

Transport Asset Management Plan 2018-2037



Preamble

It is acknowledged that this Asset Management Plan is a working document based on the best information available at the time it was prepared. The document will be reviewed and updated annually, and completely revised every four (4) years in accordance with section 403 of the *Local Government Act 1993* (NSW). In addition, it will be updated when information having a major impact on the projected expenditure and/or projected long term budget such as changes in level of service, increased grant funding or demand influences. It has been prepared in accordance with the *Local Government Act 1993* (NSW), International Infrastructure Management Manual (IIMM) and Australian Infrastructure Financial Management Manual (AIFMM).

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1. EXECUTIVE SUMMARY

Context

The transport system is the largest infrastructure assets group for Moree Plains Shire Council. This system provides vital links between communities within and outside the Shire, key freight corridors for our highly productive agricultural sector and facilities to support healthy and happy urban areas.

The transport network comprises of:

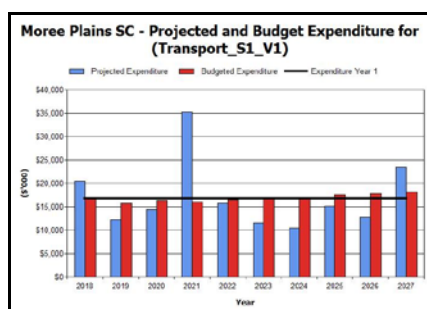
- Roads - 2830km
 - Regional - 240km
 - Rural Sealed - 461km
 - Rural Unsealed - 1990km
 - Urban Roads - 140km
- Bridges - total of 54
- Pathways - 41km
- Kerb and guttering - 127km
- Carparks - 14km²
- Traffic Management Facilities - total of 218

These infrastructure assets have a replacement value of \$390.5 million.

What does it Cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan includes operations, maintenance, renewal and upgrade of existing assets over the 10 year planning period is \$172 million or \$17.2 million on average per year. This estimate is based on the predicted life cycle of the asset and its components.

Estimated available funding for this period is \$168.9 million or \$16.8 million on average per year which is 98% of the cost to provide the service. This is a funding shortfall of \$302,000 on average per year. Projected expenditure required to provide currently agreed services in the Asset Management Plan compared with planned expenditure currently included in the Long Term Financial Plan are shown in the graph below.



* The projected expenditure is based on the estimated lifecycle of the transport assets and their components.

What we will do

We plan to provide transport services for the following:

- Operation, maintenance, renewal and upgrade of road network and pathway network to meet service levels set by Council within the budget constraints
- Road reconstructions, carpark renewals and pathway segment replacement within the 10 year planning period

What we cannot do

We do not have enough funding to provide all services at the desired service levels or provide new services without external grant funding. Works and services that cannot be provided under present funding levels are:

- A gravel sheeting program beyond the critical locations
- Sealing more of the unsealed network
- Upgrade the intersections on key heavy vehicle freight routes

Managing the Risks

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

- Road Safety
- Wet weather access for emergency services

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

- Prioritise road safety issues identified as a high risk and implementing targeted road safety initiatives to improved driver behaviour
- Prioritise works based on risk level.

Confidence Levels

This Asset Management Plan is based on a low to medium level of confidence information.

The Next Steps

The actions resulting from this Asset Management Plan are:

- Review the level of service for the road network
- Investigate fund options to improve access to unsealed roads during times of wet weather
- Implement the Moree Shared Pathway Plan and Pedestrian Access Management Plan and seek funding from the RMS

Questions you may have

What is this plan about?

This Asset Management Plan covers the infrastructure assets that serve the Moree Plains Shire Council community's transport needs. These assets include the road network, pathways, carparks, bridges and kerb and gutter throughout the Shire that enables people to travel safely between locations by the most direct and fastest route.

What is an Asset Management Plan?

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

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

Why is there a funding shortfall?

Most of the Council's transport network was constructed by developers and from government grants, often provided and accepted without consideration of ongoing operations, maintenance and replacement needs.

Many of these assets are approaching the later years of their life and require replacement. Services from the assets are decreasing and maintenance costs are increasing.

Our present funding levels are insufficient to continue to provide existing services at current levels in the medium term.

What options do we have?

Resolving the funding shortfall for increased level of service 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. Improving our efficiency in operating, maintaining, renewing and replacing existing assets to optimise life cycle costs,
3. Identifying and managing risks associated with providing services from infrastructure,
4. Making trade-offs between service levels and costs to ensure that the community receives the best return from infrastructure,

5. Identifying assets surplus to needs for disposal to make savings in future operations and maintenance costs,
6. Consulting with the community to ensure that transport services and costs meet community needs and are affordable,
7. Developing partnership with other bodies, where available to provide services,
8. 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?

It is likely that we will have to reduce service levels in some areas, unless new sources of revenue are found. For transport, the service level reduction may include:

- Decreasing the number of grades per year on unsealed roads
- Reducing the number of pathways upgraded to shared pathways
- Increasing the time between reseals on carparks
- Decreasing the number of causeways/floodways that have gravel and allowing them to return to black soil.
- Decrease in the number of paths that are constructed

What can we do?

We can develop options, costs and priorities for future transport services, consult with the community to plan future services to match the community service needs with ability to pay for services and maximise community benefits against costs.



Photo 1. Example of an unsealed road in Moree Plains Shire

2. INTRODUCTION

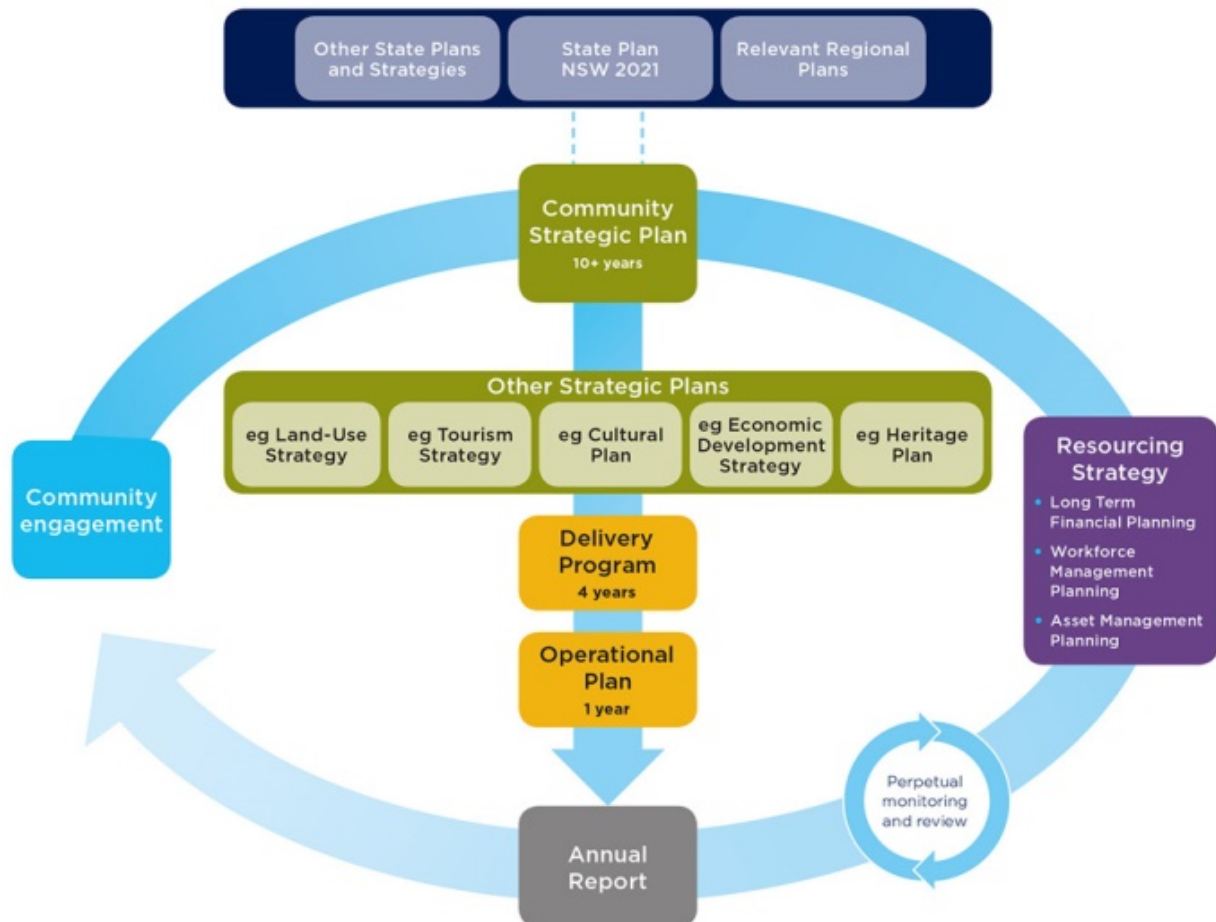
2.1 Background

This Asset Management Plan is to demonstrate responsive management of assets (and services provided from assets), compliance with regulatory requirements including the Integrated Planning and Reporting Framework (Figure 1), and to communicate funding needed to provide the required levels of service over a 20 year planning period with a focus on the first 10 years.

The Asset Management Plan is to be read with the organisation's Asset Management Policy, Asset Management Strategy and the following planning documents:

- Community Strategic Plan
- Moree Plains Shire Council Delivery Program
- Moree Plains Shire Council Operational Plan
- Resourcing Strategy – Long Term Financial Plan, Workforce Management Plan & Asset Management Planning

Figure 1 Integrated Planning and Reporting Framework¹



¹ <https://www.olg.nsw.gov.au/councils/integrated-planning-and-reporting/framework>

The infrastructure assets covered by this Asset Management Plan are shown in Table 1. These assets are used to provide transport network services to the community.

Table 1: Assets covered by this Plan

Asset category	Gross Replacement Cost ²
Sealed roads surface	\$55,278,000
Sealed roads structure	\$125,093,000
Unsealed roads	\$128,223,000
Bridges	\$49,644,000
Footpaths	\$10,445,000
Kerb and Gutter	\$19,075,000
Traffic Management	\$2,726,000
TOTAL	\$390,484,000

Key stakeholders in the preparation and implementation of this Asset Management Plan are shown in Table 2.

Table 2: Key Stakeholders in the Asset Management Plan

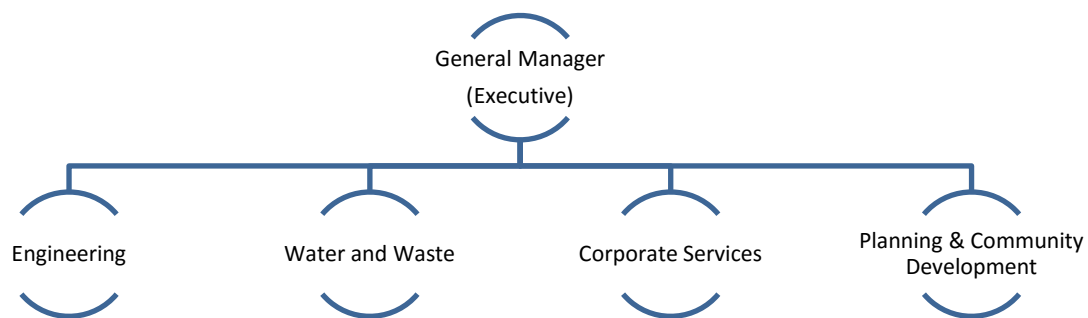
Key Stakeholder	Role in Asset Management Plan
Councillors	Represent the needs of the community and ratepayers Allocate appropriate budget to meet the organisation's objectives in providing services while managing the risks
General Manager	Ensure the resources are allocated appropriately to ensure that the organisation is able to deliver the required level of service with the provided budget Overall responsibility for developing an Asset Management Strategy, Asset Management Plans and reporting on the status and effectiveness of asset management within Council Ensure the organisation is financially sustainable through the development and implementation of sound asset management practices To implement the Asset Management Plans with the agreed resources To monitor and review performance of Council staff in achieving the requirements of the asset management planning
Manex	To provide leadership in implementing and monitoring asset management system and principals across the organisation
Managers	To ensure the asset management planning practices and plans are implemented appropriately
Asset Manager	To assist the General Manager, Manex and Managers to develop and implement Asset Management Plans and practices that align with the Asset Management Policy and Strategy therefore enabling Council to efficiently and effectively manage their asset portfolio
Government	The Federal and State Governments impact asset management

² Based on Special Schedule 7 – Report on Infrastructure Assets as at 30 June 2016

Key Stakeholder	Role in Asset Management Plan
	planning through: State planning regulations and legislation Grant funding opportunities Regulatory requirements for Local Government
Community and local businesses	The local residential, commercial and industrial communities are the users of the service that the Council assets are providing. Council has an obligation to ensure that they are delivering the agreed level of service for the lowest lifecycle costs.
Roads and Maritime Service (RMS)	The RMS has direct influence on traffic management matters such as parking regulations and traffic control. They are also responsible for the provision of funding for various projects that benefit services and assets.
National Heavy Vehicle Regulator (NVHR)	The NHVR is the independent regulator for all vehicles over 4.5t gross vehicle mass that administers the laws under the Heavy Vehicle National Law (HVNL). They aim to: <ul style="list-style-type: none"> • Reduce the compliance burden for business • Improve Australia's international competitiveness • Improve safety and productivity • Make it easier for business to operate across state and territory borders

Our organisational structure for service delivery from infrastructure assets is detailed below,

Figure 2: Moree Plains Shire Council Organisational Structure



2.2 Goals and Objectives of Asset Management

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

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

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- Having a Long Term Financial Plan which identifies required, affordable expenditure and how it will be financed.³

2.3 Plan Framework

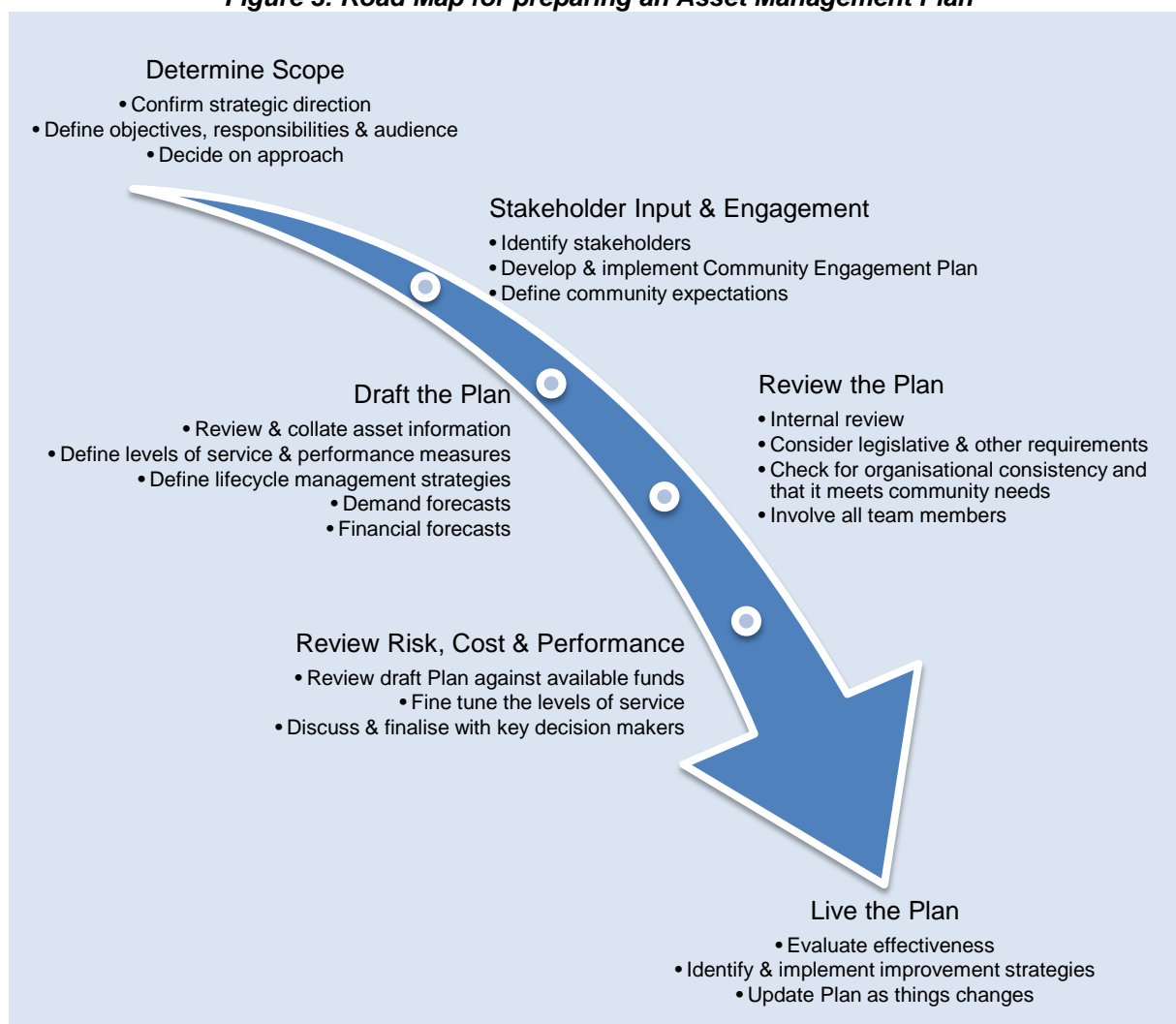
Key elements of the plan are

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

A road map for preparing an Asset Management Plan on the following page.

³ Based on IPWEA, 2011, IIMM, Sec 1.2 p 1|7.

Figure 3: Road Map for preparing an Asset Management Plan



2.4 Core and Advanced Asset Management

This Asset Management Plan is prepared as a 'core' Asset Management Plan over a 20 year planning period in accordance with the International Infrastructure Management Manual⁴. 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.

Future revisions of this Asset Management Plan will move towards 'advanced' asset management using a 'bottom up' approach for gathering asset information for individual assets to support the optimisation of activities and programs to meet agreed service levels in a financially sustainable manner.

2.5 Community Consultation

This 'core' Asset Management Plan is prepared to facilitate community consultation initially through feedback on the draft Asset Management Plans prior to adoption by the Council. Future revisions of the Asset Management Plan will incorporate community consultation on service levels and costs of providing the service. This will assist the Council and the community in matching the level of service needed by the community, service risks and consequences with the communities ability and willingness to pay for the service.

⁴ IPWEA, 2011, IIMM.

3. LEVELS OF SERVICE

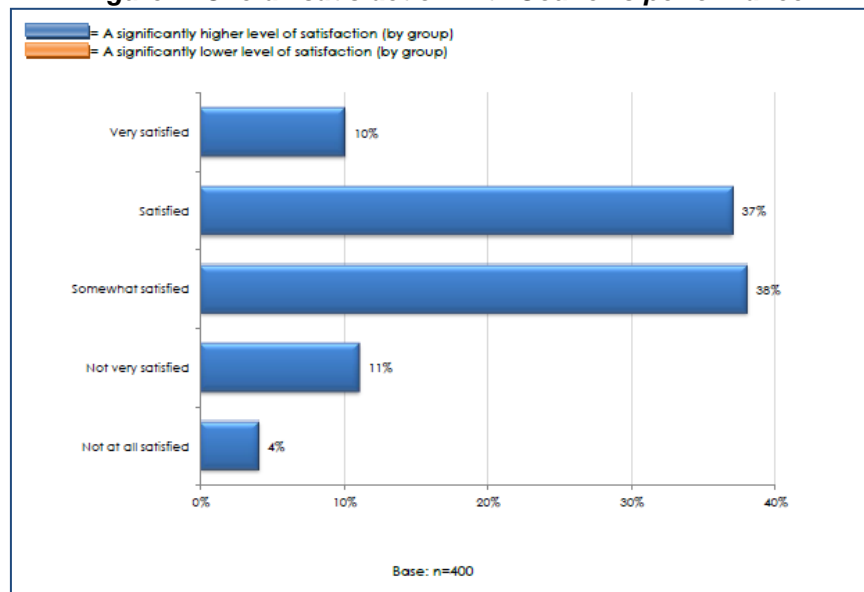
3.1 Customer Research and Expectations

Council uses the following information in developing its suite of asset management planning documents.⁵

Customer Satisfaction Survey

Council conducted the Moree Plains Shire Council Community Research Customer Satisfaction Survey in April 2012. This telephone survey polled a sample of 400 residents on their level of satisfaction with Council's services. The survey found that *residents expressed a 'moderate' level of satisfaction with the performance of Council, with 47% of respondents giving a rating of 'satisfied' to 'very satisfied'*. (Micromex Research, 2012)

Figure 4: Overall satisfaction with Council's performance



The key findings of the survey found that the areas of improvement for Council in regards to the transport infrastructure included:

- Maintaining local roads
- Overall condition of the local road network
- Road safety

⁵ This will be updated in future Asset Management Plans to reflect the findings of the Community Strategic Plan 2027

Road Network Consultative Group

This Group was established by Council on 27 July 2015 as a Consultative Group that provides advice to Council and its Committees. The group's membership consists of a balance of urban and rural residents, Councillors, industry representatives and Council staff.

This Consultative Group's functions are to:

- Be an advisory group to Council on matters relating to the road network
- Represent the views, needs and expectations of the residents of Moree Plains Shire.

This Committee is responsible for:

- Providing information and feedback to Council about the road hierarchy, level of service requirements, willingness to pay for services and self-help program ideas for the road network
- Seeking information and feedback from the community on matters relating to the road network.

On-line survey

As part of the 2015/2016 consultation process and in conjunction with the Road Network Consultative Group, Council conducted a random survey of its residents through an online survey during October and November 2015. There were 249 respondents from Moree Plains Shire residents and the survey focused around level of service and future demand requirements of the road network. The results of this survey supported the findings of the 2012 Council Community Research Customer Satisfaction Survey.

The key findings from the survey were:

- Most important requirements for rural roads are access during wet weather, road maintenance and road safety
- Most important requirements for urban roads are maintenance and road safety
- That increases in crop yield and livestock, environmental changes and changes in vehicle types and mass limits will have some of the biggest impact on future demand for our road network particular in the North West of the Shire over the next 5 to 10 years

Future versions of this Plan will be updated to reflect the findings from the community engagement that was completed as part of the development of the Community Strategy Plan, Your Shire The Plan Our Future 2027.

3.2 Strategic and Corporate Goals

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

Our vision is:

Moree Plains Shire is a strong, robust community that provides a relaxed, healthy and harmonious lifestyle with an economy that supports the local region and preserves the important environmental qualities of our area.

Our mission is:

Moree Plains Shire Council's mission is to lead the way in fostering a healthy, positive and well-resourced community.

Our Organisational Values:

Commitment: working hard to get the job done.

Integrity: being open and honest in our dealings.

Partnerships: working together with the community.

Protection: ensuring our activities do not impact on the health, safety or welfare of our stakeholders.

Respect: valuing the feelings, opinions and needs of others.

Service: giving our best to the community.

Our Community Vision:

Blessed by the Plains' rich black soils and artesian waters, Shire residents enjoy a vibrant rural economy, have a deep cultural connection to Country, and harbour a deep respect for their place and each other in such a way as to impress newcomers.

Our Community Values:

Celebrate our cultural diversity: Moree Plains gains so much from the diversity of its people.

Celebrate and embrace our differences by working together: a real sense of opportunity is evident within the Shire and residents work together to improve their quality of life.

A country lifestyle: residents have a commitment to maintaining a relaxed and tranquil community, ensuring that the Shire is a great place to raise a family.

An engaged community: there is an understanding that our vision cannot be achieved without involvement and contribution from the entire community.

Relevant organisational goals and objectives and how these are addressed in this Asset Management Plan are:

Table 3: Organisational Goals and how these are addressed in this Plan

Community Strategic Plan Outcomes	Council Objectives	How CSP Outcomes are addressed in Council's Asset Management Plan
<i>An inclusive, caring community</i>		
S1 Our community is a safe place	<p>S1.1 Take advantage of opportunities to increase safety in public places and on public roads</p> <p>S1.2 Implement and support programs that reduce the incidence of crime</p>	<p>A key issue for the community of Moree Plains Shire is road safety including education. This Plan highlights this community need and proposes strategies to address this such as on-going participation in the Local Government Road Safety Program. It is through this program that road safety education campaign targeting driver behaviour, such as speeding, are implemented at the local community level.</p>
S4 Our health and wellbeing provide for a satisfying and productive life	<p>S4.2 Provide our communities with a range of sustainable services, facilities and amenities</p> <p>S4.3 Support health, community and emergency services that meet community needs</p>	<p>Our Transport assets provided a valuable service to our community by providing an efficient and safe road network that allows people to get around for business, recreation, education, health and other reasons.</p> <p>The road network including the bridges allows the community meet the needs in emergencies such as access over rivers and creeks, road access to residents' properties and vital services.</p>
<i>A vibrant regional economy</i>		
Ec2 Our Shire has the infrastructure we need to support our economy	<p>Ec2.1 Provide a local road network that meets the Shire's transport needs</p> <p>Ec2.2 Seek financial assistance to redress the current infrastructure backlog and provide funding for key regional infrastructure projects</p>	<p>The road network provides the vital links between the state highways and regional roads to our commercial centres, homes, schools and community facilities. The road network is supported by a pathway network and public carparks. The implementation of this Asset Management Plan will ensure that our transport infrastructure asset meet the agreed level of services of our community now and into the future.</p> <p>Council is constantly reviewing grants eligibility for road, bridge and pathway projects that align to our strategic direction. Many recent projects have been funded through grant funding streams such as:</p> <ul style="list-style-type: none"> • Fixing country roads grant

Community Strategic Plan Outcomes	Council Objectives	How CSP Outcomes and Council's Objectives are addressed in Asset Management Plan
		<ul style="list-style-type: none"> • Pedestrian access funding • Higher Productivity Route grant • Repair program • Roads to Recovery funding
<i>An environment role model</i>		
E3 Our built environment – our town and villages – are desirable places to be	E3.3 Provide opportunities for the enjoyment of community spaces and places	Our pathways provide a safe and efficient way for pedestrians and cyclists to move around our towns and villages.
<i>Coordinated, committed leadership</i>		
L2 We demonstrate accountability, transparency and ethical conduct	L2.1 Base our decisions on research, evidence and our responsibility to anticipate harm before it occurs L2.2 Provide easy access to our information L2.3 Behave ethically in all our dealings	This Plan provides the information that allows Council to make sound business decisions associated with its infrastructure assets.
L3 We are engaged and well informed	L3.1 Target engagement activities to encourage stakeholder participation L3.2 Use a broad range of communication strategies and tools to inform community members and other stakeholders	Through the development and implementation of this plan, Council has identified and confirmed the level of service that Council can aim to achieve within the allocated budget.
L5 We manage our finances, assets and services effectively	L5.1 Manage our organisational resources, systems and processes responsibly L5.3 Implement good practice in planning for future infrastructure needs L5.4 Maintain assets for their current purpose and for future generations	This Plan provides the information that allows Council to make sound business decisions associated with its infrastructure assets.

* Only relevant Community Outcomes and Council Objectives have been included in the above table.

** Future versions of this Plan will be updated to reflect Community Strategy Plan, Your Shire The Plan Our Future 2027 and the Council's Delivery Program 2018 to 2021.

The organisation will exercise its duty of care to ensure public safety is accordance with the Infrastructure Risk Management Plan prepared in conjunction with this Asset Management Plan. Management of infrastructure risks is covered in Section 5.2

3.3 Legislative Requirements

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

Table 4: Legislative Requirements

Legislation	Requirement
Australian and International Standards	There are numerous Standards that set out the specifications and procedures designed to ensure products, services and systems are safe, reliable and consistently perform the way they were intended to.
Crown Lands Act 1989	An Act to provide for the administration and management of Crown Land.
Disability Discriminations Act 1992	This Act provides protection for everyone in Australia against discrimination based on disability in the areas of work, accommodation, education, access to premises, clubs and sport; and the provision of goods, facilities, services and land; and existing laws. It provides the framework to ensure, as far as practicable, that persons with disabilities have the same rights to equality as the rest of the community while promoting recognition and acceptance within the community that persons with disabilities have the same fundamental rights as the rest of the community.
Environment Protection and Biodiversity Conservation Act 1999	Provides the legal framework for the protection and management of nationally and internationally important flora, fauna, ecological communities and heritage places.
Environmental Planning and Assessment Act 1979	Sets out guidelines for land use planning and promotes sharing of responsibilities between various levels of government. Among other requirements the Act outlines the requirement for the preparation of Local Environmental Plans (LEP), Development Control Plans (DCP), Environmental Impact Assessments (EIA) and Environmental Impact Statements.
Heavy Vehicle National Law	This law covers matters relating to vehicle standards, mass dimensions & loadings, fatigue management, the Intelligent Access Program, heavy vehicle accreditation and on-road enforcement for all heavy vehicles over 4.5 tonnes.
Heritage Act 1977	An Act to conserve the environmental heritage of the State. It provides for the identification, registration and protection of items of State heritage significance including on land owned and managed by local government.
National Parks and Wildlife Act (1974)	An Act relating to the establishment, preservation and management of national parks, historic sites and certain other areas and the protection of certain fauna, native plants and Aboriginal objects
Native Vegetation Act 2003	The clearing of native vegetation on all land in NSW (excluding land listed in Schedule 1 of the Act) is regulated by this Act and outlines what landowners can and cannot do in clearing native vegetation.
NSW Local Government Act 1993; and	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a Long Term

Legislation	Requirement
Local Government Amendment (Planning and Reporting) Act 2009	Financial Plan supported by Asset Management Plans for sustainable service delivery.
NSW Road Rules	A provision of road rules for the state of NSW that are based on the Australian Road Rules so that they are substantially uniform with road rules applicable elsewhere in Australia.
NSW Road Transport (General) Act 2005	Sets out the rules to be followed and responsibilities of users of the road system and how the rules are enforced and administration.
NSW Roads Act 1993	Provides the legal requirements for the management of the road networks including: <ul style="list-style-type: none"> • Road openings and closings • Identification of road boundaries • Road widening • Road classifications • Distribution of functions • Roadworks • Protection of public roads and traffic • Regulation of traffic • Regulation of works, structures and activities • Acquisition of land • Financial assistance • Enforcement
NSW Work Health and Safety Act 2011	Sets out the roles and responsibilities to secure the health, safety and wellbeing of all persons at work including injury management and return to work.
Protection of the Environment Operations Act 1997	This Act aims to protect, provide restoration and enhancement of the quality of the NSW environment. Council is required to exercise due diligence to avoid environmental impact including the development of operations emergency plans to ensure that procedures are in place to prevent or minimise pollution.
State Records Act 1998	This act sets out requirements in respect to maintaining public records
Public Works and Procurement Act 1912	Sets out the role of Council in the planning, construction and procurement of new assets.
Road Transport Act 2013	Facilitates the adoption of nationally consistent road rules in NSW, the Australian Road Rules. It also makes provision for safety and traffic management on roads and road related areas including driver licensing, alcohol and other drug use, speeding and other dangerous driving, traffic control devices and vehicle safety crashes.
Threatened Species Conservation Act 1995	An Act to conserve threatened species, populations and ecological communities of animals and plants by setting out a number of specific objects that relate to the conservation of biological diversity and the promotion of ecologically sustainable development.

3.4 Community Levels of Service

Service levels are defined in two terms, customer levels of service and technical levels of service.

Community Levels of Service measure how the community receives the service and whether the organisation is providing community value.

The organisation's current and expected community service levels are detailed in Table 5, shows the agreed expected community levels of service based on resource levels in the current Long Term Financial Plan and community consultation/engagement.

3.5 Technical Levels of Service

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

Technical service measures are linked to Annual Budgets covering:

- Operations – the regular activities to provide services such as opening hours, cleaning, mowing grass, energy, inspections, etc
- Maintenance – the activities necessary to retain an asset as near as practicable to an appropriate service condition (eg road patching, unsealed road grading, building and structure repairs)
- Renewal – the activities that return the service capability of an asset to how it was originally commissioned (eg frequency and cost of road resurfacing and pavement reconstruction, pipeline replacement and building component replacement)
- Upgrade – the activities to provide a higher level of service (eg widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (eg a new library)

Table 5, shows the technical level of service expected to be provided under this Asset Management Plan. The agreed sustainable position in the table documents the position agreed by the Council following community consultation and trade-off of service levels performance, costs and risk within resources available in the Long Term Financial Plan.

Table 5: Road Network Level of Service

Level of Service Statement: The provision of a road network that supports our agricultural industry, local businesses, school students and road users		
	Performance Measure	Annual Target
Customer Performance Measures	Percentage of rural roads closed ⁶ to all traffic for more than 5 days per year	< 7% rural roads
	Provide road safety education targeted to the high risk user groups	Participate in the local government Road Safety Program
	Percentage of vehicle bridges that are suitable for triple road trains	85% suitable
	Percentage of rural roads that are approved for AB-triple road train access	93% suitable
	The average number of working days it takes to process oversize/overmass access applications	5 working days per application
	The average number of working days it takes to process an application for a Road Opening Permit ⁷	10 working days per application
Technical Performance Measures	That the transport network is maintained to a satisfactory condition (Condition 3): <ul style="list-style-type: none"> • Sealed roads surface • Sealed roads structure • Unsealed (gravel and black soil) roads • Bridges • Kerb and guttering 	75% of assets at condition 3 or greater ⁸
	That gravel re-sheeting occurs at critical access points/locations	\$350,000 per year
	The number of education campaigns implemented annually as part of the local government Road Safety Program	> 3 education campaigns annually
	The percentage of streets in the township of Moree with kerb and gutter that the street sweeper cleans each year	35% of Moree roads
	The number of kilometres of unsealed roads that are graded each year	3,500 km of unsealed roads
	Causeway Program	Completed annually as per program

Level of services will be developed further in future Asset Management Plans.

⁶ Road may be closed at one or more points or it may be the entire road closed.

⁷ A Road Opening Permit is required when someone or a company wishes to perform work in, under or over a Council road or road related area.

⁸ Based on Special Schedule 7 – Report on Infrastructure Assets

3.6 Increase in Level of Service

As part of the 2010 Special Rate Variation (SRV) proposal to improve the sealed road network, the community was also informed that Council would need to allow our unsealed rural road network to return to natural surface/black soil roads as there were insufficient funds to do otherwise. It was agreed that there would be a small budget allocation (approximately \$350,000 annually) for the gravel re-sheeting of critical access points. While this was not liked by the community they did understand the reasoning and therefore reluctantly agreed to the reduced level of service at that time.

Council now believes that the Community's Level of Service expectations for the unsealed road network in Moree Plains Shire has increased since 2010 in part due to flood restoration works as well as the need for improved services to support freight movements associated with the local agricultural industry

An increase in a level of service will mean additional funds will need to be allocated and the community consulted to determine their willingness to pay.

Funding strategies may include (singular or in combination):

- Special Rate Variation
- Decrease in level of service in other service areas
- Increase in grant funding
- Self-help programs

Possible Upgrades and New Capital Works to increase Level of Service over the next 10 years

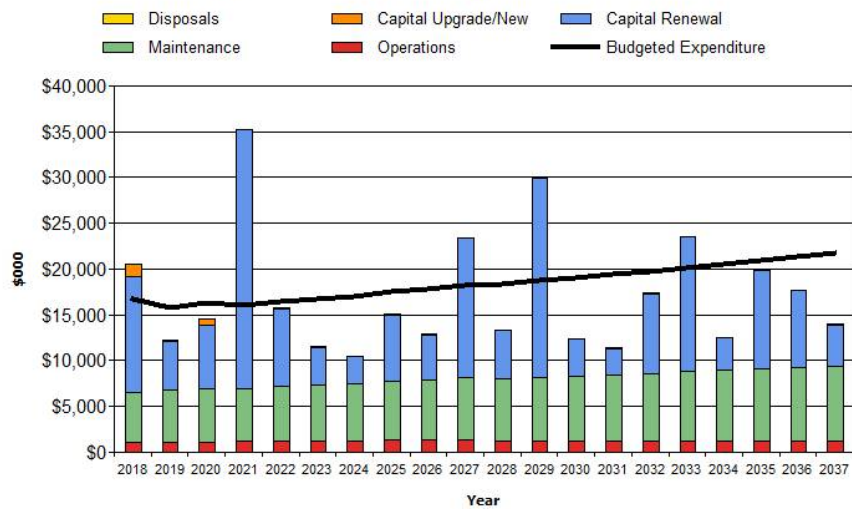
- Introduction of gravel re-sheeting program – approximately \$750,000 per year over 10 years (additional to the \$350,000 per year currently in the budget)
- Extension of the sealed road network (MR507 & SR15) – approximately \$1.5 million per year over 10 years
- Continuation of the Causeway Upgrade Program – approximately \$350,000 annually from 2019 to 2027 (\$900,000 is already allocated for 2018).

Table 6: What will an increase in Level of Service Cost

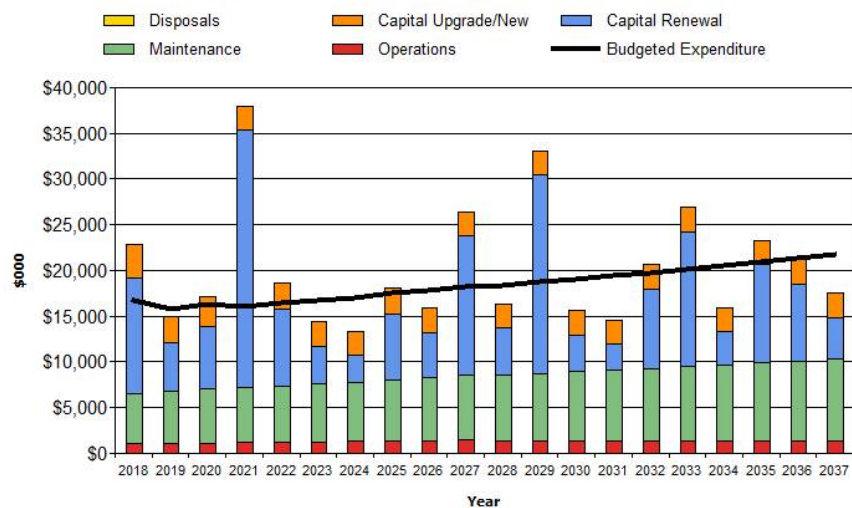
What does it cost?	Current Agreed Level of Service (S1_V1)	Increased Level of Service (S2_V1)
10 Year Average Annual Cost [10 year Operations, Maintenance, Renewal & Upgrade/New Project Expenditure]	\$16,899,000	\$19,961,000
10 year average Annual Long Term Financial Plan budget [Operations, Maintenance, Renewal & Upgrade/New Long Term Financial Plan Budget]	\$16,598,000	\$16,883,000
10 year AM financial indicator [10 year total Long Term Financial Plan/10 year total cost]	98%	85%
10 year average annual funding shortfall	-\$302,000	-\$3,079,000

Projected Operation and Capital Expenditure

Moree Plains SC - Projected Operating and Capital Expenditure (Transport_S1_V1)



Moree Plains SC - Projected Operating and Capital Expenditure (Transport_S2_V1)



4. FUTURE DEMAND

4.1 Demand Drivers

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

4.2 Demand Forecast

The present position and projections for demand drivers that may impact future service delivery and utilisation of assets were identified and are documented in Table 7.

4.3 Demand Impact on Assets

The impact of demand drivers that may affect future service delivery and utilisation of assets are shown in Table 7.

Table 7: Demand Drivers, Projections and Impact on Services

Demand drivers	Present position	Projection	Impact on services
Estimated Population	2009 – 14,019 people 2013 – 14,250 people	No significant changes in population projected	No impact on services predicted
Demographics	As at 2013 <ul style="list-style-type: none"> ➤ 26% employed by Agriculture, forestry and fishing ➤ 8.1% employed by education and training ➤ 8.1% employed in healthcare and social assistance ➤ 9.6% employed in retail trade 	No significant change in the demographics Decrease in the number of students utilising rural road bus services	No impact on services predicted
Vehicles registered in Moree Plains Shire	Number of registered vehicles ⁹ : <ul style="list-style-type: none"> ➤ 2009 – 9241 vehicles ➤ 2013 – 10,135 vehicles 	➤ Vehicle numbers will continue to increase particularly heavy vehicles.	Any increase in registered vehicles means increased Equivalent Standard Axles (ESA) on the road pavement therefore a possible increase in the wear and tear on our road network generally.
Freight movement		Increase in the use of large high productive vehicles	There has been a change in the way primary producers are moving their produce to the market. In particular the

⁹ Based on 2009 & 2013 ABS data

Demand drivers	Present position	Projection	Impact on services
			increase in goods and services that are being delivered to the properties and the increase in on farm storage. This has changed the way the roads are being used.

4.4 Demand Management Plan

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

Non-asset solutions focus on providing the required service without the need for the organisation to own the assets and management actions including reducing demand for the service, reducing the level of service (allowing some assets to deteriorate beyond current service levels) or educating customers to accept appropriate asset failures¹⁰. Examples of non-asset solutions include providing services from existing infrastructure such as aquatic centres and libraries that may be in another community area or public toilets provided in commercial premises.

Opportunities identified to date for demand management are shown in Table 8. Further opportunities will be developed in future revisions of this Asset Management Plan.

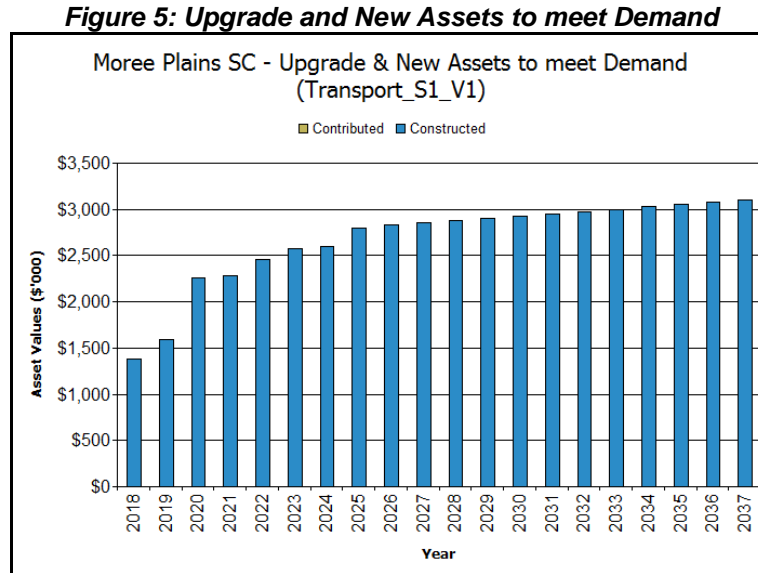
Table 8: Demand Management Plan Summary

Demand Management Factor	Demand Management Plan
Accuracy of assets condition data	Monitor and assess road related assets' economic and remaining life data in order to increase the accuracy of projected renewal costs.
Heavy Vehicle Routes	Investigate, identify and promote appropriate future heavy vehicle routes through the Shire.
Unsealed roads critical assess points	Identification of locations of highest priority.
Community Consultation	Monitor community expectations and user committee groups' capacity to be involved in the operation and maintenance activities.
Willingness to Pay	Balance priorities for assets with what the community and specific user groups are prepared to pay for the services delivered. Communicate levels of service and the financial sustainability capacity within the community.

¹⁰ IPWEA, 2011, IIMM, Table 3.4.1, p 3|58.

4.5 Asset Programs to meet Demand

Some of the new assets required to meet growth will be acquired free of cost from land developments and constructed/acquired by the organisation. New assets constructed/acquired by the organisation are discussed in Section 5.5. The cumulative value of new contributed and constructed asset values are summarised in Figure 5.



Acquiring these new assets will commit the organisation to fund ongoing operations, maintenance and renewal costs for the period that the service is provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs in Section 5.



Photo 2: Boston Street, Moree

5. LIFECYCLE MANAGEMENT PLAN

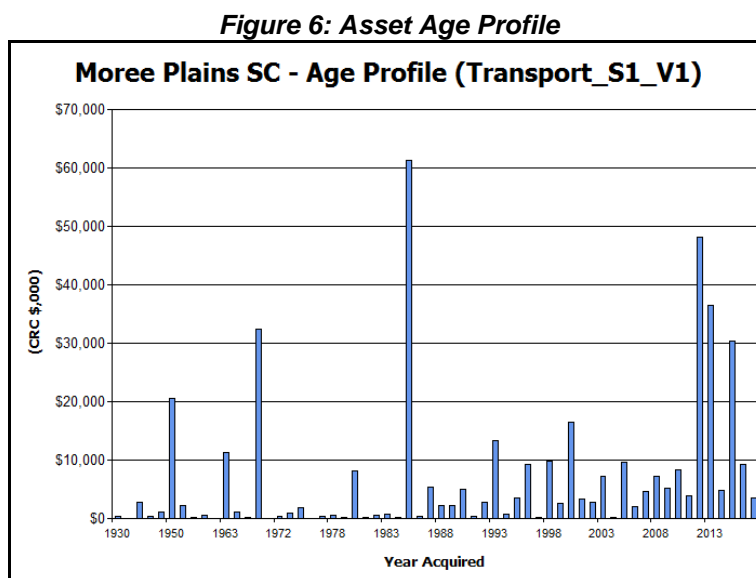
The lifecycle management plan details how the organisation plans to manage and operate the assets at the agreed levels of service (defined in Section 3) while optimising life cycle costs.

5.1 Background Data

5.1.1 Physical parameters

The assets covered by this Asset Management Plan are shown in Table 1.

The age profile of the assets included in this Asset Management Plan is shown in Figure 6.



In most cases the age profile has been determined from the condition rating or the estimated remaining useful life of the asset and then using that information to estimate construction date. This is possibly why the above graph is showing large peaks in some years. Through the recent improvement in data capture capabilities within the organisation, future Asset Management Plans should be more accurately expressed.

5.1.2 Asset capacity and performance

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

Locations where deficiencies in service performance are known are detailed in Table 9.

Table 9: Known Service Performance Deficiencies

Location	Service Deficiency
Unsealed roads	Inability to access the roads during wet periods
Rural road intersections	<p>Intersections with state highways that are not suitable for road train access are at the following locations, but not limited to:</p> <ul style="list-style-type: none"> o Boolaroo Weir Rd o Croppa Moree Rd o Buckie Rd o Dorans Rd o Gwydirfield Rd o Karingal Rd o Keith Smith Place o Limebon Rd o Morialta Rd o Newport Rd o Stirton Rd o Swifts Rd o Wilsons Rd

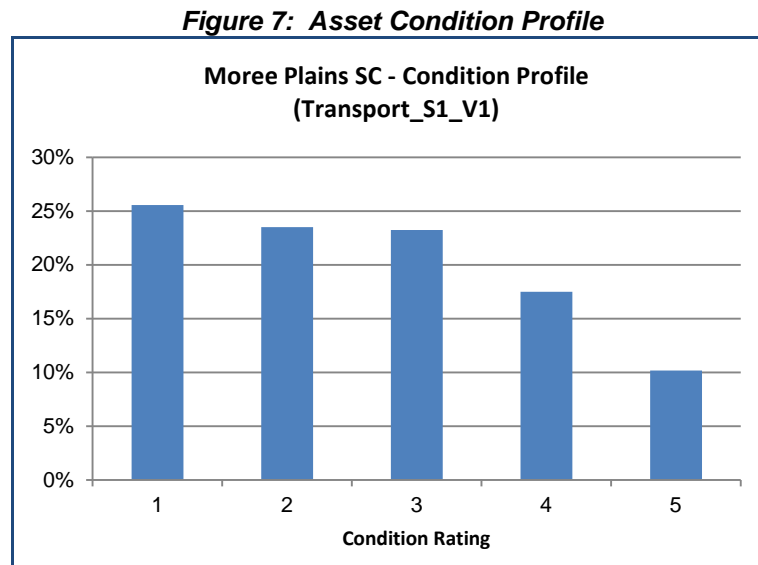
The above service deficiencies were identified from community consultation, formal requests for access and consultation with other transport agencies.



Photo 3: Council's Road Safety Officer, Mrs Renee McMillan showing an example of the heavy vehicle information pack which she distributes annually as part of the Heavy Vehicle Education Program

5.1.3 Asset condition

The condition profile of our assets is shown in Figure 7.



Condition is measured using a 1 – 5 grading system¹¹ as detailed in Table 10.

Table 10: Simple Condition Grading Model

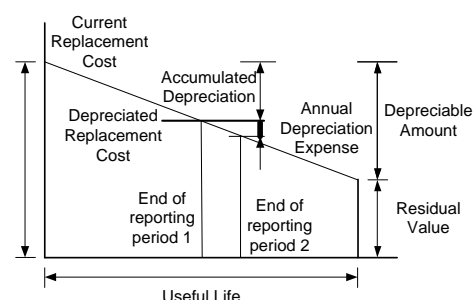
Condition Grading	Description of Condition
1	Very Good: only planned maintenance required
2	Good: minor maintenance required plus planned maintenance
3	Fair: significant maintenance required
4	Poor: significant renewal/rehabilitation required
5	Very Poor: physically unsound and/or beyond rehabilitation
0	Condition unknown

¹¹ IPWEA, 2011, IIMM, Sec 2.5.4, p 2|79.

5.1.4 Asset valuations

The value of assets recorded in the asset register as at 30 June 2013 covered by this Asset Management Plan is shown below. Assets were last revalued at 30 June 2013. Assets are valued at fair value.

Current Replacement Cost	\$390,484,000
Depreciated Replacement Cost ¹²	\$282,620,000
Annual Depreciation Expense	\$ 6,487,000



Useful lives were reviewed in June 2016.

Major changes from previous valuations are due to improved data knowledge.

Various ratios of asset consumption and expenditure have been prepared to help guide and gauge asset management performance and trends over time.

Rate of Annual Asset Consumption (Depreciation/Depreciable Amount)	1.7%
Rate of Annual Asset Renewal (Capital renewal exp/Depreciable amount)	2.3%

In 2018 the organisation plans to renew assets at 135.4% of the rate they are being consumed and will be increasing its asset stock by 0.4% in the year.

5.2 Infrastructure Risk Management Plan

An assessment of risks associated with service delivery from infrastructure assets has identified critical risks 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, together with the estimated residual risk after the selected treatment plan is operational are summarised in Table 11. These risks are reported to management and Council.

¹² Also reported as Written Down Current Replacement Cost (WDCRC).

Table 11: Critical Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan
All infrastructure assets	Unacceptable performance or early loss of road related assets due to substandard design and/or construction	H	Regular inspections undertaken to identified hazards and work scheduled based on risk priority and allocated budget
All infrastructure assets	Personal injury or potential loss of life due to faulty building services, defects or lack of maintenance	H	Regular inspections undertaken to identified hazards and work scheduled based on risk priority and allocated budget
Road assets	High vehicle crash rates due to road safety defects	VH	Regular inspections undertaken to identified hazards and work scheduled based on risk priority and allocated budget
Pathways	High user crash rates due to road safety defects	VH	Regular inspections undertaken to identified hazards and work scheduled based on risk priority and allocated budget
Rural road bridges	Bridge failure due to fatigue, concrete cancer etc	H	Regular inspection regime by qualified and experienced bridge inspectors
Unsealed rural roads	Inaccessible after rain	H	Implementation of a causeway upgrade program

5.3 Routine Operations and Maintenance Plan

Operations include regular activities to provide services such as public health, safety and amenity, eg cleansing, street sweeping, grass mowing and street lighting.

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

5.3.1 Operations and Maintenance Plan

Operations activities affect service levels including quality and function through street sweeping and grass mowing frequency, intensity and spacing of street lights and cleaning frequency and opening hours of building and other facilities.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating, eg road patching but excluding rehabilitation or renewal. Maintenance may be classified into 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 repainting, replacing air conditioning units, etc. This work falls below the capital/maintenance threshold but may require a specific budget allocation.

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

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

5.3.2 Operations and Maintenance Strategies

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

- Scheduling operations activities to deliver the defined level of service in the most efficient manner
- Undertaking maintenance activities through a planned maintenance system to reduce maintenance costs and improve maintenance outcomes. Undertake cost-benefit analysis to determine the most cost-effective split between planned and unplanned maintenance activities
- Maintain a current infrastructure risk register for assets and present service risks associated with providing services from infrastructure assets and reporting Very High and High risks and residual risks after treatment to management
- Review current and required skills base and implement workforce training and development to meet required operations and maintenance needs
- Review asset utilisation to identify underutilised assets and appropriate remedies, and over utilised assets and customer demand management options
- Maintain a current hierarchy of critical assets and required operations and maintenance activities
- Develop and regularly review appropriate emergency response capability
- Review management of operations and maintenance activities to ensure Council is obtaining best value for resources used

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 is currently reviewing its hierarchy for transport assets and further information will be included in future Asset Management Plans.

Critical Assets

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

Operations and maintenances activities may be targeted to mitigate critical assets failure and maintain service levels. These activities may include increased inspection frequency, higher maintenance intervention levels, etc. Critical assets failure modes and required operations and maintenance activities are detailed in Table 12.

Table 12: Critical Assets and Service Level Objectives

Critical Assets	Critical Failure Mode	Operations & Maintenance Activities
Dr Hollingworth Bridge, Edward Street, Moree – The structure supports the water mains that supply the residents that are located south of the river. In addition, this bridge allows over-dimension vehicles to safely traffic through Moree from east to west.	Collapse as a result of flood damage or damage by large vehicles.	We conduct routine inspections of the bridge and any deficiencies are incorporated into our maintenance plans. We assess every application received to move over-dimensional loads through the Moree Plains Shire before issuing permits.

Standards and specifications

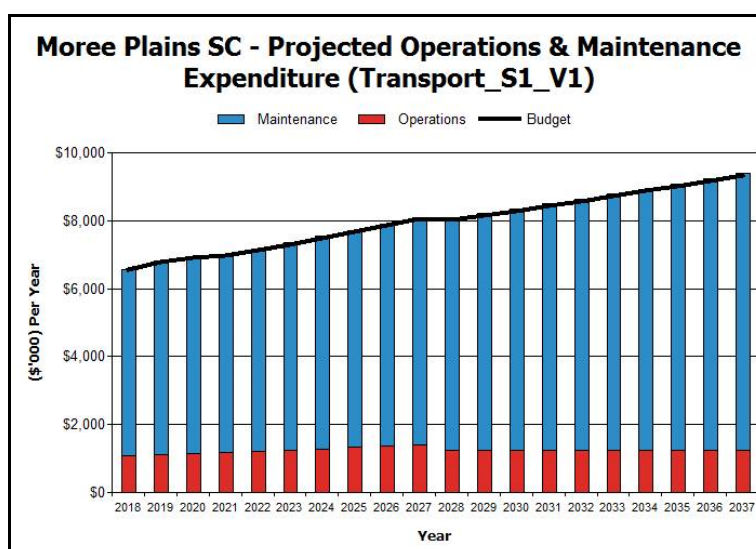
Maintenance work is carried out in accordance with the following Standards and Specifications.

- Australian Standards (as relevant to the work being undertaken)
- Manufacturers and suppliers operating manuals, guidelines and standards
- Austroads

5.3.3 Summary of future operations and maintenance expenditures

Future operations and maintenance expenditure is forecast to trend in line with the value of the asset stock as shown in Figure 8. Note that all costs are shown in current 2018 dollar values (ie real values).

Figure 8: Projected Operations and Maintenance Expenditure
i.e. excluding capital renewals, upgrades and new works



Deferred maintenance, ie works that are identified for maintenance and unable to be funded are to be included in the risk assessment and analysis in the Infrastructure Risk Management Plan. Maintenance is funded from the operating budget where available. This is further discussed in Section 6.2.

5.4 Renewal/Replacement Plan

Renewal and replacement 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 or lesser

required 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/replacement are identified from one of three methods provided in the 'Expenditure Template'.

- Method 1 uses Asset Register data to project the renewal costs using acquisition year and useful life to determine the renewal year, 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 1 was used for this Asset Management Plan and refer to the Renewal, Upgrade and New Capital Works Plan Transport Infrastructure for further details.



Photo 4: An example of the type of vehicles using the local road network

The useful lives of assets used to develop projected asset renewal expenditures are shown in Table 13. Asset useful lives were last reviewed on 30 June 2015.

Table 13: Useful Lives of Assets

Asset (Sub)Category	Useful life
Bridge – Box Culvert	70
Bridge – Rail	30 to 50 years
Bridge – Structure – Concrete	100
Bridge – Structure – Timber	80
Carpark – Formation	120 years
Carpark – Pavement	40 years
Carpark – Seal	20 years
Kerb and Gutter	40
Pathway – Asphalt	25 years
Pathway – Concrete	80 years
Pathway – Pavers	30 years
Pathway – Tiles	30 years
Road – Local – Rural – Formation	120 years
Road – Local – Rural – Pavement	36 years
Road – Local – Rural – Pavement (concrete)	50 years
Road – Local – Rural – Seal	12 years
Road – Regional – Rural – Formation	120 years
Road – Regional – Rural – Pavement (concrete)	30 years
Road – Regional – Rural – Pavement (sealed)	30 years
Road – Regional – Rural – Seal	10 years
Road – Regional – Urban – Formation	120 years
Road – Regional – Urban – Pavement	30 years
Road – Regional – Urban – Seal	10 years
Road – Urban – Lanes – Formation	120 years
Road – Urban – Lanes – Pavement	80 years
Road – Urban – Lanes – Seal	20 years
Road – Urban – Local – Formation	120 years
Road – Urban – Local – Pavement	60 years
Road – Urban – Local – Seal	15 years
Traffic Management Facilities	40 years

5.4.2 Renewal and Replacement Strategies

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

- Planning and scheduling renewal projects to deliver the defined level of service in the most efficient manner
- Undertaking project scoping for all capital renewal and replacement projects to identify:
 - the service delivery 'deficiency', present risk and optimum time for renewal/replacement
 - the project objectives to rectify the deficiency
 - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency
 - and evaluate the options against evaluation criteria adopted by the organisation, and
 - select the best option to be included in capital renewal programs
- Using 'low cost' renewal methods (cost of renewal is less than replacement) wherever possible
- Maintain a current infrastructure risk register for assets and service risks associated with providing services from infrastructure assets and reporting Very High and High risks and residual risks after treatment to management and Council
- Review current and required skills base and implement workforce training and development to meet required construction and renewal needs
- Maintain a current hierarchy of critical assets and capital renewal treatments and timings required
- Review management of capital renewal and replacement activities to ensure Council is obtaining best value for resources used

Renewal ranking criteria

Asset renewal and replacement is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (eg replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (eg roughness of a road).¹³

It is possible to get some indication of capital renewal and replacement priorities by identifying assets or asset groups that:

- Have a high consequence of failure
- Have a high utilisation and subsequent impact on users would be greatest
- The total value represents the greatest net value to the organisation
- Have the highest average age relative to their expected lives
- Are identified in the Asset Management Plan as key cost factors
- Have high operational or maintenance costs
- Where replacement with modern equivalent assets would yield material savings¹⁴

¹³ IPWEA, 2011, IIMM, Sec 3.4.4, p 3|60.

¹⁴ Based on IPWEA, 2011, IIMM, Sec 3.4.5, p 3|66.

The ranking criteria used to determine priority of identified renewal and replacement proposals is detailed in Table 14.

Table 14: Renewal and Replacement Priority Ranking Criteria

Criteria	Weighting
Condition	30%
Hierarchy classification	15%
Maintenance history	10%
Funding	15%
Customer request history	5%
Management Plan Objectives	25%
Total	100%

Renewal and replacement standards

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

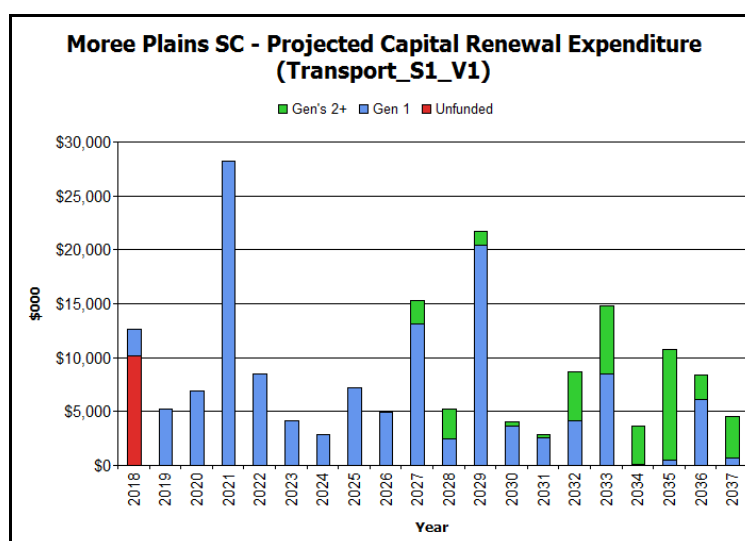
- Australian Standards (as relevant to the work being undertaken)
- Manufacturers and suppliers operating manuals, guidelines and standards
- Austroads

5.4.3 Summary of future renewal and replacement expenditure

Projected future renewal and replacement expenditures are forecast to increase over time as the asset stock increases from growth. The expenditure is summarised in Figure 9. Note that all amounts are shown in real values.

The projected capital renewal and replacement program is shown in the Renewal, Upgrade and New Capital Works Plan Transport Infrastructure 2018 to 2027.

Figure 9: Projected Capital Renewal and Replacement Expenditure
Based on predicted life cycle of the assets as estimated at that point in time



Deferred renewal and replacement, ie those assets identified for renewal and/or replacement and not scheduled in capital works programs are to be included in the risk analysis process in the Risk Management Plan.

Renewals and replacement expenditure in the organisation's capital works program will be accommodated in the Long Term Financial Plan where possible. 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 organisation 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/director or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed below.

Table 15: New Assets Priority Ranking Criteria

Criteria	Weighting
Condition	30%
Hierarchy	15%
Maintenance history	10%
Funding	15%
Customer request history	5%
Management Plan Objectives	25%
Total	100%

5.5.2 Capital Investment Strategies

The organisation will plan capital upgrade and new projects to meet level of service objectives by:

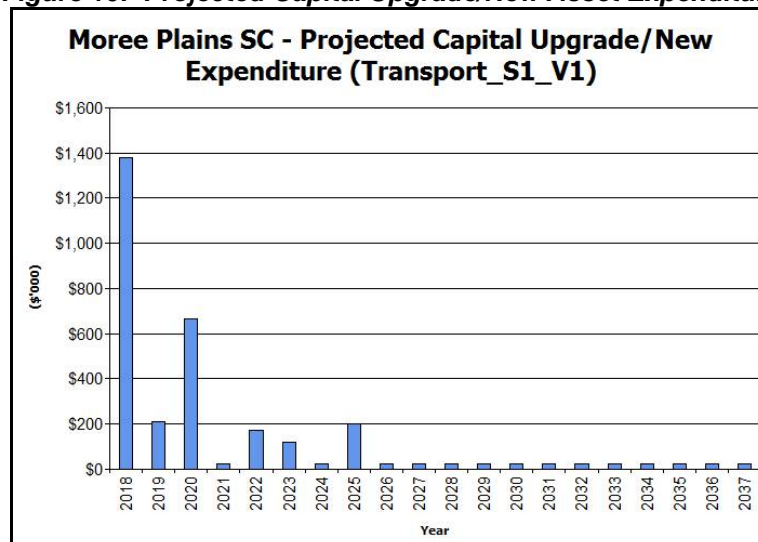
- Planning and scheduling capital upgrade and new projects to deliver the defined level of service in the most efficient manner
- Undertake project scoping for all capital upgrade/new projects to identify:
 - the service delivery 'deficiency', present risk and required timeline for delivery of the upgrade/new asset
 - the project objectives to rectify the deficiency including value management for major projects
 - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency
 - management of risks associated with alternative options
 - and evaluate the options against evaluation criteria adopted by Council, and
 - select the best option to be included in capital upgrade/new programs
- Review current and required skills base and implement training and development to meet required construction and project management needs
- Review management of capital project management activities to ensure Council is obtaining best value for resources used

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

5.5.3 Summary of future upgrade/new assets expenditure

Projected upgrade/new asset expenditures are summarised in Figure 10. The projected upgrade/new capital works program is shown in Renewal, Upgrade and New Capital Works Plan Transport Infrastructure 2018 to 2027. All amounts are shown in real values.

Figure 10: Projected Capital Upgrade/New Asset Expenditure



Expenditure on new assets and services in the organisation's capital works program will be accommodated in the Long Term Financial Plan where possible. This is further discussed in Section 6.2.

5.6 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. There are currently no transport assets requiring decommissioning or disposal.

5.7 Service Consequences and Risks

The organisation has prioritised decisions made in adopting this Asset Management Plan to obtain the optimum benefits from its available resources. Decisions were made based on the development of 3 scenarios of Asset Management Plans.

Scenario 1 - What we would like to do based on asset register data

Scenario 2 – What we should do with existing budgets and identifying level of service and risk consequences (ie what are the operations and maintenance and capital projects we are unable to do, what is the service and risk consequences associated with this position). This may require several versions of the Asset Management Plan.

Scenario 3 – What we can do and be financially sustainable with Asset Management Plans matching Long Term Financial Plans.

The development of scenario 1 and scenario 2 Asset Management Plans provides the tools for discussion with the Council and community on trade-offs between what we would like to do (scenario 1) and what we should be doing with existing budgets (scenario 2) by balancing changes in services and service levels with affordability and acceptance of the service and risk consequences of the trade-off position (scenario 3).

5.7.1 What we cannot do

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

- A gravel sheeting program on the unsealed roads beyond the critical locations
- Extending the sealed rural roads by sealing more of the unsealed network
- Upgrading of rural road intersections with the state highway network to suit road train heavy vehicle access. The following are the restrictions as provided by the Roads and Maritime Services:
 - Boolaroo Weir Rd – swept path deficiencies Croppa/ Moree Rd – No left turn into Croppa / Moree Rd from the Newell Hwy
 - Buckie Rd – swept path deficiencies and poor sight distance
 - Dorans Rd – swept path deficiencies and lack of storage capacity
 - Gwydirfield Rd (N & S) – swept path deficiencies
 - Karingal Rd – swept path deficiencies and lack of storage capacity
 - Keith Smith Place – swept path deficiencies and lack of storage capacity
 - Limebon Rd – swept path deficiencies and lack of storage capacity
 - Morialta Rd – swept path deficiencies and lack of storage capacity
 - Newport Rd – swept path deficiencies
 - Stirton Rd – swept path deficiencies
 - Swifts Rd – swept path deficiencies and lack of storage capacity
 - Wilsons Rd – swept path deficiencies and lack of storage capacity

5.7.2 Service consequences

Operations and maintenance activities and capital projects that cannot be undertaken will maintain or create service consequences for users. These include:

Information to be provided in future Asset Management Plans.

5.7.3 Risk consequences

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

Information to be provided in future Asset Management Plans.



Photo 5: An example of a local rural road that is inaccessible during wet weather

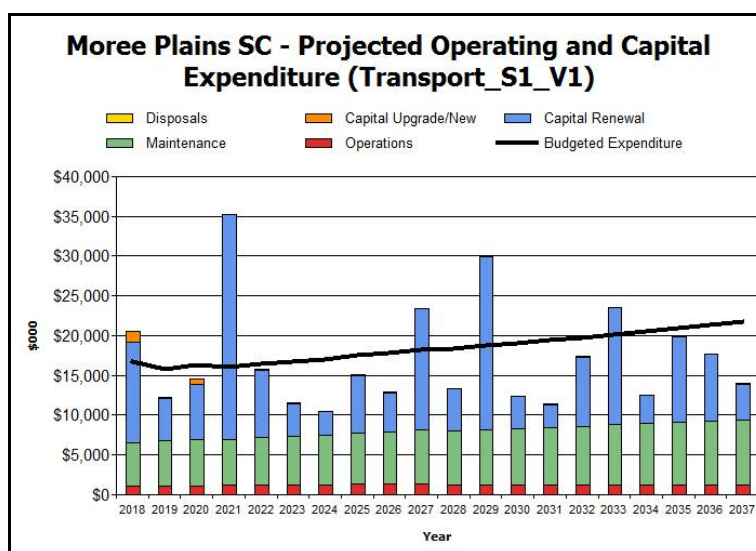
6. FINANCIAL SUMMARY

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

6.1 Financial Statements and Projections

The financial projections are shown in Figure 11 for projected operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets). Note that all costs are shown in real values.

Figure 11: Projected Operating and Capital Expenditure
Based on predicted life cycle of the assets as estimated at that point in time



6.1.1 Sustainability of service delivery

There are four key indicators for service delivery sustainability that have been considered in the analysis of the services provided by this asset category, these being the asset renewal funding ratio, long term life cycle costs/expenditures and medium term projected/budgeted expenditures over 5 and 10 years of the planning period.

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio¹⁵ 96%

The Asset Renewal Funding Ratio is the most important indicator and reveals that over the next 10 years, Council is forecasting that it will have 96% of the funds required for the optimal renewal and replacement of its assets.

Long term - Life Cycle Cost

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the asset life cycle. Life cycle costs include operations and maintenance expenditure and asset consumption (depreciation expense). Based on existing asset valuations, the life cycle cost for the services covered in this Asset Management Plan is \$13,797,000 per year (average operations and maintenance expenditure plus depreciation expense projected over 10 years).

¹⁵ AIFMG, 2012, Version 1.3, Financial Sustainability Indicator 4, Sec 2.6, p 2.16
Scenario One Version One - 2018

Life cycle costs can be compared to life cycle expenditure to give an initial indicator of affordability of projected service levels when considered with age profiles. Life cycle expenditure includes operations, maintenance and capital renewal expenditure. Life cycle expenditure will vary depending on the timing of asset renewals. The predicted life cycle expenditure over the 10 year planning period is \$16,598,000 per year (average operations and maintenance plus capital renewal budgeted expenditure in Long Term Financial Plan over 10 years).

A shortfall or surplus between life cycle cost and predicted life cycle expenditure is the life cycle gap or surplus. The life cycle surplus for services covered by this Asset Management Plan is \$2,800,000 per year (-ve = gap, +ve = surplus).

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.

As at 2017, the calculated surplus results from the fact that the overall estimated network depreciation is less than the predicted renewal expenditure.

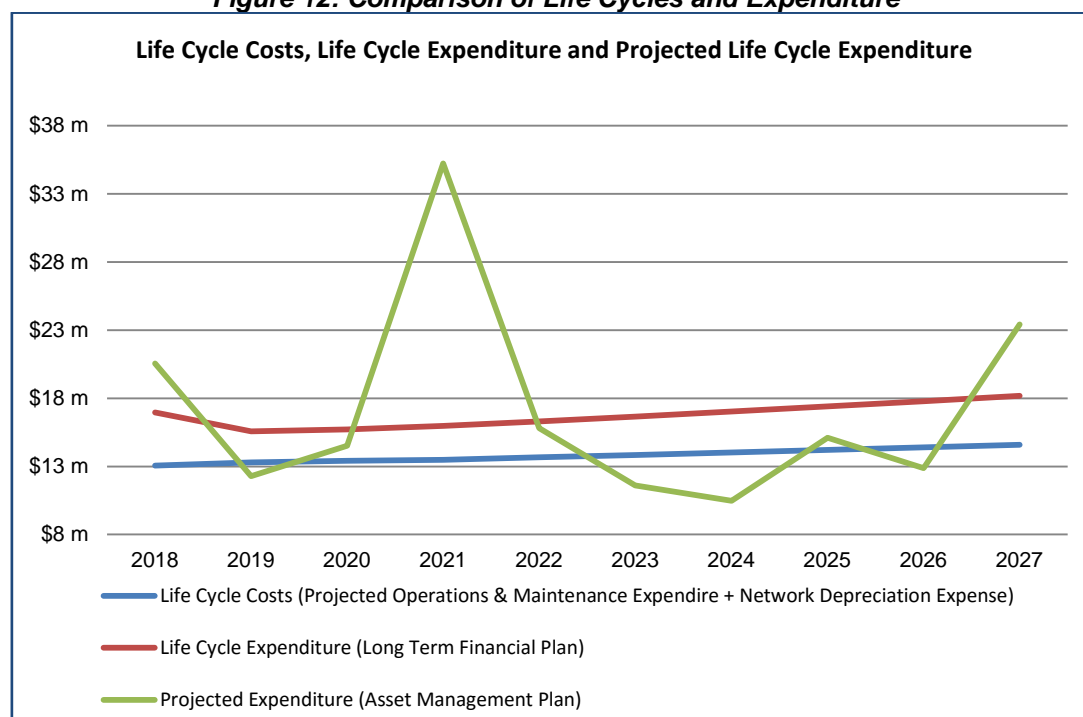
The reason for the difference at this point in time is that the estimated value of the assets requires revaluation which, when completed, will increase the total value of assets and thereby increase the depreciation cost. It is therefore likely that depreciation will then exceed renewal expenditure.

The asset management process will require revaluation from time to time and it is planned to undertake the revaluation for buildings over the next 12 months.

Revaluation of transport assets is proposed to be completed by 30 June 2020.

Until the revaluation is completed, the comparison between depreciation and predicted renewal expenditure will be, to that extent, somewhat incongruous.

Figure 12: Comparison of Life Cycles and Expenditure



Medium term – 10 year financial planning period

This Asset Management Plan identifies the projected operations, maintenance and capital renewal expenditures required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

These projected expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall. In a core Asset Management Plan, a gap is generally due to increasing asset renewals for ageing assets.

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is \$16,899,000 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$16,598,000 on average per year giving a 10 year funding gap of \$-302,000 per year. This indicates that Council expects to have 98% of the projected expenditures needed to provide the services documented in the Asset Management Plan.

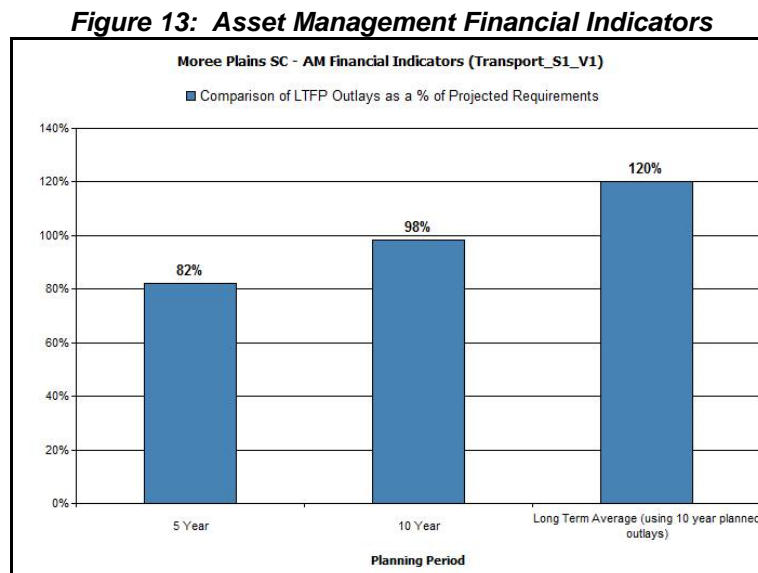
Medium Term – 5 year financial planning period

The projected operations, maintenance and capital renewal expenditure required over the first 5 years of the planning period is \$19,187,000 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$15,785,000 on average per year giving a 5 year funding gap of \$-3,401,000. This indicates that Council expects to have 82% of projected expenditures required to provide the services shown in this Asset Management Plan.

Asset management financial indicators

Figure 13 shows the asset management financial indicators over the 10 year planning period and for the long term life cycle.



Providing services from infrastructure in a sustainable manner requires the matching and managing of service levels, risks, projected expenditures and financing to achieve a financial indicator of approximately 1.0 for the first years of the Asset Management Plan and ideally over the 10 year life of the Long Term Financial Plan.

Figure 14 shows the projected asset renewal and replacement expenditure over the 20 years of the Asset Management Plan. The projected asset renewal and replacement expenditure is compared to

renewal and replacement expenditure in the capital works program, which is accommodated in the Long Term Financial Plan.

Figure 14: Projected and Long Term Financial Plan Budgeted Renewal Expenditure
Based on predicted life cycle of the assets as estimated at that point in time

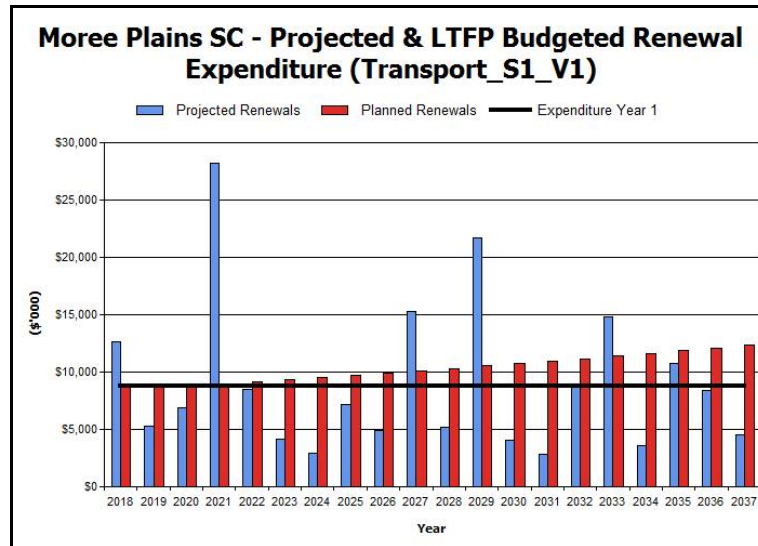


Photo 6: Construction of a new concrete causeway on Watercourse Road

Table 16 shows the shortfall between projected renewal and replacement expenditures and expenditure accommodated in Long Term Financial Plan. Budget expenditures accommodated in the Long Term Financial Plan or extrapolated from current budgets are shown in Renewal, Upgrade and New Capital Works Plan Transport Infrastructure 2018 to 2027.

Table 16: Projected and Long Term Financial Plan Budgeted Renewals and Financing Shortfall

Year End June 30	Projected Renewals	Long Term Financial Plan Renewal Budget	Renewal Financing Shortfall (- gap, + surplus)	Cumulative Shortfall (- gap, + surplus)
2018	\$12,606	\$8,786	\$-3,820	\$-3,820
2019	\$5,267	\$8,806	\$3,539	\$-281
2020	\$6,923	\$8,818	\$1,895	\$1,614
2021	\$28,207	\$8,999	\$-19,208	\$-17,594
2022	\$8,448	\$9,176	\$728	\$-16,866
2023	\$4,126	\$9,357	\$5,231	\$-11,635
2024	\$2,906	\$9,541	\$6,635	\$-4,999
2025	\$7,182	\$9,730	\$2,548	\$-2,451
2026	\$4,938	\$9,923	\$4,985	\$2,534
2027	\$15,283	\$10,121	\$-5,162	\$-2,629
2028	\$5,204	\$10,323	\$5,120	\$2,491
2029	\$21,728	\$10,530	\$-11,198	\$-8,707
2030	\$4,037	\$10,740	\$6,704	\$-2,003
2031	\$2,871	\$10,955	\$8,084	\$6,081
2032	\$8,711	\$11,174	\$2,464	\$8,545
2033	\$14,771	\$11,398	\$-3,373	\$5,172
2034	\$3,629	\$11,626	\$7,997	\$13,169
2035	\$10,713	\$11,858	\$1,145	\$14,314
2036	\$8,435	\$12,096	\$3,661	\$17,975
2037	\$4,544	\$12,337	\$7,793	\$25,768
All dollar values are in (\$'000)'s				

Note: A negative shortfall indicates a financing gap, a positive shortfall indicates a surplus for that year.

Providing services in a sustainable manner will require matching of projected asset renewal and replacement expenditure to meet agreed service levels with the corresponding capital works program accommodated in the Long Term Financial Plan.

A gap between projected asset renewal/replacement expenditure and amounts accommodated in the Long Term Financial Plan indicates that further work is required on reviewing service levels in the Asset Management Plan (including possibly revising the Long Term Financial Plan) before finalising the Asset Management Plan to manage required service levels and funding to eliminate any funding gap.

We will manage the 'gap' by developing this Asset Management Plan to provide guidance on future service levels and resources required to provide these services, and review future services, service levels and costs with the community.

6.1.2 Projected expenditures for Long Term Financial Plan

Table 17 shows the projected expenditures for the 10 year Long Term Financial Plan.

Expenditure projections are in 2017 real values.

Table 17: Projected Expenditures for Long Term Financial Plan (\$'000)

Year	Operations	Maintenance	Projected Capital Renewal	Capital Upgrade/New	Disposals
2018	\$1,091	\$5,483	\$12,606	\$1,381	\$0
2019	\$1,116	\$5,687	\$5,267	\$212	\$0
2020	\$1,138	\$5,788	\$6,923	\$665	\$0
2021	\$1,174	\$5,831	\$28,207	\$25	\$0
2022	\$1,209	\$5,967	\$8,448	\$174	\$0
2023	\$1,245	\$6,108	\$4,126	\$120	\$0
2024	\$1,283	\$6,252	\$2,906	\$25	\$0
2025	\$1,322	\$6,397	\$7,182	\$200	\$0
2026	\$1,362	\$6,549	\$4,938	\$25	\$0
2027	\$1,403	\$6,702	\$15,283	\$25	\$0
2028	\$1,237	\$6,835	\$5,204	\$25	\$0
2029	\$1,237	\$6,971	\$21,728	\$25	\$0
2030	\$1,237	\$7,110	\$4,037	\$25	\$0
2031	\$1,237	\$7,252	\$2,871	\$25	\$0
2032	\$1,237	\$7,396	\$8,711	\$25	\$0
2033	\$1,237	\$7,544	\$14,771	\$25	\$0
2034	\$1,237	\$7,694	\$3,629	\$25	\$0
2035	\$1,237	\$7,848	\$10,713	\$25	\$0
2036	\$1,237	\$8,004	\$8,435	\$25	\$0
2037	\$1,237	\$8,163	\$4,544	\$25	\$0
All dollar values are in (\$'000)'s					

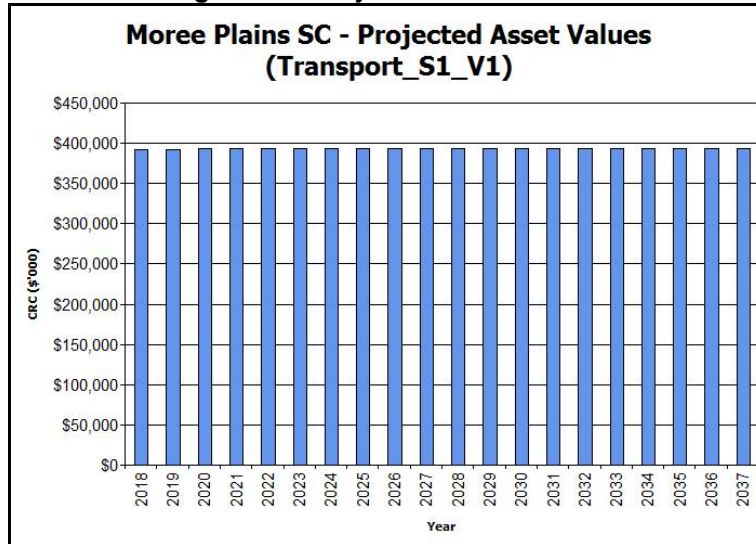
6.2 Funding Strategy

After reviewing service levels, as appropriate to ensure ongoing financial sustainability projected expenditures identified in Section 6.1.2 may be accommodated in the Council's 10 year Long Term Financial Plan.

6.3 Valuation Forecasts

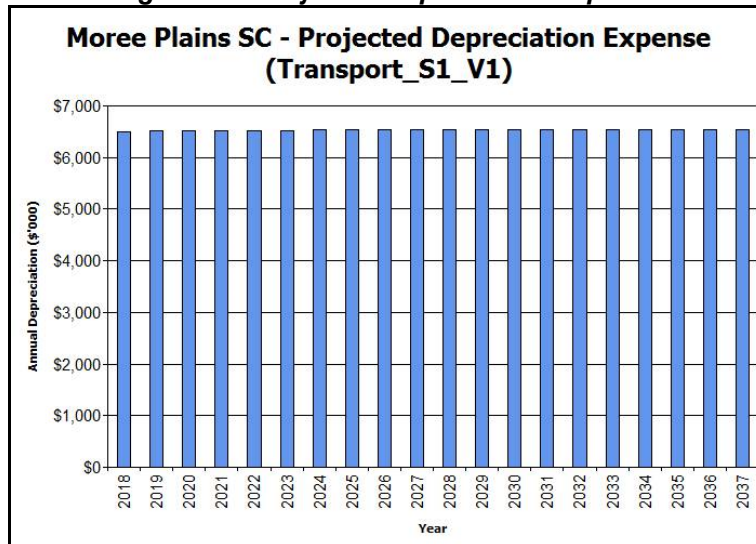
Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Figure 9 shows the projected replacement cost asset values over the planning period in real values.

Figure 15: Projected Asset Values

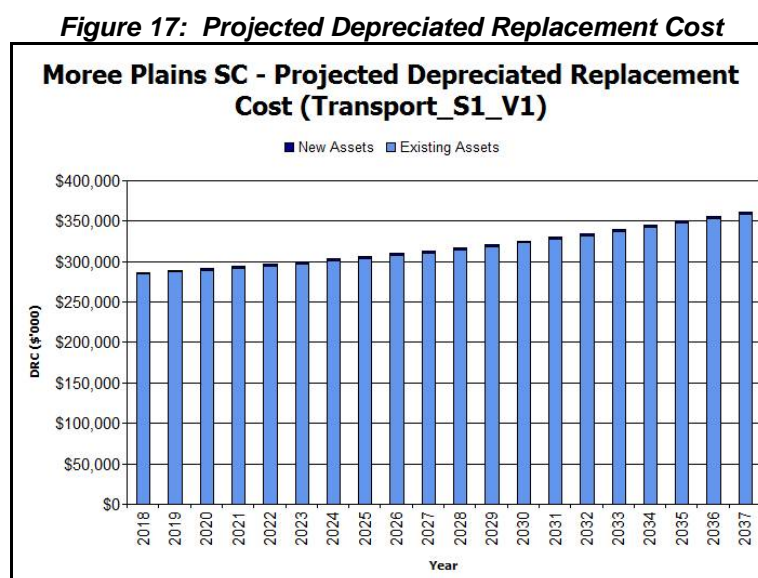


Depreciation expense values are forecast in line with asset values as shown in Figure 16.

Figure 16: Projected Depreciation Expense



The depreciated replacement cost will vary over the forecast period depending on the rates of addition of new assets, disposal of old assets and consumption and renewal of existing assets. Forecast of the assets' depreciated replacement cost is shown in Figure 17. The depreciated replacement cost of contributed and new assets is shown in the darker colour and in the lighter colour for existing assets.



6.4 Key Assumptions made in Financial Forecasts

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

Key assumptions made in this Asset Management Plan and risks that these may change are shown in Table 18.

Table 18: Key Assumptions made in Asset Management Plan and Risks of Change

Key Assumptions	Risks of Change to Assumptions
Current valuation data is accurate	Variability in renewal and replacement liability forecasts
Current remaining life data is accurate	Asset replacement liability not accurately represented
Current useful life data is accurately representative of the asset	Asset replacement liability not accurately represented
Asset condition rating is representative of asset components	Partial renewal and replacement forecasts not accurately representing the financial liability of maintaining assets at their current overall condition

6.5 Forecast Reliability and Confidence

The expenditure and valuations projections in this Asset Management Plan are based on best available data. Currency and accuracy of data is critical to effective asset and financial management. Data confidence is classified on a 5 level scale¹⁶ in accordance with Table 19.

Table 19: Data Confidence Grading System

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



Photo 7: Large box culvert (bridge) on Carrigan Road (MR507)

¹⁶ IPWEA, 2011, IIMM, Table 2.4.6, p 2|59.

The estimated confidence level for and reliability of data used in this Asset Management Plan is shown in Table 20.

Table 20: Data Confidence Assessment for Data used in Asset Management Plan

Data	Confidence Assessment	Comment
Demand drivers	Reliable	
Growth projections	Reliable	There is very little growth predicted for the Shire which would affect the transport assets
Operations expenditures	Uncertain	
Maintenance expenditures	Uncertain	
Projected Renewal expenditure.		
- Asset values	Reliable	Current total asset renewal values are provided by a third-party consultant and through internal reviews.
- Condition modelling	Uncertain	There is insufficient asset maintaining, renewal and condition data to determine more accurate condition modelling. As the Council's asset management system improves so will this information.
- Network renewals	Uncertain	There is insufficient asset maintaining, renewal and condition data to determine more accurate condition modelling. As the Council's asset management system improves so will this information.
- Defect repairs	Uncertain	There is insufficient asset maintaining, renewal and condition data to determine more accurate condition modelling. As the Council's asset management system improves so will this information.
Upgrade/New expenditures	Reliable	Based on past experience
Disposal expenditures	Reliable	There is no feasible disposals required

Over all data sources the data confidence is assessed as low to medium confidence level for data used in the preparation of this Asset Management Plan.

7. PLAN IMPROVEMENT AND MONITORING

7.1 Improvement Plan

The asset management improvement plan generated from this Asset Management Plan and those identified in the *Fit for the Future* proposal are shown in Table 21.

Table 21: Improvement Plan

Task No	Task	Responsibility	Timeline
1	Develop consistent policies and procedures across Council with the aim of improving inspection processes and maintenance planning	All asset owners and Asset Team	June 2018
2	Review and update asset data to allow for a more comprehensive understanding of the asset portfolio at the lower component or service level.	Director of Planning and Development and Asset Team	June 2018
3	Review and maintain condition and remaining useful life data to allow for a better understanding of the full lifecycle costs of the asset portfolio	Director of Planning and Development and Asset Team	ongoing
4	Review existing data and information for the asset portfolio and ensure it is linked to the asset data in the asset management system	All asset owners and Asset Team	ongoing
5	Develop and implement a framework to identify and assess critical assets across the organisation	Manex, all asset owners and Asset Team	June 2018
FFF6	Invest and trial new and emerging technology in road stabilising products that may assist in reducing the whole of life costs for the road network particularly on gravel roads <ul style="list-style-type: none"> Continue to monitor a trial on a number of roads (sealed, gravel & black soil) using a polymer road stabilising product Continue to monitor the trial being conducted on a gravel road using lime as a road stabiliser 	Director of Engineering Services	On-going
FFF7	Review and update the transport infrastructure asset data in the corporate Authority system based on available information and field inspection data (where necessary).	Director of Engineering Services	On-going
FFF8	Undertake a comprehensive review of the unsealed road network to determine the most appropriate way to manage the asset through the whole lifecycle at the lowest cost while ensuring it still meets the community needs	Director of Engineering Services	30 June 2020

7.2 Monitoring and Review Procedures

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

The Asset Management Plan will be updated annually to ensure it represents the current service level, asset values, projected operations, maintenance, capital renewal and replacement, capital upgrade/new and asset disposal expenditures and projected expenditure values incorporated into the organisation's Long Term Financial Plan.

The Asset Management Plan has a life of 4 years (Council election cycle) and is due for complete revision and updating by the 30th June the year following each Council election.

7.3 Performance Measures

The effectiveness of the Asset Management Plan can be measured in the following ways:

- The degree to which the required projected expenditures identified in this Asset Management Plan are incorporated into Council's Long Term Financial Plan
- The degree to which 1-5 year detailed works programs, budgets, business plans and organisational structures take into account the 'global' works program trends provided by the Asset Management Plan
- The degree to which the existing and projected service levels and service consequences (what we cannot do), risks and residual risks are incorporated into the Council's Strategic Plan and associated plans
- The Asset Renewal Funding Ratio achieving the target of 1.0



Photo 8: Livestock truck on an unsealed road

8. REFERENCES

IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM

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

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

IPWEA, 2011, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM

Moree Plains Shire Council, 'Community Strategic Plan 2035'

Moree Plains Shire Council, 'Delivery Program'

Moree Plains Shire Council, 'Operation Plan'

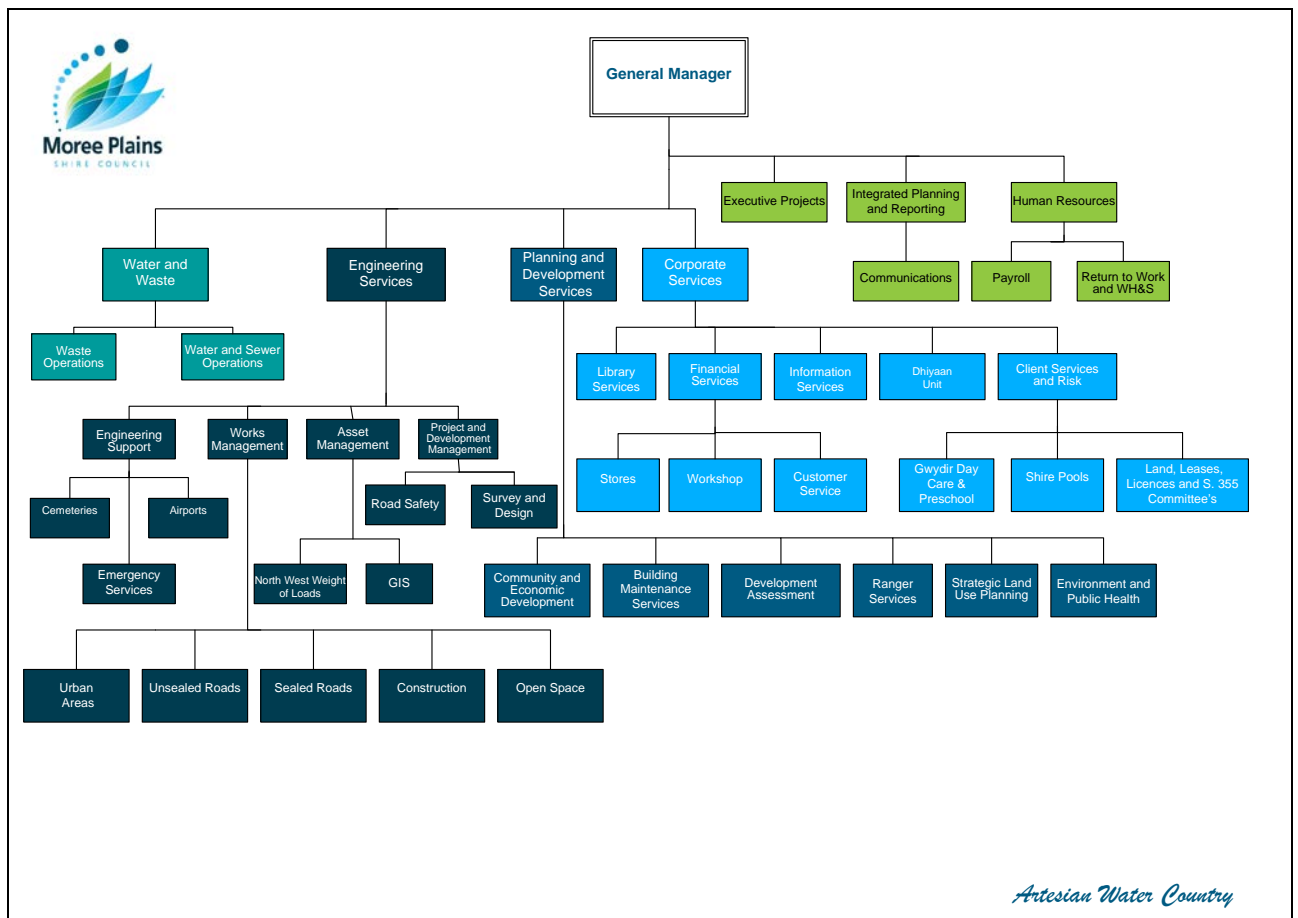
9. APPENDICES

Appendix A Organisation Structure

Appendix B Abbreviations

Appendix C Glossary

Appendix A Organisation Structure



Appendix B Abbreviations

AAAC	Average annual asset consumption
AM	Asset management
AM Plan	Asset management plan
ARI	Average recurrence interval
ASC	Annual service cost
BOD	Biochemical (biological) oxygen demand
CRC	Current replacement cost
CSP	Community Strategic Plan
CWMS	Community wastewater management systems
DA	Depreciable amount
DRC	Depreciated replacement cost
EF	Earthworks/formation
IRMP	Infrastructure risk management plan
LCC	Life Cycle cost
LCE	Life cycle expenditure
LTFP	Long Term Financial Plan
MMS	Maintenance management system
PCI	Pavement condition index
RV	Residual value
SoA	State of the Assets
SS	Suspended solids
vph	Vehicles per hour
WDCRC	Written down current replacement cost

Appendix C 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 category

Sub-group of assets within a class hierarchy for financial reporting and management purposes.

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 hierarchy

A framework for segmenting an asset base into appropriate classifications. The asset hierarchy can be based on asset function or asset type or a combination of the two.

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.

Asset renewal funding ratio

The ratio of the net present value of asset renewal funding accommodated over a 10 year period in a long term financial plan relative to the net present value of projected capital renewal expenditures identified in an asset management plan for the same period [AIFMG Financial Sustainability Indicator No 8].

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.

Core asset management

Asset management which relies primarily on the use of an asset register, maintenance management systems, job resource management, inventory control, condition assessment, simple risk assessment and defined levels of service, in order to establish alternative treatment options and long-term cashflow predictions. Priorities are usually established on the basis of financial return gained by carrying out the work (rather than detailed risk analysis and optimised decision-making).

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.

Critical assets

Assets for which the financial, business or service level consequences of failure are sufficiently severe to justify proactive inspection and rehabilitation. Critical assets have a lower threshold for action than noncritical assets.

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.

Deferred maintenance

The shortfall in rehabilitation work undertaken relative to that required to maintain the service potential of an asset.

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 outlays.

Expenses

Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or increases in liabilities that result in decreases in equity, other than those relating to distributions to equity participants.

Fair value

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

Financing gap

A financing gap exists whenever an entity has insufficient capacity to finance 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 financing gap means service levels have already or are currently falling. A projected financing 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 average operations, maintenance expenditure plus asset consumption expense, represented by depreciation expense projected over 10 years. 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 average operations, maintenance and capital renewal expenditure accommodated in the long term financial plan over 10 years. Life Cycle Expenditure may be compared to average Life Cycle Cost to give an initial indicator of affordability of projected service levels when considered with asset age profiles.

Loans / borrowings

See borrowings.

Maintenance

All actions necessary for retaining an asset as near as practicable to an appropriate service 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.
- **Specific 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 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

Regular activities to provide services such as public health, safety and amenity, eg street sweeping, grass mowing and street lighting.

Operating 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.

Operating expenses

Recurrent expenses continuously required to provide a service, including power, fuel, staff, plant equipment, maintenance, depreciation, on-costs and overheads.

Operations, maintenance and renewal financing ratio

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

Operations, maintenance and renewal gap

Difference between budgeted expenditures in a long term financial plan (or estimated future budgets in absence of a long term financial plan) and projected expenditures for operations, maintenance and renewal of assets to achieve/maintain specified service levels, totalled over a defined time (e.g. 5, 10 and 15 years).

Pavement management system (PMS)

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 *

The ratio of annual asset consumption relative to the depreciable amount of the assets. It measures the amount of the consumable parts of assets that are consumed in a period (depreciation) expressed as a percentage of the depreciable amount.

Rate of annual asset renewal *

The ratio of asset renewal and replacement expenditure relative to depreciable amount for a

period. It measures whether assets are being replaced at the rate they are wearing out with capital renewal expenditure expressed as a percentage of depreciable amount (capital renewal expenditure/DA).

Rate of annual asset upgrade/new *

A measure of the rate at which assets are being upgraded and expanded per annum with capital upgrade/new expenditure 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.

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.

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).

Specific Maintenance

Replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, 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.

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.

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

Additional and modified glossary items shown *



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