Asset Management Plan

Shire of Woodanilling

Version 1 – Adopted 12 August 2013

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Status: Final

Time Period of the Plan: The AMP covers a 10 year period.

Asset Management Plan Review Date: The AMP is reviewed every 4 years, and updated within 2 years of each Shire election.

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EXECUTIVE SUMMARY

What is an Asset Management Plan (AMP)?

Asset management planning is a process to ensure delivery of infrastructure services is provided in a sustainable manner, both from a financial and environmental perspective.

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

Context

This Asset Management Plan (AMP) is concerned with all Shire assets'. This AMP has been compiled to comply with Local Government regulatory requirements including the Integrated Planning and Reporting requirements, and to demonstrate the Shire's responsible management of assets (and services provided from these assets).

This AMP is concerned with all of the major asset classes which are listed below:

- Roads;
- Footpaths;
- Property; and
- Public Open Spaces.

This Plan collates current valuations, income and expenditure data, and compares it with the asset stock's long term funding needs (that are required to provide an agreed and sustainable Level of Service).

This Plan investigates whether the Shire's current level of asset operational, maintenance and renewal funding are sufficient to sustain the assets at a standard that will be acceptable to both asset owners and users.

This is the first asset management plan (AMP) that has been prepared by the Shire. As such whilst this AMP is comprehensive, it can also be considered as a "first cut plan" which will require ongoing refinement. Much of the data upon which this AMP is based is somewhat low in confidence and many improvement actions have been identified.

What does it Cost?

The assets covered in this AMP have a total replacement value of $26,797,684.

Managing the Risks

Analysis of the future demand influences show that the Shire's POS assets will increase over the 10 year period of this AMP. As time goes by many assets will require remediation or refurbishment to meet contemporary needs and expectations, and to preserve their asset value.

This will require further investigation and better long term planning in order to understand what can be provided going forward. However, there are gaps in the Shire's current knowledge of its assets and some of the key risks currently are:

- No condition rated data for assets;
- No formalised maintenance management regime for assets' (excluding roads); and
- No long term renewal programme (excluding buildings).

The Next Steps

There is a number of improvement actions listed at the end of this AMP, some of the key actions over the short term resulting from this AMP are to:

- Undertake condition inspections;
- Develop a spatial inventory database;
- Improve the accuracy of future financial forecasts through tracking operation, maintenance, renewal, new and upgrade costs.
- Prepare renewal programmes for all assets (excluding buildings) ; and
- Present and adopt this AMP.

1. INTRODUCTION

1.1 Background

This asset management plan has been developed 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 the following associated planning documents:

- The Shire of Woodanilling – Plan For The Future / Strategic Plan 2009 to 2014; and
- Strategic Community Plan and Corporate Business Plan 2012 to 2022.

The assets covered by this asset management plan are shown in Table 1-1 below. The information has been extracted from the Shire's Asset Registers.

Asset Category	Optimised Replacement Cost	Optimised Depreciated Replacement Cost	Annual Depreciation	Accumulated Depreciation
Road assets	$24,086,097.71	$11,310,749.43	$407,506.56	12,775,348.28
Footpath assets	$210,069.08	$90,585.54	$4,201.38	$119,483.54
Property	$2,145,892.49	$1,783,551.07	$21,422.70	$362,341.42
Public Open Spaces	$355,624.94	$130,192.86	$6,358.50	$225,432.08
Assets Total	**$26,797,684.22**	**$13,315,078.90**	**$439,489.14**	**$13,482,605.32**

Table 1-1: Assets covered by this Plan

1.2 Goals and Objectives of Asset Management

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

This asset management plan is prepared under the direction of Shire's vision:

In 2022 the Shire of Woodanilling will be a Shire that is energetic and progressive with a strong connection to its community and environment. It will be a Shire that embraces its independence and encourages the sustainable development of the natural environment through ways that value the cultural heritage and sense of place provided by living in Woodanilling.

(Source: Strategic Community Plan and Corporate Business Plan 2012 – 2022)

The Shire'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 goal of this asset management plan is to:

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

The key elements of infrastructure asset management are:

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

1.3 Corporate Document Relationships

The AMP integrates with key legislative requirements and Shire documents (adopted and in development). The Shire has adopted a corporate asset management framework similar to that detailed within the WA Asset Management Framework and Guidelines.

Figure 1-1 details the WA Asset Management Framework and Guidelines and demonstrates the relationship that exists between the Shire's AMP's and its other informing strategies and operational processes, plans and practices. The key relationships can be summarised as:

Asset Management Policy and Strategy: The Shire does not have an Asset Management Policy or Strategy. In general a Policy provides a clear direction for asset management and defines the key principles that underpin asset management for a council. A Strategy should outline how the Shire's asset portfolio will support the service needs of the community. Though reliant on a strong Strategic Community Plan and Corporate Business Plan, the Strategy should facilitate the provision of prioritised service delivery, thus informing what assets are required by the Shire.

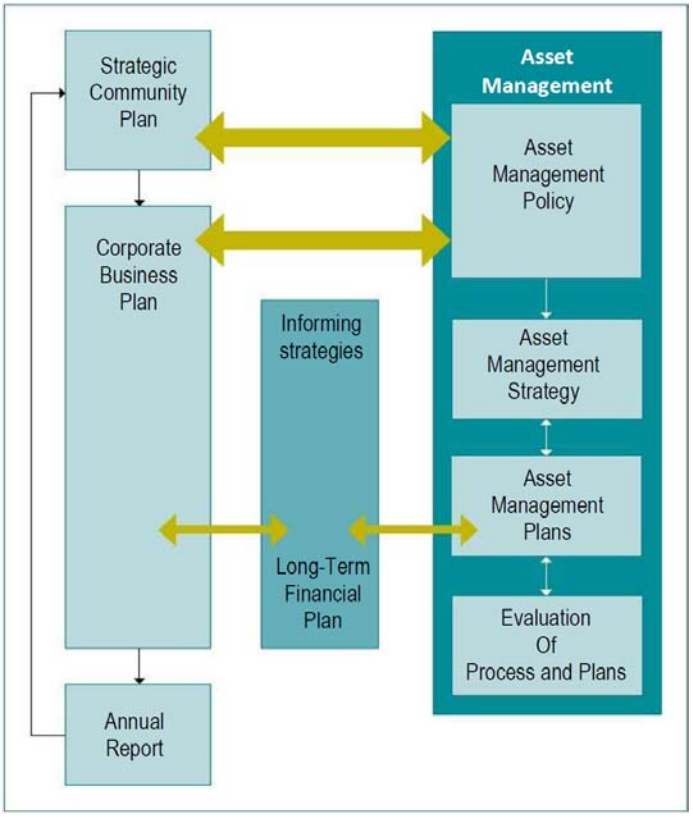

Figure 1-1: The AMP's Corporate Document Relationships
(Department of Local Government Asset Management Framework & Guidelines)

Long Term Financial Plan: The Shire plans to develop a LTFP once all other plans are complete. A LTFP sets out in detail the financial strategy required to meet the Shire's long term expenditure needs. The AMP's inform the LTFP about what level of resource is required to provide the agreed service levels.

1.4 Information Flow Requirements and Processes

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

- Shire strategic and operational plans;
- Service requests from the community;
- Workforce Plan;
- Network assets information, i.e. The asset register data on size, age, value, remaining life;
- 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 the Shire;
- Correlations between maintenance and renewal;
- Data on new assets acquired by the Shire;
- Future capital works programs; and
- Financial asset values.

Other reference documents are contained in Appendix D at the end of this document.

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

- The estimated budget and long term financial plan expenditure projections; and
- Financial sustainability indicators.

1.5 Legislative Requirements

The Shire has to meet legislative requirements including Australian and State legislation and State regulations. Relevant legislation is stated in Appendix B.

1.6 Core and Advanced Asset Management

This asset management plan is prepared as a first cut 'compliance' asset management plan in accordance with the requirements of the DLG. It is prepared to meet minimum legislative and organisational requirements for sustainable service delivery and long term financial planning and reporting. The next step in asset management progression is 'core' asset management and is a 'top down' approach where analysis is applied at the 'system' or 'network' level.

1.7 Community Consultation

This 'compliance' asset management plan is based on feedback from the Shire, and is prepared to facilitate community consultation initially through feedback on public display of the draft asset management plan prior to adoption by the Shire.

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

2. RISK MANAGEMENT PLAN

The Shire has a basic risk assessment for buildings and roads which has been incorporated into the Forward Capital Works Plan 2011-12 to 2015-16. However, the Shire does not have a corporate Risk Management Plan and no previous risk analysis of the Shires assets has been undertaken.

A default Risk Management Analysis has been undertaken and is included as Appendix C. Table 2-1 details the critical risks identified from the risk analysis. The risk analysis will need to be reviewed and amended in future revisions to this AMP.

Ref. No.	The Risk	Level of Risk	Further Action
5	No formalised maintenance management regime for all assets excluding roads. Therefore, assets are reactively maintained which leads to higher costs, greater exposure to Health and Safety risk and miss prioritisation.	Critical	Develop cyclical maintenance regimes for all assets.
6	No long term renewal programme. Leading to assets being managed sub-optimally which incurs higher whole of life costs and lower service levels.	Critical	Develop renewal programme for assets from condition ratings.

Table 2-1: Significant Risks

3.FUTURE DEMAND

3.1 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.

The Shire has identified a range of influences that may affect demand for services over the 10 year horizon of this AMP. The seven identified influences are discussed in Table 3-1 below.

Driver	Demand Change	Comment
Political	→	No change in demand expected provided that current Local, State and Federal Government policies remain unchanged. Any changes to policies that relate to funding would have the greatest impact on demand but these changes are difficult to predict.
Economic	→	Agriculture is the main industry in the Shire, accounting for approximately 50% of the workforce, though this percentage has been decreasing in recent years. Continued reliance on the road network for the freighting of grain and livestock will mean demand for well-maintained roads will remain high. However, unless economic diversification occurs within the timeframe of this AMP, no change in demand is expected on other services.
Social	↑	ABS figures show that the Shire population has increased over the last 10 years and that this trend is predicted to continue. Therefore, demand for services such as roads, paths and public open space is likely to increase. An increase in the median age of the Shire's population was also recorded. There may be an increased demand for more senior facilities in the near future.
Technology	→	Minor change in demand expected due to material, construction or maintenance techniques; minor change envisaged due to transport mode changes.
Legal	↑	Increase in management resource demand because of legislative change, possible increase in demand because of litigation changes.
Environmental	↑	Potentially higher whole of life costs due to effects of climate change; minor change from sustainability pressures.
Health & Safety	↑	Increased demand through health and safety requirements for better service levels. Increased demand for facilities to support an ageing population (e.g. ramps, better footpaths, hand rails etc).

Table 3-1: Demand Drivers

The Shire will need to undertake further work in the future to refine its understanding of how future demand may change, for example by developing a clearer view of demographical change. These future improvements will then allow the Shire to produce quantitative forecasts on how it expects the network to change over the life of the AMP.

3.2 Demand Management Strategy

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.

A demand Management Strategy will be developed for future versions of this plan.

3.3 New Assets for Growth

The new assets required to meet growth will be acquired free of cost from land developments, or constructed / acquired by the Shire. Acquiring new assets will commit the Shire to fund ongoing operations and maintenance costs for the period that the service provided from the assets is required. Given the long life cycle of assets, the impact of this growth (future renewal costs) is only likely to be material after ten years. These future costs are identified and considered in developing forecasts of future operations and maintenance costs.

4. LEVELS OF SERVICE

4.1 Background

This section details suggested service levels that the Shire could adopt. The levels are then used to monitor performance and identify areas of deficiency or over provision. The service level measures also allow the Shire to ensure that its assets are fit for purpose and provided at an efficient cost. As such, it is important to ensure that the Service Levels reflect the Shire's Strategic Community Plan and Corporate Business Plan outcomes.

By considering the Shire's objectives and values, particularly focussing on those which conflict or appear frequently, two sets of high level service levels were created;

- Community Levels of Service; and
- Technical Levels of Service

4.1.1 **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:

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

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

Technical service measures are linked to annual budgets covering:

- Operations – the regular activities to provide services (eg condition inspections);
- Maintenance – the activities necessary to retain an assets as near as practicable to its original condition (eg building and structure repairs);
- Renewal – the activities that return the service capability of an asset up to that which it had originally (eg building component replacement); and
- Upgrade – the activities to provide a higher level of service (eg additional assets within a public open space) or a new service that did not exist previously (eg a new park bench).

4.2 Desired Levels of Service

Table 4-1 overleaf details the key service levels against which the Shire will benchmark its assets performance. These sections will be progressively developed, and suitable targets set at a level similar to that currently delivered by the Shire.

Key Performance Indicator	Level of Service	Performance Measure	Explanation	Measurement Procedure	Target	Current	Data Confidence
Accessible	Assets are easy to access from the majority of town site properties.	Connectivity	Properties within the town site can readily access the public assets.	Percentage of town site lots with a safe route to the public assets.	TBC	TBC	TBC
Available	Public assets are available (i.e. operational) when required.	Public asset closures	Time that public assets are closed is minimised.	Percentage of days per annum that one or more public assets are closed due to works, condition and/or safety.	TBC	TBC	TBC
Health & Safety	Assets are provided and maintained in order to help achieve 'zero harm' to users, and minimise Council's exposure to risk.	Risk Management	Council operates a risk register for their assets.	Number of risks identified high or above shall be mitigated.	TBC	TBC	TBC
		Safety & Maintenance Defects	Assets are inspected at suitable intervals.	Percentage of assets inspected within the specified period.	TBC	TBC	TBC
		Safety & Maintenance Defects	Safety and maintenance defects are corrected within the Shire's target timeframes.	Percentage of asset defects corrected within the intervention time.	TBC	TBC	TBC
		Accidents	The number of harm/damage claims against Council is minimised.	Percentage of claims successfully defended, per annum, by number.	TBC	TBC	TBC
Maintenance	Assets are clean and well maintained.	Cleaning Requests	Assets are maintained appropriately so as to limit the number of requests for	Number of requests for maintenance received per	TBC	TBC	TBC

			maintenance received from external sources.	asset category.			
Quality	The Shire's assets are provided at a level of quality, agreed by stakeholders.	Condition	Assets are maintained in a good condition.	Percentage of assets rated as between a condition 1 and 3, on a 1 to 5 scale, where 1 is very good (new) and 5 very poor.	TBC	TBC	TBC
		Condition	The Shire's assets are free from hazards.	Average number of hazards detected, per asset category.	TBC	TBC	TBC
Satisfaction	Users are happy with the assets provided by the Shire.	Satisfaction	Users are happy with the assets available	Through the use of an annual questionnaire percentage of users who are at least satisfied with the Shire's assets.	TBC	TBC	TBC

Table 4-1: Levels of Services for Shire Assets

4.3 Current Levels of Service

When condition data is available, the results will be detailed in future Appendixes of this AMP. In addition, when information is available Safety and Maintenance information will be located future Appendixes.

4.4 Level of Service Performance Monitoring

Levels of Service will be monitored and reported in future versions of the AMP and reported in the Annual Report.

5.FINANCIAL MANAGEMENT

This section contains the financial information and will be updated as more information becomes available regarding desired levels of service, current and projected future asset performance, and the improved level of data confidence.

5.1 Asset valuations

Table 5-1 outlines the Shire's asset valuations. The valuations shall be reviewed annually. The information has been extracted from the Shire's Asset Registers.

Asset Category	Optimised Replacement Cost	Optimised Depreciated Replacement Cost	Annual Depreciation	Accumulated Depreciation
Road assets	$24,086,097.71	$11,310,749.43	$407,506.56	12,775,348.28
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Assets Total	**$26,797,684.22**	**$13,315,078.90**	**$439,489.14**	**$13,482,605.32**

Table 5-1: Shire of Woodanilling Asset Valuations

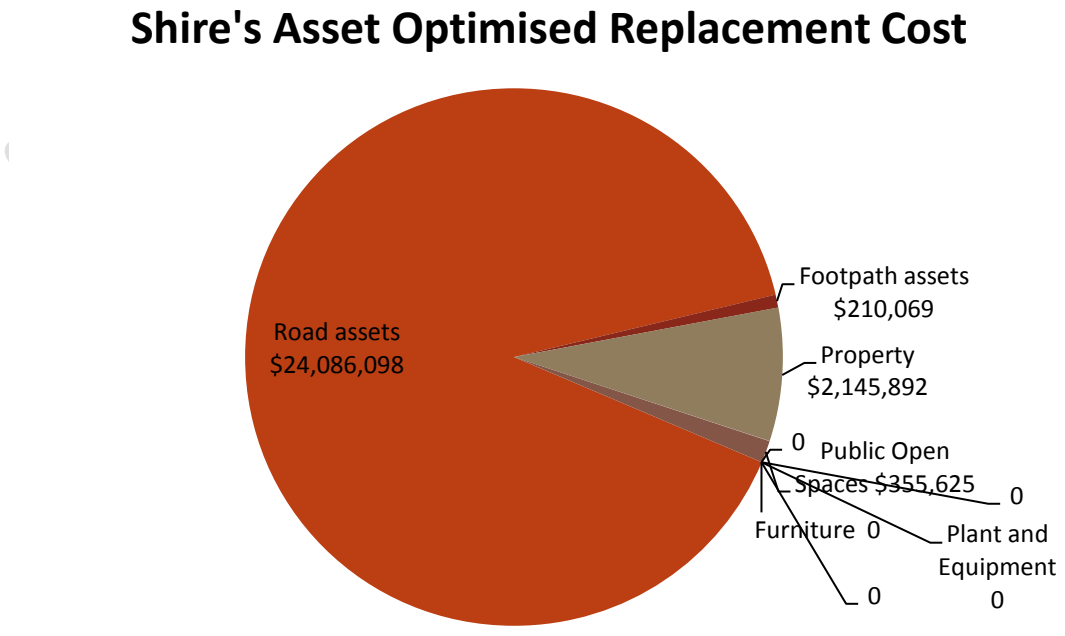

Figure 5-1: Optimised Replacement Costs for all Shire Assets

5.2 Funding and Expenditure Details

5.2.1 Summary Historical Income

Over the previous six years, external income funding has accounted for a significant portion of expenditure on all of the Shire's assets, this is shown in Table 5-2. It is therefore of interest of the Shire to maximise these external funding opportunities to ensure the present level of service are maintained.

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Roads						
External Income	$222,750	$839,214	$434,601	$639,520	$678,976	$643,945
Paths						
Income	$0	$0	$0	$0	$0	$0
Buildings						
External Income	$7,280	$16,120	$39,078	$184,964	$12,451	$95,129
Disposals	$0	$0	$36,266	$30,000	$0	$115,000
Parks & Reserves						
External Income	$0	$209,000	$0	$0	$0	$0
Drainage						
External Income	$0	$0	$0	$64,935	$37,979	$0
Totals						
Non Municipal Total	**$230,030**	**$1,064,334**	**$473,679**	**$889,419**	**$729,406**	**$739,074**
Municipal Total	**$0**	**$0**	**$36,266**	**$30,000**	**$0**	**$115,000**
Total Annual Income	**$230,030**	**$1,064,334**	**$509,945**	**$919,419**	**$729,406**	**$854,074**

Table 5-2: Historical Income 2007/08 - 2012/13

5.2.2 Summary Historical Expenditure

The Shire holds details of previous year's financial expenditure levels on its assets'. Tables 5-3 to 5-6 detail the level of expenditure over the past 5 financial years for maintenance, renewals and new assets.

	2007/08	2008/09	2009/10	2010/11	2011/12
Roads					
Maintenance	$297,140	$302,903	$325,784	$434,876	$360,667
Paths					
Maintenance	$14,645	$17,377	$21,639	$21,240	$26,935
Buildings					
Maintenance	$36,345	$50,582	$36,885	$35,752	$47,650
Parks & Reserves					
Maintenance	$63,112	$81,186	$56,287	$65,300	$67,573
Drainage					
Maintenance	$0	$0	$7,130	$0	$0
Maintenance Total	**$411,242**	**$452,048**	**$447,725**	**$557,168**	**$502,825**

Table 5-3: Historical Expenditure for Maintenance

	2007/08	2008/09	2009/10	2010/11	2011/12
Roads					
Renewal	$331,441	$603,580	$781,095	$434,959	$662,755
Paths					
Renewal	$0	$0	$0	$0	$0
Buildings					
Renewal	$9,370	$111,005	$0	$56,193	$176,129
Parks & Reserves					
Renewal	$0	$0	$0	$0	$0
Drainage					
Renewal	$0	$0	$31,897	$46,604	$0
Renewal Total	**$340,811**	**$714,585**	**$812,992**	**$537,756**	**$838,884**

Table 5-4: Historical Expenditure for Renewals

	2007/08	2008/09	2009/10	2010/11	2011/12
Roads					
New / acquisition	$0	$0	$0	$69,415	$79,999
Paths					
New / acquisition	$0	$0	$0	$0	$0
Buildings					
New / acquisition	$36,266	$32,592	$785,335	$0	$106,045
Parks & Reserves					
New / acquisition	$0	$0	$0	$30,000	$0
Drainage					
New / acquisition	$0	$0	$0	$44,175	$84,981
Construction Total	**$36,266**	**$32,592**	**$785,335**	**$143,590**	**$271,025**

Table 5-5: Historical Expenditure for New Assets

	2007/08	2008/09	2009/10	2010/11	2011/12
Totals	$788,319	$1,199,225	$2,046,052	$1,238,514	$1,612,734

Table 5-6: Summary of Historical Expenditure for all Assets

5.2.3 Summary Future Expenditure

Table 5-7 shows the planned expenditure on all assets for the next 10 financial years which has been extracted from the Shire's Forward Capital Works Program (FCWP). Only road maintenance information is available for this AMP on future expenditure for maintenance activities.

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Roads Renewal	$362,000	$305,000	$320,000	$320,000	$326,750	$326,750	$326,750	$326,750	$326,750	$326,750
Building Renewal	$69,918	$50,294	$50,831	$51,924	$54,573	$59,110	$58,838	$64,014	$63,794	$61,017
Roads Upgrade	$372,100	$628,000	$508,000	$508,000	$504,025	$504,025	$504,025	$504,025	$504,025	$504,025
Building New / acquisition / Upgrade	$145,000	$48,000	$0	$0	$20,000	$0	$25,000	$0	$0	$0
Roads Maintenance	$44,000	$56,000	$49,700	$49,700	$49,850	$49,850	$49,850	$49,850	$49,850	$49,850
Totals	**$993,018**	**$1,087,294**	**$928,531**	**$929,624**	**$955,198**	**$939,735**	**$964,463**	**$944,639**	**$944,419**	**$941,642**

Table 5-7: Future Expenditure of all Assets

The Shire will develop useful lives and condition data for each asset so this can be used to determine predicted renewals i.e when each asset will need to be replaced.

5.3 Required Operation & Maintenance Expenditure

Maintenance refers to works undertaken to address minor defects such as pothole patching on a road. These treatment works are undertaken to keep Shire's assets in a safe and operational condition, but not necessarily to improve the overall condition of these assets. 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. Assessment and prioritisation of reactive maintenance is undertaken by the Shire staff using experience and judgement.

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.

Cyclic maintenance is replacement of higher value components/ subcomponents of assets that are undertaken on a regular cycle including repainting of road markings, grading of gravel roads, etc. This work generally falls below the capital/ maintenance threshold.

The Shire has considered road maintenance costs for a 5 year period as set out in the FCWP. All assets will be incorporated into future revisions of this AMP.

It is therefore assumed that the Shire undertakes maintenance on a reactive basis (for all other assets except roads), such as a complaint from a resident or other asset user. The asset that has been reported is inspected and then if necessary a suitable repair will be conducted.

The Shire does undertake building inspections. These surveys identify areas of damage which allows the Shire to plan and undertake the required maintenance.

5.4 Required Renewal Expenditure

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.

The aim of 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.

Building and road renewals have been considered for the life of this AMP.

The Shire will consider renewals for footpath and public open space assets.

5.5 Planned Upgrade & New Expenditure

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 Shire from land development.

Buildings and roads are the only new/upgrades that have been considered in the future budget expenditure provided for this AMP.

5.6 Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation.

No assets have been identified for disposal.

5.7 Asset Priority

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

The Shire's Roads have been prioritised in the Shire of Woodanilling Road Maintenance – Asset Management Plan 2010. Table 5-8 overleaf outlines the classification details of roads.

Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
Clearing 18m	Clearing 18m	Clearing 15m	Clearing 12m	Clearing 8m
Water Table 14m	Water Table 14m	Water Table 12m	Water Table 10m	Water Table 8m
Formation 10m	Formation 12m	Formation 12m	Formation 10m	Formation 8m
Pavement 10m	Pavement 10m	Pavement 10m	Pavement 8m	
Seal 6.0-7.0m				

Table 5-8: Road Classification

The following outlines the road maintenance standards which have been extracted from the Shire's Road Maintenance Asset Management Plan.

ITEM	MAINTENANCE STANDARD
Priority 1	125% shoulder grading – as required to protect edge of seal, to control vegetation re-growth and to maintain width of shoulders. Seal – measures taken to maintain trafficable surface 75% spray verges to control vegetation. Signage – maintain signage (replace as required) Drainage – maintenance of drains and culverts 7.5% tree pruning
Priority 2	175% grading pavement surface 75% spray verges to control vegetation. Signage – maintain signage (replace as required) Drainage – maintenance of drains and culverts 7.5% tree pruning
Priority 3	125% grading pavement surface 75% spray verges to control vegetation. Signage – maintain signage (replace as required) Drainage – maintenance of drains and culverts 7.5% tree pruning
Priority 4	100% grading pavement surface 75% spray verges to control vegetation. Signage – maintain signage (replace as required) Drainage – maintenance of drains and culverts 7.5% tree pruning
Priority 5	50% grading formation surface 75% spray to control vegetation. Signage – maintain signage (replace as required) Drainage – maintenance of drains and culverts 7.5% tree pruning

5.8 Asset Sustainability Ratios

As part of the Department of Local Government (DLG) Asset Management Framework and Guidelines the Shire will report three ratios. The Shire's current ratios for the assets covered in this plan are shown below in Tables 5-9 to 5-11 and will be monitored and reported annually.

The current figures have been extracted from the financials which have been provided by the Shire. For the purpose of this AMP and because limited renewal information was available for the AMP, it has been assumed that predicted renewal expenditure is the same as planned expenditure.

Asset Consumption Ratio	Asset Consumption Ratio			
Asset Category	**Depreciated Cost (DRC)**	**Current Replacement Cost (CRC)**		**DLG's target ranges**
Road Assets	$11,310,749.43	$24,086,097.71	47.0%	**50% - 75%**
Footpath Assets	$90,585.54	$210,069.08	43.1%	
Public Open Spaces	$130,192.86	$355,624.94	36.6%	
Property	$1,783,551.07	$2,145,892.49	83.1%	
Assets Total	**$13,315,078.90**	**$26,797,684.22**	**49.7%**	

Table 5-9: Asset Consumption Ratio

When considering all Shire assets the asset consumption ratio meets the DLG's target range. Property assets have the high asset consumption ratio of 83.1% which confirms the Shire is providing a high level of service and perhaps indicates the aged condition of the asset stock.

Asset Consumption Ratio	Asset Renewal Funding Ratio			
Asset Category	**Planned Renewal Expenditure**	**Predicted Renewal Expenditure**		**DLG's target ranges**
Road Assets	$3,267,500	$3,267,500	100.0%	**95 - 105%**
Footpath Assets	$0	$0	0.0%	
Public Open Spaces	$0	$0	0.0%	
Property	$584,313	$584,313	100.0%	
Assets Total	**$3,851,813**	**$3,851,813**	**49.9%**	

Table 5-10: Asset Renewal Funding Ratio

The asset renewal funding ratio is based on the assumption that the planned capital renewal is the same as the predicted capital renewal. This value would normally indicate that the Shire is renewing assets at the rate they are being consumed and adequately funding all new assets and services. It has been identified as an improvement action to undertake condition inspections, ensure useful lives, unit rates and construction dates are available for each asset, this will enable predicted renewals to be calculated.

Asset Consumption Ratio	Asset Sustainability Ratio			
Asset Category	**Annual Planned Renewal Expenditure**	**Annual Depreciation Expense**		**DLG's target ranges**
Road Assets	$326,750	$407,507	80.2%	**90 - 110%**
Footpath Assets	$0	$4,201	0%	
Public Open Spaces	$0	$6,359	0%	
Property	$58,431	$21,423	272.8%	
Assets Total	**$385,181**	**$439,489**	**87.6%**	

Table 5-11: Asset Sustainability Ratio

The Asset Sustainability Ratio is a measure of the extent to which assets are being replaced as they reach the end of their useful lives. The road ratio is 80.2% which indicates that the Shire is not spending sufficiently on its asset renewals, whereas the property ratio of 272.8% indicated the Shire is spending too much on asset renewals. It has been listed as an improvement action to revise the data confidence.

Overall, to provide services in a financially sustainable manner, as a minimum, the Shire will need to ensure that it is renewing assets at the rate they are being consumed over the medium-long term, and funding the life cycle costs for all new assets and services.

Improvements are required to the asset register and financial data to ensure more accurate ratios with higher data confidence will better reflect the Shire's position. These ratios will be monitored and reported on an annual basis.

5.9 Gap Analysis

This section analyses the variance between the predicted full life cycle cost (including operations, maintenance, renewal, upgrade, but excluding new growth), and planned expenditure. This variance indicates the life cycle gap, showing insufficient asset expenditure, or a surplus, showing excessive expenditure. This gap indicates whether further work is required to manage required Levels of Service and funding to eliminate any funding gap.

Providing services in a sustainable manner will require matching of predicted asset expenditure to meet agreed Levels of Service with planned capital works programs and available revenue.

These predicted expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall.

At this stage it is not possible to estimate the expenditure gap since the required capital renewal expenditure has been assumed to be equal to the planned capital renewal expenditure as there is incomplete data, including no useful lives or condition data to determine replacement dates and hence predicted renewals. This has been listed as an improvement action.

With further work set to continue with the asset register data (asset age and regular condition assessments), the reprioritisation of maintenance, and any the backlog of renewals is completed, the accuracy of these forecasts will improve, allowing a gap analysis to be refined.

5.9.1 Valuation Forecasts

Asset values are forecast to increase as additional assets are added to the asset stock from construction and acquisition by the Shire and from assets constructed by land developers and others and donated to the Shire.

No valuation forecast has been undertaken in this AMP. One will be undertaken in future versions of the AMP.

5.9.2 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:

- The asset register is accurate;
- The current Levels of Service will remain constant over the life of this AMP;
- The budget details are accurate as given, and expenditure will continue on the previous four years historical trends; and
- All predicted financial figures are based on 2013 rates and are not adjusted by the inflation rate for the particular year of works.

5.9.3 Data confidence

Table 5-12 below summarises the confidence levels of financial data in the current format available. This has been identified as an improvement action to revise the data confidence.

Asset Category	Confidence Rating			
	Operations	Maintenance	Renewals	New
Expenditure	E	D	C	C
Forecast Exp	E	D	C	C
Lifecycle Exp	E	D	C	C

Table 5-12: Financial Data Levels of confidence

Table 5-13 below outlines the data confidence limits used in this AMP.

Confidence	Description
A	**Highly Reliable < 2% uncertainty** Data based on sound records, procedure, investigations and analysis which is properly documented and recognised as the best method of assessment
B	**Reliable ± 2-10% uncertainty** Data based on sound records, procedures, investigations, and analysis which is properly documented but has minor shortcomings' for example the data is old, some documentation is missing and reliance is placed on unconfirmed reports or some extrapolation.
C	**Reasonably Reliable ± 10 – 25 % uncertainty** Data based on sound records, procedures, investigations, and analysis which is properly documented but has minor shortcomings' for example the data is old or incomplete, some documentation is missing and reliance is placed on unconfirmed reports or significant extrapolation.
D	**Uncertain ± 25 –50% uncertainty** Data based on uncertain records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolation from a limited sample for which grade A or B data is available.
E	**Very Uncertain > 50% uncertainty** Data based on unconfirmed verbal reports and/or cursory inspection and analysis

Table 5-13: Levels of Confidence Definitions

6. ASSET MANAGEMENT PRACTICES

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 more information becomes available on desired levels of service and current and projected future asset performance, and the level of data confidence improves.

6.1 Accounting/Financial Systems

6.1.1 Accounting and financial systems

The Shire uses LOGIS as their financial management system, it is noted that the Shire has committed to upgrade their financial management system to IT Vision in the 2013/2014 financial year, and as part of this process will be structuring its chart of accounts and works ledgers to enable accurate capture of new, renewal, maintenance and operations for asset classes.

6.1.2 Accountabilities for financial systems

The Chief Executive Office is responsible for the accounting and financial systems. The CEO is required to undertake reviews of the Financial Management System.

6.1.3 Accounting standards and regulations

The Shire works under Australian Accounting Standards and State Legislation/Regulations and Directives issued by the Local Government Department. All systems are in accordance with the Local Government Financial Management Regs 1996, and Reg 5.(2)(c).

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

The following changes to the accounting and financial systems have been identified:

- Linking of the customer service system to the corporate asset register to link requests to asset records.
- Aligning of project and maintenance costs recording to the asset management plan requirements.
- Improvement of asset register, revaluation of assets and unit rates per road hierarchy level.
- Align business processes for new capital projects to include whole-of-life requirements i.e. operational, maintenance and renewal impacts and potential income sources.

7. PLAN IMPROVEMENT AND MONITORING

7.1 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; and
- The degree to which the 5 year works programs, budgets, corporate business plans and organisational structures take into account the 'global' works program trends provided by the asset management plan.

7.2 Improvement Plan

The asset management improvement plan generated from this asset management plan is shown in Table 7-1.

- Undertake condition inspections;
- Develop a spatial inventory database;
- Improve the accuracy of future financial forecasts through tracking operation, maintenance, renewal, new and upgrade costs.
- Prepare renewal programmes for all assets (excluding buildings) ; and
- Present and adopt this AMP.

Action	Priority High = 1 - 2 yrs Medium = 2 – 4 yrs Low =3 - 6 yrs
Develop a hierarchy for all assets (based on a similar hierarchy of Roads), identifying parent/child relationships, and link to Levels of Services.	High
Develop a simple business case proforma and associated process, for new capital projects. The proforma should provide a project brief, project description, operational, maintenance and renewal impacts (whole-of-life) and potential income sources.	High
Develop a process for community engagement on Levels of Service.	Medium
Develop Level of Service based on performance criteria / needs and affordability.	Medium
Investigate the feasibility of implementing a maintenance management system.	Medium
Develop a formal staff AM training programme, including induction awareness.	High
Develop a formal Councillor AM training programme.	High
Develop a business continuity plan for AM activities.	High
Develop a diagram that defines the organisation's asset management documentation structure and include in the AM Strategy.	High
Carry out 5% audit on assets with regard to date acquired, dimensions, structure, and condition. Increase audit if results are poor and update inventory data prior to each AMP version.	Medium
Implement a condition rating system to enable assets to be rated to help determine replacement dates.	Medium
Develop and implement condition inspection programmes and methodologies for all assets.	High
Improve the manner with which the Shire carries out the forward works planning to increase the reliability of the planned upgrade and new forward works expenditure levels.	High
Incorporate construction dates, asset useful lives and adopt consistent unit rates into each asset register.	Medium
Develop a corporate risk register (or adopt the one proposed in this AMP) to allow aggregation of identified risks.	High
Define the AM roles and responsibilities of Shire staff.	High
Define the asset financial responsibilities of Shire staff.	High
Develop a Shire population & demographic model for infrastructure planning purposes.	Low
Develop a framework for reporting AM outcomes to the Shire and customers.	Medium
Revaluate all assets within the AMP.	Medium

Table 7-1: Improvement Plan

7.3 Monitoring and Review Procedures

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

The AMP has a life of 10 years and is due for revision and updating within 2 years of each Shire election.

Appendix A.ASSET PORTFOLIO AND VALUATION

Roads

Asset Number	Asset Name	Purchase Date	Current Replacement Cost
554	Infrastructure Assets Roads Formation	30-Jun-04	$3,710,765.00
555	Infrastructure Assets Roads Pavement	30-Jun-04	14,679,417.00
556	Infrastructure Assets Roads Seal	30-Jun-04	$1,483,758.00
557	Infrastructure Assets Roads Kerbing	30-Jun-04	$62,100.00
587	Infrastructure Assets Roads-at-Cost 2005/2006	30-Jun-06	$401,596.17
614	Infrastructure Assets Roads-at-Cost 2006/2007	30-Jun-07	$428,548.50
620	Infrastructure Assets Roads-at-Cost 2007/2008	30-Jun-08	$331,441.33
633	Infrastructure Assets Roads-at-Cost 2008/2009	30-Jun-09	$603,580.10
679	Works in Progress Brought to Account 2008/2009	1-Jul-09	$16,680.64
649	Infrastructure Assets Roads-at-Cost 2009/2010	30-Jun-10	$822,756.99
667	Infrastructure Assets Roads-at-Cost 2010/2011	30-Jun-11	$717,715.18
680	Infrastructure Assets Roads-at-Cost 2011/2012	30-Jun-12	$827,738.80
Totals	**12**		**$24,086,097.71**

Footpaths

Asset Number	Asset Name	Purchase Date	Current Replacement Cost
400	Infrastructure Footpaths and Cycleways Valuation 1996/1997	30-Jun-97	$210,069.08
Totals	**1**		**$210,069.08**

Buildings

Asset Number	Asset Name	Purchase Date	Current Replacement Cost
64	**Administration Building**	1-Jul-93	$58,456.02
616	**Carport at CEO'S**	5-Feb-08	$4,717.64
669	**Aged Housing**	30-Sep-11	$1,165.00
68	**Fire Station Building**	30-Jun-96	$31,073.17
611	**Fire Shed**	15-May-07	$24,836.90
69	**House and Carport** **Lot 127 Cardigan St**	1-Jul-93	$37,678.00
70	**House** **Lot 129 Cardigan St**	1-Jul-93	$35,000.00
73	House, Shed, Paving Lot 39 Robinson Rd	1-Jul-93	$114,773.30
78	House, Shed, Pergola Lot 410 Robinson Rd	30-Jun-99	$122,381.25
83	**House, Patio** **Lot 210 Robinson Rd**	31-Dec-99	$102,944.35
524	**Stables** **LOT 290 ROBINSON ROAD**	31-Aug-03	$13,137.50

Asset Number	Asset Name	Purchase Date	Current Replacement Cost
647	**Garage to Lot 210** **WS Residence**	30-Jun-10	$10,328.90
677	Lot 199 - No. 3 House & Land - Aged Housing	21-Mar-12	$106,045.75
84	Niche Wall, Cemetery	1-Jul-93	$1,575.00
648	Recycling Depot, Woodanilling Refuse Site	30-Jun-10	$5,525.82
678	Richardson's Store	30-Jun-12	$4,553.00
637	Kenmare Hall Toilet, Contribution To Kenmare Hall Co	7-Aug-09	$10,000.00
464	Recreation Shed Oval	5-Feb-88	$120,000.00
85	Town Hall	1-Jul-93	$294,009.44
89	Lake Queeriarup Toilet	1-Jul-93	$1,400.00
92	Abultion Block Oval	1-Jul-93	$19,100.00
87	Town Hall Entrance, Brick Paving	14-Jul-99	$3,057.85
93	Toilets Centenary Park	31-Jan-00	$31,074.92
433	Regency Gazebo & Paving, Centenary Park	20-Sep-01	$6,214.37
472	Gazebo Seating, Centenary Park	15-Mar-02	$885.00
552	Lighting for Oval, Sports Complex	4-May-04	$24,150.00
573	2 Lane Cricket Net System, Woodanilling Sports Complex	22-Feb-05	$0.00
572	Matchplay Synthetic Turf, 2 tennis courts re-surfacing, Woodanilling Sports Complex	25-Feb-05	$27,610.00
623	Woodanilling Pavilion	26-Sep-08	$801,208.61
632	Toilet and Seating	30-Jun-09	$33,148.21
94	Shire Depot and Fencing	1-Jul-93	$30,00.00
95	Depot Shed	1-Jul-93	$5,000.00
473	Shed 22.5 x 9.040 X 0 4, Depot	18-Dec-02	$13,295.91
622	Mechanics Workshop	4-Dec-08	$51,546.58
Totals	**34**		**$2,145,892.49**

Public Open Spaces

Asset Number	Asset Name	Purchase Date	Current Replacement Cost
399	Infrastructure Assets Parks and Reserves Valuation 1996/1997	30-Jun-97	$233,977.17
558	Infrastructure Assets Parks and Reserves Skatepark 2003/2004	30-Jun-04	$46,249.85
675	Infrastructure Assets Parks and Reserves Lake Queerearrup 2010/2011	9-Dec-11	$75,397.92
Totals	**3**		**$355,624.94**

Appendix B. LEGISLATIVE ENVIRONMENT: ACTS AND REGULATIONS

The Shire has to meet many legislative requirements including Australian and State Legislation and State Regulations. Many of these requirements are drivers for minimum service levels in that they are levels which the Shire must meet. The current legislation which influences the Shire's asset management are:

Legislation applicable to all Asset Categories	
Legislation	**Requirement**
Local Government Act, 1995 (WA)	The Act provides the principal legislative framework around which the roles, purpose, responsibilities and powers of local governments as set out. Under the Act, regulations set out a minimum requirement for all WA local governments to develop and maintain a Strategic Community Plan and Corporate Business Plan. This compels the local governments to establish long term service and asset strategies through robust asset management practices.
Environmental Protection Act, 1986 (WA)	The Environmental Protection Act 1986 provides for the formation of the Environmental Protection Authority (EPA). It also provides for the prevention, control and abatement of pollution and environmental harm and for the conservation, preservation, protection, enhancement and management of the environment.
Disability Discrimination Act 1992	The Federal Disability Discrimination Act 1992 (D.D.A.) provides protection for everyone in Australia against discrimination based on disability. It encourages everyone to be involved in implementing the Act and to share in the overall benefits to the community and the economy that flow from participation by the widest range of people.
Occupational Health & Safety Act 1984	The Occupational Health and Safety Act is concerned with protecting the safety, health and welfare of people engaged in work or employment. The Act's primary goal is to instil health and safety programs to foster a safe work environment, but as a secondary effect, may also protect co-workers, family members, employers, customers, suppliers etc. In considering any property as a work site, and in planning, initiating and undertaking work on sites, full consideration and application of the Act should be given in order to identify, manage and reduce or mitigate the risk of harm to the Shire's employees and contractors.
Aboriginal Heritage Act 1972	Regulations and requirements that the Shire must comply with relating to aboriginal heritage.
Native Title Act 1999	Regulations and requirements that the Shire must comply with in relation to the use of land.
Town Planning & Development Act 1928	Regulations and requirements that the Shire must comply with in relation to the use of land.
Conservation and Land Management Act 1984	Regulations and requirements that the Shire must comply with relating to the use of land and vegetation.
Heritage Act, 1990 (WA)	The Heritage Act provides for, and encourages, the conservation of places which have significance to the cultural heritage in the State, as well as to establish the Heritage Council of WA. Amongst other activities, the Council maintains a state register of heritage places, which are given legal protection under the Act. Generally, buildings on the register must be maintained and cannot be diminished, destroyed or concealed.
Emergency Management Act, 2005 (WA)	The Act establishes the basis for a broader framework of regulations (Emergency Management Regulations 2006), a committee structure, the prescription of agencies to fulfil the roles as hazard management agencies, combat agencies and support organisations and a suite of State level plans and policies that link the operations of emergency management. Generally, local governments often manage fire stations, as well as use buildings for emergency management centres.

Table 7-2: Legislation, Acts and Regulations for all Asset Categories

Roads and Footpaths

Legislation	Requirement
Civil Liability Amendment Act 2003	In 2001, the High Court of Australia abolished the Common Law Rule exempting Highway Authorities from liability for the non-repair of roads (or non-feasance 'failure to perform an act'). A level of protection for road authorities from failure to carry out work was subsequently restored under Civil Liability Amendment Act 2003. Under subsection (2) of section 5Z of Part 1C of the Civil Liability Amendment Act 2003; "…a roads authority is not liable in proceedings to which this Part applies for harm arising from a failure of the authority to carry out work, unless at the time of failure the authority had actual knowledge of the particular risk that caused the harm."
Road Traffic Act 1974	The Road Traffic Act 1974 covers several key areas relevant to Local Authorities. Section 81 gives Local Authorities the power to effect road closures, both temporary and permanent. Sections 84 and 85 empower LA's to recover costs for certain damages to road reserve assets from the owner of the vehicle found to cause the damage. Other sections also set out the regulations for unauthorised parking and vehicles types, requirements and uses on roads.
Main Roads Act 1930	The Main Roads Act 1930 set out the framework by which Main Roads and the Commissioner operate and the regulations and requirements that the Shire must comply with in relation to use of roads. The Act focuses heavily on the function of Main Roads but also links with several key areas of Local Government. The act sets out Main Roads right of delegation of power to Local Government, ability to proclaim roads highways and main roads and power to make relevant regulations. MRWA must also consult relevant LG bodies prior to the improvement of any roads. Local Government must also comply with information requests from MRWA.
Land Administration Act 1997	Parameters for control and vesting of road reserves.
Other Standards and Regulations	Other relevant documents include, but are not limited to: AS/NZS 4360: 1995 Risk Management Main Roads Western Australia Traffic Management for Roadworks Code of Practice 2004. All other relevant State and Federal Acts & Regulations All Local Laws and relevant policies of the organisation Austroads – Australian Standards and Codes of Practice

Table 7-3: Legislation, Acts and Regulations for Roads and Footpaths

Property	
Legislation	**Requirement**
Building Code of Australia 2011	The Building Code of Australia (BCA) provides a nationally accepted and uniform set of technical requirements for all areas of building, from design to construction. Developed by the Australian Building Codes Board (ABCB) on behalf of the Commonwealth, State and Territory Governments, the BCA is referred to as the building regulation in all States and Territories.
All relevant Australian Standards and Codes of Practice	The Building Code of Australia references a number of other key standards and codes of practice which must be considered for buildings. Typically, this covers: Design; Construction; Services; Management works (i.e. painting); and Demolition.

Table 7-4: Legislation, Acts and Regulations for Property

Public Open Space	
Legislation	**Requirement**
Environment Protection Act (unauthorised discharges) Regulations 2004	States that pesticides cannot be discharged into the environment.
OSH Regulations 1996	The guidelines for employees and employers to undertake within the work environment.
Rights in Water and Irrigation Act 1914	Licence to take water from the groundwater aquifer for the purposes of irrigation of public open space.
Dividing Fences Act	Local government exempt from 50/50 contribution for dividing fences abutting public open space.
Bush Fires Act 1954	Regulates the specifications of firebreaks.
Health (Pesticides) Regulations 1956	Regulates the possession and use of pesticides.
Health Act 1911	Discharging causing pollution to waterways.
Wildlife Conservation Act 1950	Provides for the conservation and protection of native flora and fauna.
Department of Employment & **Workplace Relations - Code of Practice - Management of** **Hazardous Substances** **(NOH:1994)**	Regulates the possession and use of poisons.
Other Standards and Regulations	Other relevant documents include, but are not limited to: • Contaminated Sites Act 2003 • Contaminated Sites Regulations 2006 • Aboriginal Heritage Regulations 1974 • Agricultural and Veterinary Chemicals Act 1994 • Agricultural and Related Resources Protection Act 1976 • Biological Control Act 1986 • Dangerous Goods Safety Act 2004 • Poisons Act 1964 • All other relevant State and Federal Acts & Regulations • All Local Laws and relevant policies of the organisation

Table 7-5: Legislation, Acts and Regulations for Public Open Space

Appendix C. RISK MANAGEMENT ANALYSIS

To build on the risk assessment that the Shire current has for buildings and roads a risk analysis has been undertaken to be compliant with AS 4360, and has been conducted on a broad (macro) portfolio basis. In-lieu of a corporate risk policy and objectives, the following statement defines what an 'acceptable' level of risk is with regards to the Shire's assets.

Through risk management, the Shire aims to:

- Protect the quality of services provided from the Shire's assets;
- Protect users of the Shire's assets;
- Protect the Shire's assets and public image;
- Reduce the Shire's exposure to risk; and
- Promote effective financial and asset management practices.

This will be achieved through:

- Identifying, decreasing the likelihood, and mitigating the consequences of risk, within the constraints of sensible commercial objectives and practices;
- Applying risk based practices to the management of the asset portfolio and associated decision making;
- Maintaining safe and reliable assets';
- Preparing appropriate contingencies;
- Reviewing the risk profile of all assets at appropriate intervals and when circumstances dictate; and
- Maintaining an up to date Asset Management Plan for all assets.

Risk Criteria

Table 7-6 details the likelihood and consequence levels and scale which has been applied to the risk analysis. The combined values for each are then identified on the risk matrix to determine a risk value between low and extreme. The Risk Criteria has been used to produce the Risk Analysis of the Shires assets', this is displayed in Table 7-7.

LIKELIHOOD (LK.) TABLE	
5. Almost Certain	The event is expected to occur > once per year Event has more than a 75% chance of occurring Will occur within the next 6 months
4. Likely	The event will probably occur once per year Event has 50-74% chance of occurring Will occur within 18 months
3. Possible	Risk event could occur at some time Event has 25-49% chance of occurring Will occur within 30 months
2. Unlikely	Risk event is unlikely to occur Event has less than 25% chance of occurring May occur within 5 years
1. Rare	Event may only occur in exceptional circumstances Not likely to occur within next 5 years

CONSEQUENCE (CON.) TABLE	
5.Catastrophic	Financial impact > $3 million Very high Member sensitivity Irreparable damage to ARRB's image and reputation Cessation of business due to Agreement non-compliance
4. Major	Financial impact $500K - $3m Significant Member sensitivity, damage to reputation Financial impact on business or strategic objectives
3.Moderate	Financial impact $50K - $500K Moderate Participant sensitivity, damage to reputation Moderate impact on business and strategic objectives
2. Minor	Financial impact < $50K Minimal damage to image and reputation Minimal impact on business and strategic objectives
1. Insignificant	Consequences are dealt with by routine operations

LIKELIHOOD						
	5- Almost Certain	6	7	8	9	10
	4 – Likely	5	6	7	8	9
	3 –Possible	4	5	6	7	8
	2 – Unlikely	3	4	5	6	7
	1 – Rare	2	3	4	5	6
		1 – Insignificant	2 – Minor	3 – Moderate	4 – Major	5 - Catastrophic
	CONSEQUENCE					

9 – 10	**Critical Risk** – Must implement control measures.
7 – 8	**High Risk** – Must complete control evaluation.
5 – 6	**Medium Risk** – Management of responsibility.
2 - 4	**Low Risk** – Monitor. Examination of controls is not specifically required.

Table 7-6: Risk Analysis Tables

Risk Analysis

Ref No.	The Risk	Event (What happens)	Cause (How this happens)	Consequence (What results)	Existing controls	Effectiveness of existing controls	Analysis (1 (Low) – 5 (High))			Further Action
							Likelihood	Consequence	Level of risk	
1	Asset failure.	Asset fails.	Degradation of assets.	Catastrophic failure, disruption to services, financial impact.	Reactive maintenance	Low to Moderate	4	3	High	More frequent inspections and implement maintenance regimes.
2	Failure to comply with legal and regulatory requirements.	Non-compliance with legal and regulatory requirements.	Informal AM practices, insufficient resource and skill levels etc.	Asset fails or legal action may be taken.	Peer review	High	3	3	Medium	Ensure staff are well trained, reviews and audits are undertaken.
3	There is no asset condition data and no formalised inspection regime (other than basic building inspections).	Assets renewed sub-optimally. Asset becomes unusable because of poor condition.	No formal rating programme.	Higher whole of life costs, and lower service levels.	Ad-hoc inspections, stakeholder maintenance requests.	Low	5	4	High	Develop formal inspection regimes for all assets and implement.
4	No documented condition rating process leads to suboptimal asset renewal.	The Shire holds no data on the condition of assets.	No adopted rating process and methodology used by the Shire.	Assets are replaced at no documented/agreed intervention level, and possibly sub-optimally.	None	None	4	2	Medium	Adopt a formal condition rating process and methodology, implement and update this AMP.
5	No formalised maintenance management regime for all assets excluding roads.	Assets reactively maintained.	No inspection process and/or intervention framework.	Higher costs, higher exposure to H&S risk, mis-prioritisation.	Adhoc inspections, stakeholder maintenance requests.	Low	5	4	Critical	Develop cyclical maintenance regimes for all assets.
6	No long term renewal	Assets managed	No formal rating	Higher whole of life	Future	Low	5	4	Critical	Develop renewal

	programme.	sub-optimally.	programme.	costs, lower service levels.	expenditure for buildings considered.					programme for assets from condition ratings.
7	Assets are not managed in an environmentally sustainable manner.	The Shire does not manage assets in an environmentally sustainable manner.	No environmental management plan.	Financial impact, political, loss of reputation and disruption of services	None	None	4	2	Medium	Integrate this AMP with environmental management plan, review and audit.
8	Service level performance information is not collected.	Processes are not put into place to consistently collect performance information.	Lack of funding, insufficient resources and/or skill levels.	Performance against service levels is not accurately known, drainage network sub-optimally.	None	None	4	2	Medium	Develop and implement processes to allow asset service levels to be monitored.
9	A lack of sufficient asset inventory causes inefficient management practices and limits AM advancement.	The Shire holds no spatially referenced asset inventory.	Informal AM practices, insufficient resource and skill levels etc.	Assets are managed on an ad-hoc basis, with little consideration of whole of life issues.	None	None	5	2	High	Develop a more robust asset inventory, preferably in a GIS database.

Table 7-7: Risk Analysis

Appendix D. REFERENCES

1. Australian Bureau of Statistics, 2011 Time Series Profile: Woodanilling (S) (Local Government Area).
2. The Shire of Woodanilling (2009) Plan For The Future / Strategic Plan 2009 to 2014.
3. Shire of Woodanilling (2012) Strategic Community Plan and Corporate Business Plan 2012 to 2022.
4. IPWEA, 2011, International Infrastructure Management Manual, Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au.

Appendix E. 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 which are non-current assets with a life greater than 12 months and enable services to be provided.

Asset class

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

Asset condition assessment

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

Asset management (AM)

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

Average annual asset consumption (AAAC)*

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

Borrowings

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

Capital expenditure

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

Capital expenditure - expansion

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

Capital expenditure - new

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

Capital expenditure - renewal

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

a material section of a drainage network with pipes of the same capacity, resurfacing an oval.

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

Capital funding
Funding to pay for capital expenditure.

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

Capital investment expenditure
See capital expenditure definition

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

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

Class of assets
See asset class definition

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

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

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

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

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

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

Economic life
See useful life definition.

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

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

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

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. Levels of service usually relate to quality, quantity, reliability, responsiveness, environmental impact, acceptability and cost.

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

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

Loans / borrowings
See borrowings.

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

- **Planned maintenance**
  Repair work that is identified and managed through a maintenance management system (MMS). MMS activities include inspection, assessing the condition against failure/breakdown criteria/experience, prioritising scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.
- **Reactive maintenance**
  Unplanned repair work that is carried out in response to service requests and management/supervisory directions.
- **Significant maintenance**
  Maintenance work to repair components or replace sub-components that needs to be identified as a specific maintenance item in the maintenance budget.
- **Unplanned maintenance**
  Corrective work required in the short-term to restore an asset to working condition so it can continue to deliver the required service or to maintain its level of security and integrity.

Maintenance and renewal gap
Difference between estimated budgets and projected required expenditures for maintenance and renewal of assets to achieve/maintain specified levels of service, 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 Shire, 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 months. Recurrent expenditure includes operations and maintenance expenditure.

Recurrent funding
Funding to pay for recurrent expenditure.

Rehabilitation
See capital renewal expenditure definition above.

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

Renewal
See capital renewal expenditure definition above.

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

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

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

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

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

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

Strategic Longer-Term Plan
A plan covering the term of office of councillors (4 years minimum) reflecting the needs of the community for the foreseeable future. It brings together the detailed requirements in the Shire's longer-term plans such as the asset management plan and the long-term financial plan. The AMP is prepared in consultation with the community and details where the Shire 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 AMP 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 Shire.

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