Asset Management Plan
Transport

Version 3

December 2013

Institute of Public Works Engineering Australia

AM4SRRC

Document Control	Asset Management for Small, Rural or Remote Communities

Document ID: gsc_am4srrc iamp_1200829_v04

Rev No	Date	Revision Details	Author	Reviewer	Approver
1	16/04/2012	Version 1 – Draft for Comment	JM		
2	24/08/2012	Version 2 – Updated to include reviewed expenditure figures and additional modelling scenarios.	JM		
3	18/12/13	Version 3 – Creation of separate plan for Transport Infrastructure Assets including reviewed expenditure figures, depreciation and modelling scenarios.	Neil Alchin DC&BS Peter Gaff Assets Manager		

Members of the team involved in the whole or part of the preparation of this asset management plan are :

- Peter Gaff- Assets Manager
- Rolly Lawford-Director of Works and Technical Services
- Mark Linton-Harland- Manager of Works
- Neil Alchin - Director of Corporate Services
- Guy McAnally-Elwin – Finance Manager
- Michael Hodge -Asset Inspector

TABLE OF CONTENTS

This page is left intentionally blank.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

1. EXECUTIVE SUMMARY

Context

Gilgandra is nestled on the banks of the Castlereagh River in Central NSW at the junction of three major inland highways being the Newell Oxley and Castlereagh and half way between Brisbane and Melbourne. In addition to the township of Gilgandra the Shire has two villages, Tooraweenah located at the southern entrance to the Warrumbungle National Park and Armatree located in the north of the Shire.

Gilgandra is a great place to live. It is a proud, passionate, vibrant, solid and supportive rural based community. We are fortunate to have excellent schools for our children, a comprehensive range of medical services, fantastic sporting facilities, and a thriving cultural presence within the region. Although our population is ageing, social capital through volunteerism is strong, and this strength is reflected in the many events (cultural, sporting, community and nation building) that are conducted by volunteers.

Gilgandra is located just 65 kilometres north of Dubbo, one of the largest inland cities in New South Wales. This allows residents to have close access to a base hospital, specialist medical services, employment opportunities and a regional airport.

Agriculture including cereal cropping, wool production, sheep and cattle is a large contributor to the Gilgandra economy. In recent years, health and aged care have developed as large employers in the community and form an important part of a diversifying economy. For a community its size, Gilgandra is well serviced with medical, retail, accommodation, professional and financial services. The community and Council have invested heavily in medical infrastructure to ensure the community has access to essential medical and allied health services.

Gilgandra Shire, like so many other rural communities has seen significant challenges as result of an extended period of drought followed by two flood events. The decline of employment numbers in agriculture has made the need to diversify the economy even more of an essential action for the community.

Gilgandra Shire Council is directly responsible for a 1361 km transport network (including 342 km of sealed roads and streets and 1019 km of unsealed roads streets and lanes).The NSW Government is responsible for a further 196 km of state roads in the Shire.
The transport network provides access to individual properties and facilities and caters for the general circulation of the community. The network is structured on a hierarchical basis in line with Councils Local Roads Hierarchy Plan.

Transport Infrastructure

Councils Transport Infrastructure Assets are comprised of

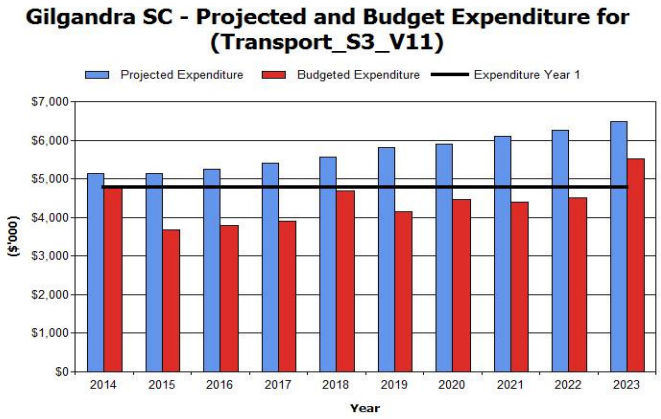
- Rural Roads
- Urban Roads
- Road Signs
- Bridges and Large Road Culverts
- Culverts
- Floodways
- Footpaths Cycleways and Walkways
- Kerb and Gutter
- Car Parks
- Aerodromes
- The Transport infrastructure assets under control of Council have a total replacement value of $346.8 million

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

What does it Cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan (AM Plan) includes operations, maintenance, renewal and upgrade of existing assets over the 10 year planning period is $5.7 million on average per year.

Council's estimated available funding for this period is $4.4 million on average per year which is 68% of the cost to provide the service. This is a funding shortfall of $1.3 million on average per year. Projected expenditure to provide services in this AM Plan compared with planned expenditure currently included in the Long Term Financial Plan Scenario 1 is shown in the graph below.



What we will do

Council plans to provide transport services for the following:

- Operation, maintenance, renewal and upgrade of transport assets to meet service levels set by Council in annual budgets and taking account of Councils Local Roads Hierarchy Plan.
- Renewal/Upgrade of the Terrabile Creek Bridge in 2013/14
- Resheeting of the Gilgandra Aerodrome in 2013/14
- Renewal of existing footpaths and kerb and gutter as required in line with Council's annual budgets and Pedestrian Access Mobility Plan (PAMP) and extension of the Windmill Walk in line with this plan
- Renewal of Webs Crossing Bridge in 2017/18
- Renewal of decking on Lucas Bridge in 2019/20
- Renewal of Gumin Bridge in 2022/23
- Renewal of local road assets in line with Roads to Recovery funding allocations provided by the Federal Government.

What we cannot do

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

- Maintenance of rural roads at an acceptable service level. Council has determined that an additional $600k (40%) per annum is required to be expended on rural roads to maintain them in line with condition ratings detailed in Councils Local Road Hierarchy Plan.

- Renewal of all transport assets as they fall due.

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:

- Rising costs of managing transport infrastructure.
- Meeting Community expectations for transport services.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

- Providing the most appropriate and affordable transport infrastructure for the community particularly rural roads.
- Highly variable and unpredictable extreme weather events, and the impact this has transport infrastructure assets. What seemingly is a manageable position can change very quickly.
- The dependence on grants from other tiers of government.

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

- Monitoring the condition of the Transport network
- Implementing a Road Hierarchy Plan on which our road maintenance and renewal activities will be based
- Monitoring and reviewing the cause of failures
- Regularly reviewing the priorities for renewal works.
- Seek additional funding in the form of grants wherever possible.

The Next Steps

The actions resulting from this asset management plan are:

- Maintain the current transport infrastructure assets in safe condition
- Continue to monitor the condition of transport assets so that there is adequate planning time for periods of major renewals
- Implement a road hierarchy plan
- Continue to improve transport asset information and knowledge.
- Maintain a single corporate asset register for financial and reporting purposes
- Monitor the provision of transport services alongside the community expectations as expressed in the Community Strategic Plan.

Questions you may have

What is this plan about?

This asset management plan covers the infrastructure assets that serve the Gilgandra Shire Community's transport needs. These assets include roads, footpaths, bridges, culverts, kerb and gutter etc (see table2.1)

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 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.

Councils' 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 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,

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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 Council will have to reduce service levels in the some areas, unless new sources of revenue are found. For transport the service level reduction may include maintaining rural roads at a lessor condition rating than is acceptable to the community and an inability to fund renewal of all road assets as they fall due for renewal.

What can we do?

Council is developing options and priorities for future transport services, and will continue to consult with the community to plan future services to match the community services needs with ability to pay for services and maximise community benefits against costs.

What can you do?

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

.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

2. INTRODUCTION

2.1 Background

This asset management plan is to demonstrate responsive management of assets (and services provided from assets), compliance with regulatory requirements, and to communicate funding needed to provide the required levels of service over a 10 year planning period.

The asset management plan follows the format for AM Plans recommended in Section 4.2.6 of the of the International Infrastructure Management Manual[1].

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

- Gilgandra Shire Community Strategic Plan 2013/14-2022/23
- Gilgandra Shire Council Delivery Program 2013/14-2016/17
- Gilgandra Shire Council Operational Plan 2013/14-2016/17
- Gilgandra Shire Council Long Term Financial Plan 2013/14-2022/23
- Gilgandra Shire Council Workforce Plan 2011-2014
- Gilgandra Shire Council Pedestrian Access Mobility Plan

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

Table 2.1: Assets covered by this Plan

Asset Sub-Category	Dimension	Replacement Value
Aerodromes	80,000 sq m	$356,133
Bridges & Major Culverts	77 each	$14,051,840
Floodways	20.1 km	$3,208,324
Car Parks	10,051 sq m	$690,306
Culverts		$9,727,517
Footpaths, Cycleways and Walkways	71 km	$620,415
Kerb and Gutter	41 km	$3,392,289
Road Signs	1818 each	$820,838
Rural Roads	1284 km	$118,374,445
Urban Roads	42 km	$9,796,833
Lanes	35 km	
TOTAL		**$161,038,940**

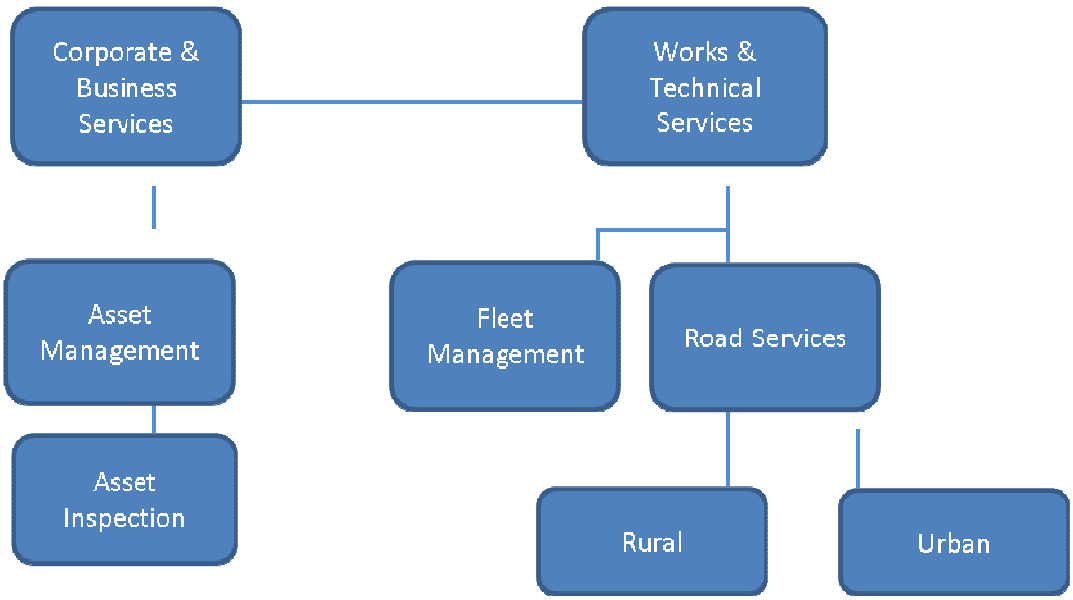
[1] IPWEA, 2011, Sec 4.2.6, Example of an Asset Management Plan Structure, pp 4|24 – 27.

Table 2.1.1: Key stakeholders in this Plan

Key Stakeholder	Role in asset Management Plan
Council	• Represent needs of the community • Allocate resources to meet Councils objectives in providing services while managing risks • Ensure Council is financially sustainable
Council Infrastructure Committee	• Recommend Policy and Strategic Direction to Council • Put forward AMPS and Renewal/Replacement Programs for Councils adoption
General Manager	• Have confidence that an accurate AMP is developed and maintained
Customers	• Expect Council to know what assets we have, where they are located, how they work and that services are provided at an economical rate
Regulators	• Require reassurance that we act within all applicable statutes
Strategic Managers	• Require information about current services for planning purposes
Operational Managers	• Need to know what work is required –today and tomorrow
Roads and Maritime Services	• Need to be assured that our roads are safe and that they integrate effectively with the state road network

Council's organisational structure for service delivery from transport infrastructure assets is detailed below

Organisational Structure for Roads Service Delivery, Figure 2.1.1



2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

2.2 Goals and Objectives of Asset Management

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

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

- 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.[2]

2.3 Plan Framework

Key elements of the plan are

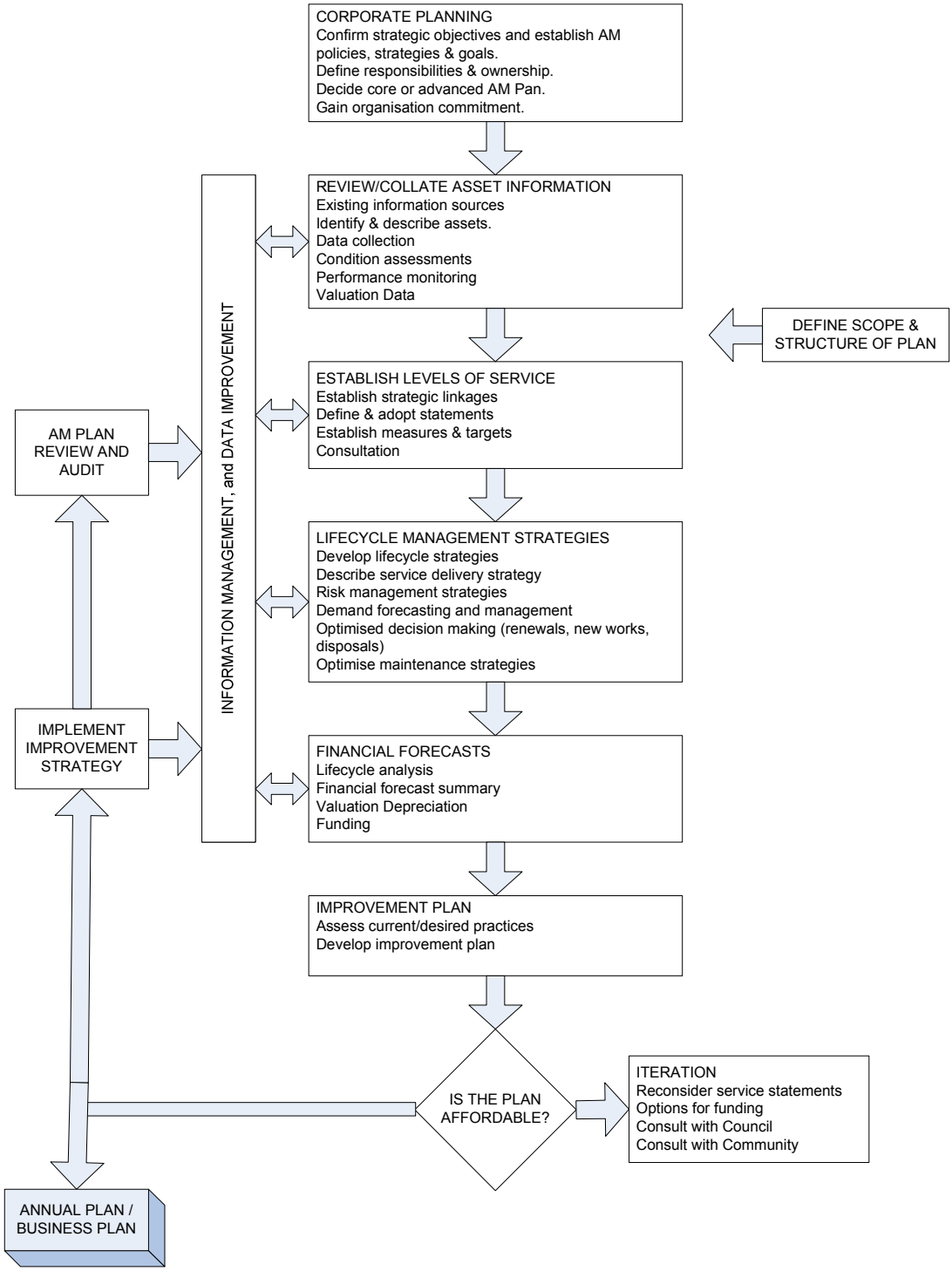
- Levels of service – specifies the services and levels of service to be provided by council.
- Future demand – how this will impact on future service delivery and how this is to be met.
- Life cycle management – how Council will manage its existing and future assets to provide defined levels of service
- 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 Councils objectives.
- Asset management improvement plan

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

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

Road Map for preparing an Asset Management Plan

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



2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

2.4 Core and Advanced Asset Management

This asset management plan is prepared as a 'core' asset management plan over a 10 year period in accordance with the International Infrastructure Management Manual[3]. 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.

Council is moving towards 'advanced' asset management using a 'bottom up' approach for gathering asset information for individual assets to support the optimisation of activities and programs to meet agreed service levels.

2.5 Community Consultation

This 'core' asset management plan is a revision of an initial combined asset management plan and incorporates initial community consultation on service levels and costs of providing the transport service. Consultation to date and additional proposed consultation will assist Council and the community in matching the level of service needed by the community, service risks and consequences with the community's ability to pay for the service.

3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

Council's latest community surveys and consultation sessions relating to integrated planning and reporting were conducted in June/July 2013. This consultation confirmed the results of previous surveys that indicated a strong community view that transport is one of the most important services delivered by Council and a significant community dissatisfaction with the standard of the transport service being delivered.

3.2 Strategic and Corporate Goals

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

Council's vision for its community is:

"Gilgandra Shire is a strong and sustainable rural centre with a caring community that is building a future together"

Council's Values are:

"Integrity, leadership, inclusivity, selflessness, objectivity, accountability, openness, honesty, respect, professionalism"

Relevant community outcomes and Council strategies and how these are addressed in this asset management plan are shown in Table 2.2.

Table 2.2: Community Outcomes and Council Strategies and Actions in relation to Transport Services

Outcome	Strategy	Action
4.1 A community serviced by a safe reliable and efficient transport network.	**4.1.1** Develop and implement asset management policies, strategies and plans **4.1.2** Develop and implement forward works infrastructure programs and plans **4.2.1** Provide a network of pathways that link wheel chair pedestrians , pedestrians	**4.1.1.1** Review all asset management plans **4.1.1.2** Establish Levels of Service for all infrastructure assets **4.1.1.3**

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

Outcome	Strategy	Action
	and cyclists to important destinations **4.2.2** Improve existing roads infrastructure to meet community needs	Ensure all infrastructure assets are inspected and conditionally rated in accordance with the determined level of service
1.1 An active community with a focus on physical and mental wellbeing	**1.1.1** Establish and maintain programs and facilities that promote and encourage a healthy lifestyle	**1.1.1.2** Continue to Implement the Pedestrian Access and Mobility Plan (PAMP)

3.3 Legislative Requirements

Council has to meet many legislative requirements including Australian and State legislation and State regulations. Relevant legislation is shown in Table 3.2.

Table 3.2: Legislative Requirements

Legislation	Requirement
Local Government Act	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
Roads Act 1997	To provide public access to roads, to classify roads, to act as the local road authority, to carry out certain functions e.g. road works and to regulate activities on public roads.
Native Vegetation Act	To manage native vegetation, to prevent broad scale clearing, to protect native vegetation, to improve native vegetation and to encourage revegetation of land.
AS 1742 (Traffic)	
Australian Road Rules	To ensure compliance and uniformity with road rules in the State and elsewhere in Australia
The Australian Accounting Standards	The Australian Accounting Standards (AASB 116) requires that assets be valued, and reported in the annual accounts, which also includes depreciation value (i.e. how fast are these assets wearing out).
Environmental Planning and Assessment Act 1979	Sets out guidelines lines for land use planning and promotes sharing of responsibilities between various levels of government in the state.
Environmental Planning and Assessment Amendment Act 2008	Sets out guidelines for land use planning and promotes sharing of responsibilities between various levels of government in the state.
Protection of the Environment Operations Act 1997	Sets out Council responsibility and powers of local area environment and its planning functions.
Building Act 1975 Reprinted as in force on 1 September 2011	Provides for what building work is assessable development for the Planning Act. Imposes requirements, in addition to those under the Planning Act, for a

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

	building development.
Building Code of Australia (or BCA)	The Building Code of Australia (or BCA) is the edition, current at the relevant time, of the Building Code of Australia (including the Queensland Appendix) published by the body known as the Australian Building Codes Board.
Occupational Health & Safety Act 2000 & Regulations 2001	Sets out roles and responsibilities to secure the health, safety and welfare of persons at work. Council is to provide a safe working environment and supply equipment to ensure safety.
Disability Discrimination Act 1992 and other relevant disability legislation.	Sets out the responsibilities to all in regards to discrimination. This Act makes it unlawful to discriminate against people because of their disability.
Australian Standards for Playgrounds AS/NZS 4486:1997, AS4685:2004 & AS/NZS 4422:1996	Sets out standards for play spaces and play equipment and minimum best practice for risk assessing safety of play spaces and equipment.
Crown land (Reserves) Act (1989):	Regulates what can be done on Crown land
Catchment Management Act 1989	• Requirement for ongoing management plan; • Promotes the coordination of activities within catchment areas; • Under the provision of this Act, Local Catchment Management Committees can be established to oversee this process in the region.
Soil Conservation Act 1938	• Preservation of water course environment.
Public Health Act	• Effluent and waste disposal methods; • Delivery of quality water supply services.
Public Works Act	• Role of DPWS is planning and construction of new assets.
Water Act 1912	• Water rights, licenses, allocations.
Water Authorities Act 1987	• Determining developer charges.
Independent Pricing and Regulatory Tribunal Act 1992	• Charging guidelines; • Trends toward a user pay system in the industry; • Gives powers to the Independent and Regulatory Tribunal to inquire into and regulate prices.

3.4 Current Levels of Service

Council has defined service levels in two terms.

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

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

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

Technical Levels of Service - Supporting the community service levels are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities that Council 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, street sweeping frequency, street lighting coverage, etc.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

- Maintenance – the activities necessary to retain assets as near as practicable to an appropriate service condition (e.g. road patching, unsealed road grading, road signs maintained, bridge repairs),
- Renewal – the activities that return the service capability of an asset up to that which it had originally (e.g. frequency and cost of road and footpath resurfacing, pavement reconstruction, bridge replacement),
- Upgrade – the activities to provide an higher level of service (e.g. widening a road, sealing an unsealed road, replacing a bridge with a larger size) or a new service that did not exist previously (e.g. a new footpath or kerb and gutter).

Council's current service levels are detailed in Table 3.4.

Table 3.4: Current and Desired Service Levels

Key Performance Measure	Level of Service Objective	Performance Measure Process	Current Level of Service	Optimal Level of Service
COMMUNITY LEVELS OF SERVICE				
Quality	Provide facilities for smooth travel	Bi Annual Community Survey Customer Requests	Low level of community satisfaction Greater than 10 customer requests per month	High level of community satisfaction Less than 5 customer requests per month
Function	Facilities are fully serviceable	Road & Bridge Closures/Flood Damage Statistics Customer Requests	Minimal Road closures. Some load limited/closed timber bridges To be determined	No road closures outside exceptional circumstance. All bridges fully serviceable Less than 2 customer service requests per month
Capacity/ Utilisation	Facilities are safe and free from hazards	Reported accidents/incidents Customer Requests	To be determined To be determined	Nil incidents / accidents Less than 2 customer service requests per month
TECHNICAL LEVELS OF SERVICE				
Operations	Street cleaning Street lighting Inspections Management Systems	Bi annual community survey Customer service requests	Requires further assessment to identify and determine whether basic service level expectations are being met	Requires further assessment to identify and determine whether basic service level expectations are being met

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

		Budget 2013/14 $956,000		
Maintenance	Provide a safe well maintained transport network	Bi annual community survey Customer service requests Condition assessments	To be determined <10 customer service requests per month As detailed in Councils Local Road Hierarchy Plan	75% community satisfaction rating >5 customer service requests per month As detailed in Councils Local Road Hierarchy Plan
		Budget 2013/14 $1,575,000		
Renewal	Refer to section 5.4.2	Condition assessments	As detailed in Councils Local Road Hierarchy Plan	As detailed in Councils Local Road Hierarchy Plan
		Budget 2013/14 $2,041,000		
Upgrade/New	Upgrade renewed assets to acceptable standards	Transport assets comply with current standards	Complying with current standards	Complying with current standards
		Budget 2013/14 $200,000		

3.5 Desired Levels of Service

Indications of desired levels of service are obtained from various sources including community consultation/engagement residents' feedback to Councillors and staff, service requests and correspondence. This asset management planning process includes the development of a number of scenarios to develop levels of service that are financially sustainable.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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 4.3.

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 4.3

Table 4.3: Demand Factors, Projections and Impact on Services

Demand factor	Present position	Projection	Impact on services
Population	4355 (2012)	8.9% Decrease (2011-2031)	• Small decrease in traffic
Ageing population	21 % over 65 years	Working age population projected to decrease by 19.9% (2011-2031)	• Greater demand on leisure travel • Less demand in peak hours • Demand a higher standard of footway access • Greater emphasis on walking and footpaths
Lifestyle pattern	Increased daily usage on rural roads due to need for additional off farm income	Daily vehicle traffic on rural roads to continue to increase	Increasingly difficult to maintaining the current level of service.
Climate change	Higher frequency of extreme weather events	Unknown, but changes likely.	Addition costs may be imposed to fund environmental initiatives e.g. carbon tax
Heavy vehicle configuration	Road Train and B Double usage increasing	Greater number of larger commercial vehicles	Higher standard of construction required

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

Demand factor	Present position	Projection	Impact on services
			particularly on designated routes
Availability of road construction materials	Access to local gravel sources is difficult	Less gravel sources and greater haulage distances	Significant increase in cost of road renewal and maintenance

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 Council to own the assets and management actions including reducing demand for the service, reducing the level of the service(allowing some assets to deteriorate beyond current service levels) or educating customers to accept appropriate asset failures. Examples of non-asset solutions include providing services from existing infrastructure such as aquatic centres and libraries that may be in another council area or public toilets provided in commercial premises.

Opportunities identified to date for demand management are shown in Table 4.4. Further opportunities will be developed in future revisions of this asset management plan.

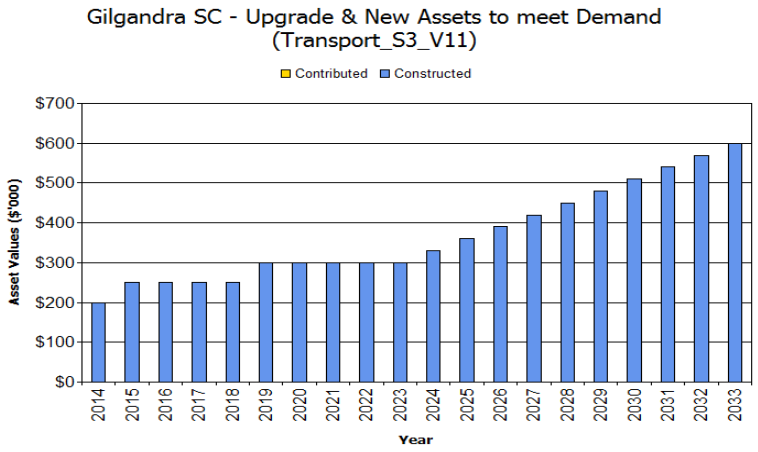
Table 4.4: Demand Management Plan Summary

Demand Driver	Impact on Services	Demand Management Plan
Communicate options and capacity to fund transport infrastructure works with the community	Transport infrastructure works prioritised in line with available budgets and Local Road Hierarchy Plan	Monitor community expectations and communicate service levels and financial capacity with the community to balance priorities for transport infrastructure with what the community is prepared to pay for. Continue to seek grant funding for projects identified in Councils Delivery Program and Operational Plan
Ageing Population	Greater emphasis on walking and footpaths	Greater compliance with access standards of footpaths eg slope, width for mobility scooters etc
Heavy vehicle configuration	Higher geometric standards on designated routes	Consider appropriate construction standards for major roads in Councils Local Road Hierarchy Plan

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

4.5 Asset Programs to meet Demand

The new assets required to meet growth will be acquired free of cost from land developments and constructed/acquired by Council. New assets constructed/acquired by Council are discussed in Section 5.5. The cumulative value of new contributed and constructed asset values are summarised in Figure 1.



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

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

5. LIFECYCLE MANAGEMENT PLAN

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

5.1 Background Data

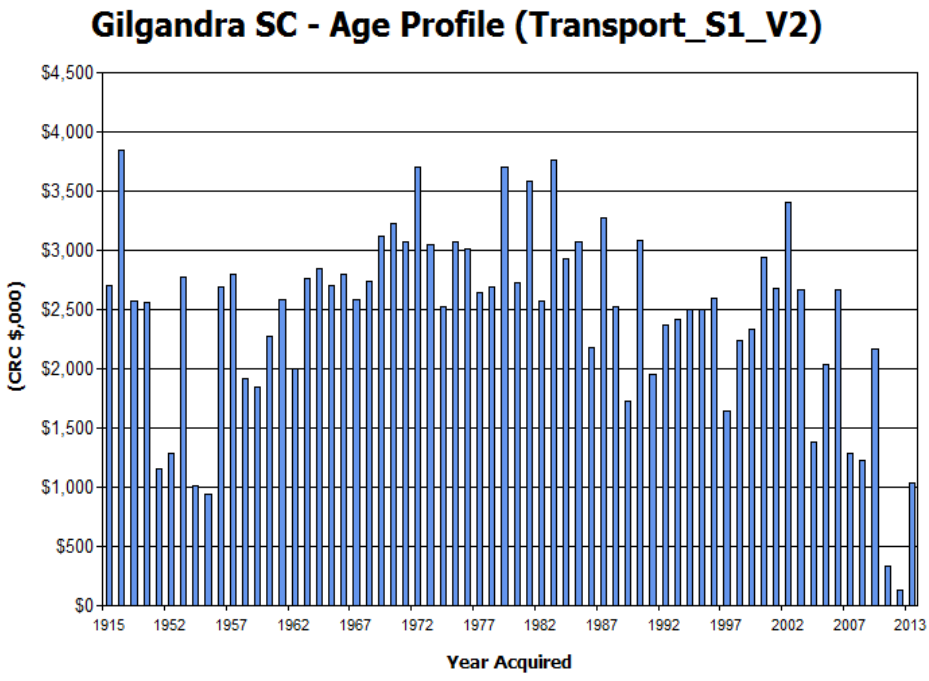
5.1.1 Physical parameters

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

Many segments of Councils rural road network are due or overdue for renewal. There is a significant number of aging timber bridges spread throughout Councils rural road network. These bridges are in a less than satisfactory condition in most cases and in many cases are reaching the end of their useful life. Footpaths and kerb and gutter in the township of Gilgandra are also aging and a number of segments require renewal.

The age profile of the assets included in this AM Plan is shown in Figure 2

Figure 2: Asset Age Profile



Plans showing the transport assets are held in a GIS database

5.1.2 Asset capacity and performance

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

Known deficiencies in service performance are known are detailed in Table 5.1.2.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

Table 5.1.2: Known Service Performance Deficiencies

Location	Service Deficiency
Timber bridges on rural roads	A number are now load limited due to condition and/or unserviceable
Rural roads	Underperforming in terms travel smoothness and overall condition ratings
Footpaths	Underperforming in terms of access standards for the elderly and disabled
Kerb and Gutter	Ageing network with potential for renewal back log

The above service deficiencies were identified from regular condition inspections by trained staff

5.1.3 Asset condition

Asset condition is monitored by regular inspection. In conjunction with the establishment of a Local Road Hierarchy Plan Council has determined the following inspection schedule for its transport assets

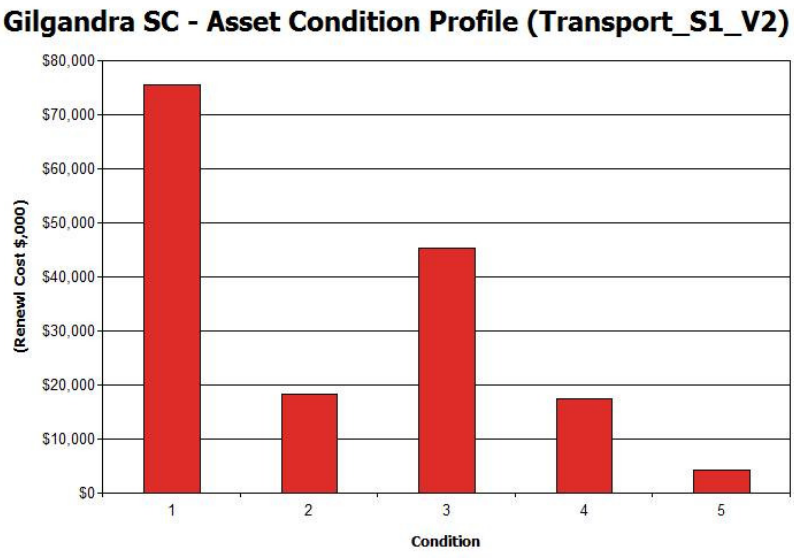
Road Category	Asset Type	Inspection Interval
Regionally Significant Road	Rural Road	Monthly
Primary Through Road	Rural Road	Monthly
Secondary Through Road	Rural Road	Three Monthly
Primary Non-Through Road	Rural Road	Three Monthly
Secondary Non-Through Road	Rural Road	Six Monthly
Large Residential Road	Rural Road	Monthly
Rural Local Road Bridges	Concrete	Twelve Monthly
Rural Local Road Bridges	Timber	Twelve Monthly
Regionally Significant Road	Urban Road	Monthly
		Monthly

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

Road Category	Asset Type	Inspection Interval
Primary Through Road	Urban Road	
Secondary Through Road	Urban Road	Three Monthly
Primary Non Through Road	Urban Road	Three Monthly
Rear Lanes	Urban Road	No Regular Inspections
Footpaths	Concrete	Annually
Footpaths	Bitumen/Asphalt	Annually
Footpaths	Grass	Annually
Footpaths	Natural	Annually
Kerb & Gutter	Concrete	Annually

The condition profile of Council's assets is shown in Figure 3.

Fig 3: Asset Condition Profile



2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

Condition is measured using a 1-5 grading system as detailed in Table 5.1.3

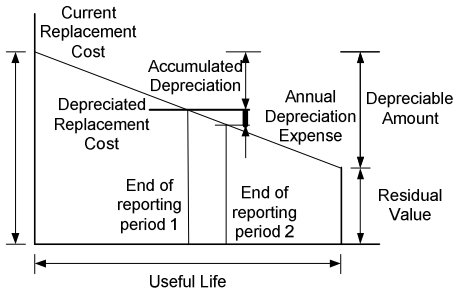
Table 5.1.3: Simple Condition Grading Model

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

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. Transport assets were last revalued at 30 June 2011. Transport assets are valued at current replacement cost. Figures exclude land and non-depreciable earth works.

Current Replacement Cost	$161,039,000
Depreciable Amount	$161,039,000
Depreciated Replacement Cost	$100,458,000
Annual Depreciation Expense	$2,415,000



Useful lives were reviewed in June 2013 by the Asset Management Plan Working Group.

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

Rate of annualAsset Consumption (Depreciation/Depreciable Amount)	1.5%
Rate of Annual Asset Renewal (Capital renewal exp/Depreciable amount)	1.3%
Rate of Annual Asset Upgrade/New (Capital upgrade exp/Depreciable amount)	0.10%
Rate of Annual Upgrade/New (including contributed assets	0.10%

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

In 2013/14 Council plans to renew transport assets at 84.5% of the rate they are being consumed and will be increasing its asset stock by 0.10% in the year.

5.1.5 Historical Data

Historical Data for the past 5 years is available in Councils Works and Technical Services Department file directory in spreadsheet form.

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 5.2.

Table 5.2: Critical Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk*	Treatment Costs
Unsealed Roads	Roughness, corrugation, potholes and gravel loss causing lower travel speed and increased risk of traffic crashes. They will also cause higher road user costs and discomfort.	High	Determine and apply optimal maintenance strategies. Formalise inspection and maintenance programme		Significant increase in expenditure
Sealed Roads	Weaker sub-base and base causing pavement damage and reducing pavement life	High	Inspect regularly and apply reactive and proactive maintenance works within budget constraint. Investigate frequently occurring failures		Significant increase in expenditure
Sealed Roads and Unsealed Roads	Inadequate hydraulic capacity and low level approach roads	High	Install a prioritised rolling programme of required maintenance works; ensure the budget is adequate to meet the maintenance requirement of the asset.		Significant increase in expenditure
Timber Bridges		High	Develop and implement timber bridge replacement program		Major funding increase

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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

5.3 Routine Operations and Maintenance Plan

Operations include regular activities to provide services such as public health, safety and amenity e.g. 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 classifies 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.

Actual past maintenance expenditure is shown in Table 5.3.1.

Table 5.3.1: Maintenance Expenditure Trends

Year	Maintenance Expenditure	
	Planned and Specific	Unplanned
2011/12	$1,222,000	$305,000
2012/13	$1,184,000	$297,000

Planned maintenance work is currently 80% of total maintenance expenditure.

Maintenance expenditure levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels with the exception of rural roads where a shortfall of 40% ($600k per annum) has been identified between current and required 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 AM Plan and service risks considered in the Infrastructure Risk Management Plan.

Assessment and prioritisation of reactive maintenance is undertaken by the organisation's staff using experience and judgement.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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 (50 – 70% planned desirable as measured by cost),
- 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 and Council/Board,
- 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 the organisation 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's service hierarchy is shown is Table 5.1.5.

Table 5.3.2: Transport Asset Service Hierarchy

Service Hierarchy	Service Level Objective
Local Roads(including bridges, culverts floodways, car parks and signs)	Refer to Councils Local Road Hierarchy Plan
Footpaths	Provide safe pedestrian access free of trip hazards, Disability Discrimination Act compliant and continuous where practical and warranted
Kerb and Gutter	Provide drainage relatively free of faults including localised flooding pooling and other drainage issues

Critical Assets

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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 maintenance 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 5.3.2.1.

Table 5.3.2.1: Critical Assets and Service Level Objectives

Critical Assets	Critical Failure Mode	Operations & Maintenance Activities
Timber Bridges	Load limited / unserviceable	Regular inspection and maintenance program

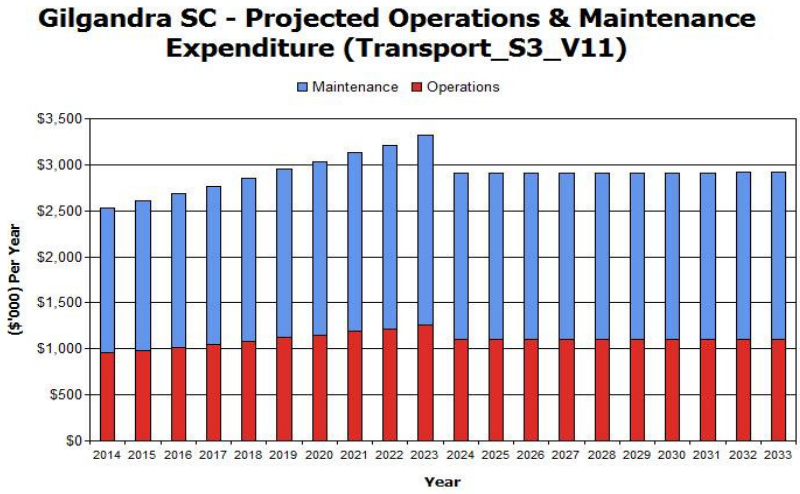
Maintenance work is carried out in accordance with the following Standards and Specifications.

- RMS and Council specifications.
- Relevant engineering standards.

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 4. Note that all costs are shown in 2013/14 dollar values (ie real values)

Figure4: Projected Operations and Maintenance Expenditure (Transport)



Deferred maintenance, i.e. 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.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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 identified in this asset management plan use the Asset Register data to project the renewal costs using acquisition year and useful life to determine the renewal year

The useful lives of assets used to develop projected asset renewal expenditures are shown in Table 5.4.1. Asset useful lives were last reviewed on 30June 2013 .

Table 5.4.1: Useful Lives of Assets

Asset (Sub)Category	Useful life (years)
Roads Sealed Gravel Pavement	 20 20 80
Road Signs	20
Bridges	100
Culverts	80
Floodways Gravel Sealed Concrete	 10 20 100
Footpaths Cycleways and Walkways	20
Kerb and Gutter	100
Car Park Seal Pavement	 20 80
Aerodrome Surface Pavement	 20 80

5.4.2 Renewal and Replacement Strategies

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

- Planning and scheduling renewal projects to deliver the defined level of service in the most efficient manner,
- Undertaking project scoping for all capital renewal and replacement projects to identify:
    - the service delivery 'deficiency', present risk and optimum time for renewal/replacement,
    - the project objectives to rectify the deficiency,
    - the range of options, estimated capital and life cycle costs for each options that could address the service deficiency,
    - and evaluate the options against evaluation criteria adopted by the organisation, and

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

  - 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 the Council/Board,
- 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 the organisation 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).[2]

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 AM Plan as key cost factors,
- Have high operational or maintenance costs, and
- Where replacement with modern equivalent assets would yield material savings.[3]

The ranking criteria used to determine priority of identified renewal and replacement proposals is detailed in Table 5.4.2.

Table 5.4.2: Renewal and Replacement Priority Ranking Criteria

Criteria	Weighting
Safety	30%
Local Road Hierarchy	50%
Condition – extent of deterioration of pavement seal footpath kerb and gutter etc.	20%
Total	**100%**

5.4.2 Renewal and replacement standards

[2] IPWEA, 2011, IIMM, Sec 3.4.4, p 3|60.
[3] Based on IPWEA, 2011, IIMM, Sec 3.4.5, p 3|66.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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

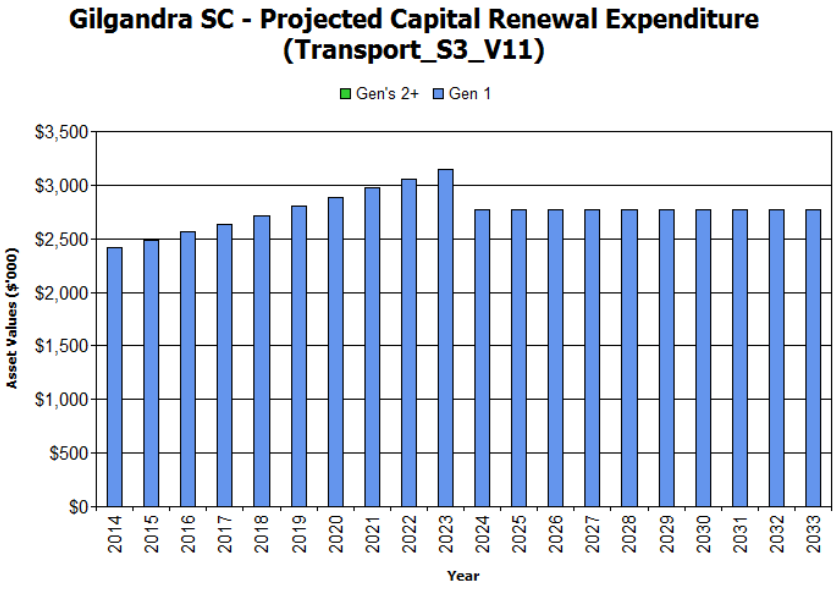
- RTA and Council specifications.
- Relevant engineering standards

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 ages. The expenditure is summarised in Figure 5. Note that all amounts are shown in real values.

The projected capital renewal and replacement program is shown in Appendix B.

Figure 5.1: Projected Capital Renewal and Replacement Expenditure (Transport)



Deferred renewal and replacement, i.e. 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 Councils capital works program will be accommodated in Councils Long Term Financial Plan . This is further discussed in Section 6.2.

5.5 Creation/Acquisition/Upgrade Plan

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

5.5.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as councillor or community requests, proposals identified by strategic plans or partnerships with other organisations. Candidate proposals are inspected to verify need and to develop a preliminary estimate. Verified proposals are ranked by

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in below

Table 5.5.1: New Assets Priority Ranking Criteria

Criteria	Weighting
Community Benefits (Local Road Hierarchy Plan)	40%
Community Expectation	10%
Lifecycle Costs	10%
Safety	40%
Total	**100%**

5.5.2 Capital Investment Strategies

Council 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/Board, 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 the organisation is obtaining best value for resources used.

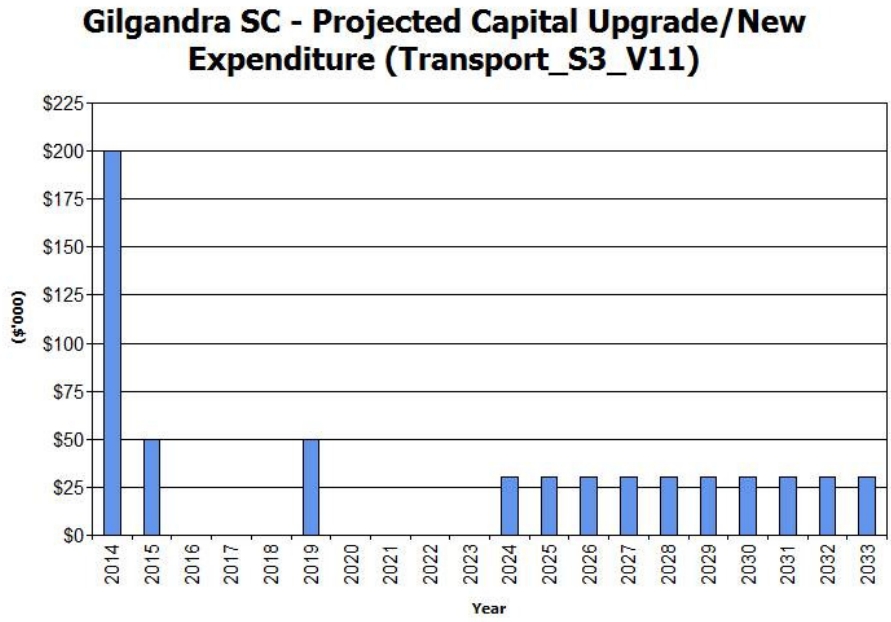
Standards and specifications for new assets and for upgrade/expansion of existing assets are the same as those for renewal shown in Section 5.4.2.

5.5.3 Summary of future upgrade/new assets expenditure

Projected upgrade/new asset expenditures are summarised in Fig 6. The projected upgrade/new capital works program is shown in Appendix C. All amounts are shown in real values.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

Figure 6.1: Projected Capital Upgrade/New Asset Expenditure (Transport)



Expenditure on new assets and services in Councils capital works program will be accommodated in Councils Long Term Financial Plan. This is further discussed in Section 6.2.

5.6 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6, together with estimated annual savings from not having to fund operations and maintenance of the assets. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any. Any revenue gained from asset disposals is accommodated in Councils long term financial plan.

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

Table 5.6: Assets identified for Disposal

Asset	Reason for Disposal	Timing	Disposal Expenditure	Operations & Maintenance Annual Savings
No transport assets identified for disposal				

5.7 Service Consequences and Risks

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

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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).

Scenario 3 – What we can do and be financially sustainable with AM Plans matching long-term financial plans.

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:

- Maintenance and renewal of rural roads in line with Councils Local Road Hierarchy Plan
- Renewal of associated timber bridges.

. 5.7.2 Service consequences

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

- Rural roads in less than satisfactory condition
- Load limited or unserviceable timber bridges

5.7.3 Risk consequences

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

- Safety
- Reduction in usable life (increased renewal costs)

These risks have been included with the Infrastructure Risk Management Plan summarised in Section 5.2 and risk management plans actions and expenditures included within projected expenditures.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

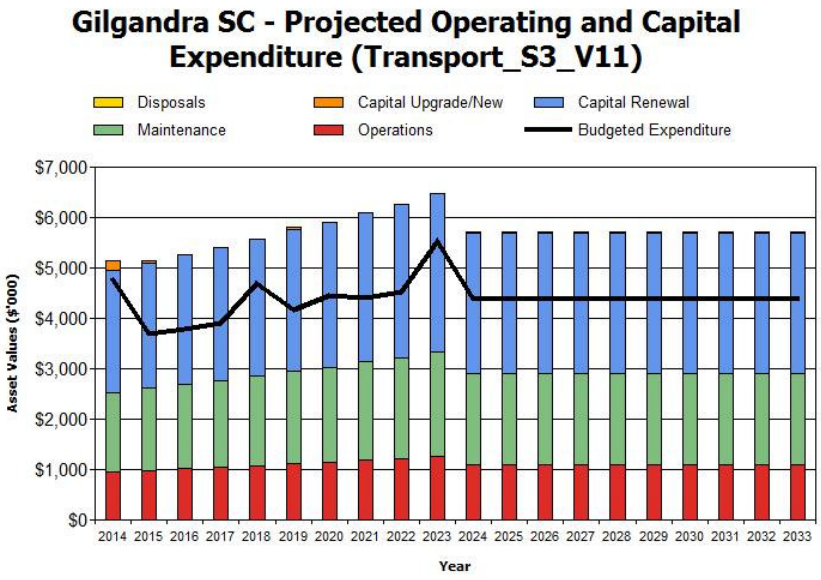
6. FINANCIAL SUMMARY

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 7 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 7: Projected Operating and Capital Expenditure (Transport)



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 Ratio[4] 53%

The Asset Renewal Funding Ratio is the most important indicator and reveals that over the next 10 years, the organisation is forecasting that it will have 53% of the funds required for the optimal renewal and replacement of its transport 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

[4] AIFMG, 2009, Financial Sustainability Indicator 8, Sec 2.6, p 2.18

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

expense). The life cycle cost for the services covered in this asset management plan is $5.3m per year (average operations and maintenance expenditure plus depreciation expense projected over 10 years).

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 life cycle expenditure over the 10 year planning period is $4.4 m per year (average operations and maintenance plus capital renewal budgeted expenditure in LTFP over 10 years).

A shortfall between life cycle cost and life cycle expenditure is the life cycle gap. The life cycle gap for services covered by this asset management plan is -$1m per year (-ve = gap, +ve = surplus).

Life cycle expenditure is 82% of life cycle costs.

The life cycle costs and life cycle expenditure comparison highlights any difference between present outlays and the average cost of providing the service over the long term. If the life cycle expenditure is less than that life cycle cost, it is most likely that outlays will need to be increased or cuts in services made in the future.

Knowing the extent and timing of any required increase in outlays and the service consequences if funding is not available will assist organisations in providing services to their communities in a financially sustainable manner. This is the purpose of the asset management plans and long term financial plan.

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 $5.7m on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is $4.4 m on average per year giving a 10 year funding shortfall of $1.3 m per year. This indicates that the organisation expects to have 77% 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 $5.2m on average per year.

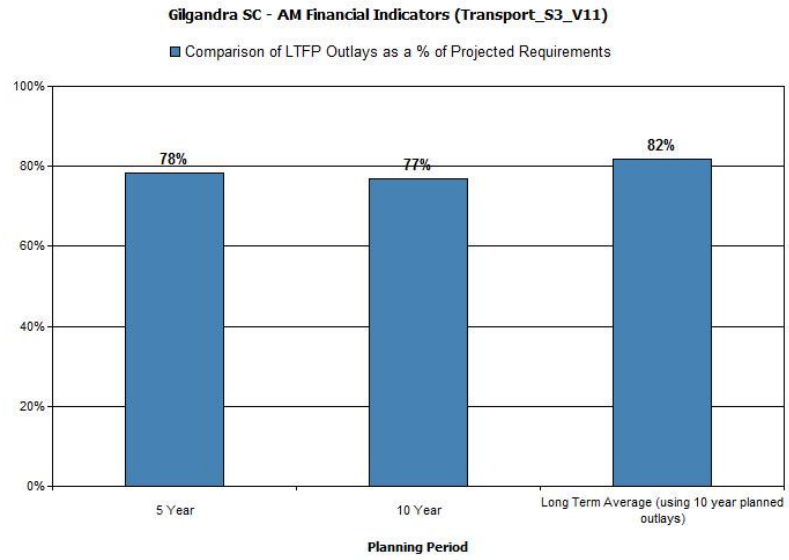
Estimated (budget) operations, maintenance and capital renewal funding is $4.1m on average per year giving a 5 year funding shortfall of $1.1m. This indicates that the organisation expects to have 78% of projected expenditures required to provide the services shown in this asset management plan.

Asset management financial indicators

Figure 7A shows the asset management financial indicators over the 10 year planning period and for the long term life cycle.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

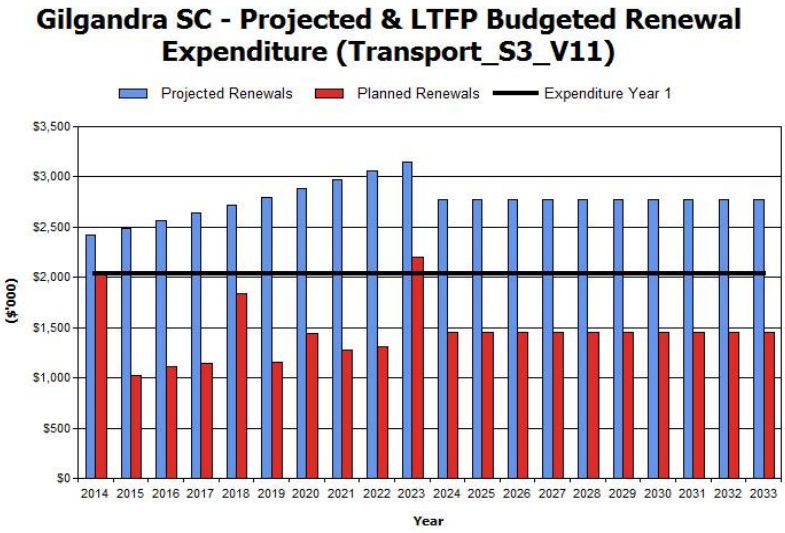
Figure 7A: Asset Management Financial Indicators



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 8 shows the projected asset renewal and replacement expenditure over the 10 years of the AM Plan. The projected asset renewal and replacement expenditure is compared to renewal and replacement expenditure in the capital works program, which is accommodated in Councils Long Term Financial Plan.

Figure 8: Projected and LTFP Budgeted Renewal Expenditure



2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

Table 6.1.1 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 Appendix D.

Table 6.1.1: Projected and LTFP Budgeted Renewals and Financing Shortfall

Year	Projected Renewals ($000)	LTFP Renewal Budget ($000)	Renewal Financing Shortfall ($000) (-ve Gap, +ve Surplus)	Cumulative Shortfall ($000) (-ve Gap, +ve Surplus)
2013/14	$2,416	$2,041	-$375	-$375
2014/15	$2,488	$1,028	-$1,460	-$1,835
2015/16	$2,562	$1,109	-$1,453	-$3,288
2016/17	$2,639	$1,141	-$1,498	-$4,786
2017/18	$2,719	$1,833	-$886	-$5,672
2018/19	$2,800	$1,157	-$1,643	-$7,315
2019/20	$2,884	$1,442	-$1,442	-$8,757
2020/21	$2,971	$1,278	-$1,693	-$10,450
2021/22	$3,060	$1,315	-$1,745	-$12,195
2022/23	$3,152	$2,197	-$955	-$13,150

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 LTFP indicates that further work is required on reviewing service levels in the AM Plan (including possibly revising the LTFP) 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 6.1.2 shows the projected expenditures for the 10 year long term financial plan.

Expenditure projections are in 2013/14 real values.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

Table 6.1.2: Projected Expenditures for Long Term Financial Plan ($000)

Year	Operations ($000)	Maintenance ($000)	Projected Capital Renewal ($000)	Capital Upgrade/ New ($000)	Disposals ($000)
2013/14	$941.00	$1,575	$2,041	$200	$0.00
2014/15	$995	$1,819	$1,028	$50	$0.00
2015/16	$1,035	$2,076	$1,109	$0.00	$0.00
2016/17	$1,078	$2,346	$1,596	$0.00	$0.00
2017/18	$1,110	$2,416	$2,288	$0.00	$0.00
2018/19	$1,158	$2,488	$1,612	$50	$0.00
2019/20	$1,179	$2,564	$1,897	$0.00	$0.00
2020/21	$1,231	$2,641	$1,733	$0.00	$0.00
2021/22	$1,251	$2,720	$1,770	$0.00	$0.00
2022/23	$1,304	$2,801	$2,652	$0.00	$0.00

6.2 Funding Strategy

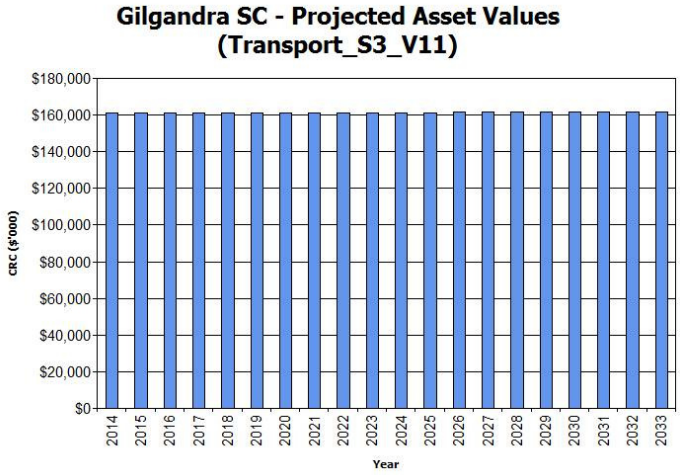
After reviewing service levels, as appropriate to ensure ongoing financial sustainability projected expenditures identified in Section 6.1.2 will be accommodated in the organisation's 10 year long term financial plan.

6.3 Valuation Forecasts

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

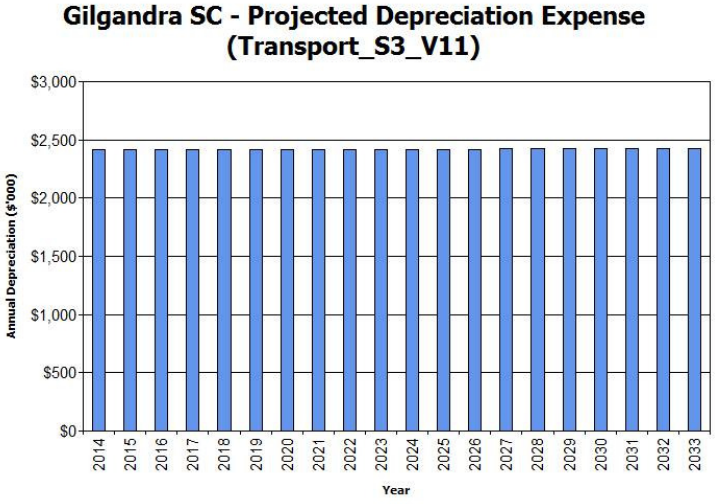
2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

Figure 9: Projected Asset Values



Depreciation expense values are forecast in line with asset values as shown in Figure 10.

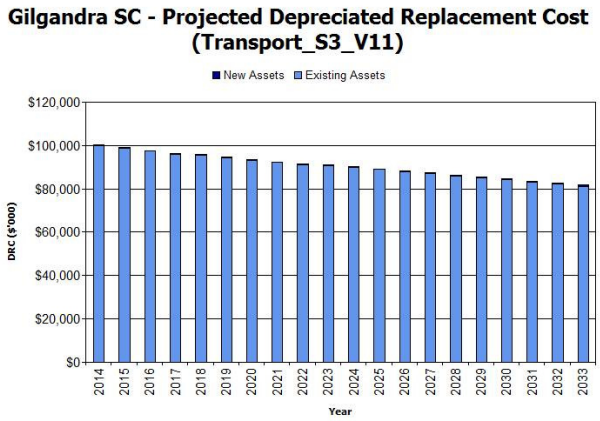
Figure 10: Projected Depreciation Expense



2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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 11. The depreciated replacement cost of contributed and new assets is shown in the darker colour and in the lighter colour for existing assets.

Figure 11: Projected Depreciated Replacement Cost



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 6.4.

Table 6.4: Key Assumptions made in AM Plan and Risks of Change

Key Assumptions	Risks of Change to Assumptions
Straight Line Depreciation	No risk due to Australian Standards Does not reflect actual degradation of assets
Valuations based on average replacement cost with like for life	Increased costs due to changed standards
Asset lives based on judgements made by staff who have a long experience of asset performance in local conditions	Depreciation changes

6.5 Forecast Reliability and Confidence

The expenditure and valuations projections in this AM 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 scale[5] in accordance with Table 6.5.

Table 6.5: Data Confidence Grading System

Confidence Grade	Description
A Highly reliable	Data based on sound records, procedures, investigations and analysis, documented properly and recognised as the best method of assessment. Dataset is complete and estimated to be accurate ± 2%

[5] IPWEA, 2011, IIMM, Table 2.4.6, p 2|59.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 6.5.1.

Table 6.5.1: Data Confidence Assessment for Data used in AM Plan

Data	Confidence Assessment	Comment
Demand drivers	B	Based on experienced organisational staff
Growth projections	B	Australian Bureau of Statistics
Operations expenditures	A	The understanding of split between operations and maintenance is uncertain ; however the total of operations and maintenance is reliable
Maintenance expenditures	A	As above
Projected Renewal exps. - Asset values	B	Valuations undertaken in 2011
- Asset residual values	NA	No residual values
- Asset useful lives	C	Useful lives
- Condition modelling	B	Has been reviewed over past 6 months
- Network renewals	C	Process of identifying renewals currently under review
- Defect repairs	B	Based on regular inspection and customer request system
Upgrade/New expenditures	B	No major new expenditures planned/affordable
Disposal expenditures	NA	No disposals included

Over all data sources, the data confidence is assessed as Medium confidence level for data used in the preparation of this AM Plan

7. PLAN IMPROVEMENT AND MONITORING

7.1 Status of Asset Management Practices

7.1.1 Accounting and financial systems

Council uses IT Vision's SynergySoft software solution for asset accounting.

Accountabilities for financial systems

The financial systems are managed by the Finance Section of the Corporate and Business Services Department of Council

Accounting standards and regulations

Council works under Australian Accounting Standards and NSW State Legislation/Regulations and Directives issued by the Division of Local Government

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

NSW Local Government Act 1993

Local Government Amendment (Planning and Reporting) Act 2009

NSW Local Government Code of Accounting Practice and Financial Reporting

Australian Accounting Standards Board AASB116

Capital/maintenance threshold

Council is in the process of developing a capitalisation and depreciation policy to guide its decision making on issues such as capital/maintenance thresholds.

Required changes to accounting financial systems arising from this AM Plan

Changes to asset management systems identified as a result of preparation of this asset management plan are:

- Develop identification and reporting on expenditures, with of separate cost for operations, maintenance and capture capital expenditures as renewal or upgrade/new,
- Development of a single corporate asset register, in which financial calculations including calculation of annual depreciation can be undertaken by council.
- Linking of the customer service system to the corporate asset register to link requests to asset records,
- Improved project cost accounting to record costs against the asset component and develop valuation unit rates.

7.1.2 Asset management system

Council uses “Asset Edge-Reflect” software to collect and collate information on its assets. This information in the entered into the ITVision SynergySoft Asset Management module.

Asset registers

Council has one Asset Register held in an ITVision SynergySoft Module.

Linkage from asset management to financial system

A linkage between the asset management and asset register modules is currently being developed by ITVision.

Accountabilities for asset management system and data maintenance

Councils Asset Manager is responsible for asset management and data collection and maintenance.

Required changes to asset management system arising from this AM Plan

- Review of accuracy and currency of asset data,

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

- Continued development of a single technical asset register as the corporate asset register, in which financial calculations including calculation of annual depreciation can be undertaken by council.

7.2 Improvement Program

The asset management improvement plan generated from this asset management plan is shown in Table 7.2.

- ***Table 7.2: Improvement Plan***

Task No	Task	Responsibility	Resources Required	Timeline
1	Integrate Councils Asset Register and Asset Management SynergySoft Modules	Corporate & Business Services (Asset Manager & Finance Manager)	Staff Time	June 2014
2	Link the customer service system to the corporate asset register to link requests to asset records	Corporate & Business Services (Records Officer)	Staff Time	June 2014
3	Review methodology for determining remaining life, with detail assessment for assets requiring renewal in the medium term (next 10-20 years) An outcome should be that the remaining lives from the asset register will generate a renewal scenario aligning with the Asset Replacement Program and Long Term Financial Plan. (Scenario 1 described in this asset management plan will match Scenario 3)	Corporate & Business Services (Asset Manager & Finance Manager)	Staff Time	June 14
4	Monitor and report Levels of Service performance measures and targets.	Technical	Staff Time	June 2014
5	Carry out revaluation of all transport assets	Corporate & Business Services (Asset Manager)	Staff Time	December 2014

7.3 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 the budget decisions.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

The AM Plan has a life of 4 years (Council election cycle) and is due for complete revision and updating within 12 months of each Council election.

7.4 Performance Measures

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

- The degree to which the required projected expenditures identified in this asset management plan are incorporated into Councils 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 Councils Community Strategic Plan and associated plans.
- The Asset Renewal Funding Ratio achieving the target of 1.0

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

8. REFERENCES

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

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

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

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

Gilgandra Shire Community Strategic Plan 2013/14-2022/23,

Gilgandra Shire Council Delivery Program 2013/14-2016/17

Gilgandra Shire Council Operational Plan 2013/14

Gilgandra Shire Council Long Term Financial Plan 2013/14-2022/23

Gilgandra Shire Council Local Road Hierarchy Plan Version 1 (July 2013)

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

9. APPENDICES

Appendix A Maintenance Response Levels of Service

Appendix B Budgeted Expenditures Accommodated in LTFP

Appendix C Abbreviations

Appendix D Glossary

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

Appendix A Maintenance Response Levels of Service

Refer to Councils Local Road Hierarchy Plan

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

Appendix B Budgeted Expenditures Accommodated in LTFP

NAMS.PLUS2 Asset Mana Gilgandra SC

port_S3_V11 Asset Management Plan

xpenditure projections **2014** (yr ending 30 June)

Transport

Asset values as at 30 June 2013 Calc CRC from Asset Register

Current replacement	$161,039	(000)	$0	(000)
Depreciable amount	$161,039	(000)	This is a check for you.	
Depreciated replacem	$100,458	(000)		
Annual depreciation e	$2,415	(000)		

Operations and Maintenance Costs from New Assets

	% of asset value
Additional operations costs	0.68%
Additional maintenance	1.12%
Additional depreciation	1.50%

Planned renewal budget (information only)

You may use these values calculated from your data or overwrite the links.

Planned Expenditures from LTFP

ar Expenditure Proje Note: Enter all values in current **2014** values

Financial year ending June 30	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	$000	$000	$000	$000	$000	$000	$000	$000	$000	$000
Expenditure Outlays included in Long Term Financial Plan (in current $ values)										
Operations										
Operations **budget**	$105	$108	$111	$115	$118	$122	$125	$129	$133	$137
Management **budget**	$851	$876	$903	$930	$957	$1,001	$1,016	$1,063	$1,078	$1,126
AM systems **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total operations	$956	$984	$1,014	$1,045	$1,075	$1,123	$1,141	$1,192	$1,211	$1,263
Maintenance										
Reactive maintenance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Planned maintenance	$1,575	$1,621	$1,670	$1,720	$1,772	$1,825	$1,880	$1,936	$1,994	$2,054
Specific maintenance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total maintenance	$1,575	$1,621	$1,670	$1,720	$1,772	$1,825	$1,880	$1,936	$1,994	$2,054
Capital										
Planned renewal **bud**	$2,041	$1,028	$1,109	$1,141	$1,833	$1,157	$1,442	$1,278	$1,315	$2,197
Planned upgrade/new	$200	$50	$0	$0	$0	$50	$0	$0	$0	$0
Non-growth contrib	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Asset Disposals										
Est Cost to dispose o	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Carrying value (DRC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Additional Expenditure and not included abo	2014 $000	2015 $000	2016 $000	2017 $000	2018 $000	2019 $000	2020 $000	2021 $000	2022 $000	2023 $000
Additional Expenditure Outlays Requirements (e.g from Infrastructure Risk Managem										
Operations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Maintenance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capital Renewal	to be incorporated into Forms 2 & 2.1 (where Method 1 is used) OR Form 2B Defect Repairs (where Method 2 c									
Capital Upgrade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
User Comments #2										

Forecasts for Capital Renewal using Methods 2 & 3 (Form 2A & 2B) & Capital Upgrade	2014 $000	2015 $000	2016 $000	2017 $000	2018 $000	2019 $000	2020 $000	2021 $000	2022 $000	2023 $000
Forecast Capital Rene from Forms 2A & 2B	$2,416	$2,488	$2,562	$2,639	$2,719	$2,800	$2,884	$2,971	$3,060	$3,152
Forecast Capital Upgrade from Form 2C	$200	$50	$0	$0	$0	$50	$0	$0	$0	$0

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

Appendix C 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
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
WDCRD	Written down current replacement cost

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

Appendix D Glossary

Annual service cost (ASC)

1) Reporting actual cost
   The annual (accrual) cost of providing a service including operations, maintenance, depreciation, finance/opportunity and disposal costs less revenue.
2) For investment analysis and budgeting
   An estimate of the cost that would be tendered, per annum, if tenders were called for the supply of a service to a performance specification for a fixed term. The Annual Service Cost includes operations, maintenance, depreciation, finance/ opportunity and disposal costs, less revenue.

Asset

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

Asset 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)*

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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 arms 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

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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 organisation, 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 *

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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.

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7

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 is 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 organisation.

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, AIFMG Glossary

Additional and modified glossary items shown *

2 Based on IPWEA,2011, IIMM, Sec 1.2 p 1/7