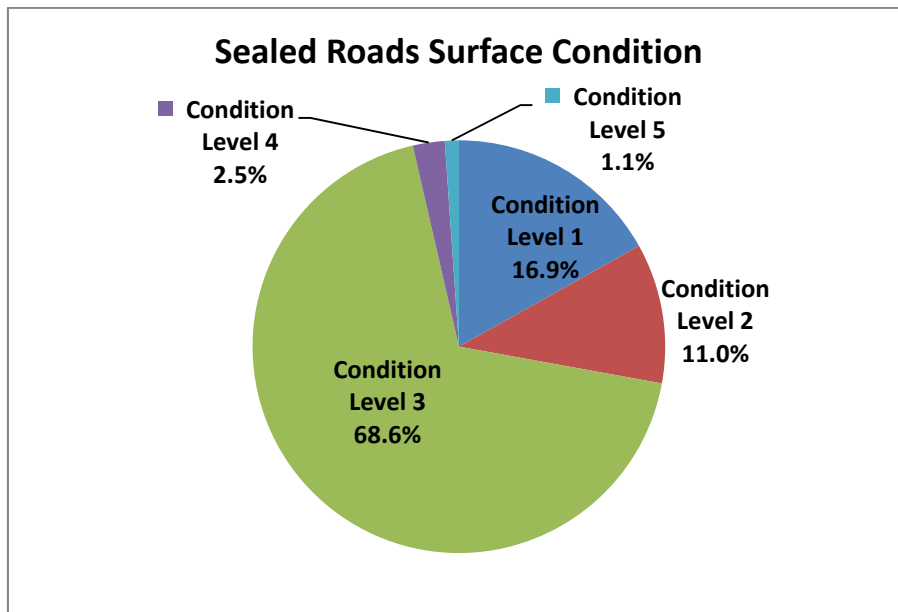
5.1.4 Asset capacity and performance

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

5.1.5 Asset condition

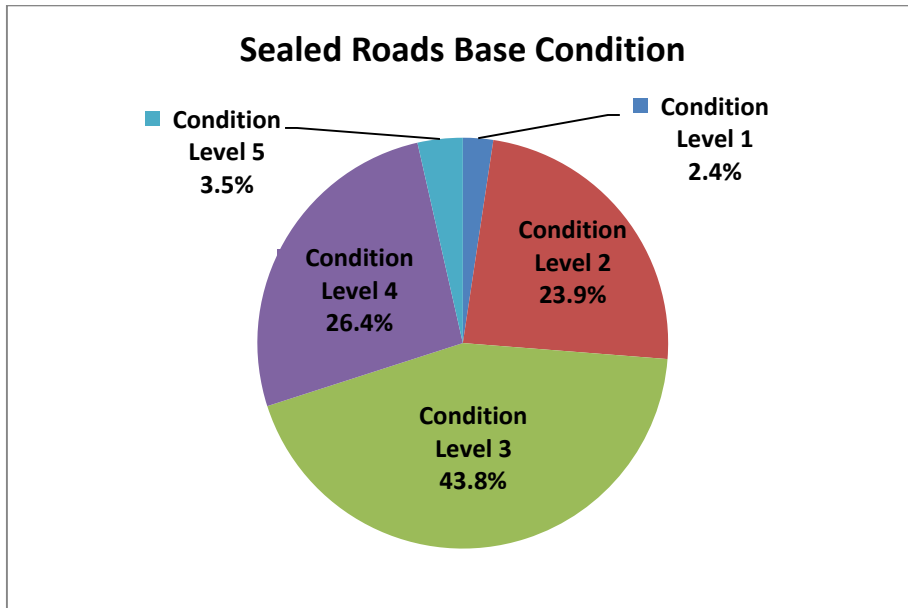
The condition profile of transport assets based on current replacement cost, using the Condition Assessment as per Table 5.1, is shown in Figures 5.1 to 5.11 below.

Figure 5.1: Condition of the surface of Sealed Roads (based on GRC)



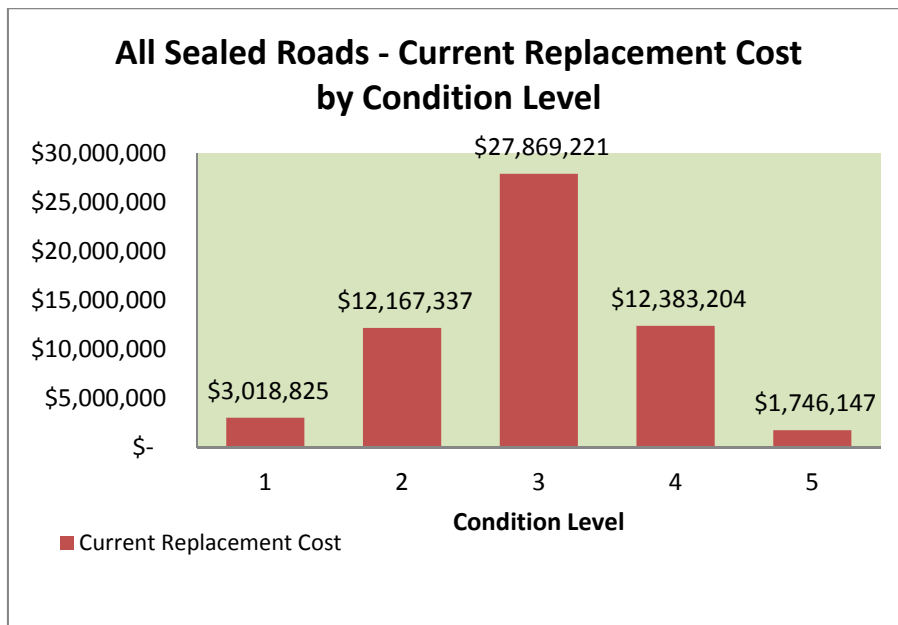
2015 data

Figure 5.2: Condition of the Base of Sealed Roads (based on GRC)



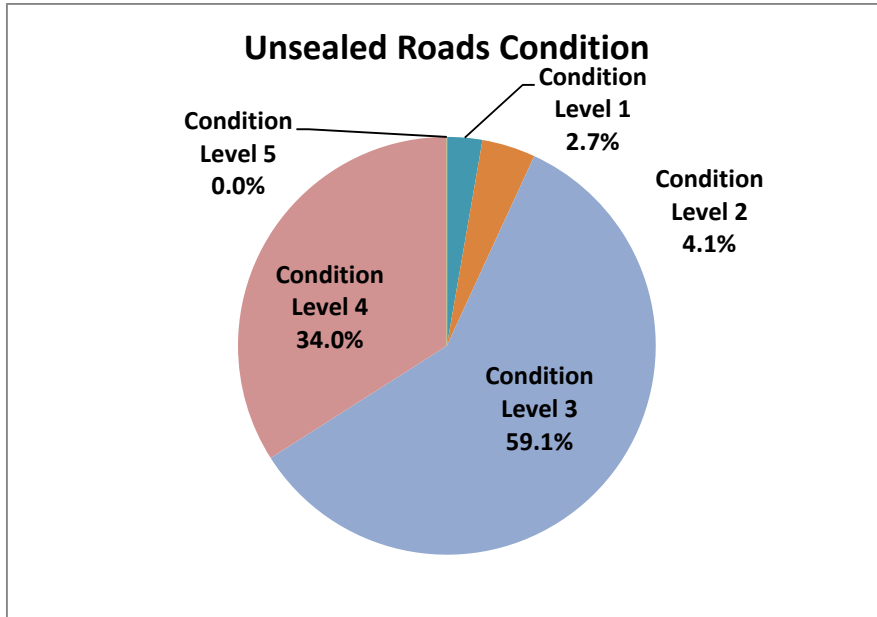
2015 data

Figure 5.3: Asset Condition Profile – Sealed Roads



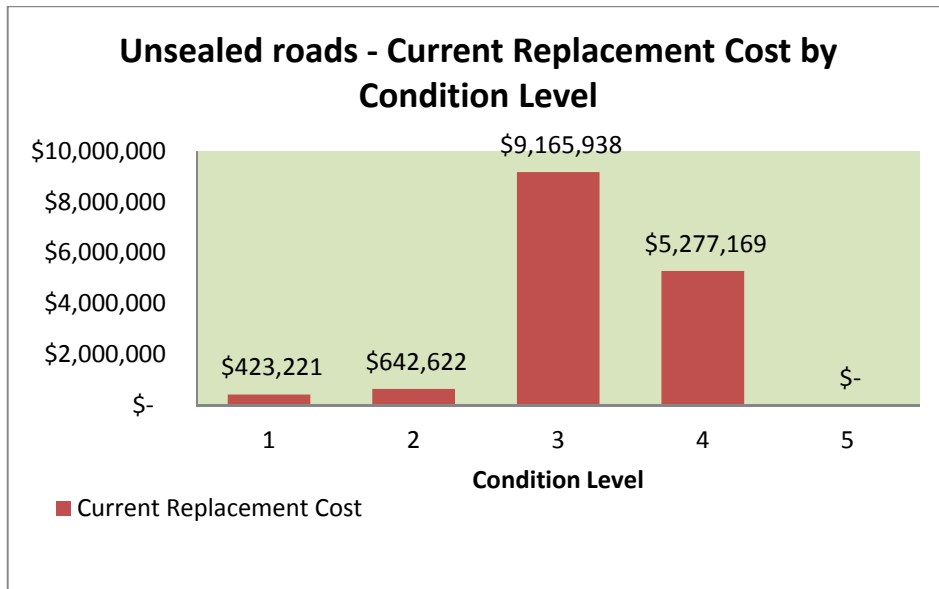
Condition rating and replacement figures (2015 data)

Figure 5.4 Condition of Unsealed Roads (based on GRC)



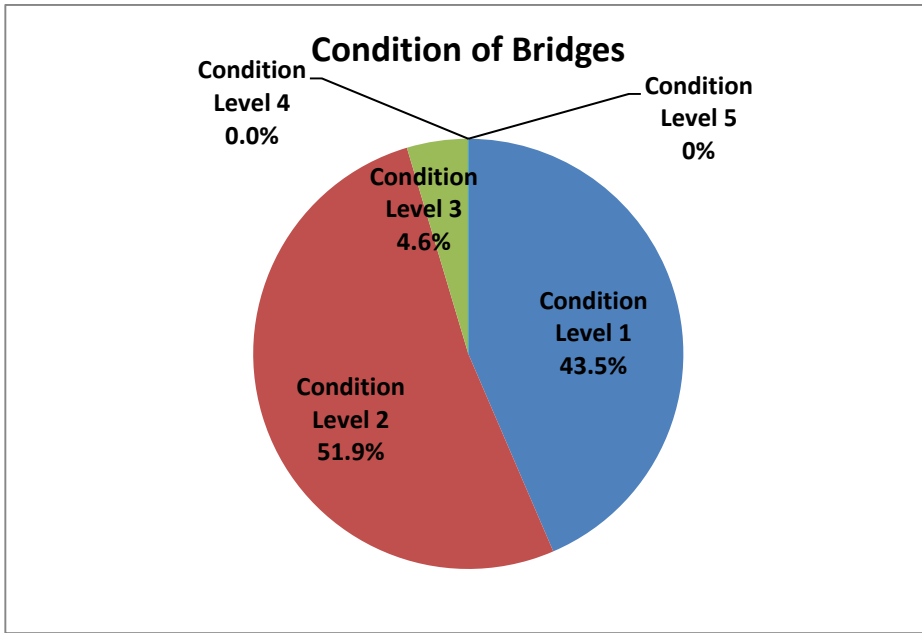
2015 data

Figure 5.5: Asset Condition Profile – Unsealed Roads



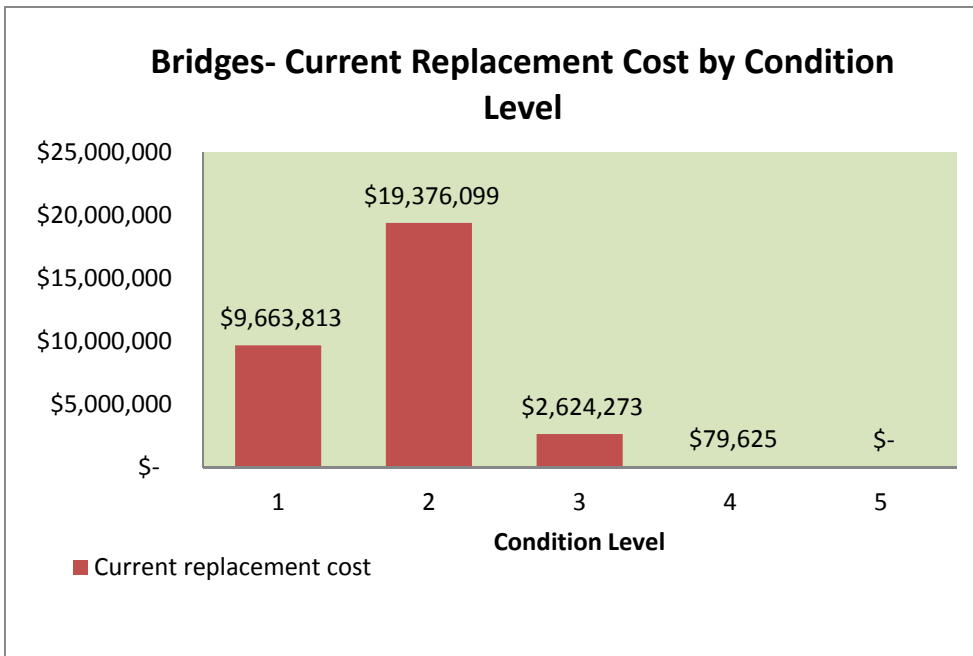
Condition rating and replacement figures (2015 data)

Figure 5.6 Condition of Council's Bridges (based on GRC)



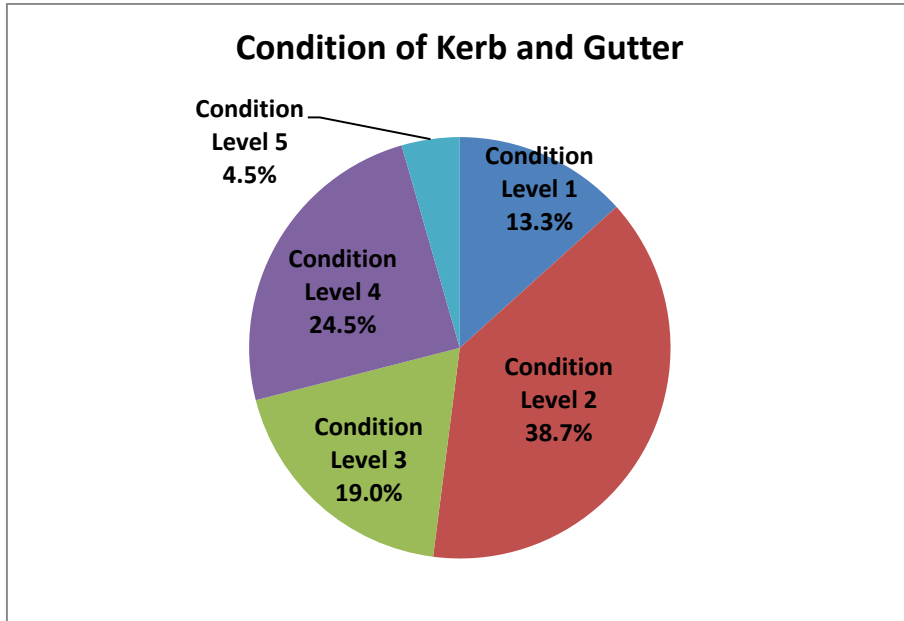
2013 data

Figure 5.7: Asset Condition Profile – Bridges



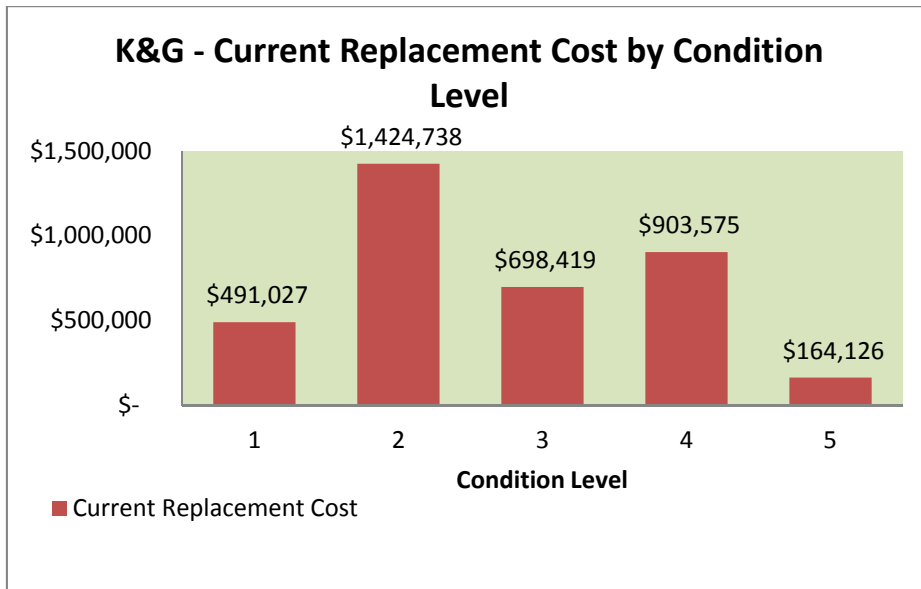
Condition rating (2013 data), replacement figures (2015 data)

Figure 5.8 Condition of Council's Kerb and Gutter (based on GRC)



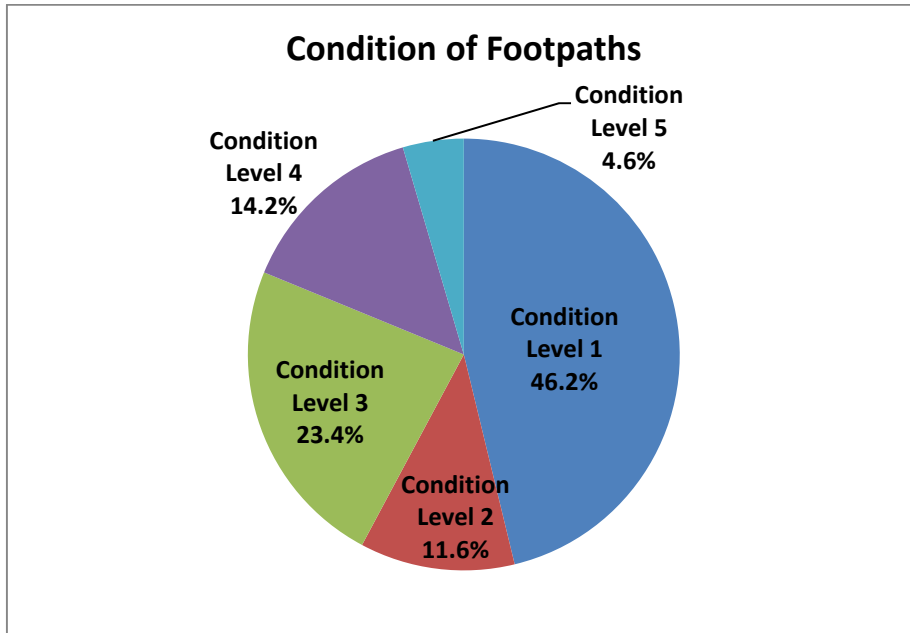
2013 data

Figure 5.9: Asset Condition Profile – Kerb and Gutter



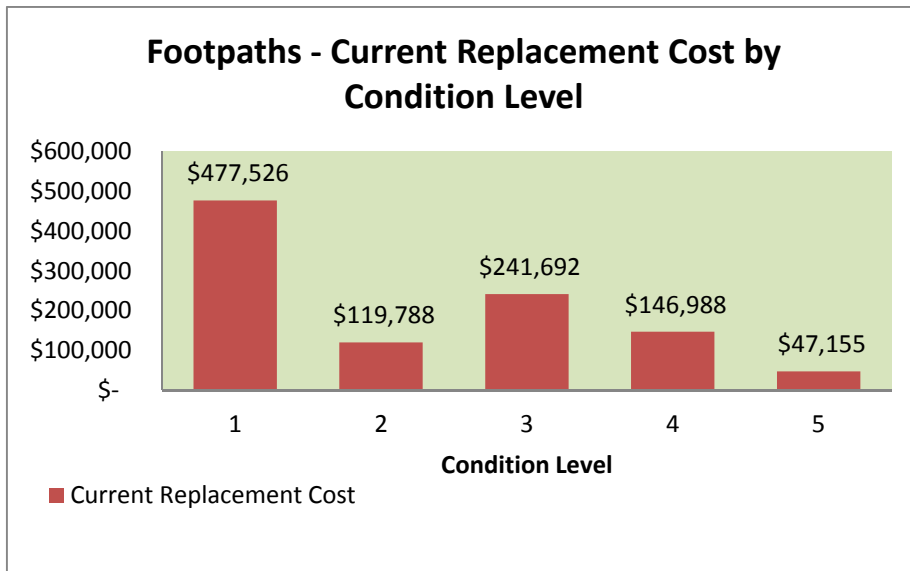
Condition rating (2013 data), replacement figures (2015 data)

Figure 5.10 Condition of Council's Footpaths (based on GRC)



2013 data

Figure 5.11: Asset Condition Profile – Footpaths



Condition rating (2013 data), replacement figures (2015 data)

Currently, Council is providing the following service levels:

Table 5.6: Current Asset Conditions based on GRC

Categories	Current Median Condition Level	Percentage at Median Level or better	Current Condition
Sealed roads - surface	3	96.4%	Very Good
Sealed roads - base	3	70.0%	Good
Unsealed roads	3	66.0%	Good
Bridges – concrete	2	95.4%	Very Good
Bridges – timber	4	100.0%	Poor
Kerb and guttering	2	52.0%	Good
Footpaths	1	46.2%	Good

The current asset condition levels are being met or exceeded for sealed roads, unsealed roads, concrete bridges, kerb and guttering and footpaths; whereas the service level for the remaining two timber bridges is below the satisfactory mean service level (Condition Level 3). These bridges are programmed for replacement in 2017/18.

5.1.6 Asset valuations

The value of assets recorded in the asset register as at June 2016 covered by this asset management plan is shown below. Assets were last revalued as at June 2015.

Table 5.7: Value of Transport Assets at 30 June 2016

Asset category	Replacement Cost	Depreciated replacement cost	Annual depreciated expense
Roads, bridges, footpaths	\$151,085,444	\$103,203,729	\$2,262,275
Bulk earthworks	\$75,893,851	0	0

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

Asset Consumption (Depreciation/Depreciable Amount)	\$2,262,275 / \$151,085,444	1.5%
Asset renewal (Capital renewal exp/Depreciable amount)	\$1,907,073 / \$151,085,444	1.3%
Asset renewal (Capital renewal exp/Depreciable amount, including bulk earthworks)	\$3,101,665 / \$226,979,295	1.4%
Asset renewal/depreciation (Capital renewal exp/Depreciable amount, including bulk earthworks)	\$3,101,665 / \$2,262,275	137.1%
Annual Upgrade/New (Capital upgrade exp/Depreciable amount)	\$600,000 / \$151,085,444	0.4%

Council is currently renewing assets at 1.37:1 of the rate they are being consumed and increasing its asset stock by 0.4% each year.

To provide services in a financially sustainable manner, Council will need to ensure that it is continuing to renew assets at the rate they are being consumed over the medium-long term and funding the life cycle costs for all new assets and services in its long term financial plan.

5.1.7 Asset hierarchy

An asset hierarchy provides a framework for structuring data in an information system to assist in collection of data, reporting information and making decisions. The hierarchy includes the asset class and component used for asset planning and financial reporting and service level hierarchy used for service planning and delivery. Council’s service hierarchy is shown in Table 5.1.5.

Table 5.8: Asset Service Hierarchy

Service Hierarchy	Service Level Objective
Sealed Roads	Roughness < 140/ counts per 100m. Rutting < 20mm.
Unsealed Roads	Bus Routes remain open. Maintain all-weather access to permanently occupied residences.
Bridges	No load restrictions. Last two timber bridges replaced.
Footpaths	Pedestrian traffic comfort and safety. Separation > 25 mm repaired promptly.

Priorities also include consideration of school bus routes, traffic volumes, accident history, all-weather access and cost of maintenance level required.

5.2 Risk Management Plan

Council staff are working with Statewide Insurance to develop a formal process for asset assessment and updating the Council’s “Road Inspection and Operational Risk Management Manual” to incorporate assessments of risks associated with service delivery from infrastructure assets that will result in loss or reduction in service from infrastructure assets or a ‘financial shock’ to the organisation. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks. Critical risks, being those assessed as ‘Very High’ - requiring immediate corrective action and ‘High’ – requiring prioritised corrective action identified in the Infrastructure Risk Management Plan are summarised in Table 5.2 below.

Table 5.9: Critical Risks and Treatment Plans

Service or Critical Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Associated Costs (proposed average annual expend)
Sealed Roads	Ride Quality decreases	M	Programmed resealing on a cyclic basis is completed annually.	\$655,000 / year
	Costs of treatment to bring back to a satisfactory condition escalate.	H	Higher level of inspections required; at least twice per year. Intervention to rehabilitate road pavements occurs not later than mid point of Condition 4.	\$1,579,000 / year
Thunderbolts Way	Failures which deny or delay access.	M	As above.	
Unsealed Roads, Barraba Road	Roads become untrafficable in wet weather.	M	Programmed gravel re-sheeting. Some upgrade works to extend the sealed network.	\$513,000/ year

Service or Critical Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Associated Costs (proposed average annual expend)
Timber Bridges – Mihi Creek and Munsies.	Bridge failure	H	Inspections to be undertaken at least annually to assess structural capacity.	\$5,000/ year
Kerb and Guttering	Minor flooding of adjoining properties	L	Annual extension of Kerb and Guttering with 50% contribution from adjoining owners	\$26,000/ year
	Trips and Falls	L	Annual preventative maintenance and reactive response to complaints	\$15,000/ year
Concrete Footpaths	Trips and Falls	M	Annual preventative maintenance and reactive response to complaints	\$85,150/ year
Unpaved Footpaths	Unightly and overgrown	L	Annual preventative maintenance and reactive response to complaints	

5.3 Routine Maintenance Plan

Routine maintenance is the regular on-going work that is necessary to keep assets operating, including instances where portions of the asset fail and need immediate repair to make the asset operational again.

5.3.1 Maintenance plan

Maintenance includes reactive, planned and specific maintenance work activities. Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions.

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

Specific maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including heavy patching, replacing protection fencing with guardrail etc. This work generally falls below the capital/maintenance threshold but may require a specific budget allocation. Actual past maintenance expenditure is shown in Table 5.3.1.

Table 5.10: Operations and Maintenance Expenditure Trends

Year	Maintenance Expenditure including Administration
2010/11	\$2,975,000
2011/12	\$3,140,000
2012/13	\$3,087,000
2013/14	\$2,051,000
2014/15	\$2,550,000
2015/16	\$3,157,000

Expenditure in 2015/16 was not typical and included one-off allocations for specific maintenance works. Current maintenance expenditure levels (except for 2015/16 year) are considered to be insufficient to meet required service levels over the period covered by this plan. Future revision of this asset management plan will include linking required maintenance expenditures with required service levels.

Reactive maintenance is carried out in accordance with adopted response levels of service.

The Uralla Shire Council in its Ten Year Financial Plan provides funding for maintenance, listed in Table 6.1.2. The comparison between the planned maintenance, based upon estimate of costs to maintain the condition level of 3 for road assets, is shown on Figure 4 below.

Figure 5.12: Comparison of Projected and Required Operations and Maintenance Expenditures for Regional Roads

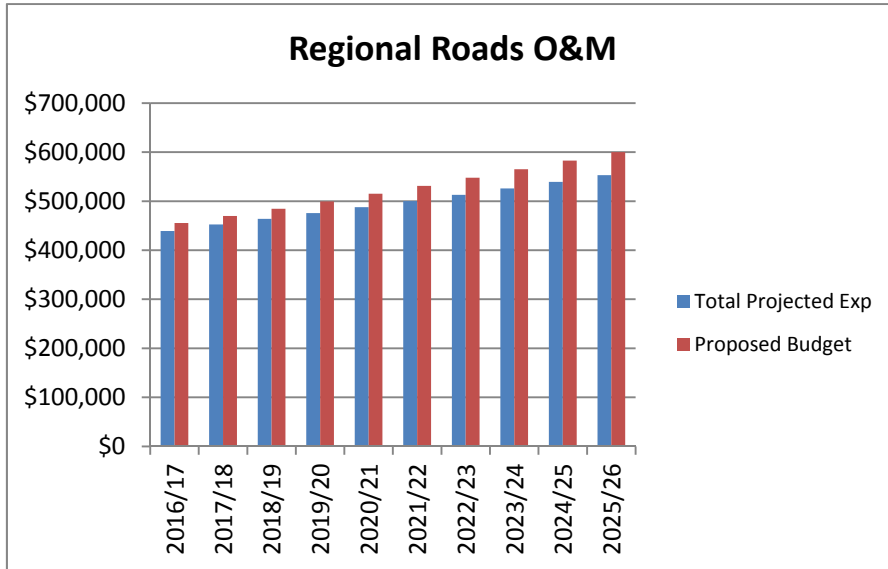
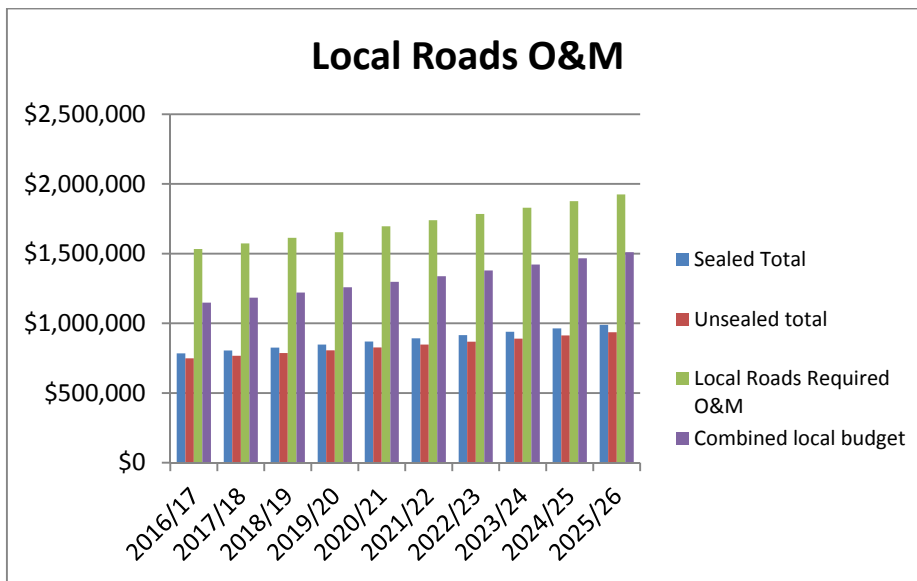


Figure 5.13: Comparison of Projected and Required Operations and Maintenance Expenditures for Local Roads



5.3.2 Standards and specifications

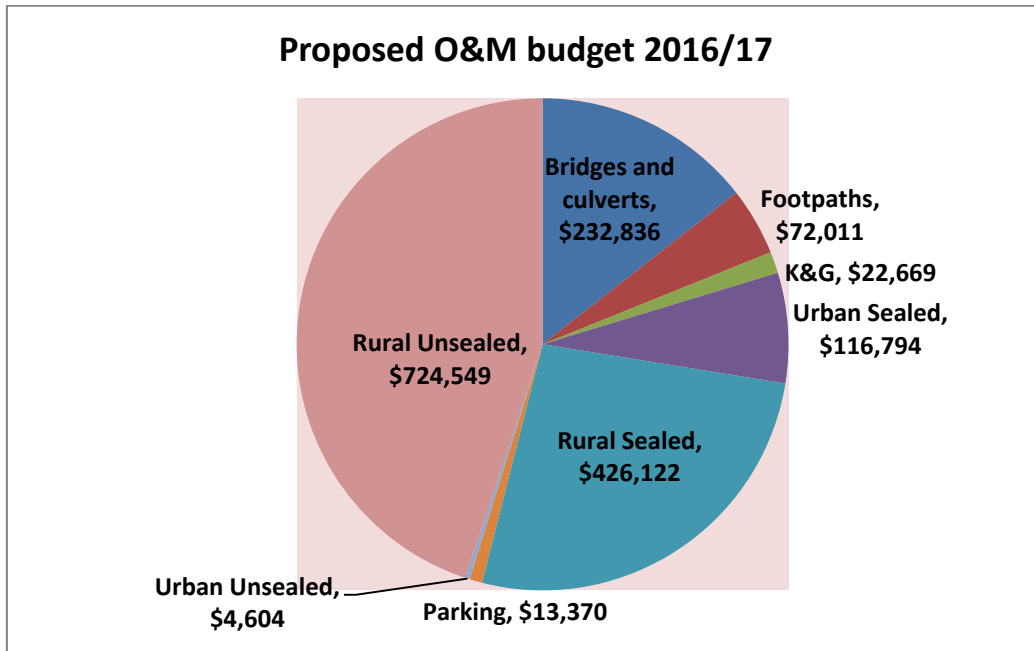
Maintenance work is carried out in accordance with the following Standards and Specifications.

- Unsealed Roads Maintenance – Guidelines to Good Practice ARRB 1993
- Sealed Local Roads Manual – Guidelines to Good Practice for the Construction, Maintenance and Rehabilitation of Pavements 1995
- Local Roads Bridge Maintenance Manual – Guidelines to Good Practice

5.3.3 Summary of future operations and maintenance expenditures

Future operations and maintenance expenditures are forecast to generally trend in line with the asset categories shown in Figure 6. The figures indicate the allocations for the year 2016/17.

Figure 5.14: Projected Operations and Maintenance Expenditure by Category for 2016/17



Deferred maintenance, i.e. works that are identified for maintenance and unable to be funded are to be included in the risk assessment process in the infrastructure risk management plan. Maintenance is funded from the operating budget and grants where available. This is further discussed in Section 6.2.

5.4 Renewal/Replacement Plan

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

5.4.1 Renewal plan

Assets requiring renewal are identified from one of three methods:

- Method 1 uses Asset Register data to project the renewal costs for renewal years using acquisition year and useful life, or
- Method 2 uses capital renewal expenditure projections from external condition modelling systems (such as Pavement Management Systems), or
- Method 3 uses a combination of average *network renewals* plus *defect repairs* in the *Renewal Plan* and *Defect Repair Plan* worksheets on the 'Expenditure template'.

Method 2 was used for this asset management plan. The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 5.11.

Table 5.11: Renewal Priority Ranking Criteria

Criteria	Weighting
Traffic volume	30
Accident History	20
Bus Route	20
Maintenance cost above average	20
All weather access	10
Total	100%

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

An example of a low cost renewal is the in-situ rehabilitation of local sealed road pavements in the Kentucky area.

5.4.2 Renewal standards

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

- Roads and Maritime Services
 - Roadworks Specifications
 - Bridgeworks Specifications
 - Materials Specifications
- www.rta.nsw.gov.au/doingbusinesswithus/guidelines
- Engineering Contract Documents

5.4.3 Summary of projected renewal expenditure

Projected future renewal expenditures are forecast to increase over time as the asset stock ages. The costs are summarised in Figure 6. Note that all costs are shown in 2015/16 dollar values.

The projected capital renewal program is shown in Appendix C.

Figure 5.15: Projected Capital Renewal Expenditure v Proposed Budget for Regional Roads

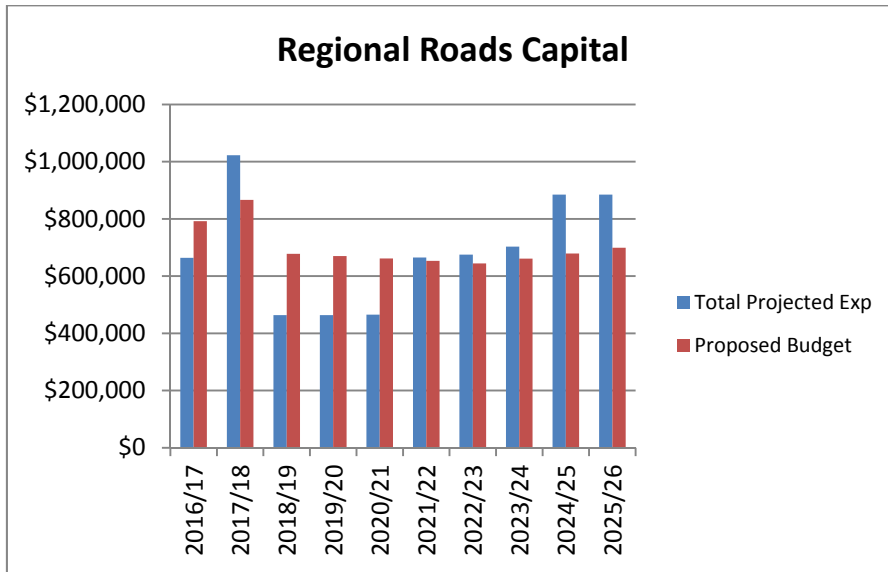
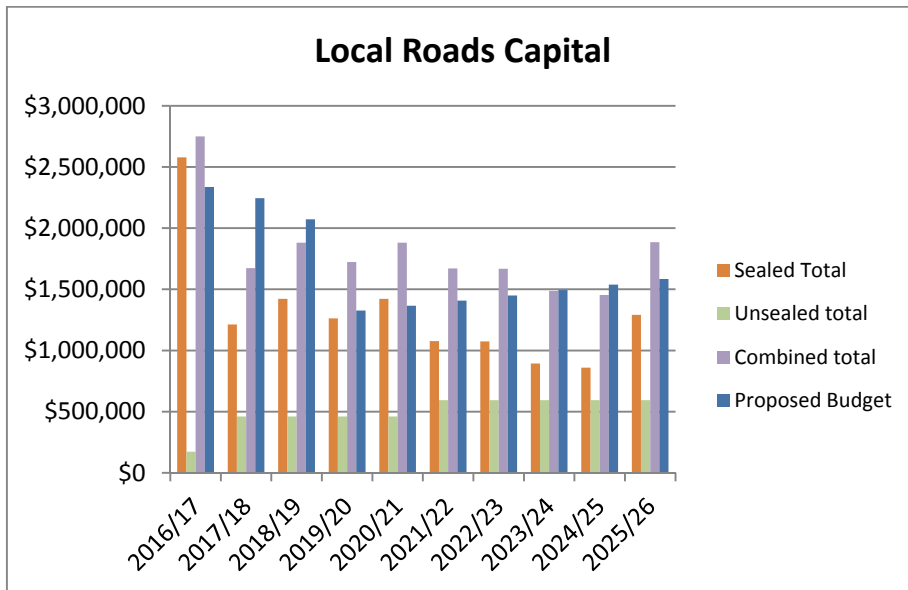


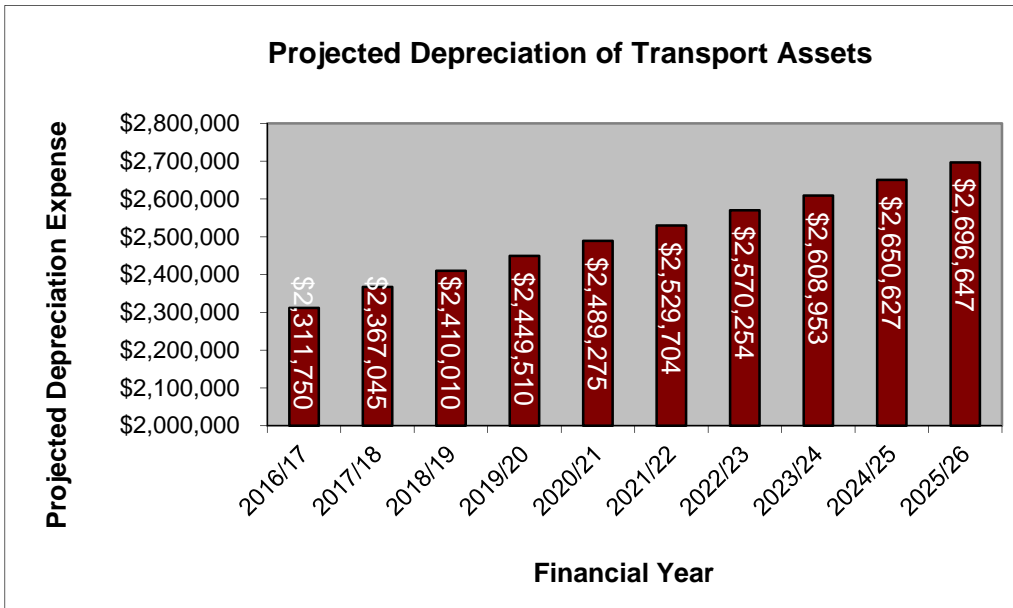
Figure 5.16: Projected Capital Renewal Expenditure v Proposed Budget for Local Roads



Previously, \$545,816 progress expenditure from R2R was allocated in 2015/16 for Mihi Creek and Munsie bridge replacements and an amount of \$774,184, being the balance of funds for the replacement of these bridges, was programmed from R2R for the 2016/17 year. However in late June 2016, Council received advice of grants of \$260k for Mihi Creek and \$800k for Munsie Bridge replacements which meant that \$1.06m from R2R was available to be redirected to road renewal works in 2016/17. The two bridges are now programmed to be replaced in 2017/18, hence the spike in capital expenditure in that year.

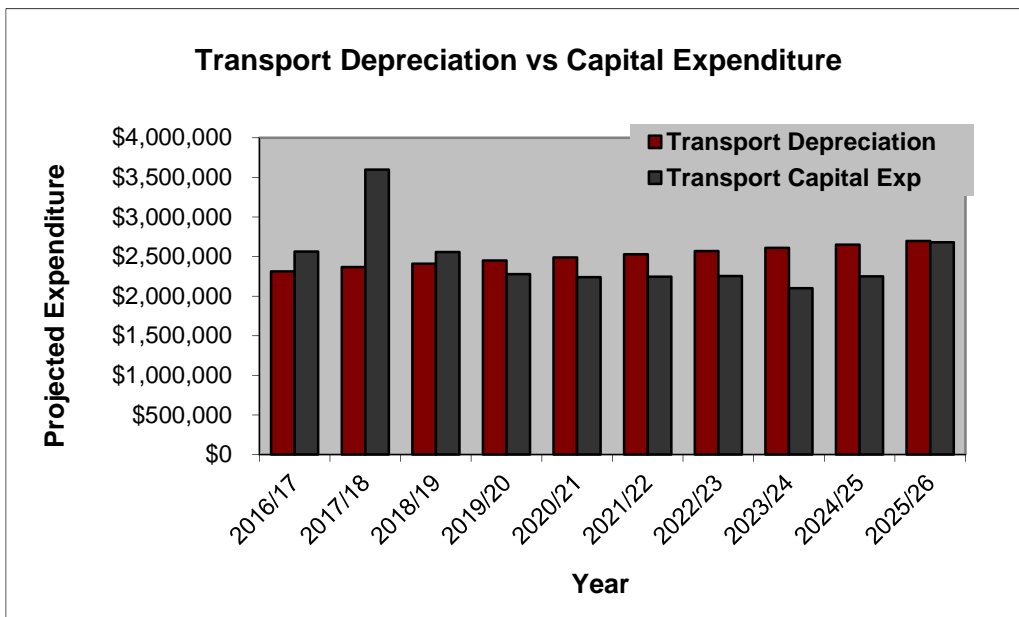
As stated in various Sections of this Asset Management Plan; the funding of Capital improvements is from fully funded non-cash depreciation plus Capital Grants and budget appropriations of own-source income. The depreciation in the Ten Year Financial Plan takes into consideration the increases in value of assets due to revaluation increments and renewed, rehabilitated and new assets. The growth of the depreciation cost is demonstrated in Figure 5.17 below.

Figure 5.17: Projected Depreciation Expenditure



Capital expenditure v the annual depreciation of transport assets is shown below in Figure 5.18.

Figure 5.18: Yearly Expenditure comparison of Depreciation and Capital Expenditure



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

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

5.5 Creation/Acquisition/Upgrade Plan

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

5.5.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as councillor or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria, similar to that for renewal in Table 5.4.1, is detailed below in Table 5.5.1.

Table 5.12: Upgrade/New Assets Priority Ranking Criteria

Criteria For Bridges	Weighting
Timber Bridges – weight restrictions	100%
Criteria for Sealing of Roads	Weighting
Traffic volume	40
Bus Route	20
Accident history	20
Maintenance cost above average	20
Total	100%

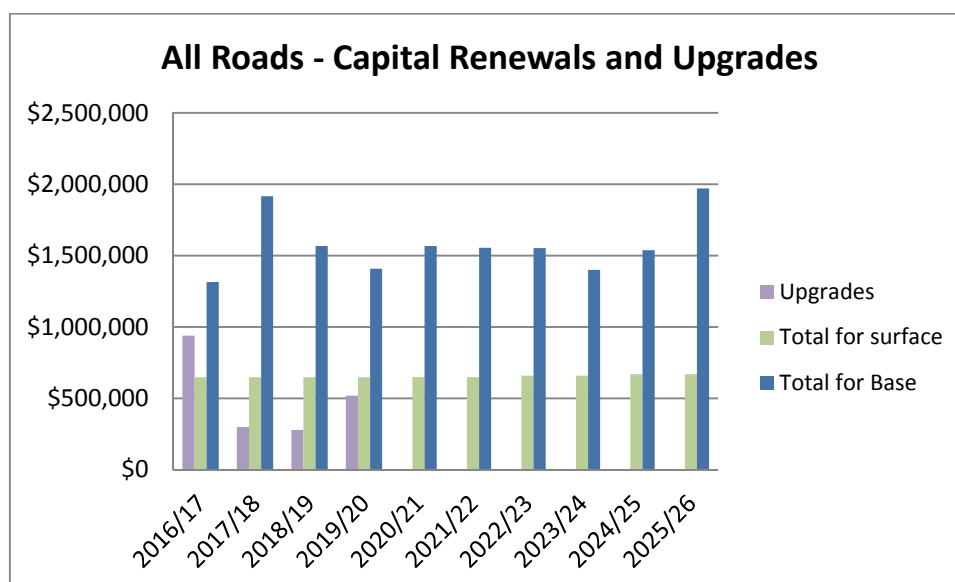
5.5.2 Standards and specifications

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

5.5.3 Summary of projected upgrade/new assets expenditure

Projected upgrade/new asset expenditures are summarised in Figure 9. The projected upgrade/new capital works program is shown in Appendix C. All costs are shown in 2016 dollar values.

Figure 5.19: Projected Capital Renewals and Upgrades – All Roads



New assets and services are acquired through the capital works program taking into consideration the Priority Ranking Criteria outlined in Table 5.12. This is further discussed in Section 6.2.

6. FINANCIAL SUMMARY

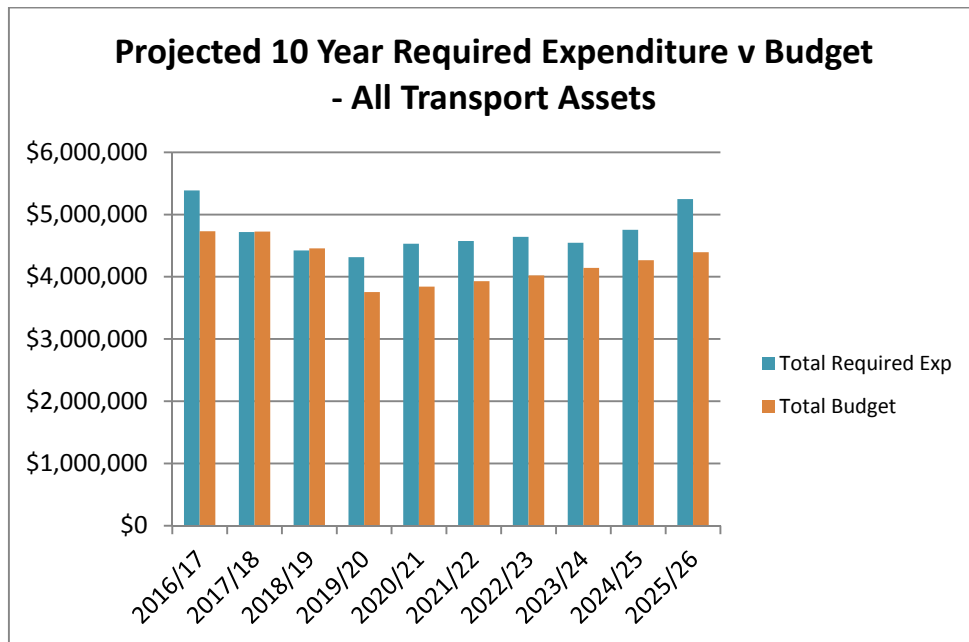
This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset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

6.1 Financial Statements and Projections

The financial projections for all Transport assets (i.e. Regional and local roads, bridges, kerb and gutter, footpaths and traffic facilities) are shown in Figure 6.1 for projected operating and maintenance (O&M) plus capital renewal expenditure compared to estimated total budget funding.

Note that all costs are shown in 2016 dollar values.

Figure 6.1: Projected Operating and Capital Renewal Expenditure and Forward Estimates Budget for all Transport Assets

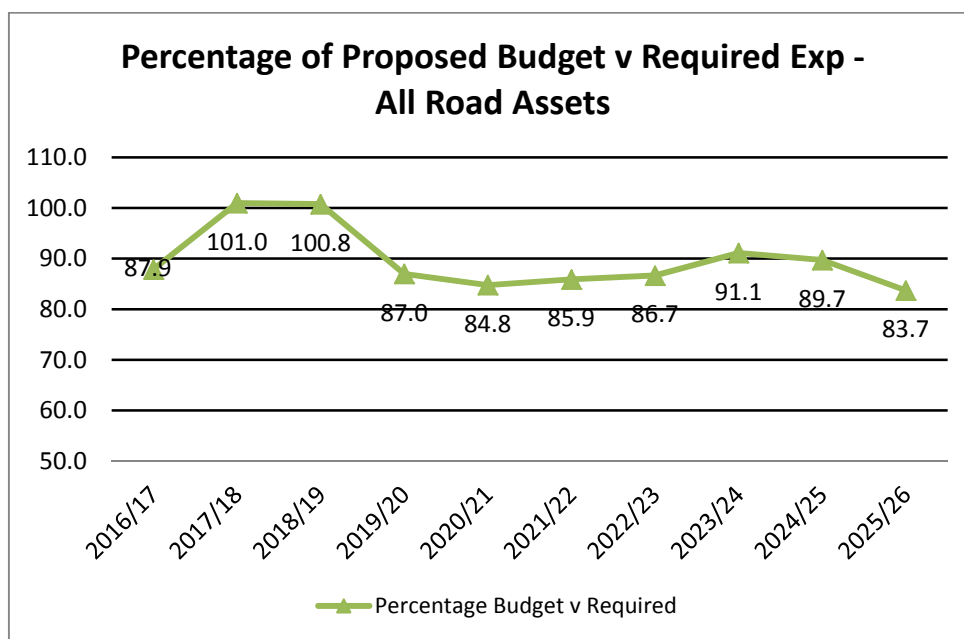


The forward estimates in the Uralla Shire Council Ten Year Financial Plan make funding provision for the projected capital expenditure (renewal, rehabilitation and replacement) in addition to the continued level of maintenance.

The Council identifies properly funded and managed targeted maintenance as the fundamental principle in preserving the condition of its assets and thereby maintaining the high level of Service Delivery expected by our Community.

Ideally, the forward estimates should provide more funds than are projected to be required, so that reasonable unforeseen eventualities can be met. Such eventualities include matching funding from State and Federal Government for road improvements. Two recent examples are: Round 4 of the Regional Australia Development Fund required \$321,500 (\$236,000 cash and \$85,500 in-kind) to match the Federal Government's \$818,500 grant towards a total of \$1,140,000 for rehabilitation work on Thunderbolts Way and a Council contribution of \$550,306 to match the State Government's grant of \$3,500,000 for the replacement of the low level crossing with a new bridge at Emu Crossing.

Figure 6.2: Comparison of the Projected Total Operating and Capital Expenditure and Forward Estimates Budget



6.1.1 Financial sustainability in service delivery

There are three key indicators for financial sustainability that have been considered in the analysis of the services provided by this asset category, these being long term life cycle costs/expenditures and medium term projected/budgeted expenditures over 5 and 10 years of the planning period. The capacity to meet the projected/budgeted expenditures is dependent upon the capacity of the organisation to provide sufficient funding from its own resources to sustain the ongoing maintenance cost. In other words, Council must have a capacity to pay.

Whilst having fully funded Capital Expenditure for the renewal, rehabilitation and new Road, Street, Bridges, Kerb and Guttering and Footpaths; it is imperative for the long term sustainability of the Council’s Transport Assets for those assets to be fully maintained. The Council has to be able to afford to fund the maintenance life cycle cost of holding assets.

The Uralla Shire Council has a history of fully funding its maintenance program being the allocation of an appropriate amount of maintenance, funded from its own resources.

The Federally funded Roads to Recovery (R2R) Program currently provides \$430,153 per annum towards Road Capital costs. The quantum of funding was established by using the formulae for the distribution of the Roads component of the Financial Assistance Grant. The Federal Government has confirmed its commitment to funding the next four-year funding round. This program has an “own source expenditure on Construction and Maintenance” test to ensure that councils maintain their level of commitment and funding from their own General Fund sources (and excluding FAG funding) and do not use the R2R funding to reduce their effort.

The Uralla Shire Council has met this test in every year since its inception in the year 2005/2006. In fact, the reference amount, over the ten years of Rounds 1, 2 and 3 has collectively been exceeded by \$4,011,000 or just over \$400,000 per annum. The details of Council’s own source funding of Road Maintenance and Construction are listed in Table 6.1. below.

Table 6.1: Summary of the Roads to Recovery funding Council own source expenditure

Year	Own Source Expenditure Construction and Maintenance	Reference Amount
First Round		
2005/2006	\$1,714,000	\$1,551,000
2006/2007	\$1,877,480	\$1,551,000
2007/2008	\$1,115,896	\$1,551,000
2008/2009	\$2,088,401	\$1,551,000
Second Round		
2009/2010	\$1,913,826	\$1,671,355
2010/2011	\$1,486,168	\$1,671,355
2011/2012	\$2,188,334	\$1,671,355
2012/2013	\$3,713,190	\$1,671,355
Third Round		
2013/14	\$2,294,523	\$1,671,355
2014/15	\$1,651,312	\$1,671,355
	\$20,043,130	\$16,232,130
Additional Expenditure	\$4,011,000	

The Uralla Shire Council has an established capacity to own source fund its maintenance within the operational budget of Council. The Ten Year Financial Plan continues on the base established in the years 2005/06 to 2012/13 which saw a growth of own source funding of 116.6%.

Long term - Life Cycle Cost

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

Life cycle costs (required expenditure) are compared to life cycle (forward estimates) expenditures in Figure 6.2. The sustainability of Council requires the fully funding of the life cycle cost by the life cycle expenditure.

The estimated annual life cycle cost for the services covered in this asset management plan is \$5,386,591 for 2016/17 and \$5,247,986 for 2025/26 for the operation, maintenance and engineering administration costs plus depreciation expenditure. The life cycle proposed budget in the Council’s Ten Year Financial Plan is \$4,732,353 for 2016/17 and \$4,393,626 in 2025/26 . Life cycle expenditure will vary depending on the timing of asset renewals.

A shortfall between life cycle cost and life cycle expenditure is the life cycle gap.

The life cycle gap for services covered by this asset management plan is \$4,839,399 for the ten year period or an average of \$480,000 per year.

Medium term – 10 year financial planning period

The Life Cycle proposed expenditure is \$42,300,519 for the ten years to 2025/26 and the life cycle costs are \$47,139,918 giving a life cycle sustainability index of 0.897. The life cycle costs and life cycle expenditure comparison highlights any difference between present outlays and the average cost of providing the service over the long term. If the life cycle expenditure is less than that life cycle cost, it is most likely that funding will need to be increased or cuts in services made in the future.

Knowing the extent and timing of any required increase in outlays and the service consequences if funding is not available will assist organisations in providing services to their communities in a financially sustainable manner. This is the purpose of the asset management plans and long term financial plan. The Uralla Shire Council's Ten Year Financial Plan is a 3,000 line individually calculated interactive spreadsheet that is based upon meeting a small increase in population and expansion of its road network to achieve 50% sealed road proportion within the 10 years to 2025/26.

This asset management plan therefore identifies the projected operations, maintenance and capital renewal expenditures required to provide that level of service to the Community over a 10 year period. This plan provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

The projected required expenditures may be compared to budgeted expenditures in the 10 year period. Figure 6.2 indicates that Council's Ten Year Financial Plan provides sufficient funds over the short term to meet the life cycle costs of its Transport Assets but not over the full 10 year period.

Uralla Shire Council's long term practice of relying principally on maintenance of its road network, rather than making adequate provision for scheduled rehabilitation works, may need to be reviewed. In addition, the funding of renewal of a road asset (such as resealing sealed roads within the 15 year life of the surface) is a 'low-cost' renewal method as discussed in Section 5.4.1.

Financial Sustainability Indicators

Providing services from infrastructure in a sustainable manner requires the matching and managing of service levels, risks, projected expenditures and funding to achieve a financial sustainability indicator of 1.0 for the first years of the asset management plan and ideally over the 10 year life of the Asset Management Plan.

Table 6.2 below shows the total projected operation and maintenance (O&M) and capital renewals expenditures required for all transport assets in the 10 year planning period. This projected total required expenditure is compared to the total O&M and capital renewal budgets in the Ten Year Financial Plan 2016/17 to 2025/26.

Table 6.2: Projected and Budgeted total expenditures and Funding Shortfall

Year	Total Exp Required	Total Proposed Budget	Shortfall (-ve gap, +ve surplus)	Cumulative Shortfall
2016/17	\$5,386,591	\$4,732,353	-\$654,238	-\$654,238
2017/18	\$4,719,900	\$4,765,187	\$45,287	-\$608,951
2018/19	\$4,422,182	\$4,455,768	\$33,586	-\$575,366
2019/20	\$4,316,203	\$3,754,481	-\$561,722	-\$1,137,087
2020/21	\$4,531,083	\$3,840,793	-\$690,290	-\$1,827,377
2021/22	\$4,575,418	\$3,929,708	-\$645,710	-\$2,473,087
2022/23	\$4,640,320	\$4,021,304	-\$619,016	-\$3,092,104
2023/24	\$4,545,686	\$4,141,645	-\$404,041	-\$3,496,145
2024/25	\$4,754,548	\$4,265,654	-\$488,894	-\$3,985,039
2025/26	\$5,247,986	\$4,393,626	-\$854,360	-\$4,839,399
Totals	\$47,139,918	\$42,300,519	-\$4,839,399	

Note: An negative shortfall indicates a funding gap, a positive shortfall indicates a surplus for that year.

Providing services in a sustainable manner will require matching of projected asset renewals to meet agreed service levels with planned capital works programs and available revenue.

A gap between projected asset renewals, planned asset renewals and funding indicates that further work is required to manage required service levels and funding to eliminate any funding gap. Uralla Shire Council will need to manage the gap in the year 2016/2017 and onwards.

This asset management plan will provide guidance on future service levels and resources required to provide these services, and review future services, service levels and costs with the community. The impact of adopting different levels of service on the available funding has been discussed earlier in Section 3.5.

6.1.2 Expenditure projections for the 10 year term

Table 6.3 shows the projected expenditures for the Ten Year Financial Plan. Expenditure projections are in current (non-inflated) values. In the normal course of operation Council does not dispose of Road, Street, Bridges, Kerb and Guttering and Footpath assets.

From time to time there will be an impairment of one of these assets due to natural disaster. However these are unforeseen events and not included in forward projection. Additionally such natural events are accompanied by State and Federal Funding to replace the asset with a fraction of the cost to be matched by Council. Consequently such projections are not included in this Asset Management Plan.

The funds required for Operation and Maintenance and Capital Renewals in Council’s long term plan are listed below for the ten years 2016/17 to 2025/26.

Table 6.3: Expenditure Projections for the 10 year term

Year	Projected Capital Exp for Renewals – All Roads	Projected Exp for Operations and Maintenance	Proposed Upgrades (funded)
2016/17	\$3,414,291	\$1,972,300	\$940,000
2017/18	\$2,695,056	\$2,024,843	\$300,000
2018/19	\$2,345,646	\$2,076,536	\$280,000
2019/20	\$2,186,646	\$2,129,556	\$520,000
2020/21	\$2,347,146	\$2,183,937	
2021/22	\$2,335,704	\$2,239,714	
2022/23	\$2,343,400	\$2,296,920	
2023/24	\$2,190,089	\$2,355,597	
2024/25	\$2,338,768	\$2,415,780	
2025/26	\$2,770,768	\$2,477,218	
	\$24,967,516	\$22,172,402	\$2,040,000

Upgrade works, other than those included in Table 6.3 which have been approved by Council to be funded out of the current R2R programme, are not included in this section. These desired but unfunded upgrade works totalling \$5.86m are detailed in Appendix D. In order to carry out these upgrade works Council will need obtain further grant funding as the current funding levels are insufficient to carry out the necessary maintenance and scheduled renewal works.

6.2 Funding Strategy

Projected expenditure identified in Section 6.1 is to be funded from future operating and capital budgets. The funding strategy is detailed in Council’s Ten Year Financial Plan and detailed in Section 6.1.1 as stated:

Maintenance and capital expenditure for the renewal, rehabilitation of Roads, Bridges, Kerb and Guttering and Footpaths is underfunded by \$4.8m over the next ten years when compared with the Long Term Financial Plan and it is imperative that Council sources further funding to close the projected shortfall. A possible source of funding is through a special rate variation. The Council has to be able to afford to fund the maintenance life cycle cost of holding assets.

6.3 Valuation Forecasts

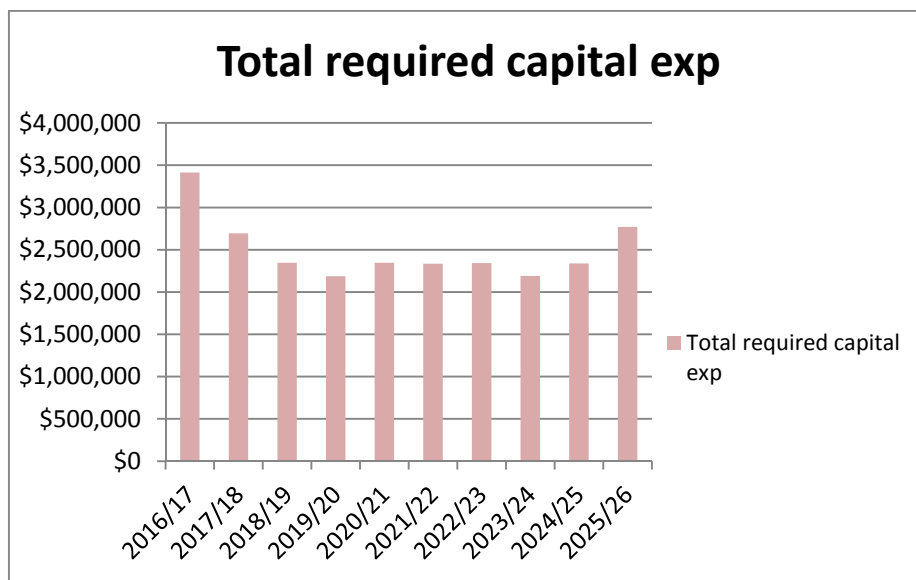
Asset values are forecast to increase as additional assets are added to the asset stock principally from construction and acquisition by Council and also from assets constructed by land developers and others donated to Council. Uralla Shire Council annually reviews the replacement cost of its Infrastructure Assets by incremental increases based upon the IPWEA (NSW) Roads and Transport Directorate Road and Bridge Construction Cost Indexes. This index, produced periodically, is also used to project future revaluation percentages for Transport Assets.

The projected value of the asset and the estimated revaluation increment is calculated in the Non-Current Asset and Depreciation spreadsheet (in the statutory form Projected Income, Cash Flow and Financial Position Statements years 2016/17 to 2025/26) for revaluation increment and depreciation.

The annual incremental increase smooths out the increase flowing from the periodic five year revaluation cycle of Council’s assets. The next revaluation and assessment of asset condition of Road Assets is due in the year ended 30 June 2019.

The projected value of Non-current Transport asset depends also on the projection and funding in the forward estimates of renewals and upgrades expenditure. These expenditures are listed for the period 2016/17 to 2025/26 in Figure 6.3 below:

Figure 6.3:- All Road Assets – Total Required Capital Expenditure



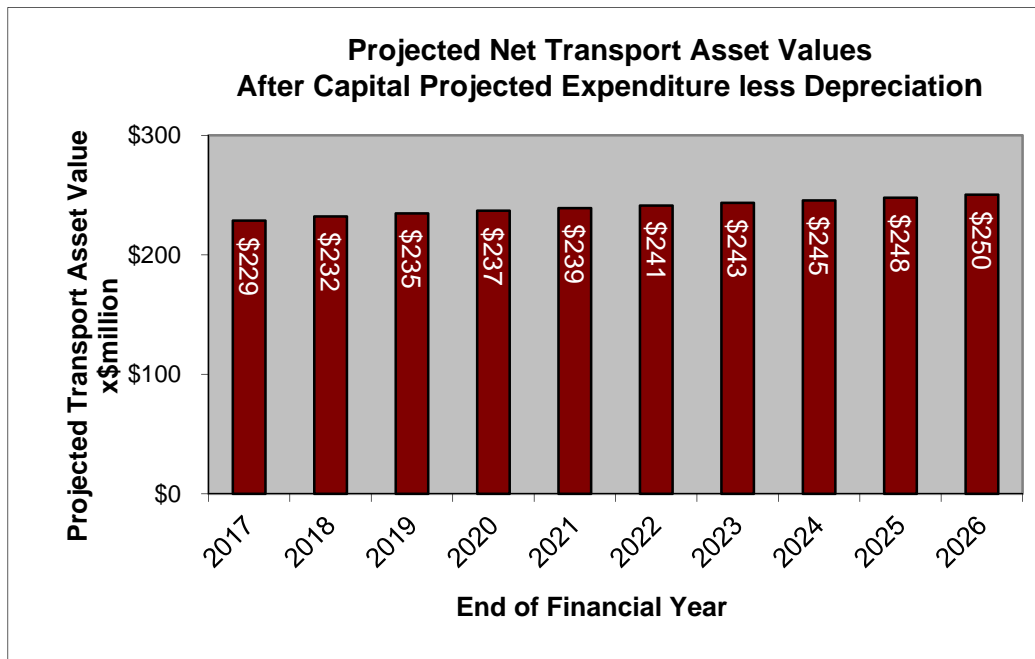
Depreciation expense values are forecast in line with asset values as shown in Figure 5.18.

The following Figure 6.4 shows the projected net replacement asset values, after adding construction and deducting Depreciation over the planning period in 2016 dollar values.

The Net Transport Asset values is the net result of the Carried/Forward Net value plus revaluation increments and renewed, rehabilitated and new assets less depreciation and impairment, if any. The above projected depreciated replacement cost (current replacement cost less accumulated depreciation) will steadily increase over the forecast period as Council is planning on increasing the sealed network and replacing the balance of the timber bridges.

Figure 5.17 shows the projected annual depreciation of transport assets. The projected total asset value movement for Council’s roads, streets, bridges, kerb and gutter and footpaths over the next 10 years is shown in Figure 6.4.

Figure 6.4: Projected Asset Values



6.4 Key Assumptions made in Financial Forecasts

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

Key assumptions made in this asset management plan are:

- All costs are in 2016 dollars.
- RMS Block Grant funding continuing for regional roads
- Roads to Recovery grant funding continuing for local roads
- Roads and bridges component of the Financial Assistance Grants (FAGs) continuing from the Federal Government Budget.

7. ASSET MANAGEMENT PRACTICES

7.1 Accounting/Financial Systems

7.1.1 Accounting and financial systems

The financial system used by the Uralla Shire Council is Authority 6.6, through a Managed Service Provider contract with Civica Australia. The system is managed by Council's Finance Section producing monthly financial reports, for management and the Council's Finance Committee and annual financial statements for audit and production to the Uralla Community and other interested parties.

7.1.2 Accountabilities for financial systems

Council's Significant Accounting Policies are set out in the annual financial statements Note 1. Section I is applicable specifically to Infrastructure.

7.1.3 Accounting standards and regulations

Council currently complies with the following standards and regulations with respect to asset accounting

- AASB116 – Property, Plant and Equipment
- The Australian Equivalents to International Financial Reporting Standards, to the extent that the Australian Accounting Standards and the New south Wales Local Government Act Regulations and Local Government Code of Accounting Practice and Financial Reporting require.
- The Local Government Code of Accounting and financial reporting
- The Local Government Act 1993 requires Council to prepare an annual report as to its achievements with respect to the objectives and performance targets set out in its management plan for that year.
- Australian Accounting Standard (AAS) 27 is applicable to financial reporting by local governments, and provides guidelines for accounting methods and procedures.

7.1.4 Capital/maintenance threshold

The determination of expenditure as capital or maintenance is a combination of purpose, value and economic life of the asset received from the expenditure. The guidelines for the determination are set out in Note 1 of the Annual Financial Statements as adopted annually by Council.

7.1.5 Required changes to accounting financial systems arising from this AM Plan

Currently infrastructure values, current replacement costs and written down values, are calculated from desktop audits and field condition surveys. With the development and improvement of this asset management plan the infrastructure values will be more accurate and will be reflected in the financial system.

7.2 Asset Management Systems

7.2.1 Asset management system and registers:

A number of systems and registers are used by the Uralla Shire Council for the purpose of this asset management:

- MapInfo® (Intramaps® from January 2014) - For the Geographical Information System (GIS). These systems hold the spatial information on the majority of asset groups
- Microsoft® Excel spreadsheets are used to manipulate and interrogate asset data
- Financial system: Civica® "Authority" software – customer billing, water meter register and customer water consumption information. Maintains the capital value register and manages depreciation.
- document management and customer requests system is TRIM (© (HP Software Division)

- Council's current maintenance management system used for transport assets is via field work sheets and using Microsoft® Excel spreadsheets. Council is working, with Statewide Mutual Risk Officers, towards implementing a robust modern system based upon Risk Assessment tools. Other maintenance is undertaken on a reactive basis under direction from the Director Engineering Services and Works Manager.
- The Points Score System is responsible for producing annual capital works programs.

7.2.2 Accountabilities for asset management system and data

The responsibility for operating and maintaining the core Asset Management systems is with the Director Engineering Services. The development of an annual transport budget allocation within the Council budget is between the Director Engineering Services and the General Manager based upon the ten year financial plan forward estimates. The annual production of capital works and maintenance programs is by the Director Engineering Services through the Works Planning Advisory Unit.

7.2.3 Linkage from asset management to financial system

Council utilises Civica Authority to link asset management to the financial system by managing the asset values including depreciation and revaluations. However, there are no direct links with operations and maintenance expenses and the individual asset.

7.2.4 Required changes to asset management system arising from this Asset Management Plan

A system which provides a direct linkage between operations and maintenance expenditure and individual assets is required. The ongoing maintenance of this system should then become a core function within Council's operations.

7.3 Information Flow Requirements and Processes

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

- Council strategic and operational plans,
- Service requests from the community,
- Network assets information,
- The unit rates for categories of work/materials,
- Current levels of service, expenditures, service deficiencies and service risks,
- Projections of various factors affecting future demand for services and new assets acquired by Council,
- Future capital works programs,
- Financial asset values.

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

- The projected Works Program and trends,
- The resulting budget and long term financial plan expenditure projections,
- Financial sustainability indicators.

These will impact the Long Term Financial Plan, Strategic Longer-Term Plan, annual budget and departmental business plans and budgets.

7.4 Standards and Guidelines

Standards, guidelines and policy documents referenced in this asset management plan are:

- Council's Significant Accounting Policy (Note 1 to Annual Financial Statements)
- Roads and Maritime Services –Roadworks, Bridgeworks and Materials Specifications
- Unsealed Roads Manual – Guidelines to Good Practice ARRB 1993
- Sealed Local Roads Manual – Guidelines to Good Practice for the Construction, Maintenance and Rehabilitation of Pavements. ARRB 1995
- Local Roads Bridge Maintenance - Guidelines to Good Practice ARRB 2000
- Department of Housing Road Manual 1987 (urban works)

8. PLAN IMPROVEMENT AND MONITORING

8.1 Performance Measures

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

- The degree to which the required cashflows identified in this asset management plan are incorporated into the organisation’s long term financial plan and Community/Strategic Planning processes and documents,
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the ‘global’ works program trends provided by the asset management plan;

8.2 Improvement Plan

The following tasks in Table 8.1 have been identified to be included in future revisions of the asset management plan.

Table 8.1: Improvement Plan

Task No	Task	Responsibility	Timeline
1	Quantify desired levels of service	DIR	By next revision
2	Develop an Age Profile for all transport assets	DIR	By next revision
3	Develop a formal process for asset assessment	DIR	By next revision
4	Improve financial projections as further information becomes available on desired levels of service.	DIR	After completion of Task 1.
5			
6			
7			
8			
9			
10			

8.3 Monitoring and Review Procedures

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

This Plan has a life of 4 years and is due for revision and updating within twelve months of each Council election.

REFERENCES

Uralla Shire Council – Ten Year Financial Plan 2015/16 to 2024/25

Uralla Shire Council – 2015/2016 Operational Plan

DVC, 2006, *Asset Investment Guidelines*, Glossary, Department for Victorian Communities, Local Government Victoria, Melbourne, <http://www.dpcd.vic.gov.au/localgovernment/publications-and-research/asset-management-and-financial>.

IPWEA, 2006, *International Infrastructure Management Manual*, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au.

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, 2011, *Asset Management for Small, Rural or Remote Communities* Practice Note, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/AM4SRRC.

APPENDICES

Appendix A Examples of Road Conditions; refer Table 5.1.3 IIMM Descriptions of Condition

Appendix B Projected 10 Year Capital Renewal Works Program (reseals and re-sheeting)

Appendix C Planned upgrade, rehabilitation or new Transport Infrastructure in the 10 year Capital Works Program

Appendix D Glossary

Appendix E Abbreviations

Appendix A – Examples of Road Conditions refer Table 5.1.3 IIMM Descriptions of Condition

Sealed Road – Condition 1 (Eastern Avenue)



Sealed Road – Condition 2 (Torryburn Road)



Sealed Road – Condition 3 (Fitzroy Street)



Sealed Road – Condition 4 (Burtons Lane)



Unsealed Road – service level (Big Ridge Road)



Unsealed Road – grade intervention level (Balala Road)



Kerb and Guttering – condition 1 (Fitzroy Street)



Kerb and Guttering – Condition 3 (Salisbury Street)



Footpath – Condition 1 (John street)



Footpath – Condition 3 (Salisbury Street)



Concrete Bridge replacing a timber bridge – Enmore Road,



Timber Bridge due for replacement



Appendix B – Projected 10 year Capital Renewal Works Program (reseals and re-sheeting)

Regional Sealed Roads

Resealing of sealed roads at 6.7% of length each year i.e. cycle time of 15 years.

10 Year Proposed Capital Program	
Year	Forward Estimates
2016/17	\$248,500
2017/18	\$248,500
2018/19	\$248,500
2019/20	\$248,500
2020/21	\$250,000
2021/22	\$250,000
2022/23	\$260,000
2023/24	\$260,000
2024/25	\$270,000
2025/26	\$270,000

The 10 year forward estimates of \$2,554,000 will reseal approximately 90 kilometres of the 129 kilometres of regional rural sealed road. This is 70% of the length in 67% of the time to achieve a resealing cycle of 15 years (or 6.7% annually).

Rural Local Sealed Roads

Resealing of sealed roads at 5.0% of length each year i.e. cycle time of 20 years.

10 Year Proposed Capital Program	
Year	Forward Estimates
2016/17	\$335,733
2017/18	\$335,733
2018/19	\$335,733
2019/20	\$335,733
2020/21	\$335,733
2021/22	\$335,733
2022/23	\$335,733
2023/24	\$335,733
2024/25	\$335,733
2025/26	\$335,733

The 10 year forward estimates of \$3,357,330 will re-seal approximately 132 kilometres of the 273km rural local road network. This represents 48.3% of the length in 50% of the time to achieve a resealing cycle of 20 years (or 5% annually).

Urban Local Sealed Roads

Resealing of sealed roads at 6.7% of length each year i.e. cycle time of 15 years.

10 Year Proposed Capital Program	
Year	Forward Estimates
2016/17	\$63,997
2017/18	\$63,997
2018/19	\$63,997
2019/20	\$63,997
2020/21	\$63,997
2021/22	\$63,997
2022/23	\$63,997
2023/24	\$63,997
2024/25	\$63,997
2025/26	\$63,997

The 10 year forward estimates of \$639,973 will re-seal approximately 17.8 kilometres of the 26.5km urban local road network. This represents 67% of the length in 67% of the time to achieve a resealing cycle of 15 years (or 6.7% annually).

Gravel re-sheeting – Regional Roads

Re-sheeting of unsealed roads at 5.0% of length each year i.e. cycle time of 20 years.

10 Year Proposed Capital Program	
Year	Forward Estimates
2016/17	\$18,336
2017/18	\$18,902
2018/19	\$19,484
2019/20	\$20,085
2020/21	\$20,705
2021/22	\$21,344
2022/23	\$22,000
2023/24	\$22,661
2024/25	\$23,341
2025/26	\$24,041

The ten year forward estimates total of \$210,899 will re-sheet the 9.75 kilometres of the Bundarra to Barraba Road prior to its sealing in the program outlined in Appendix D. The sealing of the regional road before 2025/2026 will then release annual funding allocated for re-sheeting to other works.

Gravel re-sheeting –Local Roads

Note: Re-sheeting cycle varies from 4% to 3.3% of total length annually i.e. 25 to 30 years cycle time, depending on Road Class.

10 Year Proposed Capital Program	
Year	Forward Estimates
2016/17	\$172,654
2017/18	\$482,668
2018/19	\$482,668
2019/20	\$482,668
2020/21	\$482,668
2021/22	\$634,769
2022/23	\$634,769
2023/24	\$634,769
2024/25	\$634,769
2025/26	\$634,769

The ten year total of \$5,277,170 will re-sheet approximately 156 kilometres on the 511 kilometres of local rural unsealed roads. This represents 30.5 percent of the length during the ten year period which achieves the re-sheeting rate required to maintain the intervention target of Condition Level 3.

Appendix C – Planned upgrade, or new Transport Infrastructure in the 10 year Capital Works Program.

The following are the planned upgrades and new capital works for the 10 years from 2016/17 to 2025/26:

Bridges

Mihi Bridge on Enmore Road, replace timber superstructure with \$260,000 of R2R funding and \$260,000 special grant funding from the State Government Fixing Country Roads program.

Munsies Bridge on Gostwyck Road, it is proposed to replace the timber superstructure with precast concrete. The new bridge will continue to be one lane so work is not upgrade. The project is scheduled for 2017/18 and is fully funded by a special Federal Government grant of \$800,000.

Sealed Roads

See attached spreadsheet **Appendix D** for details of renewals projects on regional, rural local and urban roads.

Roads to be upgraded:

The road projects previously approved by Council to be upgraded from unsealed to sealed is as follows:

2016/17	2.0 km Bingara Road, \$420,000
2017/18	0.64 km Jacksons Road, \$150,000
2017/18	0.35 km Saumarez War Service Road, \$150,000
2018/19	1.15 km Tulong Road, \$200,000
2018/19	2.1 km Eastern Avenue rehab and widen to two lanes (note: upgrade cost to widen is \$80k of total cost of \$320k)
2019/20	0.35 km Leece Road, \$120,000
2019/20	2.0 km Retreat Road, \$400,000

The combined length of these projects is 8.59km.

Identified transport projects that are **currently unfunded** and are not included in the 10 year Capital Works Program:

Regional Roads:

MR132 Barraba Road – complete sealing of remaining unsealed length 9.75km at an estimated cost of \$3.8m.

Note: 1.86km of sealing works at the western end was funded from the Blackspot program in 2014/15.

Council plans to spend \$48,686 in 2018/19 on upgrading works. This is the balance of funds remaining at the end of the current REPAIR program. A new REPAIR program will commence from 2019/20 however individual Council funding is not guaranteed as projects will be prioritised on a regional point score basis.

When the next round of blackspot funding applications is invited it is intended to propose the 2km unsealed section remaining on the western end hill section.

Regional Bridges

Tolleys Gully Bridge on MR73 needs replacing due to poor alignment and width. Estimated cost \$1.0m. Replacement is proposed for 2019/2020 and is expected to be funded by special grant, however no provision has been made for funding in this plan.

Upgrade causeway on Barraba Road at Bakers Creek to a bridge structure at a cost of \$1.4m. This project is currently unfunded.

Rural Local:

Identified road sealing projects:

- 8.4 km Bingara Road complete sealing of remaining unsealed length \$3.3m
- 1.0 km Bakers Lane \$100,000
- 7.35 km Retreat Road \$1,420,000
- 7.6 km Bendemeer Road \$2,280,000
- 1.8 km Mount Mitchell Road \$540,000
- 1.4 km Fossickers Reserve access and Camping Area \$540,000

Urban Local:

- Rowan Avenue plus new stormwater drainage
- Extension of Uralla shared cycleway path

90 m Bridge Street, Top Pub to King Street - western side

200 m per year Shared footpath Maitland Street from Hill Street south to Sports Complex

Causeways to be upgraded:

Bingara Road at 2 locations
 Maitland Street
 Queen Street
 Gostwyck Road (on gravel Section)
 Kingstown Road near Balala
 Terrible Vale Road

Kerb and Gutter: Renew all sections at Condition level 5 over the next 10 years and extend the network by 210m per year.

Safety Issues to be addressed:

Bundarra Road guardrail/ wire barrier in 3 locations on Pinnacle
 Gwydir River Road – guardrail/ wire barrier on two bridge approaches
 Baldersleigh Road/ Thunderbolts Way intersection upgrade
 Eastern Avenue – realign corner near Wards
 Retreat Road - crest realignment

10 Year Financial Plan Capital Program	
Year	Forward Estimates
2016/17	\$70,600
2017/18	\$70,600
2018/19	\$70,600
2019/20	\$70,600
2020/21	\$70,600
2021/22	\$70,600
2022/23	\$70,600
2023/24	\$70,600
2024/25	\$70,600
2025/26	\$70,600
Total	\$706,000

Footpaths: Renew sections at Condition Levels 4 and 5 over the next 10 years and extend the network by 200 metres per year.

10 Year Financial Plan Capital Program	
Year	Forward Estimates
2016/17	\$57,570
2017/18	\$58,212
2018/19	\$58,873
2019/20	\$59,554
2020/21	\$60,256
2021/22	\$60,978
2022/23	\$61,723
2023/24	\$62,489
2024/25	\$63,279
2025/26	\$64,092
Total	\$607,026

The 10 year allocation of \$607,000 will enable construction of approximately 2,000 metres of footpath, thus achieving the 200 metres per annum target.

The desired footpath construction is as follows:

800 m Bundarra CBD

The 10 year allocation of \$706,000 will enable construction of approximately 2,100 metres of kerb and guttering, thus achieving the 210 metres per annum target.

The desired kerb and guttering construction works are as follows:

King Street, McMahon to Everett, 210m

Rowan Avenue, northern side Bridge Street west, 100m

Queen Street, from East Street 60m both sides north, i.e. 120m

Bowline Street opposite the Bundarra Central School

Roman Street, 140m both sides i.e. 280m

Warwick Street, from McCrossin Street both sides north.

Appendix D - Program of proposed Capital Works 2016/17 to 2025/26

Road Type	Road Name	Location	Work Type	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	
Regional	MR73 C	00 to 1.0km (part 300m)	Rehab	\$120,000										
	MR73 C	23.0 to 24.0km (part 650m)	Rehab		\$260,000									
	MR73 C	1.0 to 2.0km (part 700m)	Rehab	\$280,000										
	MR124	6.0 to 7.0km (part 110m)	Rehab		\$83,840									
	MR124	4.0 to 5.0km (part 560m)	Rehab		\$196,000									
	MR124	8.0 to 9.0km (part)	Rehab		\$78,846									
	MR124	8.0 to 9.0km (complete)	Rehab			\$201,314								
	MR73 C	15.0 to 16.0km (part 350m)	Rehab		\$140,000									
	MR73 N	52.0 to 53.0km	Rehab				\$198,686	\$200,000						
	MR73 C	21.0 to 22.0km (all)	Rehab						\$400,000					
	MR73 N	48.0 to 49.0 (all)	Rehab							\$400,000				
	MR73 C	14.0 to 15.0km (all)	Rehab								\$400,000			
	MR124	4.0 to 5.0km (part 560m)	Rehab											
	MR73 N	50.0 to 51.0 (part 520m)	Rehab										\$400,000	
	MR73 S	19.0 to 20.0km (all)	Rehab											\$400,000
	MR73 N	51.0 to 52.0km (all)	Rehab										\$400,000	
	MR73 C	13.0 to 14.0km (all)	Rehab											\$200,000
	MR73 N	50.0 to 51.0 (bal 480m)	Rehab										\$227,625	
			Sub total =	\$400,000	\$758,686	\$201,314	\$198,686	\$200,000	\$400,000	\$400,000	\$400,000	\$627,625	\$600,000	
Rural Local	Bingara Road	Seal 4.68 to 6.68km	Upgrade	\$420,000										
	Mihi Creek Bridge	Replace bridge	Upgrade	\$520,000										
	Jacksons Road	Seal 00 to 0.64km	Upgrade		\$150,000									
	Saumarez War Serv	Seal 350m	Upgrade		\$150,000									
	Tulong Road	00 to 1.15km	Upgrade			\$200,000								
	Eastern Avenue	Cost to widen to 2 lanes	Upgrade			\$80,000								
	Leece Road	Seal 350m	Upgrade				\$120,000							

	Retreat Road	Seal 2.0 km	Upgrade				\$400,000						
			Sub total for upgrade=	\$940,000	\$300,000	\$280,000	\$520,000	\$0	\$0	\$0	\$0	\$0	
	Munsies Bridge	Replace bridge	Renewal	\$800,000									
	Eastern Avenue	2.0 to 3.0km (all)	Rehab			\$265,000							
	Reeves Road	1.0 to 2.0km (all)	Rehab		\$186,000								
	Burtons Lane	1.0 to 2.0km	Rehab		\$186,000								
	Sawpit Gully Loop	00 to 0.38km	Rehab										
	Reeves Road	00 to 1.0km	Rehab	\$186,000									
	Noalimba Avenue	4.0 to 5.0km	Rehab	\$345,000									
	Kingstown Road	35.0 to 36.0km	Rehab			\$345,000							
	Gostwyck Road	4.0 to 5.0km	Rehab					\$345,000					
	Hawthorne Drive	00 to 1.0km	Rehab					\$345,000					
	Hawthorne Drive	4.0 to 5.0km	Rehab					\$345,000					
	Reeves Road	2.0 to 2.56km	Rehab		\$103,788								
	Noalimba Avenue	5.0 to 6.0km	Rehab				\$345,000						
	Plug Lane	00 to 0.1km	Rehab										
	Burtons Lane	00 to 1.0km	Rehab			\$80,000	\$106,000						
	Traceys Road	2.0 to 3.0km	Rehab						\$186,000				
	Barleyfields Road	3.0 to 3.22km	Rehab						\$75,900				
	Eastern Avenue	0.77 to 2.0km	Rehab						\$80,796	\$342,696			
	Hawthorne Drive	1.0 to 2.0km	Rehab								\$345,000		
	Terrible Vale Road	6.0 to 7.0km	Rehab									\$345,000	
	Hawthorne Drive	6.0 to 7.0km	Rehab									\$345,000	
	Traceys Road	3.0 to 3.422km	Rehab				\$80,000						
			Sub totals	\$1,331,000	\$475,788	\$690,000	\$531,000	\$690,000	\$345,000	\$342,696	\$342,696	\$345,000	\$690,000
			Total for capital renewal and upgrade	\$2,271,000	\$775,788	\$970,000	\$1,051,000	\$690,000	\$345,000	\$342,696	\$342,696	\$345,000	\$690,000
Urban Local	Bligh Avenue	John to Park 220m	Rehab	\$44,000									
	John Street	Queen to Phillip Ave	Rehab	\$6,000									
	Duke Street	Salisbury to end 240m	Rehab	\$162,000									
	Maitland Street	Plane to Salisbury	Rehab			\$207,808	\$91,192						

Park Street	440 to 660m	Rehab	\$154,000										
Uralla Square	John to Uralla Rd 120m	Rehab				\$42,000							
Gilmore Place	AC overlay 00 to 140m	Rehab	\$67,872	\$9,128									
Hill Street	Duke to Bridge 460m (part)	Rehab				\$83,744	\$216,936						
Salisbury Street	Bridge to Queen 210m	Rehab							\$105,000				
Queen Street	Kingstown Rd to end K&G	Rehab							\$34,800				
Hill Street	Duke to Bridge St complete	Rehab						\$216,936					
Salisbury Street	Queen to Uralla 220m	Rehab							\$77,000				
Queen Street	Salisbury to creek 100m	Rehab								\$45,000			
Munro Avenue	Uralla to Fitzroy 200m	Rehab											
Warwick Street	McCrossin to McKenzie 280m	Rehab										\$78,000	
Sub totals			\$212,000	\$221,872	\$216,936	\$216,936	\$216,936	\$216,936	\$216,936	\$216,800	\$45,000	\$0	\$78,000
Annual totals for capital works \$k			\$2,883	\$1,756	\$1,388	\$1,467	\$1,107	\$962	\$959	\$788	\$973	\$1,368	

Appendix D – Glossary

Annual service cost (ASC)

- 1) Reporting actual cost
The annual (accrual) cost of providing a service including operations, maintenance, depreciation, finance/opportunity and disposal costs less revenue.
- 2) For investment analysis and budgeting
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 operations, maintenance, depreciation, finance/opportunity and disposal costs, less revenue.

Asset

A resource controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity. Infrastructure assets are a sub-class of property, plant and equipment which are non-current assets with a life greater than 12 months and enable services to be provided.

Asset class

A group of assets having a similar nature or function in the operations of an entity, and which, for purposes of disclosure, is shown as a single item without supplementary disclosure.

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 (AM)

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.

Average annual asset consumption (AAAC)*

The amount of an organisation's asset base consumed during a reporting period (generally a year). This may be calculated by dividing the depreciable amount by the useful life (or total future economic benefits/service potential) and totalled for each and every asset OR by dividing the carrying amount (depreciated replacement cost) by the remaining useful life (or remaining future economic benefits/service potential) and totalled for each and every asset in an asset category or class.

Borrowings

A borrowing or loan is a contractual obligation of the borrowing entity to deliver cash or another financial asset to the lending entity over a specified period of time or at a specified point in time, to cover both the initial capital provided and the cost of the interest incurred for providing this capital. A borrowing or loan provides the means for the borrowing entity to finance outlays (typically physical assets) when it has insufficient funds of its own to do so, and for the lending entity to make a financial return, normally in the form of interest revenue, on the funding provided.

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 expenditure - expansion

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

Capital expenditure - new

Expenditure which creates a new asset providing a new service/output that did not exist beforehand. As it increases service potential it may impact revenue and will increase future operations and maintenance expenditure.

Capital expenditure - renewal

Expenditure on an existing asset or on replacing an existing asset, which returns the service capability of the asset up to that which it had originally. 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 generally has no impact on revenue, but may reduce future operations and maintenance expenditure if completed at the optimum time, eg. resurfacing or resheeting a material part of a road network, replacing a material section of a drainage network with pipes of the same capacity, resurfacing an oval.

Capital expenditure - upgrade

Expenditure, which enhances an existing asset to provide a higher level of service or expenditure that will increase the life of the asset beyond that which it had originally. Upgrade expenditure is discretionary and often does not result in additional revenue unless direct user charges apply. It will increase operations and maintenance expenditure in the future because of the increase in the organisation's asset base, eg. widening the sealed area of an existing road, replacing drainage pipes with pipes of a greater capacity, enlarging a grandstand at a sporting facility.

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

Capitalisation threshold

The value of expenditure on non-current assets above which the expenditure is recognised as capital expenditure and below which the expenditure is charged as an expense in the year of acquisition.

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

Specific parts of an asset having independent physical or functional identity and having specific attributes such as different life expectancy, maintenance regimes, risk or criticality.

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, including 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.

Depreciable amount

The cost of an asset, or other amount substituted for its cost, less its residual value.

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 arms length transaction.

Funding gap

A funding gap exists whenever an entity has insufficient capacity to fund asset renewal and other expenditure necessary to be able to appropriately maintain the range and level of services its existing asset stock was originally designed and intended to deliver. The service capability of the existing asset stock should be determined assuming no additional operating revenue, productivity improvements, or net financial liabilities above levels currently planned or projected. A current funding gap means service levels have already or are currently falling. A projected funding gap if not addressed will result in a future diminution of existing service levels.

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 that contribute to meeting the needs of organisations or the need for access to major economic and social facilities and services, eg. 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 separate 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.

Key performance indicator

A qualitative or quantitative measure of a service or activity used to compare actual performance against a standard or other target. Performance indicators commonly relate to statutory limits, safety, responsiveness, cost, comfort, asset performance, reliability, efficiency, environmental protection and customer satisfaction.

Level of service

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

Life Cycle Cost

1. **Total LCC** The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs.
2. **Average LCC** The life cycle cost (LCC) is average cost to provide the service over the longest asset life cycle. It comprises annual operations, 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 operations, maintenance and capital renewal expenditure incurred in providing the service in a particular year. Life Cycle Expenditure may be compared to average Life Cycle Cost to give an initial indicator of life cycle sustainability.

Loans / borrowings

See borrowings.

Maintenance

All actions necessary for retaining an asset as near as practicable to its original condition, including regular ongoing day-to-day work necessary to keep assets operating, eg road patching but excluding rehabilitation or renewal. It is operating expenditure required to ensure that the asset reaches its expected useful life.

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.

Reactive maintenance

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

Significant maintenance

Maintenance work to repair components or replace sub-components that needs to be identified as a specific maintenance item in the maintenance budget.

Unplanned maintenance

Corrective work required in the short-term to restore an asset to working condition so it can continue to deliver the required service or to maintain its level of security and integrity.

Maintenance and renewal gap

Difference between estimated budgets and projected required expenditures for maintenance and renewal of assets to achieve/maintain specified service levels, 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 (eg 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

The notion of materiality guides the margin of error acceptable, the degree of precision required and the extent of the disclosure required when preparing general purpose financial reports. Information is material if its omission, misstatement or non-disclosure has the potential, individually or collectively, to influence the economic decisions of users taken on the basis of the financial report or affect the discharge of accountability by the management or governing body of the entity.

Modern equivalent asset

Assets that replicate what is in existence with the most cost-effective asset performing the same level of service. It is the most cost efficient, currently available asset which will provide the same stream of services as the existing asset is capable of producing. It allows for technology changes and, improvements and efficiencies in production and installation techniques

Net present value (NPV)

The value to the organisation of the cash flows associated with an asset, liability, activity or event calculated using a discount rate to reflect the time value of money. It is the net amount of discounted total cash inflows after deducting the value of the discounted total cash outflows arising from eg the continued use and subsequent disposal of the asset after deducting the value of the discounted total cash outflows.

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, eg. parks and playgrounds, footpaths, roads and bridges, libraries, etc.

Operations expenditure

Recurrent expenditure, which is continuously required to provide a service. In common use the term typically includes, eg power, fuel, staff, plant equipment, on-costs and overheads but excludes maintenance and depreciation. Maintenance and depreciation is on the other hand included in operating expenses.

Operating expense

The gross outflow of economic benefits, being cash and non cash items, during the period arising in the

course of ordinary activities of an entity when those outflows result in decreases in equity, other than decreases relating to distributions to equity participants.

Pavement

The layer below the sealed surface which provides the strength to support the traffic loads. Usually made up of two layers: a base and a sub-base.

Pavement management system

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

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).

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 operations and maintenance expenditure.

Recurrent funding

Funding to pay for recurrent expenditure.

Rehabilitation

See capital renewal expenditure definition above.

Remaining useful life

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

Renewal

See capital renewal expenditure definition above.

Reseal

A coating of bitumen and aggregate applied over an existing seal to restore the service potential of the road surface.

Resheet

A layer of gravel pavement material applied over an existing unsealed road to restore the service potential of the road surface.

Residual value

The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.

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, eg 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.

Seal

The surface or uppermost layer of a road. Usually consists of a thin layer of bitumen and crushed aggregate up to 20mm diameter or a thin layer of asphalt.

Section or segment

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

Service potential

The total future service capacity of an asset. It is normally determined by reference to the operating capacity and economic life of an asset. A measure of service potential is used in the not-for-profit sector/public sector to value assets, particularly those not producing a cash flow.

Service potential remaining

A measure of the future economic benefits remaining in assets. It may be expressed in dollar values (Fair Value) or as a percentage of total anticipated future economic benefits. It is also a measure of the percentage of the asset's potential to provide services that are still available for use in providing services (Depreciated Replacement Cost/Depreciable Amount).

Strategic Longer-Term Plan

A plan covering the term of office of councillors (4 years minimum) reflecting the needs of the community for the foreseeable future. It brings together the detailed requirements in the council's longer-term plans such as the asset management plan and the long-term financial plan. The plan is prepared in consultation with the community and details where the council is at that point in time, where it wants to go, how it is going to get there, mechanisms for monitoring the achievement of the outcomes and how the plan will be resourced.

Specific 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.

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.

Value in Use

The present value of future cash flows expected to be derived from an asset or cash generating unit. 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 net cash inflows, where the entity would, if deprived of the asset, replace its remaining future economic benefits.

Source: IPWEA, 2009, Glossary

Appendix E – Abbreviations

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

For further information



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