

SHIRE OF BRIDGETOWN- GREENBUSHES



CONSOLIDATED ASSET MANAGEMENT PLAN SUMMARY 2019/20 TO 2033/34

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Executive Summary

The Shire of Bridgetown-Greenbushes owns and maintains a range of assets that help to support the delivery of various Shire services. This includes roads, property, parks, reserves & other infrastructure and plant & equipment assets

This Consolidated Asset Management Plan is a summary document of all the Shire's Asset Management Plans (AMP) developed for each asset class. Each individual AMP outlines the activities and programmes that will be carried out over the next 15 years, the service levels (standard) the Shire currently provides and the resources required to deliver them.

The AMPs are evolving with the Shire's asset management practice maturity. As such there are several actions that have been identified that will improve the AMP's accuracy over time. All readers of this AMP must understand its limitations and applied assumptions before acting on any information contained within it. Further detailed information is contained within each individual AMP.

The Shire's total assets portfolio is worth approximately \$257.7m and overall appears to be in a good condition. The asset consumption ratio that measures the extent to which depreciable assets have been consumed currently sits at 76%, which suggests that assets are currently being renewed within appropriate timeframes (Department of Local Government target range is 50% - 75%).

Looking forward, the Shire may experience some service demand change. Influences such as climate change, tourism growth, construction & maintenance costs, external sources of funding and demographic change are regarded as likely to have the greatest affect.

In order to improve the Shire's asset management practices, key tasks have been identified. These have been listed within the Improvement Plan for future implementation.

Background and Objectives

Purpose of this Asset Management Plan

This document is a Consolidated Asset Management Plan (AMP) for all the Shire's assets. These are typically defined as transport infrastructure (comprising roads, bridges, footpaths, urban storm water drainage, kerbing, table drains and rural culverts), property infrastructure (land, buildings and furniture & equipment), parks, reserves and other infrastructure (includes aquatic centre, waste site, sportsgrounds etc.) and plant & equipment. The AMP documents how the Shire plans to manage these assets, to deliver services of a specified quality (service levels) and what are the associated long-term costs.

Focus of this Asset Management Plan

The AMP focuses on all assets. The 'types' of asset that make up the portfolio, and their values, are detailed in Table 1.

Asset Type	Number of Assets	Replacement Cost
Transport Assets		
Roads - Sealed	255 kms	\$140,861,082
Roads – Un-sealed	425 kms	
Bridges (Road)	423m	\$10,669,359
Kerbing & Table Drains (SWC)	1,413,416m	\$41,492,362
Footpaths	16.5kms	\$3,086,535
Rural Culverts	15,852m	\$7,665,642
Drainage Pits & Pipes	Pits (681) Pipes (15,566m)	\$7,379,593
Sub-Total Transport Assets		\$211,154,573
Property		
Administration/Operations Buildings	17	\$3,150,231
Emergency Services Buildings	14	\$1,760,707
Library Buildings	1	\$4,032,742
Community Use Buildings	11	\$790,742
Historical Buildings	8	\$945,299
Sport & Recreation Buildings	34	\$8,845,363
Public Conveniences	8	\$476,366
Public Halls	5	\$2,781,366
Residential Buildings	3	\$604,150
Tourism Buildings	1	\$828,766

Council Land Holdings	85	\$7,581,581
Furniture & Equipment	30	\$140,680
Sub-Total Property Assets		\$31,937,993
Parks, Reserves & Other Infrastructure		
Parks & Gardens	145	\$3,931,589
Playground Equipment	23	\$296,600
Other Infrastructure	134	\$5,624,100
Sub-Total Parks, Reserves & Other Infrastructure Assets		\$9,852,289
Plant & Equipment		
Major Plant	58	\$4,312,402
Minor Plant	15	\$135,192
Equipment	39	\$274,998
Sub-Total Plant & Equipment Assets		\$4,722,592
TOTAL ALL ASSETS		\$257,667,447

Table 1: Assets covered by the Consolidated AMP

Corporate Document Relationships

This AMP integrates with the following Shire documents:

- ❖ Strategic Community Plan
- ❖ Corporate Business Plan
- ❖ Long Term Financial Plan
- ❖ Annual Budget

Time Period of the AMP and Review Process

The Asset Management Plan covers a 15 year period. It will be reviewed during annual budget preparation and amended to be kept up to date.

Service Levels

Introduction

Service Levels describe the service standard (e.g. quality) that the Shire provides from its assets. Service Levels can be developed through the consideration of strategic inputs, policy inputs and perceived customer requirements. Information regarding development of the Shire's current Service Levels are found in the individual AMP for each asset class.

Service Level Performance

Development of service level targets and performance indicators has been identified as an action in this AMP's improvement plan.

Service Demand

Council's fundamental role is to provide services to its community and stakeholders. These services are often underpinned by assets. Predicting future demand for services (e.g. upgraded, renewed or new road infrastructure, buildings etc.) is important to ensure that the appropriate assets are provided and maintained. This section summarises likely factors that may affect the demand for services over the life of the AMP.

Historic Demand

The following table outlines the key factors that may have affected historical service demand change.

Driver Type	Effect	Demand Change
Population	Present population estimated as at 30 th June 2017 was 4,708 A forecast increase of 6.97% (an average of 0.46% pa) from 2016 (4,665) to 2031 (4,990) an increase of 325 over 10 years.	Neutral
Demographic	Projected increases in the: 0-9 age group (1.4 %) 20-39 age group (44.8%) 60-79 age group (10.8%) 80+ age group (187.6%) and decreases in the: 10-19 age group (-35.6%) 40-59 age group (-23.3%)	A marginal increase (8.4 persons/pa) in population in the 10-39 age group may impact future demand for facilities. Neutral Increasing population in the 80+ age group (36.2 persons pa) will impact in the areas of disability access, associated paths and parking requirements and passive recreation facilities for the aged and infirm. Increase The net decrease in the 40-79 age group (-12.5% 171 or -1.71 persons pa), will have little impact on services. Neutral
Tourism	The population increases during peak tourist periods, especially during the "Blues at Bridgetown" music festival. The size of the increase is unknown.	Seasonal increase in demand for use of ablution facilities, temporary road closures, rubbish collection and signage will be negligible. Neutral

Climate	<p>Temperature: The Annual Maximum Temperature Anomaly indicates that temperature has increased 1.2 degrees Celsius for the period 1910 to 2018. The Annual Minimum Temperature Anomaly has also increased by 1.5 degrees over the same period.</p> <p>The annual mean temperature anomaly trend for south western Australia indicates that the temperatures for the south west area will continue to increase in years to come. Annual maximum and minimum temperatures are forecast to increase in accordance with BOM projections.</p> <p>Rainfall: Annual rainfall has been decreasing steadily since 1910 to 2018 (down approx. 150mm).</p> <p>Annual rainfall will continue to decrease as indicated by the Annual Rainfall Anomaly trend graph with the likelihood of more extreme weather events occurring.</p>	<p>With increasing temperatures both maximum and minimum, decreasing rainfall, extended growing season, the trend down in both the number of wet days and consecutive wet days and more extreme weather events being experienced, there will be an increase in fire risk, increased occurrences of storm damage remediation requirements for transport assets.</p> <p style="text-align: center;">Increase</p>
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Table 2: Consolidated AMP - Historic Demand Drivers

Future Demand

Consideration was given to six possible future demand drivers that may influence demand on the provision of all Council services.

Driver Type	Service Demand Change
Political	Overall effect negligible , but moderate increase to improve asset management practices.
Economic	Increase for additional money to potentially meet a backlog of renewal works. Increase from potential higher construction and maintenance costs.
Social	Decreasing demand due to population and recreation participation decline. Changing/increasing needs due to an ageing population and social disadvantage. Increase from higher tourist numbers.
Technological	Opportunity to decrease maintenance costs through implementation of emerging technologies.
Legal	Neutral , no identified drivers.
Environmental	Increase in costs due to climate change and implementation of power and water consumption minimisation strategies.

Table 3: Consolidated AMP - Future Demand Drivers

Demand Management

A review of past and future demand factors shows that service demand change has occurred and will also likely occur into the future. Looking forward, the following initiatives/improvements are proposed to meet demand changes.

- ❖ Climate change – Develop and implement a Long-Term Assets Masterplan that reflects the warmer and drier climate and ensure that future design considers the implications of a warming and drying climate with the potential for more extreme weather events.
- ❖ Tourism – Provision of appropriate level of infrastructure (roads, parking, buildings and recreation facilities etc.) to support tourism activities within the Shire.
- ❖ Participation – Identify areas that will have an increase in utilisation by the community to ensure the assets are suitable for future years.
- ❖ Participation & Costs – Further develop this AMP’s operational and capital expenditure programmes, with consideration to the Long-Term Assets Masterplan once prepared and associated infrastructure hierarchies.
- ❖ External funding – Lobby for sustained or increased funding levels, react to changes as they occur.
- ❖ Demographics – Continue to monitor changes and develop a robust local demographic/usage model.

Lifecycle Management Plan

Lifecycle management encompasses all strategies and practices that the Shire employs to manage its assets at the lowest lifecycle cost. Lifecycle management plans are included in each individual AMP.

Assets Portfolio Physical Parameters

Table 5 details the number and type of infrastructure and other assets within the Shire and their combined values.

Asset Type	Number of Assets	Current Replacement Cost	Fair Value	Annual Depreciation
Roads - Sealed	255 kms	\$140,861,082	\$104,771,609	\$1,619,693
Roads – Un-sealed	425 kms			
Bridges (Road)	423m	\$10,669,359	\$6,850,782	\$176,423
Kerbing & Table Drains (SWC)	1,413,416m	\$41,492,362	\$38,122,991	\$214,816
Footpaths	16.5kms	\$3,086,535	\$2,232,418	\$63,570
Rural Culverts	15,852m	\$7,665,642	\$4,840,520	\$96,332

Drainage Pits & Pipes	Pits (681) Pipes (15,566m)	\$7,379,593	\$4,729,880	\$90,648
Sub-Total Transport		\$211,154,573	\$161,548,200	\$2,261,482
Administration/Operations Buildings	17	\$3,150,231	\$2,964,842	\$93,184
Emergency Services Buildings	14	\$1,760,707	\$1,709,512	\$26,123
Library Buildings	1	\$4,032,742	\$3,908,154	\$62,317
Community Use Buildings	11	\$790,742	\$752,468	\$19,240
Historical Buildings	8	\$945,299	\$901,754	\$21,982
Sport & Recreation Buildings	34	\$8,845,363	\$8,501,945	\$172,679
Public Conveniences	8	\$476,366	\$462,263	\$7,078
Public Halls	5	\$2,781,366	\$2,656,262	\$62,976
Residential Buildings	3	\$604,150	\$570,670	\$16,743
Tourism Buildings	1	\$828,766	\$777,263	\$25,775
Council Land Holdings	85	\$7,581,581	\$7,581,581	\$0
Furniture & Equipment	30	\$140,680	\$140,680	\$0
Sub-Total Property	217	\$31,937,993	\$30,927,394	\$508,097
Parks & Gardens	145	\$3,931,589	\$2,431,112	\$126,217
Playground Equipment	23	\$296,600	\$153,653	\$19,773
Other Infrastructure	134	\$5,624,100	\$4,884,665	\$126,534
Sub-Total Parks, Reserves & Other Infrastructure	302	\$9,852,289	\$7,469,430	\$272,524
Construction & Maintenance Plant	13	\$1,260,220	\$1,260,220	\$105,688
Fleet Vehicles	20	\$565,390	\$565,390	\$49,602
Minor Plant & Equipment	44	\$379,336	\$379,336	\$47,863
Waste Facility	6	\$202,000	\$202,000	\$21,232
Emergency Services/Bushfire Plant & Equipment	29	\$2,315,646	\$2,315,646	\$120,611
Sub-Total Plant & Equipment	112	\$4,722,592	\$4,722,592	\$344,996
TOTAL ALL ASSETS		\$257,667,447	\$204,667,616	\$3,387,099

Table 4: Consolidated AMP- Asset Portfolio Physical Parameters

Assets Portfolio Data Confidence and Reliability

Table 6 details the reliability and confidence levels of the Shire's current asset data. It is the Shire's intention to progress towards a position whereby data confidence levels for all areas are classified as either excellent or good.

Confidence Grade	Description	Accuracy
1 – Excellent	Accurate	100%
2 – Good	Minor inaccuracies	± 5%
3 – Average	50% estimated	± 20%
4 – Poor	Significant	± 30%
5 – Very Poor	All data estimated	± 40%

Transport	Condition Grade	Valuation
Roads	Good	Fair
Bridges	Good	Fair
Kerb/SWC	Good	Fair
Footpaths	Average	Fair
Rural Culverts	Good	Fair
Urban SW Drain	Good	Fair
Property	Condition Grade	Valuation
Land	Good	Fair
Buildings	Good	Fair
Furniture & Equipment	Good	Fair
Parks, Reserves & Other Infrastructure	Condition Grade	Valuation
Parks & Reserves	Average	Fair
Playground Equipment	Average	Fair
Other Infrastructure	Good	Fair
Plant & Equipment	Condition Grade	Valuation
Construction & Maintenance Plant	Good	Fair
Fleet Vehicles	Good	Fair
Minor Plant & Equipment	Good	Fair
Waste Facility	Fair	Fair
Emergency Services/Bushfire Plant & Equipment	Good	Fair

Table 5: Consolidated Asset Portfolio Data Confidence Levels

Lifecycle Management Strategies

Operation & Maintenance Strategy

The Shire seeks to progress to a point whereby it employs preventative maintenance strategies wherever possible, in order to maximize asset performance and minimize long terms costs. Each asset strategy (where considered necessary) will be specifically designed for its own requirements. Technical maintenance service levels will be documented and reflected within each AMP. All planned maintenance activities will also be individually costed, and these then used to inform the long-term budget requirements.

Renewal Strategy

All assets are periodically inspected to determine their condition, on a 1 (new/excellent) to 5 scale (very poor/failed). The results are then modelled to predict assets' potential year of renewal. Shire staff or suitably qualified consultants would inspect these assets to determine the timing, scope and budget of any future renewal project. Projects are listed on a consolidated long term works program.

Upgrade/New Strategy

The need for new and/or upgraded assets (e.g. to meet a service deficiency) are identified from a number of potential sources. Each potential project is investigated by Shire staff and where valid, often prioritized against similar projects. Approved projects are then listed onto a consolidated long term works program.

Disposal Strategy

The Shire does not dispose of assets generally with the following exceptions:

- ❖ Plant & equipment assets as part of the plant & equipment replacement program; or
 - ❖ Furniture & equipment that are surplus to requirements or are obsolete; or
 - ❖ Portions of land associated with land resumptions for road realignments where land that is no longer required for road purposes is, with the approval of the Department of Planning and Landgate, amalgamated into an adjoining landowner/s' property.
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Financial

This section summarizes the predicted financial requirements over the life of the plan resulting from all the information presented in the various AMPs.

Projected Expenditure Requirements - All dollar values are in (\$'000)'s

Expense	Year 1	Year 2	Year 3	Year 4	Year 5
	2019/20	2020/21	2021/22	2022/23	2023/24
Operations	\$4,462	\$4,399	\$4,399	\$4,399	\$4,399
Maintenance	\$2,357	\$2,357	\$2,357	\$2,357	\$2,357
Renewal	\$1,998	\$1,876	\$1,880	\$2,502	\$2,602
Upgrade	\$614	\$398	\$525	\$402	\$461
New	\$0	\$0	\$0	\$0	\$0
Disposal	\$0	\$0	\$0	\$0	\$0
Total	\$9,431	\$9,030	\$9,161	\$9,660	\$9,819

Expense	Year 6	Year 7	Year 8	Year 9	Year 10
	2024/25	2025/26	2026/27	2027/28	2028/29
Operations	\$4,399	\$4,399	\$4,399	\$4,399	\$4,399
Maintenance	\$2,357	\$2,357	\$2,357	\$2,357	\$2,357
Renewal	\$2,868	\$2,685	\$2,787	\$3,709	\$4,223
Upgrade	\$473	\$523	\$448	\$496	\$509
New	\$0	\$0	\$0	\$0	\$0
Disposal	\$0	\$0	\$0	\$0	\$0
Total	\$10,097	\$9,964	\$9,991	\$10,961	\$11,488

Expense	Year 11	Year 12	Year 13	Year 14	Year 15
	2029/30	2030/31	2031/32	2032/33	2033/34
Operations	\$4,405	\$4,405	\$4,405	\$4,405	\$4,405
Maintenance	\$2,357	\$2,357	\$2,357	\$2,357	\$2,357
Renewal	\$3,907	\$3,896	\$4,296	\$3,018	\$3,018
Upgrade	\$521	\$535	\$548	\$465	\$465
New	\$0	\$0	\$0	\$0	\$0
Disposal	\$0	\$0	\$0	\$0	\$0
Total	\$11,190	\$11,193	\$11,606	\$10,245	\$10,245

Table 6: Consolidated AMP - Asset Projected Expenditure Requirements

Plan Improvement and Monitoring

This Section of the AMP outlines the degree to which it is an effective and integrated tool within the Shire. It also details the future tasks required to improve its accuracy and robustness.

Performance Measures

On an annual basis each WA local government reports seven key performance indicators (KPIs) (available within the Annual Report) as required by the Department of Local Government. Of these, three KPIs reflect the performance of the Shire's assets.

These KPIs are useful in determining:

- ❖ the current physical state of the asset portfolio
- ❖ how sufficient past renewal expenditure was
- ❖ whether sufficient future renewal expenditure is being allowed for

The effectiveness of the AMP will be monitored by the performance of these three key performance indicators. Each key performance indicator is described below with the Shire's current performance recorded in Table 7.

Asset Consumption Ratio

The ratio is a measure of the condition of the Shire's physical assets, by comparing their condition based fair value (what they're currently worth) against their current replacement cost (what their replacement asset is currently worth as new). The ratio highlights the aged condition of the portfolio and has a target band of between 50%-75%. Non-depreciating assets (e.g. land etc.) should be excluded from the calculation.

$$\frac{\text{Depreciated Replacement Cost (Fair Value) of Depreciable Assets}}{\text{Current Replacement Cost of Depreciable Assets}}$$

Asset Sustainability Ratio

The ratio is a measure of the extent to which assets managed by the Shire are being replaced as they reach the end of their useful lives. The ratio is essentially past looking and is based upon dividing the annual depreciation expense of the asset portfolio by the annual renewal expenditure. The ratio has a target band of between 90%-110%.

$$\frac{\text{Asset Renewal Expenditure}}{\text{Asset Depreciation}}$$

Asset Renewal Funding Ratio

The ratio is a measure as to whether the Shire has the financial capacity to fund asset renewal as and when it is required over the future 10 year period. The ratio is calculated by dividing the net present value of planned renewal expenditure over the next 10 years in the LTFP, by the net present value of planned renewal expenditure over the next 10 years in the AMP. The ratio has a target band of between 95%-105%.

$$\frac{\text{NPV of LTFP Planned Renewal Expenditure over the next 10 years}}{\text{NPV of AMP Required Renewal Expenditure over the next 10 years}}$$

Annual Consumption & Renewal (% of Asset Value)	Department of Local Government Range	Year		
		2016-17	2017-18	2018-19
Asset Consumption Ratio	50% - 75%	76.0%	77.0%	76.0%
Asset Renewal Funding Ratio	95% - 105%	96.0%	116.0%	115.0%
Asset Sustainability Ratio	90% -110%	85.0%	50.0%	71.0%

Table 7: Consolidated AMP Performance Measures

Improvement Plan

The asset management improvement plan generated from this AMP is shown in the table below:

Task No	Task	Responsibility
1	Develop a process for community engagement on Levels of Service including a survey to determine community service level expectations and development of key performance indicators delivered via Council's assets	ELT (Executive Leadership Team)
2	Implement a suitable system and process to record property utilisation and booking request levels	ELT
3	Develop a data collection procedure to ensure repeatability and on-going improvement of condition data collection and modelling processes	AMT (Asset Management Team)
4	Implement the condition inspection programme for all assets	ELT/AMT
5	Greater degree of componentisation in the condition rating process	ELT/AMT
6	Review the Shire's year acquired date for all assets	ELT/AMT
7	Determine useful lives and remaining useful lives of Council's assets and adopt consistent unit rates	ELT/AMT

8	Configure the Shire's corporate financial system to record asset expenditure at the individual asset level according to maintenance type and activity	ELT/AMT
9	Identify and improve capture of operational expenditure in the organisation financial system to enable more accurate reporting of operational expenditure	ELT/AMT
10	Develop and implement safety and maintenance inspection programmes and methodologies for all assets	ELT/AMT
11	Identify and assess critical assets for failure modes	ELT/AMT
12	Identify assets for possible future disposal	ELT/AMT
13	Develop staff AM performance measures and link KPI's to individual job descriptions	Human Resource Officer
14	Provide asset management training to relevant staff and Councillors	Human Resource Officer
15	Develop a long-term capital works programme after undertaking condition inspections	ELT/AMT
16	Analyse demand impacts as a result of increased tourism	ELT/AMT
17	Analyse demand impacts as a result of age demographic changes	ELT/AMT
18	Create Sustainable Assets Policy and an associated action plan	ELT/AMT
19	Investigate alternative power generation technologies to help reduce the Shire's carbon footprint and operating costs	ELT/AMT
20	Investigate and implement a suitable asset management software program to consolidate all asset classes into one integrated database	ELT/AMT
21	Develop long term financial projections for Operational, Maintenance and capital costs in line with the Long-Term Financial Plan requirements	ELT/AMT

Table 8: Consolidated AMP Improvement Plan