



# Wandering Shire Council

## Roads

# Asset Management Plan



# WANDERING ROAD ASSET MANAGEMENT PLAN

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# WANDERING ROAD ASSET MANAGEMENT PLAN

## 1 Executive Summary

### Context

The Shire of Wandering is a small rural authority located in the Central South region of Western Australia. Some 120km South East of Perth it is a short yet scenic drive off the Albany Highway to picturesque fields and homes. With an area of 1, 955 km<sup>2</sup> it is a cosy farming town with approximately 600 people residing in the Shire and less than 100 people in the Township itself.

The Shire borders the local authorities of Armadale, Serpentine – Jarrahdale, Murray, Boddington, Williams, Cuballing, Pingelly, Brookton and Beverley.

The Shire of Wandering has had a stable population growth over the past 10 years. The Preliminary Census of Population and Housing data from the Australian Bureau of Statistics (ABS) estimates the resident population for the Shire at 442 people in 2011

### Road Infrastructure Service

The Unsealed and Sealed road network comprises predominantly local rural roads with some areas on the outskirts of villages still unsealed and a small section of regional road still unsealed.

Unsealed road assets have been broken down into two main components for the purpose of this asset management plan with these components being formation (or earthworks); and pavement (i.e. gravel).

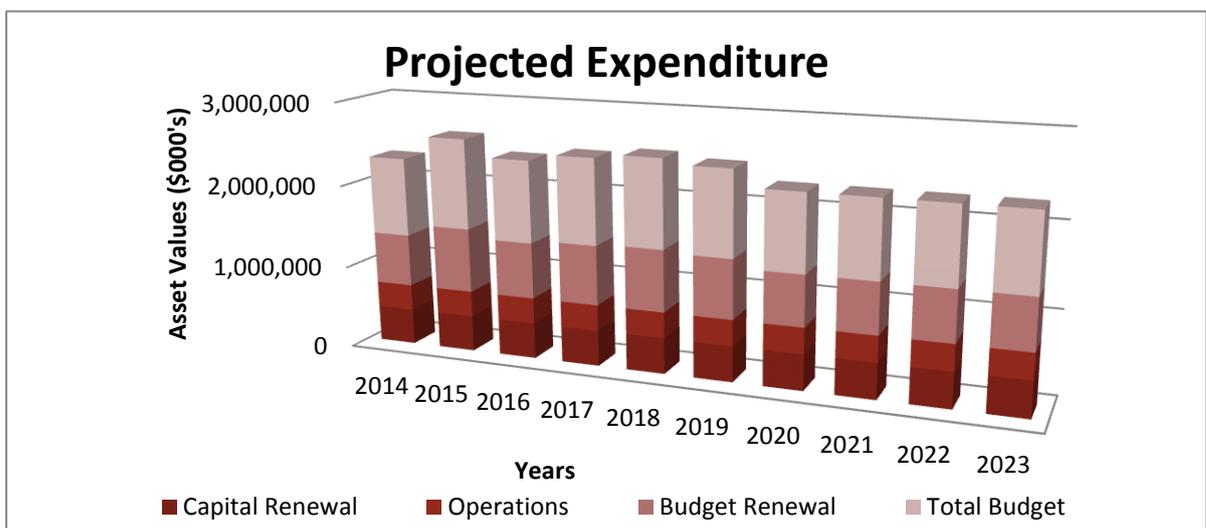
These infrastructure assets have a replacement value of \$21,473,000. This figure does not include any allowance for the value of the formation as once the formation is constructed it is not considered to depreciate in the same manner as the pavement

### What does it Cost?

The asset management plan has been developed on the basis that Council has to spend \$742,000 on roads per annum. For the “first cut plan”, this funding has been allocated to maintenance and renewal.

Council’s estimated available funding for this period is \$900,000 per year. Projected and budgeted expenditure are shown in the graph below.

### Graph of projected expenditure



# WANDERING ROAD ASSET MANAGEMENT PLAN

The current budget of \$900,000 per annum is considered sufficient to provide the level of service currently expected by the community. Future revisions of this plan will identify ways to increase spend on to achieve desired service levels.

## What we will do

Council plans to provide Unsealed Road Services from the following:

- Operation, maintenance and renewal of unsealed roads to meet service levels set by council in annual budgets.
- Identifying opportunities for increased productivity through innovative work practices and technology
- Exploring alternate future funding strategies to better service the unsealed road network
- Rationalising the unsealed road network to ensure the asset base is financially sustainable

## 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 grading of all unsealed roads at desirable intervals
- Resheeting of all unsealed roads at desirable intervals
- Maintenance grading of all Councils unsealed roads on an annual basis
- Sealing of roads that are currently unsealed, other than regional roads
- Renewing of all pavements at desirable intervals

## Managing the Risks

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

- Not resheeting all roads at adequate intervals
- Rapid deterioration of some unsealed roads due to environmental conditions
- Maintaining all unsealed roads in a safe condition
- Reductions in levels of grant funding
- Not replacing all sealed road surfaces at adequate intervals
- Rapid deterioration of some ageing road pavements

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

- Monitoring the condition of unsealed and sealed road assets
- Taking a long term network wide approach to decisions on transport infrastructure expenditure
- Monitoring conditions of assets and keeping the community informed of changes in service levels from assets should they occur
- Signposting major hazards on unsealed roads should they occur and not be immediately dealt with due to financial constraints
- Lobbying levels of government for continuing and increased grant funding support.

## The Next Steps

The actions resulting from this asset management plan are:

- Improving the quality of data available on sealed and unsealed road assets
- Reviewing service levels in line with long term funding availability
- Developing improved systems for assessing useful lives of assets
- Rationalising the unsealed road asset base
- Reviewing the most appropriate budget mix between maintenance and renewals to optimise service delivery

# WANDERING ROAD ASSET MANAGEMENT PLAN

Over recent years the Wandering LGA, along with much of WA, has experienced several floods which have caused widespread damage to transport infrastructure assets in particular. For Wandering Council this has meant that works programs have had to be reprioritised and it has been extremely difficult to accurately represent the condition of assets across the network. During flooding several unsealed roads have experienced inundation which has and will continue to have an impact on the rate at which they deteriorate

## Questions you may have

### What is this plan about?

This asset management plan covers the sealed and unsealed road infrastructure assets that assist in serving the Wandering Community's Transport Infrastructure needs. These assets include predominantly unsealed local roads. These assets enable people to travel and transport goods throughout the local government area as well as access other areas.

### 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 unsealed road network was constructed from government grants, gifted by other levels of government or gifted by developers, often provided and accepted without consideration of ongoing operations, maintenance and replacement needs.

Councils' present funding levels are sufficient to continue to provide existing services at current levels over the life of this plan. Into the foreseeable future, the condition of Councils unsealed road network is going to get worse unless increased funds can be sourced.

### 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, replacing existing and constructing new assets to optimise life cycle costs,
3. Making tradeoffs between service levels and costs to ensure that the community receives the best return from infrastructure
4. Consulting with the community to ensure that transport services and costs meet community needs and are affordable,
5. Developing partnership with other bodies, where available to provide services;
6. 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 some areas, unless new sources of revenue are found. For unsealed road assets, examples of the service level reduction may include load, speed and access restrictions on unsealed roads.

### What can we do?

Council can develop options and priorities for future unsealed road services. This can be achieved by determining costs of providing the services and consulting with the community to plan future services with the aim of matching the community services needs with ability to pay for services and maximizing benefit to the community for costs to the community.

# WANDERING ROAD ASSET MANAGEMENT PLAN

## 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. 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.

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

- Wandering Shire Council Strategic Community Plan 2013-2023
- Wandering Shire Council Corporate Plan 2013/17
- Wandering Shire Council LTFP 2013/23

This 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	Asset Register Replacement Cost	Depreciated Replacement Cost
Sealed Roads		
Unsealed Roads		
<b>TOTAL</b>	<b>\$21,473,070</b>	<b>\$9,628,470</b>

### 2.2 Goals and objectives asset management

The 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:

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

# WANDERING ROAD ASSET MANAGEMENT PLAN

The goal of this asset management plan

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

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

## Vision

***A healthy, harmonious and progressive community where all people are willing to contribute and enjoy opportunities to be successful***

## Our goals are:

- A community that is involved and caring
- A robust and diverse rural economy
- Development that is in keeping with the rural landscape
- Infrastructure services that are well planned and delivered
- A strong and effective organisation

Relevant goals and objectives and how these are addressed in this asset management plan

## Goal

**Administration** - To develop financial, administrative and engineering policies and procedures to ensure all activities of Council are properly managed to obtain effective and efficient utilisation of all resources.

To provide sound financial planning and reporting.

## Objective

- Provide information and advice to Council to enable sound decisions to be made.
- Preparation of Operational, 4 year Delivery and 10 year Community Strategic Plan.

## How Goal and Objective addressed in AMP

The Asset Management Plan in conjunction with Long Term Financial Plan and the Community Plan are the tools by which Council assesses the long term financial sustainability of council's infrastructure assets.

Planning long term sustainable infrastructure is important to enable the appropriate resources to be identified and provided. Planning long term sustainable infrastructure is important to enable Council to meet its statutory Council governance.

## 2.3 Plan Framework

Key elements of the plan are

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

## 2.4 Core and Advanced Asset Management

This asset management plan is prepared as a first cut 'core' asset management plan. 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. Moving towards an "advanced" asset management plan requires increased resources and financial inputs. Future revisions of the asset management plan will consider if there is value for the community in moving to an advanced asset management plan.

### 2.4.1 Limitations

This asset management plan initially provides an approach to basic asset management based on:

- Best available current information
- Current level of service
- Contrasting existing management strategies with opportunities for improvement
- A long term financial plan for 10 years, resulting from financial needs predictions through particular asset's economic life span then prioritising work for a rolling 4 years program focusing in detail on capital, operational and maintenance requirements.
- A life cycle approach

As mentioned previously in this plan, Council currently has limited reliable data available on its unsealed road network, with this further compounded by flood damage.

This initial plan is based on the best information available at the time of preparation. The plan will be regularly reviewed and updated with the level of sophistication improving incrementally to an optimum level that is appropriate to the needs of council and the community. Council may consider investing in an asset management system which may enable council to improve processes and prepare asset management plans based on increased data accuracy, including expenditure history and asset performance.

# WANDERING ROAD ASSET MANAGEMENT PLAN

The data that this plan is based on has several limitations with the most significant of these being:

- Council has limited historical unit rate data for its unsealed road assets
- Limited segmentation of unsealed road assets has been undertaken
- Detailed condition assessments have not been undertaken for unsealed road assets

## 2.5 Community Consultation

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

## 3. LEVELS OF SERVICE

### 3.1 Customer Research and Expectations

Council has not carried out any research on customer expectations. This will be investigated for future updates of the asset management plan.

### 3.2 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 1995	Sets out role, purpose, responsibilities and powers of local governments including the preparation of Community Strategic Plan and Corporate Plan. Specifies requirements relating to purchasing (Tendering) and disposal of assets.
Roads Act	Set out the rights of members of the public to pass along public roads, the rights of persons who own land adjoining a public road to have access to the public road, and to establish the procedures for the opening and closing of a public road, to provide for the classification of roads, to provide for the declaration public authorities as roads authorities for both classified and unclassified roads, to confer certain functions (in particular, the function of carrying out road work), and to regulate the carrying out of various activities on public roads.
Work Health and Safety Act & Regulation	Sets out roles and responsibilities to secure the health, safety and welfare of persons at work

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## 3.3 Current Levels of Service

Council has defined service levels in two terms.

**Community Levels of Service** relate to the service outcomes that the community wants in terms of safety, quality, quantity, reliability, responsiveness, cost effectiveness and legislative compliance.

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

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

**Technical Levels of Service** - Supporting the community service levels are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities that the council undertakes to best achieve the desired community outcomes.

Technical service measures are linked to annual budgets and the resources Council applies in trying to achieve the community levels of service.

Council's current service levels are detailed in Table 3.3.

**Table 3.3: Current Service Levels**

Key Performance Measure	Level of Service Objective	Performance Measure Process	Desired Level of Service	Current Level of Service
<b>COMMUNITY LEVELS OF SERVICE</b>				
<u>Quality</u>	Smoothness of surfaces	Customer service requests	Less than 10 customer requests per month relating to surface roughness	Unknown
<u>Function</u>	Roads are accessible	Customer service requests relating to access	Less than 40 customer requests per month relating to loss of access	Unknown

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<u>Safety</u>	Provide a safe unsealed road network free from major hazards	Number of injuries and accidents	No accidents/injuries resulting from condition of unsealed road assets	Unknown
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Key Performance Measure	Level of Service Objective	Performance Measure Process	Desired Level of Service	Current Level of Service
<b>TECHNICAL LEVELS OF SERVICE</b>				
<u>Condition</u>	Optimise condition of unsealed road assets within budget constraints	Compliance with annual works program	Within +5% to - 10% of annual works program budget	Unknown
<u>Accessibility/Safety</u>	Network is safe and accessible	Inspection regime	No major safety or access issues left unaddressed within 3 days of notification	Unknown
<u>Responsiveness</u>	Requests are dealt with and responded to in a timely manner	Response Times	All requests responded to within 5 days notifying of actions	Unknown
<u>Cost Effectiveness</u>	Manage unsealed road assets in a cost effective manner	Unit rate monitoring	To be developed	Unknown

### 3.4 Desired Levels of Service

At present, indications of desired levels of service are obtained from various sources including residents' feedback to Councillors and staff, service requests and correspondence. Council has yet to quantify desired levels of service. This will be done in future revisions of this asset management plan.

## 4. FUTURE DEMAND

### 4.1 Demand Forecast

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

Within the Wandering LGA there is a possibility that demand for greater service levels from unsealed road assets may eventuate. The main driver of this demand is likely to be a requirement for increasing agricultural productivity by reducing transport costs. Council shall consider on a case by case basis how any increase in demand for a particular asset may be managed. This AMP does not currently include any budget allocation for funding increases in demand

### 4.2 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.

Over the 10 year period covered by this plan there is not expected to be any material change in demand from unsealed road assets. The only expected change is an increase in demand for access from higher productivity vehicles used for agricultural purposes. Opportunities identified to date for demand management are shown in Table 4.2. Further opportunities will be developed in future revisions of this asset management plan.

**Table 4.2: Demand Management Plan Summary**

Service Activity	Demand Management Plan
Access for high productivity vehicles	Assess requested routes when applied for to determine suitability and modifications required

### 4.3 New Assets for Growth

It is not anticipated that Council will require or acquire any new assets for growth during the life of this asset management plan. Growth is predicted to be negligible and any minor increase in new assets through growth will be accounted for at the next review of this asset management plan.

## 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.

Council owns a broad range of sealed and unsealed road assets that vary in age, condition and useful lives. These road assets are constructed from a variety of pavements (gravels) which have been dependent on availability of materials and industry best practice at the time of construction.

Each of the different types of assets behaves differently and accordingly, this provides challenges in the management of the unsealed road network.

Council currently has limited information available on the age profile of its unsealed road assets and obtaining this data is considered quite difficult. Future revisions of this plan will look to incorporate age data.

The age profile of the assets included in this AM Plan is still be worked on by staff through Roman 2. This information is being collated through a combination of local knowledge, condition assessment and estimations. Future revisions of this plan will include the age of assets as well as fair value of the road infrastructure.

#### 5.1.2 Asset capacity and performance

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

Locations where deficiencies in service performance are known are detailed in Table 5.1.2 below.

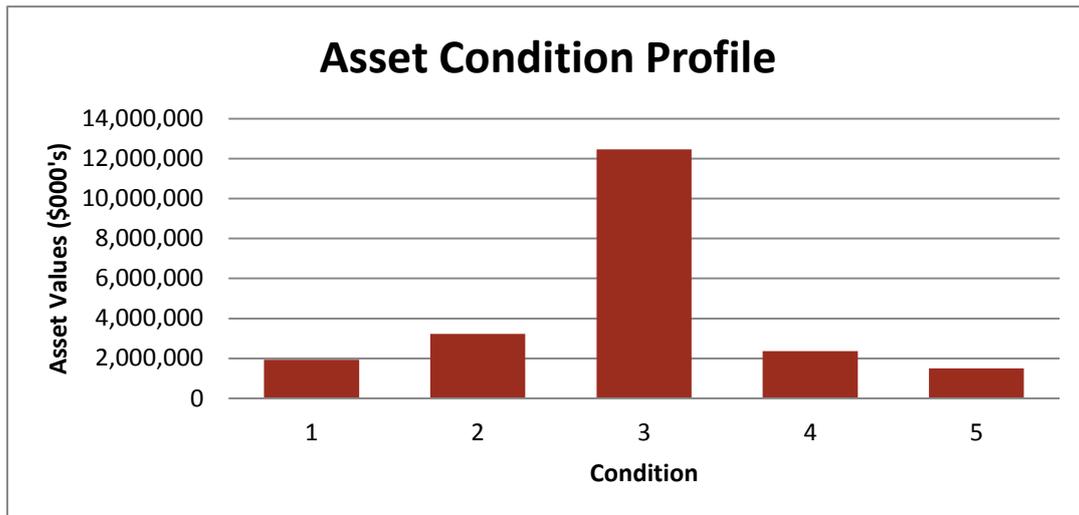
<b>Location</b>	<b>Service Deficiency</b>
Numerous unsealed roads	Poor road geometry and alignment
Numerous unsealed road pavements	Inadequate pavement depth and material quality
Numerous unsealed roads	Inadequate drainage lines and pavement elevations to allow for drainage
Sealed rural roads	Poor road geometry and alignment
Numerous sealed road pavements	Inadequate pavement depth and material quality

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## 5.1.3 Asset condition

The condition profile of assets included within this AM Plan is shown in Figure 2. This information was gathered through a combination of previously recorded data, visual inspections of key assets, utilisation of local knowledge and sampling of lower priority assets

**Figure 2: Asset Condition Profile**



Condition is measured using a 1 – 5 rating system<sup>3</sup> as detailed in Table 5.1.3.

**Table 5.1.3: IIMM Description of Condition**

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

## 5.1.4 Asset valuations

The value of assets recorded in the asset register as at 30 June 2011 covered by this asset management plan is shown below. Assets were last revalued at 30 June 2011. (Council is in the process of re-valuing its road assets for the year ended 30 June 2014, and this data is subject to change until the valuation has been completed)

Current Replacement Cost \$21,473,070  
 Depreciable Amount \$16,249,317  
 Depreciated Replacement Cost \$9,628,469  
 Annual Depreciation Expense \$420,021

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

Asset consumption (Depreciation / depreciable amount) = 2.61%

Asset renewal (Capital renewal exp / depreciable amount) 4.04%

Based on the above figures, Council is currently renewing assets at 155% of the rate they are being consumed. It should be noted that this calculation takes the aggregate planned renewal expenditure over the 10 year life of this plan and averages it out on an annual basis for comparison with the annual depreciation expense. In reality Council will vary its future renewal budgets to align more closely with required renewals when they fall due.

To provide services in a financially sustainable manner, Council will need to ensure that it makes allowance for future asset renewals by setting aside funding each year in to an internally restricted reserve so that assets can be replaced in the future. This function forms part of Council's Long Term Financial Plan.

## 5.1.5 Asset hierarchy

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

Council's service hierarchy is shown in Table 5.1.5.

**Table 5.1.5: Sealed and Unsealed Road Asset Service Hierarchy**

Service Hierarchy	Service Level Objective
Group 1	Maintain to the highest standard of Councils Road network and maintain safe access at all times
Group 2	Maintain to a safe standard and maintain access under 98% of conditions
Group 3	Maintain safe access to properties at all times
Group 1	Maintain to the highest standard of Councils Unsealed Road network and grade 2 times per annum
Group 2	Maintain to a safe standard and grade 1 time per annum
Group 3	Maintain safe access to properties and asses priorities for grading based on remaining budget

The above hierarchy system will be used to assist in determining future maintenance and capital renewal priorities. Within the sealed local rural roads category Council will rank roads based on traffic volumes which will be incorporated into future revisions of this asset management plan. An action resulting from this asset management plans is to improve reliability of traffic volume data for unsealed roads.

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## 5.2 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 are summarised in Table 4.2.

Service or Asset at Risk	What can Happen	Risk Rating (VH,H)	Risk Treatment Plan
Unsealed Roads	Loss of all weather access	H	Develop road hierarchy and resheet schedule to suit existing funding, erect warning signs. Keep community informed of service levels
Sealed Road Surfaces	Reduction in vehicle travel speed from poor condition surfaces, increased pavement damage due to moisture	H	Improve allocation of current funding. Report on funding needs to Council. Collect better data on condition and useful lives of roads, determine optimum maintenance and renewal intervention levels & priorities works on these parameters
Sealed Road Pavements	Premature failure, reduction in travel speeds	H	Improve allocation of current funding & find additional funds, Collect better data on condition and useful lives of roads, determine optimum maintenance and renewal intervention levels & prioritize works on these parameters

## 5.3 Routine Maintenance Plan

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

### 5.3.1 Maintenance plan

Maintenance includes reactive, planned and specific maintenance work activities.

Reactive maintenance is unplanned repair work carried out in response to service requests and management/supervisory directions. Planned maintenance is repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown experience, prioritising, scheduling, actioning the

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work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Prior to the development of this AMP there has been variance in the levels of maintenance expenditure; and generally the level of maintenance undertaken is considered to be adequate to maintain a safe and accessible unsealed road network.

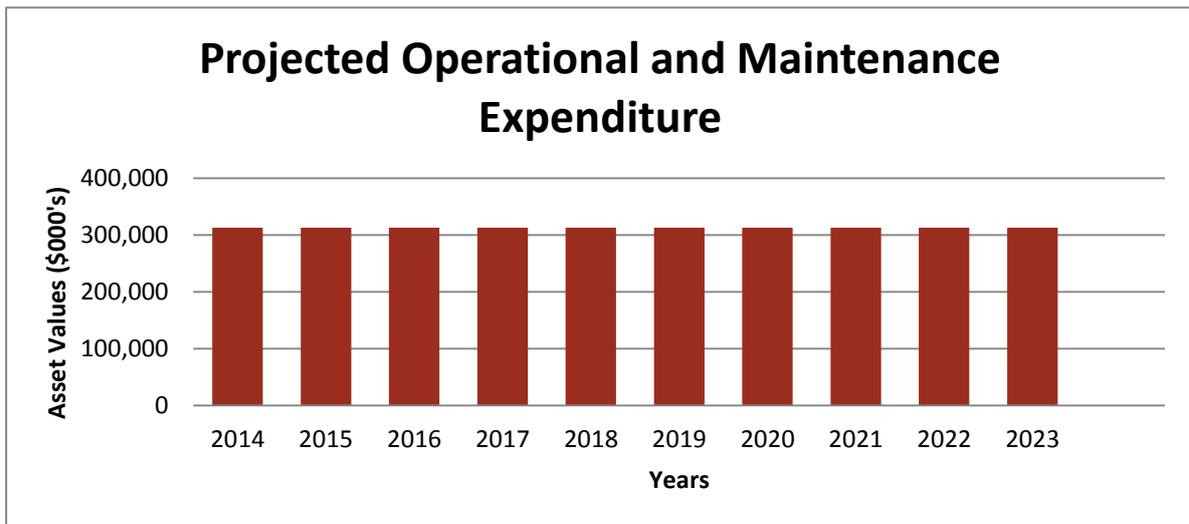
It is important to note that with limited budget availability it is difficult to balance maintenance requirements with undertaking renewals at optimum intervals for all assets.

The level of maintenance required on the sealed road network has increased over time, predominantly as a result of not resealing sealed pavements at appropriate frequencies. It is important to note that with limited budget availability it is difficult to balance maintenance requirements with undertaking renewals at optimum intervals for all assets.

### 5.3.2 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. Note that all costs are shown in 2014 dollar values

**Figure 3: Projected Operational and Maintenance Expenditure**



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

## 5.4 Renewal/Replacement Plan

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

### 5.4.1 Renewal plan

Assets requiring renewal are identified from one of two methods:

- Method 1 uses Asset Register data to project the renewal costs for renewal years using acquisition year and useful life, or
- Method 2 uses capital renewal expenditure projections from external condition modelling systems (such as Pavement Management Systems)

Generally, Method 1 was used for this asset management plan. Based on data provided in this plan it is evident that not all renewals due within the 10 year period of this plan are able to be funded. To overcome this, a risk based approach has been used to "balance" current available renewal budgets against roads to be renewed.

Within Councils roads budgets there are limitations as to where certain funds can be spent. For example Council's Regional Roads Grant can only be expended on Regional Roads. These budget constraints have also been considered when developing forward works programs.

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

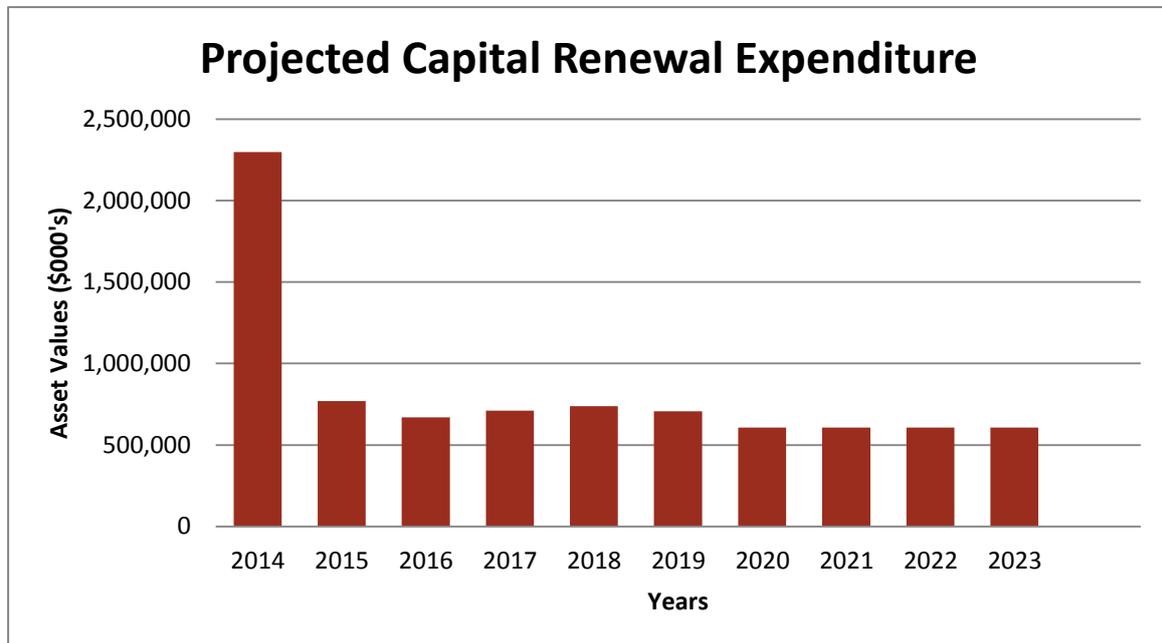
### 5.4.2 Summary of projected renewal expenditure

Preliminary estimates indicate that Council needs to spend \$429,460 annually on renewals (Council actually spends \$600,000) and \$350,000 annually on maintenance (Council actually spends \$312,640). The current estimated cost to bring all of its assets to a standard where only minor maintenance is required is \$1,867,920

The infrastructure gap described above is the difference between what Council should be spending and what Council is actually spending on asset maintenance and renewal. The gap is effectively added each year to the backlog, creating a greater problem for the future. The infrastructure backlog is the sum of the work we should have done but haven't to maintain and renew our assets. The greater the backlog, the higher the risk that our infrastructure will fail. The calculation of the infrastructure backlog will be further refined through assessment and valuation of the asset and its refinement in Roman 2. Any substantial changes to the backlog will then be incorporated in the next review of this plan.

# WANDERING ROAD ASSET MANAGEMENT PLAN

Figure 4: Projected Capital Renewal Expenditure (show annually over 10 years)



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

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

## 5.5 Creation/Acquisition/Upgrade Plan

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

### 5.5.1 Selection criteria

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

### 5.5.2 Standards and specifications

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

# WANDERING ROAD ASSET MANAGEMENT PLAN

## 5.6 Disposal Plan

Council has not currently planned or budgeted for any asset disposals. Future revisions of this asset management plan may consider asset disposal as an option for reducing the renewal gap however considerable research and community consultation is required prior to any decisions on asset disposal being taken

## 6. FINANCIAL SUMMARY

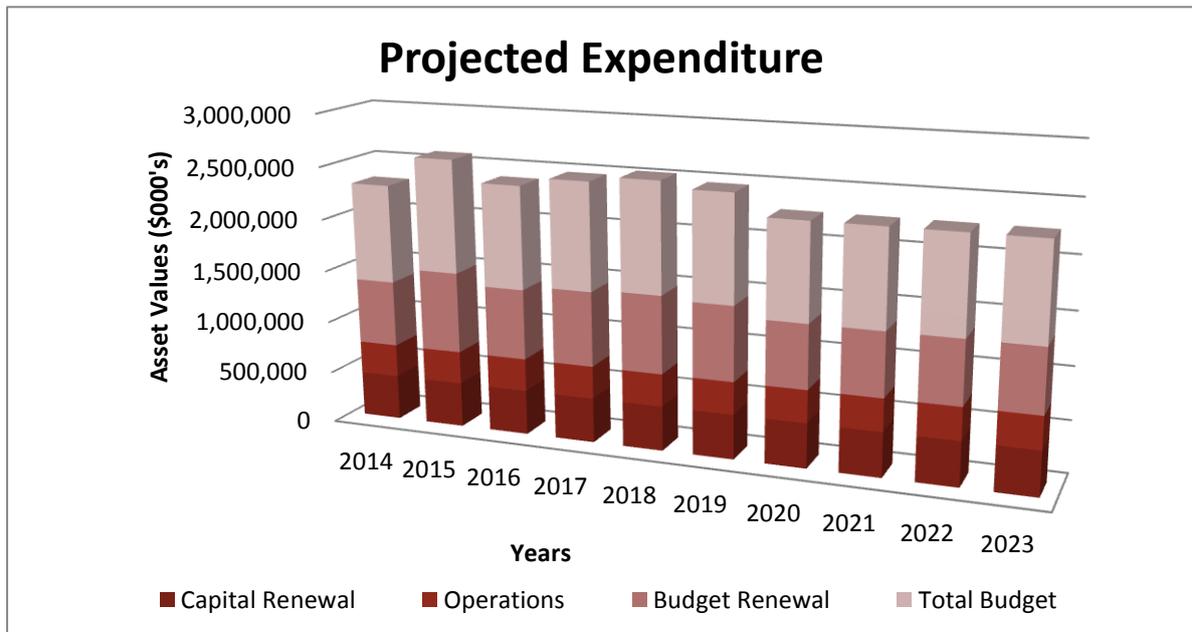
This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset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

### 6.1 Financial Statements and Projections

The financial projections are shown in Figure 5 for projected operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets), net disposal expenditure and estimated budget funding.

Note that all costs are shown in 2012 dollar values.

**Figure 5.1: Projected Operating and Capital Expenditure and Budget (Scenario 1 - from Asset Register)**



# WANDERING ROAD ASSET MANAGEMENT PLAN

## 6.1.1 Financial sustainability in service delivery

There are two key indicators for financial sustainability that have been considered in the analysis of the services provided by buildings, these being long term life cycle costs/expenditures and medium term projected/budgeted expenditures over 10 years of the planning period.

### *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 longest asset life. Life cycle costs include operations and maintenance expenditure and asset consumption (depreciation expense). The life cycle cost for the services covered in this asset management plan is \$732,660 per year (operations and maintenance expenditure plus depreciation expense in year 1).

Life cycle costs can be compared to life cycle expenditure to give an indicator of sustainability in service provision. Life cycle expenditure includes operations, maintenance and capital renewal expenditure in year 1. Life cycle expenditure will vary depending on the timing of asset renewals. The life cycle expenditure at the start of the plan is \$837,600 (operations and maintenance expenditure plus budgeted capital renewal expenditure in year 1). 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 \$104,900 (-ve = gap, +ve = surplus).

Life cycle expenditure is 114% 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. This indicator is calculated on the assumption that current expenditure trends will continue indefinitely, however in reality this will not occur and budgets and plans will be altered to manage renewals prior to them falling due. In order to start addressing the backlog, the Shire has budgeted to continue to spend annually in excess of the life cycle cost required.

Knowing the extent and timing of the required increase in outlays and the service consequences if funding is not available will assist Wandering Council in providing services to its community 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.

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is \$742,000 per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$919,640 per year giving a 10 year funding surplus of \$177,640 per year and a 10 year sustainability indicator of 1.24. This will enable the Shire to address the current estimated backlog based on the current replacement cost of the roads asset.

# WANDERING ROAD 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 \$1,154,793 per year.

Estimated (budget) operations, maintenance and capital renewal funding is \$1,014,980 year giving a 5 year funding shortfall of \$139,813 year. This is 88% of projected expenditures giving a 5 year sustainability indicator of 0.88.

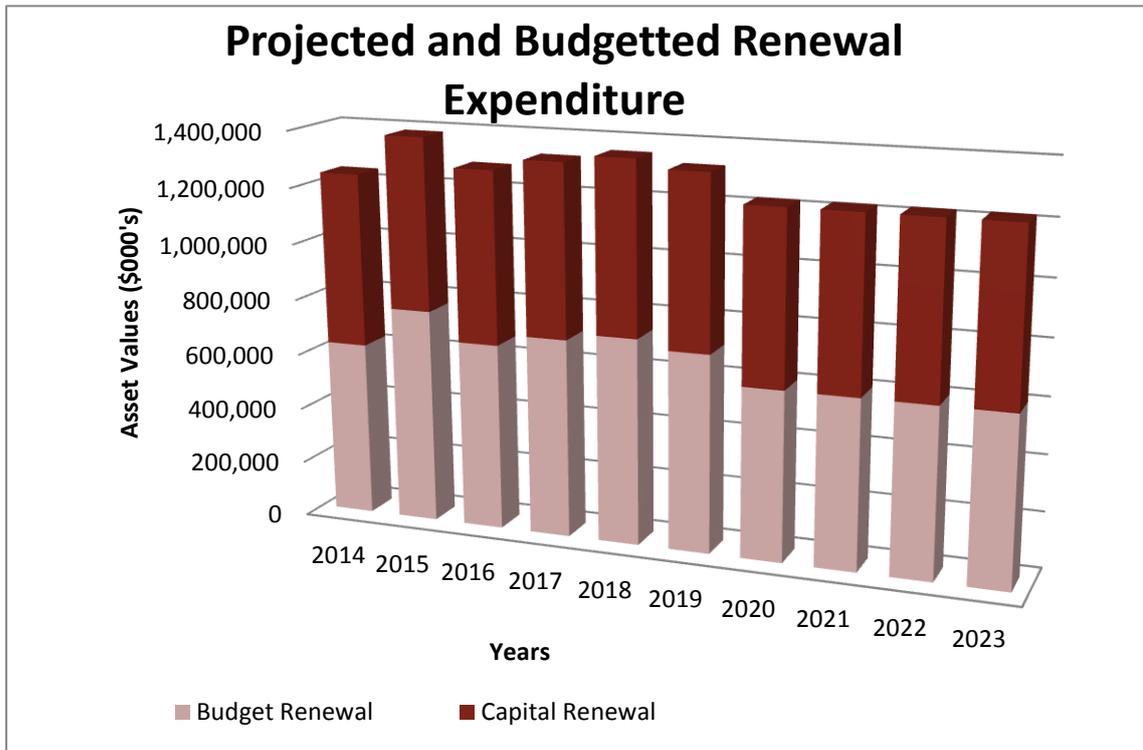
## Financial Sustainability Indicators

Figure 7 shows the financial sustainability indicators over the 10 year planning period and for the long term life cycle. It should be noted that this graph is based on the assumption that over the long term, renewal expenditure will remain in line with the average renewal expenditure over the 10 year life of this plan.

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

Figure 6 shows the projected asset renewals in the 10 year planning period. The projected asset renewals are compared to budgeted renewal expenditure in the capital works program and capital renewal expenditure in year 1 of the planning period in Figure 6.

**Figure 6: Projected and Budgeted Renewal Expenditure**



## WANDERING ROAD ASSET MANAGEMENT PLAN

Table 6.1.1 shows the shortfall between projected and budgeted renewals

**Table 6.1: Projected and Budgeted Renewals and Expenditure Shortfall**

Year	Projected Renewals (\$000)	Planned Renewal Budget (\$000)	Renewal Funding Shortfall (\$000) (-ve Gap, +ve Surplus)	Cumulative Shortfall (\$000) (-ve Gap, +ve Surplus)
2014	\$2,492,923	\$625,000	-\$1,672,384	-\$1,672,384
2015	\$429,460	\$769,200	\$339,740	-\$1,332,645
2016	\$429,460	\$669,200	\$239,740	-\$1,092,905
2017	\$429,460	\$711,300	\$281,840	-\$811,066
2018	\$429,460	\$737,700	\$308,240	-\$502,826
2019	\$429,460	\$707,000	\$277,540	-\$225,286
2020	\$429,460	\$607,000	\$177,540	-\$47,747
2021	\$429,460	\$607,000	\$177,540	\$129,793
2022	\$429,460	\$607,000	\$177,540	\$307,332
2023	\$429,460	\$607,000	\$177,540	\$484,872

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

A gap between projected asset renewals, planned asset renewals and funding indicates that further work is required to manage required service levels and funding to eliminate any funding gap.

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.

# WANDERING ROAD ASSET MANAGEMENT PLAN

## 6.1.2 Expenditure projections 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 current (non-inflated) values. Disposals are shown as net expenditures (revenues are negative).

**Table 6.1.2: Expenditure Projections for Long Term Financial Plan (\$000)**

Year	Maintenance and Operations (\$000)	Projected Capital Renewal (\$000)
2014	\$312,640	\$625,000
2015	\$312,640	\$769,200
2016	\$312,640	\$669,200
2017	\$312,640	\$711,300
2018	\$312,640	\$737,700
2019	\$312,640	\$707,000
2020	\$312,640	\$607,000
2021	\$312,640	\$607,000
2022	\$312,640	\$607,000
2023	\$312,640	\$607,000

## 6.2 Funding Strategy

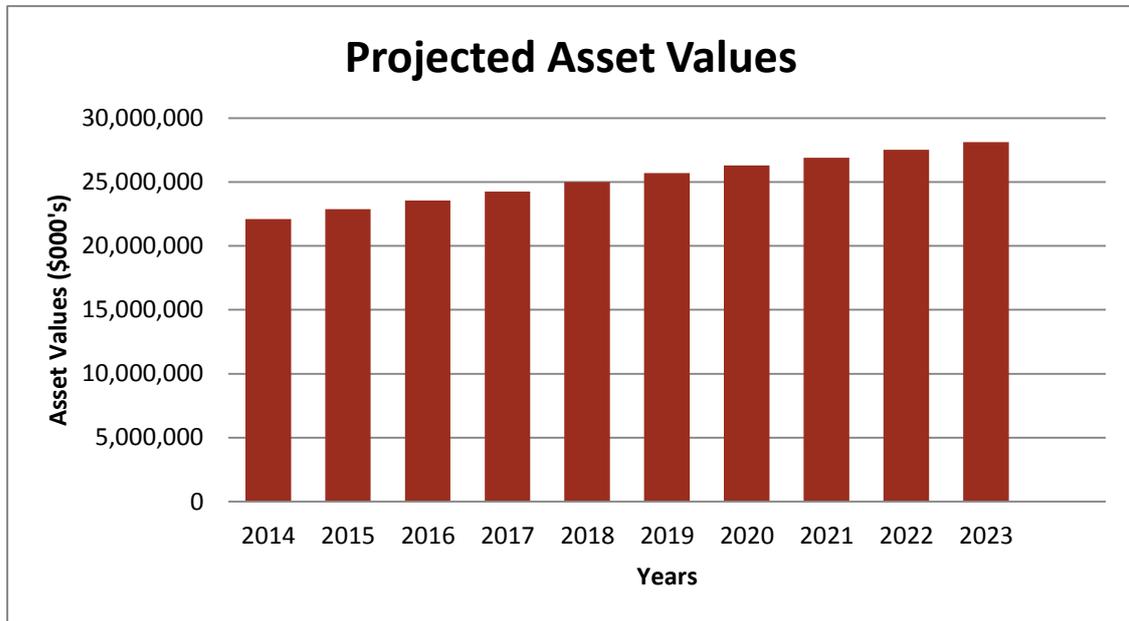
Projected expenditure identified in Section 6.1 is to be funded from future operating and capital budgets. The funding strategy is detailed in the organisation's 10 year long term financial plan.

## 6.3 Valuation Forecasts

Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by Council and from assets constructed by land developers and others and donated to Council. Figure 7 shows the projected replacement cost asset values over the planning period in 2012 dollar values.

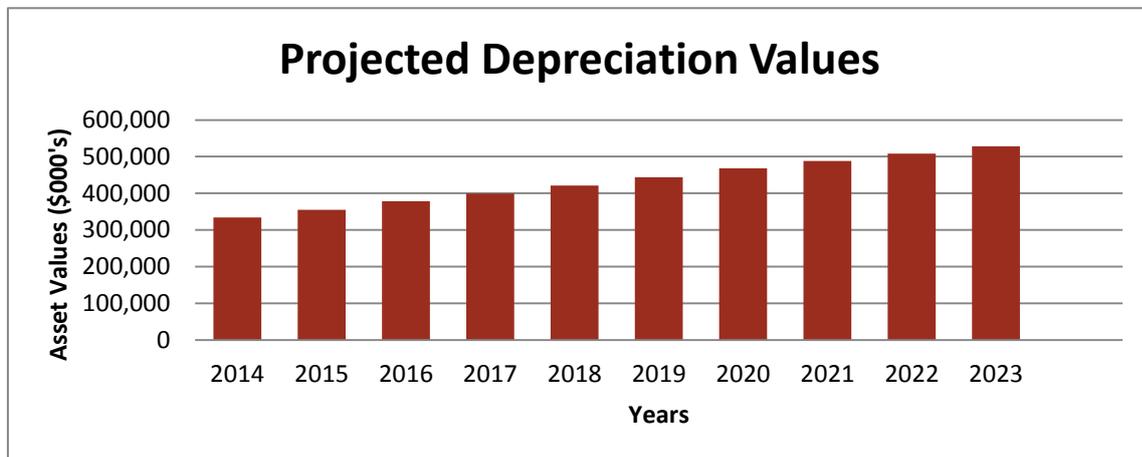
# WANDERING ROAD ASSET MANAGEMENT PLAN

**Figure 7: Projected Asset Values**



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

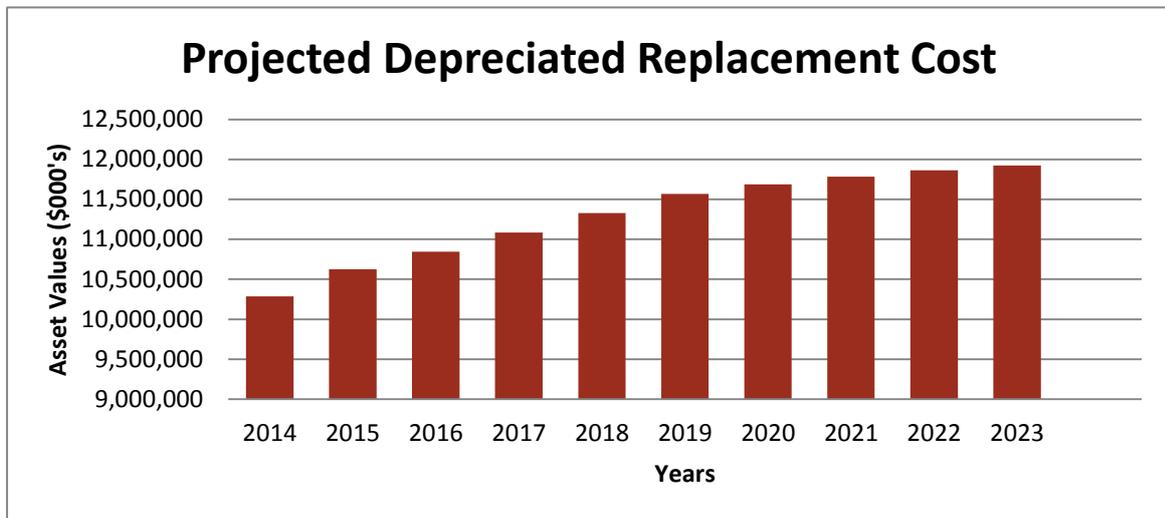
**Figure 8: Projected Depreciation Expense**



The depreciated replacement cost (current replacement cost less accumulated depreciation) 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 effect of contributed and new assets on the depreciated replacement cost is shown in the light colour bar

# WANDERING ROAD ASSET MANAGEMENT PLAN

Figure 9: 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 are:

- Budgeted maintenance and operational costs are adequate to maintain assets to a standard that is safe
- Useful lives of assets and unit rates have been based on industry guides and local knowledge
- That predicted useful lives are valid
- Does not account for any future environmental or financial shocks
- This AMP is a 'first cut' which will be refined over time as better data on assets is obtained
- Assumed that this plan accounts for all sealed road assets owned by Council
- Majority of Sealed Local Rural Roads are not yet segmented

## 7. ASSET MANAGEMENT PRACTICES

### 7.1 Accounting/Financial Systems

#### 7.1.1 Accounting and financial systems

The long term financial plan is a spreadsheet model developed in-house. It includes works and capital programs. Asset registers are internally developed spreadsheets from data analysed in the IT Vision software. Operational transactions are recorded in IT Vision local government accounting software system

#### 7.1.2 Accountabilities for financial systems

# WANDERING ROAD ASSET MANAGEMENT PLAN

The Corporate Support Function is accountable for the financial system, and the Manager Administration and Finance (MAF), with the support of the CEO is responsible for the asset registers

## **7.1.3 Accounting standards and regulations**

The long term financial plan is a budgeting model that reports forecast budgets in accordance with Australian Accounting Standards as they apply to Local Government.

## **7.1.4 Capital/maintenance threshold**

Council may consider developing a capitalisation policy. For the purpose of this asset management plan only renewals identified will be considered as capital.

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

It is not anticipated at this stage that as a result of the development of Council's asset management plans, any major changes will be required to Council's general ledger

## **7.2 Asset Management Systems**

### **7.2.1 Asset management system**

Wandering Council does not currently utilize any formal asset management system or any asset management software packages. Assets are currently managed using a combination of staff knowledge and asset registers in IT Vision software.

The above mentioned method of managing assets allows Wandering Council to manage asset life cycle, knowledge needed to plan, construct or acquire, inspect, operate, maintain and review each asset and component

Prepare long term financial plans to merge assets at lowest possible cost whilst controlling exposure to risk and loss

### **7.2.2 Asset registers**

Councils asset registers are currently maintained in Synergy Soft. Outputs are spreadsheet based and are effective at providing information required for asset management planning. The asset register requires future development which includes further validation of unit rates, useful lives and acquisition dates. This will be undertaken during future reviews of the asset management plan

### **7.2.3 Linkage from asset management to financial system**

Asset management and financial systems have been manually linked by developing AMP's concurrently with the long term financial plan. Further integration may be developed between asset systems and financial systems

### **7.2.4 Accountabilities for asset management system and data**

# WANDERING ROAD ASSET MANAGEMENT PLAN

The Asset Management system and data is managed by Wandering's finance department in close consultation with other sections of Council. The asset management system and data management are currently under the responsibility of the Manager of Administration and Finance

## 7.2.5 Required changes to asset management system arising from this AM Plan

There are no changes to the current asset management system resulting from this AMP; however Council will review all asset management systems and practices under its asset management strategy. These will impact the Long Term Financial Plan, Strategic Longer-Term Plan, annual budget and departmental business plans and budgets

## 7.3 Information Flow Requirements and Processes

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

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

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

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

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

## 7.4 Standards and Guidelines

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

- Local Government Act 1995
- Local Government (Functions and General) Regulations 1996
- Local Government (Administration) Amendment Regulations (No. 2) 2011
- Integrated Planning and Reporting Framework and Guidelines
- Integrated Planning and Reporting Advisory Standard
- Asset Management Framework and Guidelines

## 8. PLAN IMPROVEMENT AND MONITORING

### 8.1 Performance Measures

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

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

### 8.2 Improvement Plan

The asset management improvement plan generated from this asset management plan is shown in Table 8.2.

**Table 8.2: Improvement Plan**

Task No	Task	Responsibility	Resources Required	Timeline
1	Revalue assets on the basis of “fair value” in accordance with regulations	CEO	Staff Time plus possible external resources	2015
2	Further develop service levels for all infrastructure categories	MAF	Staff time plus possible external resources	Ongoing
3	Obtain traffic data for sealed and unsealed local rural roads and regional roads	MAF	Staff Time	Ongoing
4	Develop strategies to reduce funding gap	CEO, MAF	Staff Time	Ongoing
5	Undertake a major review of this Asset Management plan on a 4 year cycle	CEO	Staff Time	2015
6	Undertake yearly condition assessments of the sealed road network with the aim for 100% coverage every year for regional roads and every 2 years for local roads	Works Supervisor	Staff Time	Annually

## 8.3 Monitoring and Review Processes

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

The Plan has a life of 4 years and is due for revision and updating by 30 June in the year following each Council election.

# WANDERING ROAD ASSET MANAGEMENT PLAN

## Appendix F Glossary

### Annual service cost (ASC)

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

### Asset

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

### Asset class

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

### Asset condition assessment

The process of continuous or periodic inspection, assessment, measurement and interpretation of the resultant data to indicate the condition of a specific asset so as to determine the need for some preventative or remedial action.

### Asset management (AM)

The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner.

### Average annual asset consumption (AAAC)\*

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

### Borrowings

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

### Capital expenditure

Relatively large (material) expenditure, which has benefits, expected to last for more than 12 months. Capital expenditure includes renewal, expansion and upgrade. Where capital projects involve a combination of renewal, expansion and/or upgrade expenditures, the total project cost needs to be allocated accordingly.

### Capital expenditure - expansion

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

### Capital expenditure - new

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

### Capital expenditure - renewal

Expenditure on an existing asset or on replacing an existing asset, which returns the service capability of the asset up to that which it had originally. It is periodically required expenditure, relatively large (material) in value compared with the value of the components or sub-components of the asset being renewed. As it reinstates existing service potential, it generally has no impact on revenue, but may reduce future operations and maintenance expenditure if completed at the optimum time, eg. resurfacing or resheeting a material part of a road network, replacing a material section of a drainage network with pipes of the same capacity, resurfacing an oval.

# WANDERING ROAD ASSET MANAGEMENT PLAN

## **Capital expenditure - upgrade**

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

## **Capital funding**

Funding to pay for capital expenditure.

## **Capital grants**

Monies received generally tied to the specific projects for which they are granted, which are often upgrade and/or expansion or new investment proposals.

## **Capital investment expenditure**

See capital expenditure definition

## **Capitalisation threshold**

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

## **Carrying amount**

The amount at which an asset is recognised after deducting any accumulated depreciation / amortisation and accumulated impairment losses thereon.

## **Class of assets**

See asset class definition

## **Component**

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

## **Cost of an asset**

The amount of cash or cash equivalents paid or the fair value of the consideration given to acquire an asset at the time of its acquisition or construction, including any costs necessary to place the asset into service. This includes one-off design and project management costs.

## **Current replacement cost (CRC)**

The cost the entity would incur to acquire the asset on the reporting date. The cost is measured by reference to the lowest cost at which the gross future economic benefits could be obtained in the normal course of business or the minimum it would cost, to replace the existing asset with a technologically modern equivalent new asset (not a second hand one) with the same economic benefits (gross service potential) allowing for any differences in the quantity and quality of output and in operating costs.

## **Depreciable amount**

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

## **Depreciated replacement cost (DRC)**

The current replacement cost (CRC) of an asset less, where applicable, accumulated depreciation calculated on the basis of such cost to reflect the already consumed or expired future economic benefits of the asset.

## **Depreciation / amortisation**

The systematic allocation of the depreciable amount (service potential) of an asset over its useful life.

## **Economic life**

See useful life definition.

## **Expenditure**

The spending of money on goods and services. Expenditure includes recurrent and capital.

## **Fair value**

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

## **Funding gap**

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

# WANDERING ROAD ASSET MANAGEMENT PLAN

## Heritage asset

An asset with historic, artistic, scientific, technological, geographical or environmental qualities that is held and maintained principally for its contribution to knowledge and culture and this purpose is central to the objectives of the entity holding it.

## Impairment Loss

The amount by which the carrying amount of an asset exceeds its recoverable amount.

## Infrastructure assets

Physical assets that contribute to meeting the needs of organisations or the need for access to major economic and social facilities and services, eg. roads, drainage, footpaths and cycleways. These are typically large, interconnected networks or portfolios of composite assets. The components of these assets may be separately maintained, renewed or replaced individually so that the required level and standard of service from the network of assets is continuously sustained. Generally the components and hence the assets have long lives. They are fixed in place and are often have no separate market value.

## Investment property

Property held to earn rentals or for capital appreciation or both, rather than for:

- (a) use in the production or supply of goods or services or for administrative purposes; or
- (b) sale in the ordinary course of business.

## Key performance indicator

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

## Level of service

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

## Life Cycle Cost

1. **Total LCC** The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs.
2. **Average LCC** The life cycle cost (LCC) is average cost to provide the service over the longest asset life cycle. It comprises annual operations, maintenance and asset consumption expense, represented by depreciation expense. The Life Cycle Cost does not indicate the funds required to provide the service in a particular year.

## Life Cycle Expenditure

The Life Cycle Expenditure (LCE) is the actual or planned annual operations, maintenance and capital renewal expenditure incurred in providing the service in a particular year. Life Cycle Expenditure may be compared to average Life Cycle Cost to give an initial indicator of life cycle sustainability.

## Loans / borrowings

See borrowings.

## Maintenance

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

### • Planned maintenance

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

### • Reactive maintenance

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

### • Significant maintenance

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

### • Unplanned maintenance

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

# WANDERING ROAD ASSET MANAGEMENT PLAN

## **Maintenance and renewal gap**

Difference between estimated budgets and projected required expenditures for maintenance and renewal of assets to achieve/maintain specified service levels, totalled over a defined time (e.g. 5, 10 and 15 years).

## **Maintenance and renewal sustainability index**

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

## **Maintenance expenditure**

Recurrent expenditure, which is periodically or regularly required as part of the anticipated schedule of works required to ensure that the asset achieves its useful life and provides the required level of service. It is expenditure, which was anticipated in determining the asset's useful life.

## **Materiality**

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

## **Modern equivalent asset**

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

## **Net present value (NPV)**

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

## **Non-revenue generating investments**

Investments for the provision of goods and services to sustain or improve services to the community that are not expected to generate any savings or revenue to the Council, eg. parks and playgrounds, footpaths, roads and bridges, libraries, etc.

## **Operations expenditure**

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

## **Operating expense**

The gross outflow of economic benefits, being cash and non cash items, during the period arising in the course of ordinary activities of an entity when those outflows result in decreases in equity, other than decreases relating to distributions to equity participants.

## **Pavement management system**

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

## **PMS Score**

A measure of condition of a road segment determined from a Pavement Management System.

## **Rate of annual asset consumption**

A measure of average annual consumption of assets (AAAC) expressed as a percentage of the depreciable amount (AAAC/DA). Depreciation may be used for AAAC.

## **Rate of annual asset renewal**

A measure of the rate at which assets are being renewed per annum expressed as a percentage of depreciable amount (capital renewal expenditure/DA).

## **Rate of annual asset upgrade**

A measure of the rate at which assets are being upgraded and expanded per annum expressed as a percentage of depreciable amount (capital upgrade/expansion expenditure/DA).

## **Recoverable amount**

The higher of an asset's fair value, less costs to sell and its value in use.

## **Recurrent expenditure**

Relatively small (immaterial) expenditure or that which has benefits expected to last less than 12

# WANDERING ROAD ASSET MANAGEMENT PLAN

months. Recurrent expenditure includes operations

## **Recurrent funding**

Funding to pay for recurrent expenditure.

## **Rehabilitation**

See capital renewal expenditure definition above.

## **Remaining useful life**

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

## **Renewal**

See capital renewal expenditure definition above.

## **Residual value**

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

## **Revenue generating investments**

Investments for the provision of goods and services to sustain or improve services to the community that are expected to generate some savings or revenue to offset operating costs, eg public halls and theatres, childcare centres, sporting and recreation facilities, tourist information centres, etc.

## **Risk management**

The application of a formal process to the range of possible values relating to key factors associated with a risk in order to determine the resultant ranges of outcomes and their probability of occurrence.

## **Section or segment**

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

## **Service potential**

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

## **Service potential remaining**

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

and maintenance expenditure.

## **Strategic Longer-Term Plan**

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

## **Specific Maintenance**

Replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including repainting, building roof replacement, cycle, replacement of air conditioning equipment, etc. This work generally falls below the capital/maintenance threshold and needs to be identified in a specific maintenance budget allocation.

## **Sub-component**

Smaller individual parts that make up a component part.

## **Useful life**

Either:

- (a) the period over which an asset is expected to be available for use by an entity, or
- (b) the number of production or similar units expected to be obtained from the asset by the entity.

It is estimated or expected time between placing the asset into service and removing it from service, or the estimated period of time over which the future economic benefits embodied in a depreciable asset, are expected to be consumed by the council.

## **Value in Use**

The present value of future cash flows expected to be derived from an asset or cash generating unit. It is deemed to be depreciated replacement cost (DRC) for those assets whose future economic benefits are not primarily dependent on the asset's ability to generate net cash inflows, where the entity would, if deprived of the asset, replace its remaining future economic benefits.

Source: IPWEA, 2009, Glossary