PLANT AND EQUIPMENT
ASSET MANAGEMENT PLAN

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PLANT AND EQUIPMENT
ASSET MANAGEMENT PLAN

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1. Executive Summary

The Shire of Mukinbudin maintains a range of different types of plant and equipment assets that enable stakeholders such as staff to carry out different activities. The portfolio is made up of equipment, vehicles and tools.

This is the Shire's first Asset Management Plan (AMP) to be produced for plant and equipment. It seeks to outline the activities and programmes that the Shire will carry out over the next 15 years. It details the service levels the Shire will provide and the resources required to deliver them. While the document is comprehensive it is also considered a "first cut" AMP. As such there are a number of actions that have been identified that will improve its accuracy over time. All readers of this AMP must understand its limitations and applied assumptions before acting on any information contained within it.

Overall, the AMP has determined that there are a number of data deficiencies on plant and equipment assets. As a result, the current asset management practices are not as effective as they could be. Issues currently of key focus which require action over the short term are to:

- **Develop an accurate asset inventory for all plant and equipment assets**
- **Investigate available asset management software systems**
- **Develop and implement planned maintenance and condition inspection programmes for applicable assets**
- **Develop an asset replacement schedule**
- **Develop accurate valuations of all plant and equipment assets**
- **Secure appropriate resources to further develop the Shire's asset management programme/activities**
- **Begin monitoring asset's performance against the service levels**

2. Background and Objectives

2.1. Purpose of this Asset Management Plan

This document is an Asset Management Plan (AMP) for the Shire of Mukinbudin's plant and equipment. The AMP documents the management practices, processes and strategies that we (the Shire) apply to ensure that the assets are fit for purpose and maintained to agreed service levels that are balanced against long term resource availability.

2.2. Focus of this Asset Management Plan

The AMP broadly covers all vehicles, vehicles accessories, plant and tools. In line with the Shire's Asset Management Policy, assets with a useful life of less than 1 year, and/or a replacement cost of less than $2,000 are not included within this AMP. The asset types covered by this AMP and their valuations are detailed in Table 2-1. It should also be noted that fair values are not currently available.

Asset Type	Quantity	Current Replacement Cost	Fair Value
Back Hoe	1	$150,000	-
Bitumen Spray Unit	1	$70,000	-
Bus	1	$124,450	-
Car	3	$89,008	-
Grader	2	$680,000	-
Loader	1	$320,000	-
Minor Plant	16	$66,406	-
Mower/Slasher	4	$32,285	-
Planter	2	$46,800	-
Roller	2	$340,000	-
Storage Tank	6	$19,807	-
Sweeper	1	$75,000	-
Tractor	2	$155,000	-
Truck	8	$1,582,570	-
Ute	5	$123,146	-
Wood Chipper	1	$6,755	-
Total	**56**	**$3,881,227**	**-**

Table 2-1: Assets covered by Plant & Equipment AMP

2.3. Corporate Document Relationships

This AMP integrates with many other key Shire documents. Furthermore, AMPs are also key informing documents of the Shire's integrated planning and reporting framework. The principal documents that link to this AMP are:

- Strategic Community Plan
- Corporate Business Plan
- Long Term Financial Plan
- Capital Works Plan
- Annual Budget

2.4. Who is the Audience of the AMP?

The principal audience of this AMP is the Shire of Mukinbudin Council and Chief Executive Officer.

2.5. Time Period of the AMP and Next Review Data

The AMP covers a 10 year period and will be next reviewed by 1st July 2016.

2.6. Asset Management Plan Stakeholders

The following people and organisations are key stakeholders in the development of the AMP and/or of the final AMP. The Service Levels detailed in Section 3 support the interests of these stakeholders. An analysis of possible stakeholders and service levels is attached as Appendix B, as well as the process used to select the final service levels. Only those which have been deemed the most important to the key stakeholders have been included in this AMP.

Stakeholder	Key in AMP development?	Key AMP audience?
Shire of Mukinbudin Council		✓
Shire of Mukinbudin Staff	✓	✓
Bush Fire Brigade(s)		✓
Other External Users		✓

Table 2-2: Stakeholder Relationships to AMP

3. Service Levels

3.1. Service Level Introduction

This section details the service levels that the Shire has set out to achieve and provide for its plant and equipment. The service requirements of all major stakeholders were considered (Appendix B) and those which were the most frequently occurring, or were needed, then formed the basis of the service levels along with other strategic drivers. These service levels are then used to monitor the performance of the service from the assets and to identify areas of over or under delivery. The service level measures also allow the Shire to ensure that plant and equipment is fit for purpose and provided at an efficient cost.

3.2. Organisational Drivers and Objectives

3.2.1. Strategic Community Plan

The Shire's Strategic Community Plan (2013-2023) was considered in order to identify organisational drivers and objectives that may affect service levels. The Shire defines its overall Vision to be:

"To assist our community towards a prosperous future by providing a positive environment in which to work and live."

In order to achieve this Vision, The Strategic Community Plan contains a number of Themes, Strategies and Actions. All identified actions must be considered and incorporated into this Plan. Those that directly align with plant and equipment are:

Theme	Strategy(s)	Action(s)
Social	3.1 – Integrated, accessible and safe transport networks. 3.2 – Effectively plan, develop and manage infrastructure and facilities.	= Continue to provide an accessible community bus service and ensure a regular public bus service to Perth is maintained

Table 3-1: Strategic Community Plan Actions Aligned to Plant and Equipment

3.2.2. Asset Management Policy and Strategy

The Shire maintains both Asset Management Policy and Strategy documents. Broadly speaking, the Policy sets out the Shire's key asset management principles, whilst the Strategy describes the long term approach. The Policy's principles include a number which must be considered by the service levels, they are:

- **Define agreed asset service levels, matched with the associated resources and assets required to enable their delivery**
- **Manage assets in a whole-of-life and economically, environmentally and socially sustainable manner**
- **Balance decisions with other key Shire policies and functions**
- **Give priority to the needs of existing assets and services before new ones**
- **Commit to continuous improvement**
- **Manage the risks associated with asset ownership and management**

3.3. Stakeholder Research and Expectations

No research into stakeholder expectations has been undertaken. This will be undertaken as part of future engagement of service levels and has been listed as an improvement action.

3.4. Legislation and Standards

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 that the Shire must meet. A list of relevant legislation can be found in Appendix A.

3.5. Plant and Equipment Assets' Function

Further to meeting legislative requirements and standards as part of the Shire's business context, consideration must also be given to the overall function of plant & equipment in setting service levels. In order to develop a functional statement for these assets, the previously discussed corporate documents were considered. Considering all drivers, the following statement has been developed.

The Shire will seek to provide plant & equipment that is deemed necessary to support its strategic community objectives.

Figure 3-1: Plant & Equipment Functional Statement

3.6. Service Level Targets and Performance

Table 3-2 details the service level targets and performance which the Shire will provide. The service levels for accessibility, quality and safety were selected from the stakeholders' needs analysis.

Key Performance Indicator	Stakeholder	Level of Service	Performance Measure	Target	Current	Data Confidence
Availability	Bush Fire Brigade, Staff, External Users	Plant & equipment is available for use when required.	Percentage of days per year that plant & equipment is available for use.	95%	TBC	-
Compliance	Bush Fire Brigade, Council	Plant & equipment is managed to at least meet statutory obligations.	Number of identified occurrences each year where an asset has failed to meet a statutory requirement.	0	TBC	-
Financial Sustainability	Council	Plant & equipment portfolio is financially sustainable	Percentage of AMP sustainability ratio KPIs within target.	100%	TBC	-
Reliability	Bush Fire Brigade, Staff, External Users	Plant & equipment is managed so as to provide a high reliability level.	The percentage of days per year that all plant & equipment assets are fully functioning, excluding planned maintenance periods.	95%	TBC	-
Safety	Bush Fire Brigade, Council, Staff, External Users	Ensure plant & equipment is maintained to reduce risk of injury	Number of days with no reported lost time injuries.	300	TBC	-

Table 3-2: Service Level Targets and Performance

4. Demand

This section summarises likely factors which may affect the demand for plant & equipment assets over the life of the AMP. Full details of potential demand factors are recorded in Appendix C.

4.1. Historic Demand

Whilst historical demand trends are not always an indication of what may happen in the future, they often help managers form a view of how service demand may change.

When the overall population change of the Shire (Figure 4-1) between 2001 and 2011 is considered, the number of recorded people at census night has fallen from 914 (2001) to 807 (2011). This decrease of -11.7% would suggest that demand for some services would also have decreased, resulting in a corresponding fall in plant and equipment demand/usage.

Over the same timeframe, the Shire's population's median age has also increased from 38 to 44. The fall in number of young people and growth in number of older people, may have caused a change in service demand and hence the types of different plant and equipment assets needed.

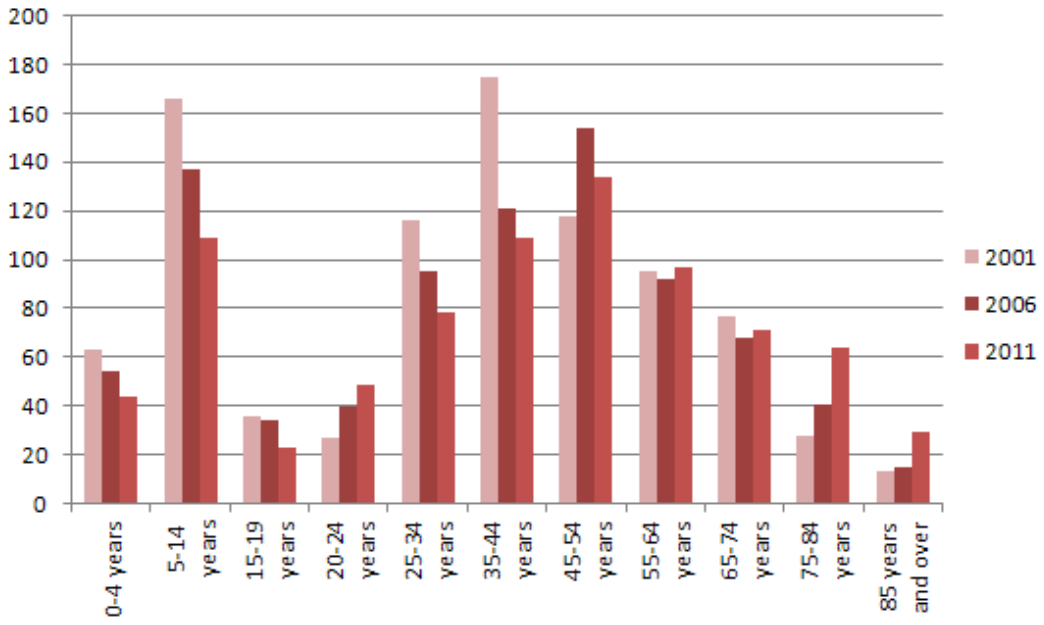


Figure 4-1: ABS Census Data - Mukinbudin Population and Demographic 2001-2011

Figures from Tourism WA (Figure 4-2) show that over the past 4 years, the estimated number of visitors to/within WA have risen from 18.7million in 2009 to 22.1million in 2013. Whilst figures show that only 7% of visitors go to the "golden outback" region of WA (within which the Shire lies), demand growth may have occurred in service areas such as

transport and recreation. This may have led to a corresponding demand increase of plant and equipment.

Figure 4-2: WA Visitors (Source: Tourism WA October 2013)

In summary, a decrease in population size has likely caused an overall fall in demand for certain services. Although possibly offset in part by increasing visitor numbers, a fall in service demand may have also caused a resulting drop in plant and equipment demand. As such, there may be some asset's which could be regarded as underutilised and cost-inefficient. Additionally, demand change may also have been inconsistent across services areas, as a changing population demographic may have caused some service demand to fall quicker than others. Going forward, it will be important to understand the usage levels of individual assets, so that over or under use can be identified. In turn, this will help to facilitate more efficient plant and equipment asset provision.

4.2. Future Demand Drivers (Factors)

Consideration was given to six possible future demand drivers (political, economic, social, technological, legal and environmental) that may influence demand of plant and equipment. Each of these drivers is discussed in Appendix C and summarised in Table 4-1.

Driver Type	Affect over life of AMP
Political	State government cannot exert significant direct demand change on the Shire's plant & equipment assets. Potential demand change could occur when service shifting happens; however over the life of this AMP, no specific actions have been identified. The Shire Council can affect demand through a number of ways, but primarily through the allocation of financial resources and setting of service levels. However, the development of the Shire's Integrated Planning and Reporting Framework will help ensure that all service levels are sustainably funded. In 5 February 2009, the Minister for Local Government announced a suite of Local Government reforms. Future amalgamations may occur, although the scope and timing unknown. If they were to occur, there may be scope to reduce service demand through asset rationalisation. Change Effect: Neutral demand change
Economic	A direct link exists between the number of Shire staff and quantities of certain plant and equipment assets. As such, projected changes in staff numbers over the life of this AMP need to be considered. Consequential demand changes for plant & equipment will be included in the next version of this AMP. Over the life of this AMP, it is highly likely that the cost of different energy fuels used by plant and equipment (e.g. petrol, diesel, gas, electricity) will increase above normal CPI levels. As such, there may be an increasing need to monitor consumption levels and costs and to identify where reductions can be made. The introduction of the IPRF will enable the Shire to determine its sustainability and potentially allow Council to change the service levels that it provides. The implementation of improved asset management practices will allow the Shire to align service levels to plant and equipment portfolio size. Change Effect: Rising energy costs will drive sustainability initiatives. Changes in workforce size as well as service level performance need to be aligned with plant & equipment requirements.
Social	The Shire's population has fallen from 659 in 2001 to 490 in 2011. This trend is generally in line with the State Government's Band B forecast which suggests that the population will continue to fall to approximately 320 people by 2026. If correct, then service demand will likely significantly decrease. This will potentially drive the need for asset rationalisation and

	service level change in order to reduce long term costs. Historical census data shows that the Shire's median age changed from 35 in 2001 to 45 in 2011. With this expected to continue to increase into the foreseeable future service demand may also change. In turn this may result in subtle changes to the types of plant and equipment needed to support these services. Change Effect: Negative change due to a falling population size. Possible changes in composition of plant and equipment portfolio due to service demand changing with an ageing population.
Technological	The increasing technological complexity of many plant and equipment items may make servicing and maintenance support more complex and costly. Investment in staff training and specialist equipment may be required. An improvement in the Shire's asset management practices will likely mean that a higher volume of data will need to be captured and managed on plant and equipment assets. This position may mean that an increase in resources is needed to acquire and manage data, as well as a software management system. Change Effect: Increasing technological complexity will increase demand for staff training and specialist equipment to service and maintain many assets. Additional resources will be required to maintain better data on individual plant and equipment assets in order to achieve better asset management outcomes.
Legal	No demand factors identified. Change Effect: No change
Environmental	Community awareness of environmental issues is likely to continue to grow. Over time this will continue to alter habits and legislation. Future consideration of plant and equipment need, obtaining maximum asset life and reducing energy and carbon use will be required. Initiatives may change the composition of the plant and equipment stock. Change Effect: Increased demand for clearer decision making around asset need. Preference for more environmentally gentler assets may increase whole of life costs.

Table 4-1: Future Demand Drivers

4.3. Demand Summary

As the Shire's population fell over the past 10 years and its demographic changed, it is likely that service demand changed as well. As such, it is possible that some plant and equipment is over underutilised. With projections showing that the population is expected to continue to shrink, as well as the median age increasing, service demand will change over the life of this Plan. This will consequentially affect the composition of the plant and equipment portfolio. Therefore, future versions of this AMP must align with other AMPs and with the Workforce Management Plan.

In addition to population and demographic changes, the Shire will need to respond to other emerging trends. These include rising energy costs, and the need to become increasingly environmentally sustainable. Initiatives and policy changes may make old assets obsolete and drive the acquisition of newer, more efficient and environmentally friendly units. However, these may come at a price premium which will therefore demand more resources. Furthermore, as some plant and equipment assets become increasingly more technical, the Shire's ability to service and maintain them may become difficult without investment in staff training and specialist equipment. Consider of a future strategy around plant and equipment servicing and maintenance may be wise.

The analysis shows that the key demand areas over the life of this AMP are likely to be:

= An increased demand for skilled labour (internal or external) and financial resources to:

  - Improve asset management practices and systems
  - Fund higher future energy costs
  - Implement environmental sustainability initiatives
  - Align plant and equipment assets to service demand
  - Train and equip staff in order to perform servicing and maintenance activities

= Changing demand for services and thus changing requirements of plant and equipment due to:

  - A falling population size
  - An aging population

= An opportunity to reduce demand and costs through:

  - The rationalisation of existing stock where opportunities exist and where assets do not clearly align with service provision

In order to quantify and meet the challenges that these major demand factors may pose, the following improvement actions have been listed:

= Investigate the options available to the Shire to secure appropriate asset management skills and resources to drive improved practices
= Collect inventory data on plant and equipment assets
= Monitor assets' costs and utilisation levels in order to determine those which are performing poorly
= Identify environmental sustainability initiatives
= Align this AMP with the service demand forecasts from other AMPs and staffing projections in the Workforce Management Plan

5. Risk Management

The Shire does not currently operate a risk management policy or corporate risk register. In lieu of these, a desktop risk analysis has been undertaken for the plant and equipment portfolio and is included as Appendix E. Table 5-1 outlines the top identified risks. An improvement action for the Shire to develop a corporate risk management framework has been listed.

Risk Ref.	The Risk	Level of Risk	Further Action
4	A formal planned maintenance management strategy and programme does not exist. As a result, the risk of critical plant and equipment failing when required is higher.	H	Develop a planned preventative maintenance programme for all plant and equipment assets.
5	The Shire does not have an asset management system, making sound management practices hard to achieve.	H	Develop a specification for an asset management system and review costs and benefits.

Table 5-1: Major Plant and Equipment Portfolio Risks

Each of the top identified risks are recommended for further action (see Section 9).

6. Lifecycle Management Plan

The lifecycle management plan details how the Shire plans to manage and operate its plant and equipment at the agreed service levels (Section 3).

6.1. Background Data

6.1.1. Work Category Definitions

This AMP generally considers work within the following six areas of activity.

Activity	Definition
Operation	Continuously required expenditure which enables the asset to provide benefits, such as vehicle licensing.
Maintenance	Regular repair works to prevent deterioration of the assets' capability, such as minor repairs, servicing etc.
Renewal	Works to replace existing assets which are worn, poorly functioning or dated with assets of equivalent capacity or performance. For example, the replacement of a grader.
Upgrade	The significant upgrade of an asset to produce a higher service level, such as replacing a truck with one of a higher load carrying capacity.
New Work	The creation or acquisition of a new asset that provides a service that did not exist before, such as the acquisition of a second grader, where previously only one was owned.
Asset Disposal	The process of removing and disposing of an asset upon the end of its useful life. For the purpose of this AMP this is only when an asset is not replaced.

Table 6-1: Activity Categories

6.1.2. Lifecycle Costing Basis

The financial projections within this section of the AMP have adopted life cycle costing (LCC) principles. LCC is the combination of all lifecycle costs associated with an asset, from conception and design through to eventual disposal. This concept is demonstrated by the Figure to the right. Lifecycle costing is important in order to understand the true costs of assets.

Figure 6-1: Asset Lifecycle

6.1.3. Plant and Equipment Portfolio Physical Parameters

The quantities and approximate values of the plant and equipment assets currently covered by this AMP are shown in Table 6-2 and the portfolio's Current Replacement Cost in Figure 6-2. An improvement action has been listed to obtain Fair Values for all assets.

AMP Section	Asset Type	Quantity	Unit	Current Replacement Cost	Fair Value
6.2	Back Hoe	1	No.	$150,000	-
	Bitumen Spray Unit	1	No.	$70,000	-
	Bus	1	No.	$124,450	-
	Car	3	No.	$89,008	-
	Grader	2	No.	$680,000	-
	Loader	1	No.	$320,000	-
	Minor Plant	16	No.	$66,406	-
	Mower/Slasher	4	No.	$32,285	-
	Planter	2	No.	$46,800	-
	Roller	2	No.	$340,000	-
	Storage Tank	6	No.	$19,807	-
	Sweeper	1	No.	$75,000	-
	Tractor	2	No.	$155,000	-
	Truck	8	No.	$1,582,570	-
	Ute	5	No.	$123,146	-
	Wood Chipper	1	No.	$6,755	-
TOTAL	**ALL**	**56**	No.	**$3,881,227**	**-**

Table 6-2: Plant and Equipment Portfolio Physical Parameters

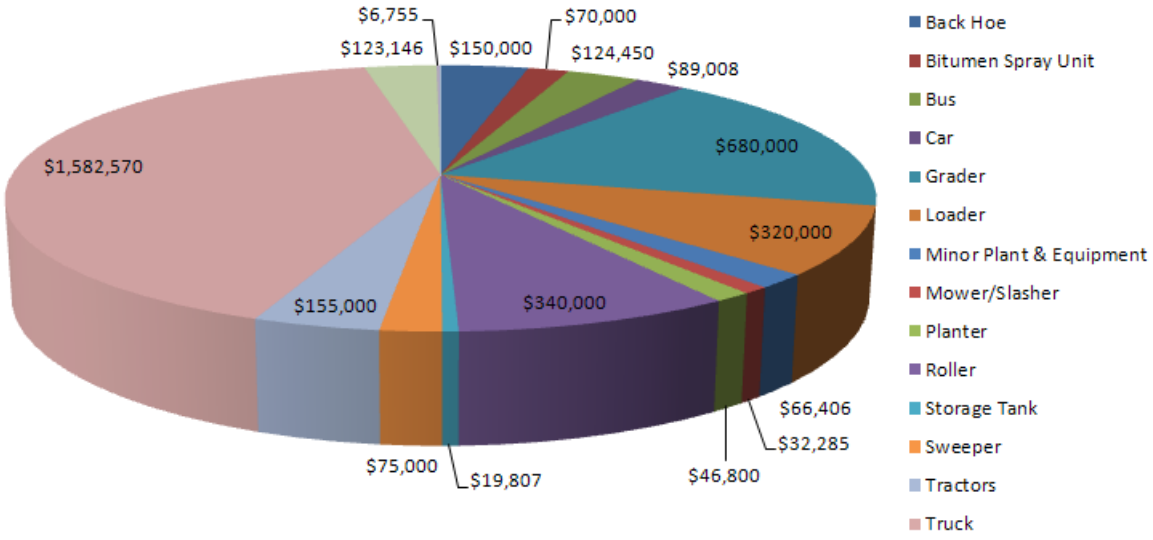


Figure 6-2: Plant and Equipment Portfolio Current Replacement Costs

6.1.4. Plant and Equipment Portfolio Data Confidence and Reliability

To be able to effectively manage its assets, the Shire collects and maintains a range of data on its Plant and Equipment Portfolio. Understanding where gaps in this data exist is important to determine the confidence that we can put in the outcomes (e.g. valuations) that result. Table 6-4 details the reliability and confidence levels of the current asset data the Shire holds. In assessing the data, the Shire has applied the IIMM confidence framework as detailed in Table 6-3.

Confidence Grade	Description	Accuracy
1	Accurate	100%
2	Minor inaccuracies	± 5%
3	50% estimated	± 20%
4	Significant data estimated	± 30%
5	All data estimated	± 40%

Table 6-3: Data Confidence Measures

Asset Class	Inventory	Condition	Valuation
All plant and equipment assets	2	4	3

Table 6-4: Plant and Equipment Portfolio Data Confidence Levels

It is the Shire's intention to progress towards a position whereby data confidence levels for all areas are classified as either a 1 or 2.

6.2. Asset Lifecycle Management – Plant and Equipment Assets

6.2.1. Asset Inventory

An inventory of the Shire's plant and equipment assets is attached in Appendix F. At present the level of inventory detail is somewhat limited. An improvement action to develop a 'future data state' for the plant and equipment inventory has been listed.

6.2.2. Asset Condition

Data on each asset's physical condition is not currently held. An improvement action to develop and apply a condition inspection programme for applicable assets has been listed.

6.2.3. Asset Valuation

At the end of each financial year, the Shire reviews the valuation of its assets. An internal valuation for plant and equipment was undertaken by the Shire. Results are shown in Table 6-5. However, only fair values are not currently available. An improvement action to prepare current replacement costs, fair values and annual depreciation amounts for each asset has been listed.

Year	Current Replacement Cost	Fair Value	Annual Depreciation
2013	$3,881,227	-	-

Table 6-5: Plant and Equipment Portfolio Valuation

6.2.4. Operation and Maintenance Plan

Operation activities and costs are those which are required to run an asset (e.g. fuel, cleaning, licensing etc.). 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 (e.g. minor repairs, servicing etc.). This section of the AMP details the Shire's operation and maintenance activities and costs.

Historical Expenditure

The Shire's recorded expenditure on operation and maintenance activities from the general ledger is shown in Table 6-6. Due to some limitations in the general ledger, the figures are considered to be moderately accurate. It should be noted that labour costs are generally not included as these are captured in the Shire's Workforce Management Plan. A task to improve the recording accuracy of all plant and equipment costs has been listed.

Year	Operation Expenditure	Maintenance Expenditure
2012/13	$204,186	$246,450
2011/12	$215.583	$139,075
2010/11	$174,798	$184,412

Table 6-6: Historical Plant & Equipment Operation and Maintenance Expenditure 2010/11 - 2012/13

Maintenance Response and Prioritisation

At present, the assessment and prioritisation of maintenance activities is undertaken by operational staff using experience and judgement. An improvement task has been listed for the Shire to develop a detailed planned preventative maintenance programme.

Standards and Specifications

Operation and maintenance work is carried out in accordance with the relevant standards and specifications listed in Appendix A.

Future Operation and Maintenance Expenditure

With the plant & equipment portfolio not expected to increase in size over the life of this AMP, operation and maintenance costs are expected to generally change in line with inflation levels. Where upgraded or new plant & equipment assets are forecast for acquisition within the life of this AMP, allowances for additional operation and maintenance costs have been made. The following figures are presented in future dollar values and an inflation factor of 4% has been applied.

Year	Operation Expenditure	Maintenance Expenditure
2014/15	$206,117	$223,471
2015/16	$214,362	$232,409
2016/17	$222,936	$241,706

2017/18	$231,853	$251,374
2018/19	$241,128	$261,429
2019/20	$250,773	$271,886
2020/21	$260,804	$282,762
2021/22	$271,236	$294,072
2022/23	$282,085	$305,835
2023/24	$293,369	$318,068
2024/25	$305,103	$330,791
2025/26	$317,307	$344,023
2026/27	$330,000	$357,784
2027/28	$343,200	$372,095
2028/29	$356,928	$386,979

Table 6-7: Projected Plant & Equipment Operation and Maintenance Expenditure

6.2.5. 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 or new work expenditure.

Historical Expenditure

The Shire's actual past expenditure on plant & equipment asset renewal activities is shown in Table 6-8. It should be noted though that at present, it is not possible to clearly separate all expenditure on renewal, upgrade and acquisition activities. As such, the amounts spent on renewal may be over inflated. The revision of the following figures and general ledger has been listed as an improvement action.

Year	Renewal Expenditure
2012/13	$142,852
2011/12	$155,288
2010/11	$157,349

Table 6-8: Historical Plant and Equipment Renewal Expenditure 2010/11 - 2012/13

Renewal Selection

Plant and equipment assets requiring renewal are currently identified either through staff inspection or in accordance with replacement schedules which are updated on an annual basis. There are currently gaps in the replacement programme and an improvement task to refine it has been listed.

Summary of Projected Renewal Expenditure

A summary of the planned expenditure on plant and equipment asset renewal is provided below. The expenditure level is based upon historical levels of expenditure, records of which are currently somewhat inaccurate, and annual depreciation estimates. An improvement task to refine future renewal expenditure projections using replacement schedules has been listed.

Year	Renewal Expenditure
2014/15	$929,000
2015/16	$499,000
2016/17	$532,500
2017/18	$275,000
2018/19	$336,000
2019/20	$280,500
2020/21	$127,000
2021/22	$198,000

2022/23	$209,000
2023/24	$375,000
2024/25	$375,000
2025/26	$375,000
2026/27	$375,000
2027/28	$375,000
2028/29	$375,000

Table 6-9: Projected Plant & Equipment Renewal Expenditure

6.2.6. Acquisition/Upgrade Plan

Where a service deficiency is identified and existing plant & equipment assets cannot provide the service, then assets may be acquired or existing ones upgraded. All potential acquisition and upgrades are subject to Council approval.

Historical Expenditure

The Shire's actual past expenditure on plant & equipment asset acquisition/upgrade activities is shown in Table 6-10. As previously discussed, records on historical expenditure levels have low confidence levels and may currently be recorded as renewal.

Year	Upgrade Expenditure	New Expenditure
2012/13	$0	$0
2011/12	$0	$0
2010/11	$0	$0

Table 6-10: Historical Plant & Equipment Acquisition/Upgrade Expenditure

Summary of projected upgrade/new asset expenditure.

A summary of planned upgrade and new assets is detailed in Table 6-11.

Year	Asset	Upgrade Expenditure	New Expenditure
2014/15			
2015/16			
2016/17			
2017/18			
2018/19			
2019/20			
2020/21			
2021/22			
2022/23			
2023/24			
2024/25			
2025/26			
2026/27			
2027/28			
2028/29			

Table 6-11: Planned Plant & Equipment Upgrade & Acquisition Expenditure

6.2.7. Disposal Plan

Disposal includes any activity associated with disposal of a decommissioned asset. For the purposes of this AMP, this is when the asset is not replaced. Assets identified for possible decommissioning and disposal are shown in Table 6-12, together with estimated annual savings from not having to fund operation, maintenance and renewal of the assets.

Year	Disposal Income (-ve) or Cost (+ve)
2014/15	-$169,500
2015/16	-$80,000
2016/17	-$174,000
2017/18	-$50,000
2018/19	-$101,000
2019/20	-$44,000
2020/21	-$71,000
2021/22	-$27,500
2022/23	-$81,000
2023/24	-$88,667
2024/25	-$88,667
2025/26	-$88,667
2026/27	-$88,667
2027/28	-$88,667
2028/29	-$88,667

Table 6-12: Planned Plant & Equipment Disposal

7. Financial

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

All future monetary figures in this section are expressed in terms of real dollars, with a 2014 base year and an applied inflation rate of 4%. Historic figures are expressed in their respective real values.

7.1. Projected Expenditure

Table 7-1 Table 7-2 and Table 7-3 detail the projected expenditure required for the plant and equipment portfolio over the next 15 years. As previously discussed, there are areas of data weakness and therefore the following projections are likely to change as the Shire's asset management practices improve.

Asset Type	Year 1	Year 2	Year 3	Year 4	Year 5
	2014/15	2015/16	2016/17	2017/18	2018/19
Plant & Equipment Assets	$1,358,587	$945,771	$997,142	$758,227	$838,557
Required Funds	**$1,358,587**	**$945,771**	**$997,142**	**$758,227**	**$838,557**

Table 7-1: Projected Plant & Equipment Asset Expenditure - 2014/15 to 2018/19

Asset Type	Year 6	Year 7	Year 8	Year 9	Year 10
	2019/20	2020/21	2021/22	2022/23	2023/24
Plant & Equipment Assets	$803,159	$670,565	$763,308	$796,920	$986,437
Required Funds	**$803,159**	**$670,565**	**$763,308**	**$796,920**	**$986,437**

Table 7-2: Projected Plant & Equipment Asset Expenditure - 2019/20 to 2023/24

Asset Type	Year 11	Year 12	Year 13	Year 14	Year 15
	2024/25	2025/26	2026/27	2027/28	2028/29
Plant & Equipment Assets	$1,010,894	$1,036,330	$1,062,783	$1,090,295	$1,118,906
Required Funds	**$1,010,894**	**$1,036,330**	**$1,062,783**	**$1,090,295**	**$1,118,906**

Table 7-3: Projected Plant & Equipment Asset Expenditure - 2024/25 to 2028/29

7.2. Projected Revenue Sources

Table 7-4, Table 7-5 and Table 7-6 detail the likely revenue sources for the plant and equipment portfolio.

Asset Type	Year 1	Year 2	Year 3	Year 4	Year 5
	2014/15	2015/16	2016/17	2017/18	2018/19
Vehicle Hire	-$4,425	-$4,601	-$4,786	-$4,977	-$5,176
Disposal Income	-$169,500	-$80,000	-$174,000	-$50,000	-$101,000
Municipal Funds	**$1,015,163**	**$861,169**	**$818,356**	**$703,250**	**$732,380**

Table 7-4: Projected Plant & Equipment Asset Revenue - 2014/15 to 2018/19

Asset Type	Year 6	Year 7	Year 8	Year 9	Year 10
	2019/20	2020/21	2021/22	2022/23	2023/24
Vehicle Hire	-$5,383	-$5,598	-$5,822	-$6,055	-$6,297
Disposal Income	-$44,000	-$71,000	-$27,500	-$81,000	-$88,667
Municipal Funds	**$753,776**	**$593,967**	**$729,985**	**$709,865**	**$891,472**

Table 7-5: Projected Plant & Equipment Asset Revenue - 2019/20 to 2023/24

Asset Type	Year 11	Year 12	Year 13	Year 14	Year 15
	2024/25	2025/26	2026/27	2027/28	2028/29
Vehicle Hire	-$6,549	-$6,811	-$7,084	-$7,367	-$7,662
Disposal Income	-$88,667	-$88,667	-$88,667	-$88,667	-$88,667
Municipal Funds	**$915,678**	**$940,852**	**$967,033**	**$994,261**	**$1,022,578**

Table 7-6: Projected Plant & Equipment Asset Revenue - 2024/25 to 2028/29

7.3. Key Assumptions Made in Financial Forecasts

This section details the key assumptions made in presenting the information contained in this AMP and in preparing forecasts of required operating and capital expenditure, revenue and depreciation expense. 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 AMP are that:

- Plant & equipment assets will remain in Council ownership throughout the period covered by this AMP, unless specifically detailed otherwise in Section 6.
- Standards, Acts and Regulations associated with plant and equipment assets will remain essentially the same over the AMP life.
- Expenditure projections make allowance for likely inflation at a rate of 4% per annum.
- Operation and maintenance costs are based on historical expenditure trends which are not necessarily a sound indicator of future need, nor are tied to actual activities.
- Renewal programmes have been based on either historical cost or annual depreciation rates. Future versions of this AMP will move to replacement schedules.
- Inventory information used in calculations is the latest available at hand, but consideration of overall data confidence levels is critical when using this AMP.
- Historical expenditure reports split by activity may contain expenditure which was actually expended on different activities.

Accuracy of future financial forecasts may be improved in future revisions of this AMP by the following actions.

- Developing and applying unit costs and assumed lives for all assets.
- Improving the accuracy and data confidence of asset inventories where they are low.
- Ensuring that accurate valuations of all asset types are produced annually.
- Ensuring that all future upgrade, new and disposal projects, with funding expenditure/ revenue projections, are fully documented in Section 6.

7.4. Integrated Planning & Reporting KPIs

The Shire operates its business processes in-line with the WA Department of Local Government's Integrated Planning and Reporting Advisory Standard. Asset Management performance is measured by the application of three Key Performance Indicators (KPIs). The plant and equipment portfolio's performance against each KPI is as follows.

KPI	Performance	Comment
Asset Consumption Ratio	-	Target band is between 50% and 75%. This ratio cannot currently be calculated due to fair values not being available for plant and equipment assets.
Asset Sustainability Ratio	-	Target band is between 90% and 110%. This ratio cannot currently be calculated due to the annual depreciation amount for plant and equipment assets not being known.
Asset Renewal Funding Ratio	100%	Target band is between 90% and 100%. The ratio is currently within the band. However, it should be noted that further work is required to refine the inventory and determine renewal dates for all assets.

8. Asset Management Practices

8.1. Accounting/Financial Systems

The current financial package used by the Shire for recording expenditure and revenue from plant and equipment assets is Quickbooks, but the Shire is moving to Synergysoft during 2014. The Shire's Deputy CEO is responsible for the systems maintenance and accuracy. In meeting its financial reporting obligations the Shire must comply with

- AAS 4 Depreciation
- AAS 5 Materiality
- AAS 6 Accounting Policies
- AAS 27 Financial Reporting by Local Governments
- AAS 29 Financial Reporting by Government Departments
- AAS 31 Financial Reporting for Governments
- AAS 38 Revaluation of Non-Current Assets
- AASB 1041 Revaluation of Non-Current Assets
- SAC 4 Definition And Recognition of The Elements of Financial Statements
- Local Government Act 1995 Part 6 – various financial management processes.

Any changes which have been identified as needing to occur to the accounting/financial system by this AMP are included in the improvement plan.

8.2. Asset Management Systems

The Shire does not currently operate an asset management system for its plant and equipment assets. The investigation of a suitable system has been listed as an improvement action.

8.3. Information Flow Requirements and Processes

The key information flows *into* this AMP are:

- Council strategic and operational plans
- Asset inventories
- Valuation reports
- Current service levels, expenditures, service deficiencies and service risks
- Projections of various factors affecting future demand for services and assets owned by Council
- Future capital replacement programmes
- Financial asset values

The key information flows *from* this AMP are:

- The resulting budget and long term financial plan expenditure projections
- Financial sustainability indicators
- The asset management improvement programme

These will impact the Long Term Financial Plan, Corporate Business Plan and Annual Budget.

8.4. Legislation, Standards, Policies and Guidelines

Standards, guidelines and policy documents referenced in this AMP are listed in Appendix A.

9. Plan Improvement and Monitoring

This Section of the AMP outlines the degree to which it is an effective and integrated tool within the Shire's business processes as well detailing the future tasks required to improve its accuracy and robustness.

9.1. Performance Measures

The effectiveness of the AMP can be measured in the following ways:

= The degree to which the required cash flows identified in this AMP are incorporated into council's long term financial plan.

Suitable measures to continuously monitor the performance of this AMP will be developed after such a time when the Shire's corporate integrated planning reaches a suitable maturity and robustness.

9.2. Improvement Plan

The asset management improvement plan generated from this AMP is shown in Table 9-1.

Task No	Task	Responsibility	Resources Required	Timeline
1	Investigate the resources required to carry out the asset management programme and determine suitable/available source(s).			
2	Develop a future data state for the plant and equipment asset inventory and collect missing data.			
3	Monitor assets' costs and utilisation levels in order to determine those which are performing poorly			
4	Identify environmental sustainability initiatives			
5	Align this AMP with the service demand forecasts from other AMPs and staffing projections in the Workforce Management Plan			
6	Refine the general ledger so that revenue and expenditure is recorded by activity and asset. Refine the records held on past expenditure and revenue.			
7	Develop a plant and equipment rationalisation process.			

8	Develop a corporate risk management policy and register.			
9	Develop and implement a cyclical condition inspection programme, with associated renewal triggers, for applicable assets.			
10	Develop a planned preventative maintenance programme for plant and equipment assets.			
11	Develop a plant and equipment replacement schedule and required funding.			
12	Engage with stakeholders in order to understand service needs and align with service levels.			
13	Develop a specification for an asset management system and investigate options.			
14	Obtain current and depreciated replacement costs, along with annual depreciation rates, for all plant and equipment.			

Table 9-1: Plant and Equipment AMP Improvement Plan

9.3. Monitoring and Review Procedures

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

APPENDICES

Appendix A – Legislation Acts and Regulations

This section provides details on all legislation, standards, policies and guidelines which should be considered as part of the management practices of the Shire's plant and equipment assets.

Legislation / Standard / Organisation	Requirement / Document
Local Government Act 1995	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by AMPs for sustainable service delivery.
Dangerous Goods Safety Act 2004	Relates to the safe storage, handling and transport of dangerous goods (e.g. herbicides).
Occupational Health and 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. 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.
OSH Regulations 1996	The guidelines for employees and employers to undertake within the work environment
Federal Motor Vehicle Standards Act 1989	The main objectives of this Act are to achieve uniform vehicle standards to apply to new vehicles when they begin to be used in transport in Australia and to regulate the first supply to the market of used imported vehicles.
WA Road Traffic Act 1974	The Act sets out all road regulations applied within WA. It covers key aspects such as licencing for vehicles, driver licencing, traffic regulations, impounding and confiscation of vehicles, events on roads and other regulations.
WA Road Traffic Amendment Act 2004	Amends the Act to cover/clarify areas concerning dangerous driving.
WA Road Traffic Code 2000	Sets out the road rules within WA.
WA Road Traffic (Vehicle Standards) Regulations 2002	Sets out the standards for vehicles, covering areas such as maintenance, emission control, load limits and restricted access vehicles.

Other Standards and Regulations	Other relevant documents include, but are not limited to: = Various Australian Standards which may be applicable to individual types of plant and equipment = AS/NZS 4360: 1995 Risk Management = All other relevant State and Federal Acts & Regulations = All Local Laws and relevant policies of the organisation = Refer to Section 7 for the relevant financial legislation and regulatory requirements.
Shire of Mukinbudin	Shire Policies including: = 1.2.7 – Drug and Alcohol Testing = 1.4.3 – Smoke Free Zones = 1.5.2 – Motor Vehicle Replacement = 1.5.3 – Use of Plant by Community Groups = 1.5.4 – Security of Plant = 1.6.6 – Revaluation of Non-Current Assets = 1.6.10 – Purchasing and Tender Policy

Table 9-2: Legislative Requirements, Standards, Policies and Guidelines

Appendix B – AMP Stakeholders and Service Levels

AMP Stakeholders

Analysis of the Shire's plant and equipment revealed that there are 4 key stakeholder groups. These stakeholders are identified below and while there may be other minor stakeholders, they have not been specifically considered by this AMP.

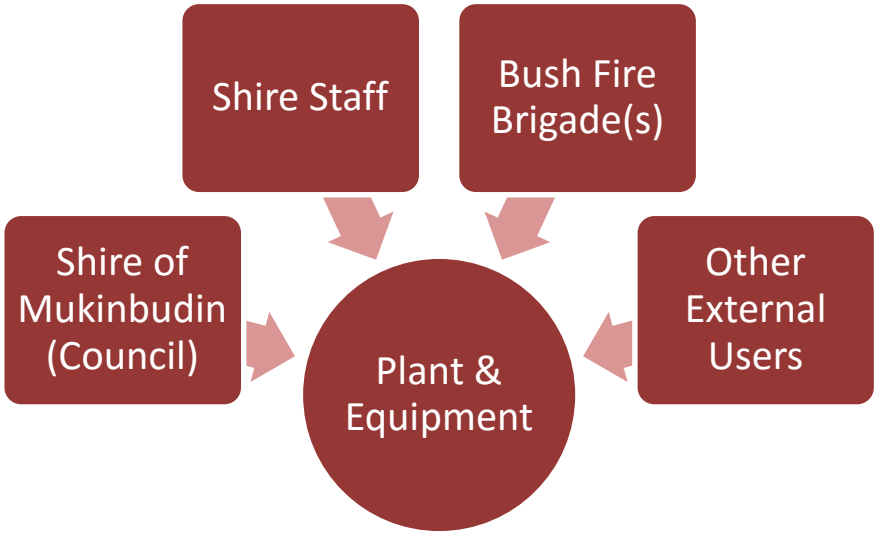


Figure 9-1: Plant & Equipment Stakeholders

- Shire of Mukinbudin Council

  Council is the owner of all plant and equipment. Members are responsible for setting suitable policy to help guide the management of plant and equipment assets. They are also responsible for balancing service levels against whole of life costs. The AMP contains relevant information around which Council is able to make long term strategic decisions.

- Shire of Mukinbudin Staff

  Staff have a number of different interests in plant and equipment. Most use plant and equipment assets during their day to day work, others have access to some privately as part of remuneration packages. Staff use the AMP for a range of business activities such as financial, performance and works management.

- Bush Fire Brigade(s)

  The local bush fire brigade(s) relies on Shire owned plant and equipment to carry out firefighting activities. While they are mostly likely not direct users of the AMP, they have a very strong need for service outcomes such as availability, performance and safety.

- Other External Users

The Shire provides and maintains a number of equipment assets that are used by external stakeholders (e.g. community bus). These assets are usually acquired in order to support specific strategic outcomes (e.g. weed removal). Users of these assets would be unlikely to use the AMP, but would need outcomes such as availability, performance, condition and safety.

Process for Developing Potential Service Levels

In developing the service levels for plant & equipment, the Shire has generally applied the framework as set out in the IIMM - 2011. The process broadly applies 5 steps, being:

- Identify service attributes important to customers;
- Define the customer service levels the Shire delivers;
- Develop performance measures;
- Consult with customers; and
- Make service level based decisions.

Identifying Service Attributes Important to Customers (Stakeholders)

For this AMP, stakeholders were identified and then segmented into groups, as detailed in Figure 9-1. Each stakeholder group has different interests and may seek different service outcomes.

The identification of these service outcomes and interests was undertaken internally, by taking on each group's position. In this instance no stakeholder consultation occurred, however in future revisions of this AMP, it would be advantageous to do so.

Define the Customer Service Levels the Shire Delivers

Using the values that were developed, key drivers/service levels were selected. These provided the basis from which the final service level table was produced. Typically, those service levels which were frequently occurring or were "needed" (as opposed to "wanted"), were selected.

Develop Performance Measures

Performance measures for each service level were developed and which used the "SMART" rule, being; **S**pecific, **M**easurable, **A**chievable, **R**elevant and **T**imebound. Where possible, ratios (percentages) were also used in the final measurement in order to accommodate possible changes in base data.

Consult With Customers

At this point in time, no consultation has occurred with key customers (stakeholders). It is envisaged that this will occur over the medium term. Before this occurs though, a suitable framework for consultation with stakeholders will need to be developed.

Make Service Level Based Decisions

Once the Shire has reached a future point whereby it has confidence in both customers' required service levels and transport network performance, it will be able to make informed strategic decisions.

Stakeholder Key Service Attributes

Each of the key stakeholders were considered as to what they value and expect from plant and equipment. These needs and wants were captured and have been presented in the table below. Those considered of high importance, that is are frequently reoccurring, and those which are needed, were then chosen to form the basis of the AMP's Service Levels.

Stakeholder	Specific Needs/Wants	Need or Want?	Service Attribute
Shire (Council)	Plant & Equipment managed to meet all applicable statutory regulations	Need	Compliance
	Plant & Equipment is managed in a financially sustainable manner	Need	Financial Sustainability
	Plant & Equipment is provided in a financially efficient manner	Want	Financial Efficiency
	Plant & Equipment is managed in an environmentally sustainable manner	Want	Environmental Sustainability
	Plant & Equipment is maintained so as to minimise the Shire's and user's risk exposure	Want	Safety
	Users are satisfied with the Plant & Equipment	Want	Satisfaction
Shire (Staff)	Plant & Equipment is of a certain minimum quality and with good ergonomics	Want	Quality
	Plant & Equipment is reliable	Want	Reliability
	Plant & Equipment is available when required	Want	Availability
	Plant & Equipment is safe to operate	Want	Safety
	Plant & Equipment which is part of a remuneration package is new and looks good.	Want	Aesthetics
	Plant & Equipment is in a good condition	Want	Condition
Bush Fire Brigade(s)	Plant & Equipment meets required DFES specifications	Need	Compliance
	Plant & Equipment is reliable	Need	Reliability

	Plant & Equipment is available when required	Need	Availability
	Plant & Equipment is safe to operate	Need	Safety
	Plant & Equipment is in a good condition	Want	Condition
Other External Users	Plant & Equipment is reliable	Want	Reliability
	Plant & Equipment is available when required	Want	Availability
	Plant & Equipment is safe to operate	Want	Safety
	Plant & Equipment is in a good condition	Want	Condition

Table 9-3: Stakeholder Service Attributes

The following service attributes were selected for Service Levels:

- **Safety – Frequency: 4 and Needed**
- **Availability – Frequency: 3 and Needed**
- **Reliability – Frequency: 3 and Needed**
- **Compliance – Frequency: 2 and Needed**
- **Financial Sustainability – Frequency: 1 and Needed**

Appendix C – Plant & Equipment Demand

Background

Council's fundamental role is to provide services to its community and stakeholders. Plant and equipment assists in the delivery of many of these services. Predicting future changes to service demand is an important element of any organisation's asset management practices. It enables practitioners to plan ahead and identify the best way of meeting future demand.

This section of the AMP looks at both historical and future factors which may influence plant and equipment asset demand. Whilst future demand is arguably the more important focus, crucial evidence and trends can be learnt from examining what has happened, and what is happening. Readers should be aware though that as with any demand forecasting, prediction is rarely ever 100% correct. As this is the Shire's first Plant & Equipment AMP, the Demand Section takes a broad view to possible influences and as an outcome, attempts to identify those most likely to have the greatest impact on demand over the life of the AMP.

Historic Demand

Demand for services is generally measured by service demand (e.g. usage). However, linking the usage of services such as transport (e.g. roads, paths etc.) back to plant and equipment usage levels is complex. As such and where possible, understanding each piece of plant or equipment's usage levels is a far easier metric to collect and maintain data on. An improvement action to monitor the usage levels of major pieces of plant and equipment has been listed. To ascertain the historical demand, the Shire has used statistics to consider a range of factors.

Population Change

When the overall population change of the Shire (Figure 9-2) between 2001 and 2011 is considered, the number of recorded people at census night has fallen from 659 (2001), to 575 (2006), to 490 (2011). The decrease of -25.6% between 2001 and 2011 would suggest that demand for some services would also have decreased. Therefore demand for plant & equipment may also have fallen. As such, the Shire may have to monitor utilisation levels in order to understand whether some assets are underutilised and whether rationalisation is appropriate and possible. An analysis of current usage levels and comparison to whole of life costs has been listed as an improvement action.

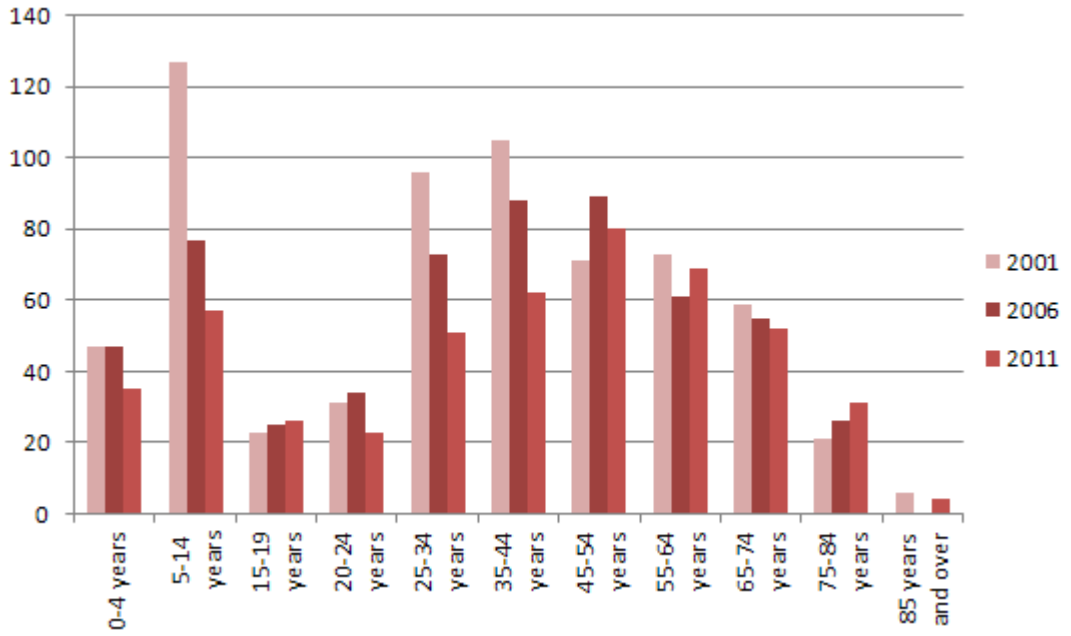


Figure 9-2: ABS Population & Demographic - Shire of Mukinbudin 2001-2011

Demographic Change

Figure 9-2 also shows that between 2001 and 2011 there has been a significant change in the Shire's demographic profile. While the Shire's median age has risen from 35 (2001) to 45 (2011), representative of an ageing population, there are also some interesting trends that are apparent.

Further analysis of the nature of population decline shows that it is not occurring evenly. Figure 9-2 shows that population decline has occurred in the 0-4, 5-14, 20-24, 25-34, 35-44, 55-64, 65-74 and 85+ age groups. At the same time though, population growth has occurred in the 15-19, 45-54 and 75-84 age groups. A changing demographic may have caused a change in service demand and hence the types of different plant and equipment assets needed. However, without accurate usage data, it is difficult to understand the effects of demographic change on plant and equipment assets.

Tourist & Visitor Numbers Change

Outside of immediate local demand, there may be potential demand from visitors to the Shire, whether day trippers or tourists. Figures from Tourism WA (Figure 9-3) show that over the past 4 years, the estimated number of visitors to/within WA have risen from 18.7million in 2008/09 to 22.1million in 2012/13. Whilst figures show that only 7% of visitors go to the "golden outback" region (within which the Shire sits), there remains some potential future demand growth within the Shire, particularly at recreation sites that visitors are likely to go to. This may

mean an increase in demand for certain services (e.g. recreation, transport etc.) which may also have increased demand on certain plant and equipment assets.

Figure 9-3: WA Visitors (Source: Tourism WA October 2013)

Future Demand Drivers

In order to identify future demand pressures on plant & equipment (both positive and negative), six driver categories, being political, economic, social, technological, legal and environmental have been considered. Drivers such as these will not only influence asset demand, but also possibly require future resources in order to meet specific needs or goals. Each of these demand drivers are discussed below and their effects summarised. The exact effects of many of these drivers are difficult to quantify though and may also require further study and research.

Political Demand

State Government

Political influence on the Shire's service delivery is limited to a number of high level areas. Political influence can also generally be separated by that which occurs from the Shire's Council and that which arises from other political levels, such as through state or federal Legislation and Acts.

The only area of potential demand change from state government that has been identified (aside from local government reform) is that of service shifting. In recent years, local governments have been expected to provide an increasingly diverse range of services. This has naturally affected the amount and types of plant and equipment also required. However, over the life of this AMP, no specific service transfer is planned to occur.

Council

The largest area of demand that the Shire's Council can influence is that around changes to service levels. For example, by enforcing changes to current maintenance practices (e.g. increasing mowing frequency) or by changing policy so that plant and equipment is renewed more or less frequently. These changes can then affect areas such as the portfolio's size, whole of life costs etc. To ensure that this demand is managed, Council need to be informed on both future service demand levels, as well as the financial sustainability of the service levels that they may wish to provide. This AMP will help to ensure demand changes imposed by Council are manageable.

Local Government Reform

In 5 February 2009, the Minister for Local Government announced a suite of Local Government reforms. The reforms required each Local Government to consider structural reform options with its neighbouring Councils and encouraged voluntary amalgamations or development of regional collaborative groups. While the Shire did not amalgamate with any other Local Governments, it is currently unclear whether compulsory amalgamations outside of

metropolitan Perth will occur in the future. If they were to occur, there may be some scope to rationalise the plant and equipment portfolio where excess capacity existed.

Change Effect: No likely specific future demand identified, although future amalgamations may be the most likely factor.

Economic Demand

Staff Number Changes

Many of the pieces of plant & equipment that the Shire owns are required in order to support the jobs that staff members undertake. As such there is a direct link between staff numbers and the quantities of certain plant and equipment assets. Although population forecasts would suggest that major changes in staff numbers are unlikely over the life of this AMP, other external factors such as service provision also need to be considered. Ultimately, much will depend on what the Shire's Workforce Management Plan predicts. As such, an improvement action to align plant & equipment demand with workforce projections has been listed.

Energy Costs and Availability

The operation and maintenance of many plant & equipment assets uses energy, typically in the form of either petrol, diesel, gas or electricity. In recent years, many of these energy sources have significantly increased in cost. For example petrol prices have risen by approximately +6.5% per annum over the past 2 years. Although future energy costs and availability are difficult to predict, it is likely that costs will continue to rise above normal inflation levels. As such, the use of plant & equipment will become increasingly expensive. There is merit in considering the composition of the plant & equipment portfolio and determine where possible policy changes can be made so that utilised assets are increasingly energy efficient. This has been listed as an improvement action.

Council Financial Sustainability

In recent years there has been a moderate level of publicity and investigation into the long term sustainability of WA local governments. The introduction of the Shire's integrated planning and reporting framework means that it is working towards a point whereby it can clearly understand its long term financial sustainability. Once this point is reached, the sustainability of plant and equipment assets can also ascertained.

Change Effect: Rising energy costs will drive sustainability initiatives such as fuel efficient plant. Changes in the predicted workforce size need to be aligned with this AMP.

Social Demand

Population

The Western Australian Department for Planning along with the Western Australian Planning Commission produce population forecasts for WA local government areas. The last forecast profile for the Shire (February 2012) contains a population forecast produced in 2006, spanning from 2006 until 2026. The forecast contains 5 bands of population forecast, with Band A being the most pessimistic and Band E the most optimistic. The results are shown in

Year	Band A	Band B	Band C	Band D	Band E
2006	610	610	610	610	610
2007	570	590	600	610	630
2008	530	570	590	610	640
2009	490	540	570	600	650
2010	450	510	550	600	650
2011	410	490	540	590	660
2012	390	470	530	580	660
2013	370	450	510	570	660
2014	350	440	500	560	650
2015	340	430	490	550	640
2016	330	420	480	540	630
2017	320	410	470	530	620
2018	310	400	460	520	610
2019	300	390	450	510	600
2020	290	380	440	500	600
2021	280	360	430	490	590
2022	270	360	420	480	580
2023	260	350	410	480	570
2024	250	340	400	470	560
2025	250	330	390	460	560
2026	240	320	390	450	550

Table 9-4.

Year	Band A	Band B	Band C	Band D	Band E
2006	610	610	610	610	610
2007	570	590	600	610	630

2008	530	570	590	610	640
2009	490	540	570	600	650
2010	450	510	550	600	650
2011	410	490	540	590	660
2012	390	470	530	580	660
2013	370	450	510	570	660
2014	350	440	500	560	650
2015	340	430	490	550	640
2016	330	420	480	540	630
2017	320	410	470	530	620
2018	310	400	460	520	610
2019	300	390	450	510	600
2020	290	380	440	500	600
2021	280	360	430	490	590
2022	270	360	420	480	580
2023	260	350	410	480	570
2024	250	340	400	470	560
2025	250	330	390	460	560
2026	240	320	390	450	550

Table 9-4: Western Australian Planning Commission - Population Forecasts by Bands 2006 to 2026

When the census results are considered, it suggests that the Shire is currently tracking generally in line with the projection of Band B. The forecast suggests that the population of the Shire will continue to decline down to approximately 320 people by 2026. If this scenario were to occur, it could be expected that a reduction in service demand due to population change would be experienced. As such, the Shire may find that many pieces of plant & equipment become underutilised and where still required, alternative methods of procurement may be more economical (e.g. leasing). In order to understand if some assets are currently underutilised, an improvement action has been listed to monitor usage levels against whole of life costs.

Demographics

Historical census data showed that the Shire's median age changed from 35 in 2001 to 45 in 2011. With projections suggesting that the population will also decrease, it is highly likely that the median age will continue to increase over the life of this AMP. Therefore services demanded by younger people, such as active recreation, will likely fall, whilst services for older people such as passive recreation may rise. This may result in subtle changes to the types of plant & equipment needed to support these services.

Change Effect: Overall plant & equipment demand levels will be influenced by population changes. Demographic change may influence plant & equipment types rather than quantity. Overall, a decrease in demand is expected if the population continues to shrink.

Technological Demand

Plant Maintenance

In recent years, many items of plant and equipment (e.g. vehicle control systems) have become increasingly complex. This trend is likely to continue as other technology features (e.g. parking assist, collision avoidance, wireless computing etc.) become increasingly common. While these features present benefits in terms of efficiency, safety etc., they may make it increasingly difficult for the Shire to maintain them without specific technologies such as diagnostic software and hardware. Given the relatively remote location of the Shire, this may increase its maintenance costs. As such, there may be a significant increase in demand for new technologies to enable certain assets (e.g. vehicles) to be maintained by the Shire. This will also demand an investment in staff training so that they also have the necessary skills to maintain them.

Alternative Fuels

Rising fuel costs have led to an increase in the number of alternative fuels available for certain pieces of plant (e.g. compressed natural gas). If the Shire were to introduce vehicles using alternative fuels, there would be a need for staff to gain familiarity with their handling. Additional specialist service equipment may also be required.

Condition Monitoring and Asset Management Systems

Changes and improvements to the way WA local governments are managing their assets means that there will likely be a growing need to develop and manage data in the form of inventories, condition ratings, financial performance etc. To do so in an efficient manner so that data can be interrogated and knowledge extracted, a plant & equipment asset management system will likely be required. Therefore, over the life of this AMP it is expected that additional resources to acquire and maintain a system will be needed. Resources will also be required to acquire data in the form of inventory and condition ratings. An improvement action to define the scope and requirements for such a system has been listed as an improvement action.

Change Effect: The increasing amount of technology being integrated into specific pieces of plant and equipment will increase the demand for specialist servicing equipment and staff training. Overall maintenance costs may therefore increase. Improved asset management practices will also increase the need for resources to acquire and maintain asset data.

Legal Demand

No specific legal demand factors have been identified.

Change Effect: No change

Environmental Demand

Environmental Sustainability

In recent years, the community's awareness of environmental issues, including climate change, has resulted in change to habits and broader government legislation (e.g. carbon tax). It is likely that over the term of this AMP that infrastructure managers will have to ensure that assets are provided and maintained at increasingly environmentally sustainable levels. This will include:

= Questioning whether assets are required
= Ensuring that maximum life is obtained from assets
= Acquiring assets that are energy efficient
= Acquiring assets with a high component recyclability rate and/or low carbon footprint

Change Effect: Increased demand for clearer decision making around asset need. Demand for staff to understand asset's whole of life costs. Preference for the acquisition of "environmentally gentle" assets which may have a higher whole of life costs.

Appendix D – Replacement Programme

Asset Number	Primary Description	Serial No/ Registration	Replacement Year	Disposal Income	Purchase Cost	Net Cost
111	Reticulator					
118	Silvan Linkage Mounted Unit With 400l Tank					
150	Galvanised Tank 2000 Gal					
161	Kerbing Machine					
165	Roadbroom Mcdonald					
168	Fibreglass Watertank 5000 Gal					
180	Bitumen Spray Unit					
187	Kevrek Crane					
192	Dake Post Hole Digger & Augers					
198	Case 695 Tractor 62hp Pto		2014/15	$4,000	$38,000	$34,000
210	Steel Water Tank					
211	Water Tank					
225	Caterpillar 12h Grader		2014/15	$10,000	$370,000	$360,000
226	Multipac Multi Tyre Roller		2014/15	$40,000	$185,000	$145,000
227	Dulevo Ride-On Street Sweeper		2014/15	$5,000	$25,000	$20,000
228	Wacker Packer Plate Compactor					
233	Howard Porter Metal Sp					
238	Vermeer Woodchipper 1/6th Share Newroc					
256	Howard Rollamowa					

Asset Number	Primary Description	Serial No/ Registration	Replacement Year	Disposal Income	Purchase Cost	Net Cost
279	Mitsubishi Fv517kw 6 X With Howard Porter Body		2014/15	$25,000	$140,000	$115,000
281	Toyota Coaster 22 Seat		2015/16	$25,000	$95,000	$70,000
288	Mitsubishi Triton Double Cab		2014/15	$16,000	$25,000	$9,000
293	2003 Ford Courier Ute Recreation		2014/15	$1,500	$19,000	$17,500
296	Davey Fire Fighter Pump					
297	Isuzu 3.4 Fire Tender Fts700 - Muka					
298	Isuzu Fire Tender Fts700 - Bonnie Rock					
301	Caterpillar 12h Grader		2015/16	$40,000	$370,000	$330,000
305	Scrub Rake 2nd Hand					
307	Weldmatic 255 Welder					
317	Komatsu Wb97R-2 Backhoe Second Hand		2018/19	$15,000	$180,000	$165,000
319	John Deere L108 Ride On Mower		2016/17	$500	$5,000	$4,500
324	Share of Newhealth Vehicle					
329	Road Counter					
344	Cat 938G Front End Loader		2016/17	$100,000	$381,500	$281,500
358	Berends Warrior 210 Rotary Slasher 2007					
365	Chatfield Ezyplanter - Final Payment					
369	Kenworth Daf Truck		2017/18	$50,000	$270,000	$220,000
371	5 Axle Side Tipper Trailer		2019/20	$25,000	$155,500	$130,500
377	Toro Reelmaster Mower		2019/20	$2,000	$15,000	$13,000
381	Sea Container					

Asset Number	Primary Description	Serial No/ Registration	Replacement Year	Disposal Income	Purchase Cost	Net Cost
382	2009 Concrete Saw					
383	25kva Genset					
384	2004 Tandem Axle Car Trailer					
387	Ultramax Smart Cleaner					
403	New Holland Tractor		2022/23	$10,000	$82,000	$72,000
407	Ford Utility		2016/17 2021/22	$2,500 $2,500	$19,000 $19,000	$16,500 $16,500
410	300 Series Hino 816	MBL150	2019/20	$10,000	$56,000	$46,000
411	300 Series Hino 614	MBL1070	2019/20	$7,000	$49,000	$42,000
417	Black Hawk Chem Tank					
420	Vibe Roller		2021/22	$10,000	$145,000	$135,000
434	2012 Nissan Patrol	1MBL	2014/15 2016/17 2018/19 2020/21 2022/23	$35,000 $38,000 $38,000 $38,000 $38,000	$58,000 $58,000 $58,000 $58,000 $58,000	$23,000 $20,000 $20,000 $20,000 $20,000
435	2012 Ford Territory	MBL1	2014/15 2016/17 2018/19 2020/21 2022/23	$18,000 $18,000 $18,000 $18,000 $18,000	$35,000 $35,000 $35,000 $35,000 $35,000	$17,000 $17,000 $17,000 $17,000 $17,000

Asset Number	Primary Description	Serial No/ Registration	Replacement Year	Disposal Income	Purchase Cost	Net Cost
438	Holden Crew Cab 4x2	MBL2	2014/15 2016/17 2018/19 2020/21 2022/23	$15,000 $15,000 $15,000 $15,000 $15,000	$29,000 $29,000 $29,000 $29,000 $29,000	$14,000 $14,000 $14,000 $14,000 $14,000
439	Holden Crew Cab 4x4	MBL1071	2015/16 2018/19 2021/22	$15,000 $15,000 $15,000	$29,000 $29,000 $29,000	$14,000 $14,000 $14,000
81	Chatfield Tree Planter					

Appendix E – Risk Management Analysis

This appendix details the desktop risk analysis undertaken on the management of the plant and equipment portfolio. The risk analysis has been undertaken to be compliant with AS 4360.

Risk Context

The risk analysis applies only to the management activities undertaken on the portfolio. It does not seek to identify physical risks. In-lieu of a corporate risk policy and objectives, the following statement defines what an 'acceptable' level of risk is with regards to plant and equipment assets.

Through risk management, the Shire of Mukinbudin aims to:

- Protect the quality of the plant and equipment portfolio;
- Protect users of plant and equipment;
- 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 assets and associated decision making;
- Maintaining safe and reliable plant, equipment and infrastructure;
- Preparing appropriate contingencies;
- Reviewing the risk profile of the portfolio at appropriate intervals and when circumstances dictate; and
- Maintain an up to date Plant and Equipment AMP.

Risk Criteria

The following criteria have been applied as part of the risk analysis.

Likelihood Levels

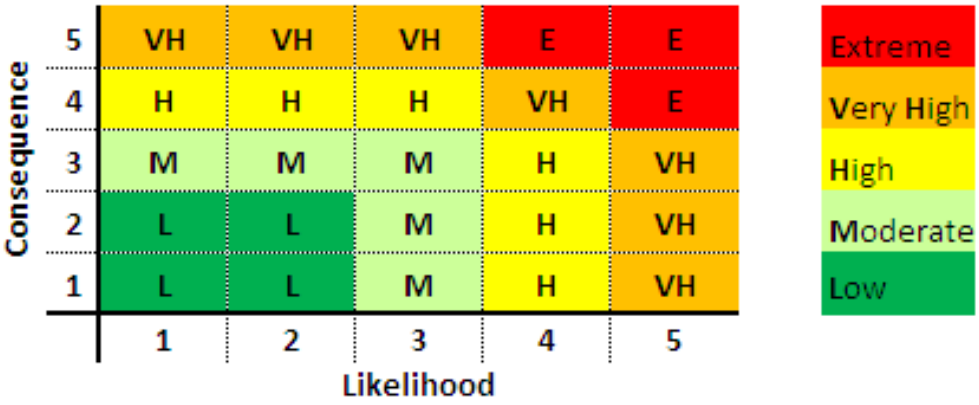
Level	Likelihood Scale	
	Descriptor	Indicative Frequency (expected to occur)
5	Almost certain	The event will likely occur once a year or more frequently.
4	Likely	The event will likely occur every three years.
3	Possible	The event will likely occur every ten years.
2	Unlikely	The event will likely occur every thirty years.
1	Rare	The event will likely occur every one hundred years.

Consequence Scale

Consequences Scale

Severity Level	Consequence Types					
	Political (P)	Economic (E)	Social (S)	Legal (L)	Environmental (E)	Health & Safety (HS)
5		Annual economic benefit or cost change of greater than +/- $1,000,001.		Significant prosecution and fines. Very srious litigation including class actions	Very serious, long term environmental impairment of ecosystem functions.	Multiple fatalities, or significant irreversible effects to >50 persons.
4	Serious public or media outcry (international coverage).	Annual economic benefit or cost change of between +/- $200,001 to $1,000,000.	On-going serious social issues. Significant damage to structures/items of cultural significance.	Major breach of regulation. Major litigation		Single fatality and/or severe irreversible disability (>30%) to one or more persons.
3	Significant adverse national media/ public/ NGO attention.	Annual economic benefit or cost change of between +/- $50,001 to $200,000.		Serious breach of regulation with investigation or report to authority with prosecution and/or moderate fine possible.	Serious medium term environmental effects.	Moderate irreversible disability or impairment (<30%) to one or more persons.
2	Attention from media and/or heightened concern by local community. Critism by NGOs.	Annual economic benefit or cost change of between +/- $10,001 to $50,000.	On-going social issues. Permanent damage to items of cultural significance.	Minor legal issues, non compliances and breaches or regulation.	Moderate, short term effects but not affecting ecosystem functions.	Objective but reversible disability requiring hospitalisation.
1	Minor, adverse local public or medical attention or complaints.	Annual economic benefit or cost change of upto +/- $10,000.	Minor medium term social impacts on local population. Mostly repairable.		Minor effects on biological of physical environment.	No medical treatment required.

Risk Matrix


Consequence
5 VH VH VH E E
4 H H H VH E
3 M M M H VH
2 L L M H VH
1 L L M H VH
1 2 3 4 5
Likelihood
Extreme
Very High
High
Moderate
Low

Risk Analysis

Asset: Plant and Equipment Portfolio				Compiled by:	Ben Symmons (Asset Infrastructure Management)					Date:	28-Jan-14	
Date of risk review:				Reviewed by:						Date:		
							Analysis (1 (Low) - 5 (High))					
Reference	The Risk	Event (what can happen)	Cause (how this can happen)	Consequence (What can happen)	Existing controls	Effectiveness of existing controls	Likelihood	Consequence	Level of risk	Risk priority	Treat Risk (Y/N)	Further Action
1	AMP service levels have not been adopted by Council	Funding required to meet service levels may not be allocated	Council allocate funding elsewhere	Asset(s) condition may deteriorate with time, exposing users to potential harm. (HS & E)	Production of AMP and LTFP	High.	2	2	L	9	N	
2	AMP service levels not in alignment with stakeholders' needs	Services don't meet stakeholders' needs.	Lack of consultation and long term demand forecasting.	Assets may be underutilised and don't align with stakeholder needs (E).	Production of AMP.	Moderate	3	2	M	8	N	
3	AMP is not supported by Council	Funding and management decisions made in isolation of AMP	AMP is not adopted, Council do not understand AM principals.	Assets incorrectly managed, resulting in potential for increased risk as well as sub-optimal whole of life costs. (E)	Production of AMP	Moderate, AMP not adopted.	2	2	L	9	N	
4	Poor maintenance management	Maintenance items are corrected ad-hoc	No formal maintenance management strategy exists	Maintenance items are not corrected in a timely fashion, assets may not function when required (HS).	Reactive maintenance regime.	Moderate	3	4	H	1	Y	Develop a formal planned maintenance programme for all plant and equipment assets.
5	Shire does not have an asset management system	Data control and management is difficult, leading to inaccuracies	Shire not aware of the benefits of a system, unable to resource a system.	AM practices are more difficult, data hard to manage and interrogate/report on (E).	Informal inventories within the Shire	Low	4	3	H	1	Y	Develop a specification for an asset management system and review costs and benefits.
6	Shire unable to resource AM programme	Formalised AM programme may not be resourced by the Shire.	Lack of financial and/or staff resource.	Shire breaches legislation (L).	AMP and LTFP	Moderate	3	3	M	4	N	
7	Shire does not have a formal rationalisation process.	Excess assets are not disposed of.	Lack of process.	High financial liability, inefficient service outcomes (E).	None	N/A	3	3	M	4	N	
8	No corporate risk management framework or policy	Shire has no corporate risk management framework or policy	Lack of Policy	Risks failed to be identified and managed in a coordinated manner (L)	None	N/A	3	3	M	4	N	
9	General ledger does not allow expenditure to be captured by asset and activity.	AMP statistics and modelling inaccurate.	Misaligned general ledger.	Shire breaches legislation (L).	AMP and LTFP	Moderate	3	3	M	4	N	
10	Asset inventories not accurate.	Asset inventories are inaccurate.	Lack of resource and expertise. Lack of recreation AM system.	AMP inaccurate, risks not identified, asset mismanaged (E).	AMP and LTFP	Moderate	3	3	M	4	Y	Refine asset inventory for plant and equipment.

Appendix F – Plant and Equipment Asset Inventory

Asset Number	Primary Description	Type	Serial No/ Registration	Date Bought	Acquisition Cost	GCRC	Fair Value	Life	Annual Depreciation
111	Reticulator	Minor Plant & Equipment				$5,210			
118	Silvan Linkage Mounted Unit With 400l Tank	Storage Tank				$2,100			
150	Galvanised Tank 2000 Gal	Storage Tank				$2,700			
161	Kerbing Machine	Minor Plant & Equipment				$3,217			
165	Roadbroom Mcdonald	Minor Plant & Equipment				$3,961			
168	Fibreglass Watertank 5000 Gal	Storage Tank				$2,102			
180	Bitumen Spray Unit	Bitumen Spray Unit				$70,000			
187	Kevrek Crane	Minor Plant & Equipment				$2,641			
192	Dake Post Hole Digger & Augers	Minor Plant & Equipment				$2,332			
198	Case 695 Tractor 62hp Pto	Tractors				$70,000			
210	Steel Water Tank	Storage Tank				$5,126			
211	Water Tank	Storage Tank				$2,864			
225	Caterpillar 12H Grader	Grader				$340,000			
226	Multipac Multi Tyre Roller	Roller				$170,000			
227	Dulevo Ride-On Street Sweeper	Sweeper				$75,000			
228	Wacker Packer Plate Compactor	Minor Plant & Equipment				$2,122			
233	Howard Porter Metal Sp	Minor Plant & Equipment				$3,500			
238	Vermeer Woodchipper 1/6th Share Newroc	Wood Chipper				$6,755			
256	Howard Rollamowa	Mower/Slasher				$8,046			
279	Mitsubishi Fv517kw 6 X With Howard Porter Body	Truck				$197,570			
281	Toyota Coaster 22 Seat	Bus				$124,450			
288	Mitsubishi Triton Double Cab	Ute				$28,500			
293	2003 Ford Courier Ute Recreation	Ute				$19,010			
296	Davey Fire Fighter Pump	Minor Plant & Equipment				$6,650			
297	Isuzu 3.4 Fire Tender Fts700 - Muka	Truck				$300,000			
298	Isuzu Fire Tender Fts700 - Bonnie Rock	Truck				$300,000			
301	Caterpillar 12H Grader	Grader				$340,000			
305	Scrub Rake 2nd Hand	Minor Plant & Equipment				$4,091			
307	Weldmatic 255 Welder	Minor Plant & Equipment				$2,850			
317	Komatsu Wb97R-2 Backhoe Second Hand	Back Hoe				$150,000			
319	John Deere L108 Ride On Mower	Mower/Slasher				$3,318			

Asset Number	Primary Description	Type	Serial No/ Registration	Date Bought	Acquisition Cost	GCRC	Fair Value	Life	Annual Depreciation
324	Share of Newhealth Vehicle	Car				$5,008			
329	Road Counter	Minor Plant & Equipment				$2,547			
344	Cat 938G Front End Loader	Loader				$320,000			
358	Berends Warrior 210 Rotary Slasher 2007	Mower/Slasher				$7,285			
365	Chatfield Ezyplanter - Final Payment	Planter				$40,000			
369	Kenworth Daf Truck	Truck				$265,000			
369	Kenworth Daf Truck	Truck				$265,000			
371	5 Axle Side Tipper Trailer	Truck				$125,000			
377	Toro Reelmaster Mower	Mower/Slasher				$13,636			
381	Sea Container	Minor Plant & Equipment				$3,689			
382	2009 Concrete Saw	Minor Plant & Equipment				$2,255			
383	25kva Genset	Minor Plant & Equipment				$3,300			
384	2004 Tandem Axle Car Trailer	Minor Plant & Equipment				$4,795			
387	Ultramax Smart Cleaner	Minor Plant & Equipment				$13,245			
403	New Holland Tractor	Tractors				$85,000			
407	Ford Utility	Ute				$18,636			
410	300 Series Hino 816	Truck	MBL150			$70,000			
411	300 Series Hino 614	Truck	MBL1070			$60,000			
417	Black Hawk Chemical Tank	Storage Tank				$4,915			
420	Vibe Roller	Roller				$170,000			
434	2012 Nissan Patrol	Car	1MBL			$50,000			
435	2012 Ford Territory	Car	MBL1			$34,000			
438	Holden Crew Cab 4x2	Ute	MBL2			$28,500			
439	Holden Crew Cab 4x4	Ute	MBL1071			$28,500			
81	Chatfield Tree Planter	Planter				$6,800			

Table 9-5: Shire Plant and Equipment Inventory