



Gnowangerup: Transport Asset Management Plan

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Executive summary

Transportation is one of the key services provided by the Shire of Gnowangerup to its community. This service is underpinned by a number of different infrastructure assets. This includes roads, paths, drainage, car parks, bridges, street furniture and aviation facilities.

Ensuring that the Shire meets the transport needs of current and future users is highly important. To do this, the Shire takes a long-term management view. This view, and the plans and strategies that the Shire has for its transport assets, are recorded within this document. This Transport Asset Management Plan (TAMP) is maintained as a live document to ensure that it remains up to date. It integrates with the Shire's Strategic Community Plan, to ensure that it is balanced against the other services that the Shire delivers. This TAMP considers a future planning view of ten years.

The Shire understands that over this time, the way that the community moves around will change. This means that our transport assets may also have to change. The Shire currently believes that climate change, construction and maintenance cost increases, external funding availability, staff availability, state government requirements and water availability are the potentially most significant drivers of change.

In total, the Shire's transport assets have a combined fair value of \$82.4million. These assets depreciate by about \$3.4m each year as they age and wear. The Shire then replaces assets at the end of their physical lives, so that the service can be maintained.

Overall, the Shire's network is in a good condition. At the last time of inspection only 5% of assets were found to be in either a poor or very poor condition. While this means there is a \$2.9m backlog of renewal work, it is anticipated that this can be caught up with via the works programme. In addition, with an asset consumption ratio of 59%, there are no short-term financial sustainability concerns.

The Shire strives to ensure that the transport service quality is provided at the level required by our community, at a cost that it can afford. At present, all community satisfaction levels with transport services are below the average for the Great Southern region. To further assist in understanding service delivery performance, the Shire is starting to monitor service level indicators. In future versions of the TAMP, these indicators will assist the Shire in its decision making.

Why does the Shire provide assets?

Physical infrastructure assets exist for the single purpose of facilitating the delivery of services. This includes core services such as governance and administration, transport, parks & recreation, waste management, and so on. These services help to make the Shire a liveable place, that is responsive to community values, appreciative of our natural environment, and provides a choice of lifestyle and work.

This document is the Shire's Transport Asset Management Plan (TAMP). It seeks to outline the activities and strategies that will be carried out for the Shire's transport assets, over the next ten financial years.

What is Asset Management?

The role of Council is to deliver services that help realise the community's vision for the Shire. This vision is defined within the Shire's Strategic Community Plan. The various services that are then required to be delivered, often demand the provision of infrastructure assets.

Infrastructure assets can be challenging to provide, operate, maintain and renew in a sustainable way and with limited financial resources. Good asset management practices seek to take a long-term planning view, that balances the service quality against the community's capacity to pay.

Our Transport Network

The Shire's transport network provides an integrated service with other private, local government and state government controlled infrastructure. It aims to meet the day to day needs of the community and considers modes such as vehicular, cycling and pedestrian. The service is supported through the provision of infrastructure such as roads, paths, bridges, drainage, street furniture and aviation facilities.

What do we have and what are they worth?

Our Transport network is the largest asset class both in size and value. The individual asset types that make up this network include:

Asset Class	Quantity	Fair Value (\$m)	Total CRC (\$m)	Percentage
Aviation Facilities	1	\$3,252,400	\$16,734,200	15%
Bridges & Floodways	3	\$1,060,000	\$1,521,600	1%
Car Parks	2	\$30,500	\$174,080	<1%
Culverts	1,300	\$3,278,797	\$6,486,291	6%
Drainage	134 pits / 78 pipes / 1,774km table drains	\$1,626,067	\$1,903,592	2%
Paths	6km	\$743,644	\$1,243,947	1%
Roads & Laneways	1,031km	\$72,400,665	\$86,457,319	75%
TOTAL		\$82,392,073	\$114,521,029	

Table 1: Quantity and Value of Transport Assets

What is their condition?

The physical condition of infrastructure assets affects their ability to deliver the intended service at the required quality. Therefore, the Shire periodically inspects assets and records their condition. For consistency, the condition of all transport assets is reported on a 1 (very good) to 5 (very poor) rating scale. The condition data is used for a variety of other outputs, including the predicting when assets may need renewing, and how much they are worth in their current state.

The condition of our transport assets at the last time of inspection is detailed in Figure 1.

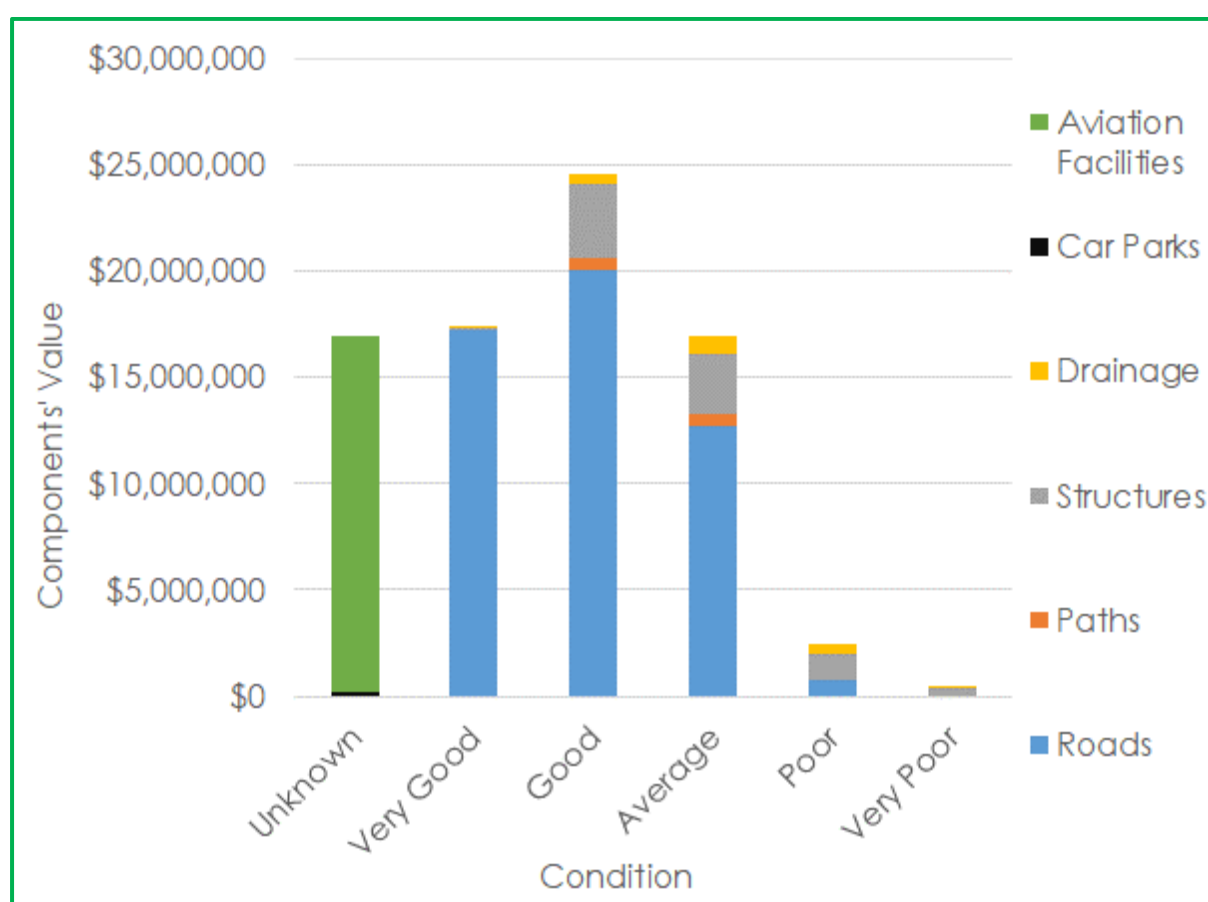


Figure 1: Condition of Transport Assets by Replacement Cost

How confident are we?

Although the Shire records data on its transport assets for inventory, condition and value, it is important to understand how confident it is of the data accuracy. This is important to determine the confidence that we can put in the outcomes that result (e.g. valuations). It also allows the Shire to target where data improvements are required. The Shire has assessed its confidence in transport asset data using the following grading scale.

Confidence Grade	Accuracy	Confidence Grade General Meaning
Highly Reliable	± 2%	Data based on sound records, procedures, investigations and analysis which is properly documented and recognised as the best method of assessment.
Reliable	± 10%	Data based on sound records, procedures, investigations and analysis which is properly documented but has minor shortcomings; for example the data is old, some documentation is missing and reliance is placed on unconfirmed reports or some extrapolation.
Uncertain	± 25%	Data based on sound records, procedures, investigations and analysis which are incomplete or unsupported, or extrapolation from a limited sample for which grade A or B data is available.
Very Uncertain	± 40%	Data based on unconfirmed verbal reports and/or cursory inspection and analysis.
Unknown	Nil	None or very little data held.

Table 2: Data Confidence Grading

The current confidence in the Shire's asset data is:

Asset Class	Inventory	Condition	Valuation
Aviation Facilities	Reliable	Unknown	Uncertain
Bridges & Floodways	Highly Reliable	Uncertain	Uncertain
Car Parks	Reliable	Unknown	Uncertain
Culverts	Reliable	Reliable	Reliable
Drainage	Reliable	Uncertain	Uncertain
Paths	Highly Reliable	Highly Reliable	Highly Reliable
Roads & Laneways	Highly Reliable	Highly Reliable	Highly Reliable

Table 3: Transport Asset Data Confidence

How is the service performing?

The Shire needs to ensure that the service performance delivered by our transport assets meets the needs of users. However, the quality of these services can be varied, and in turn this influences overall cost. As a general rule, as the service quality gets higher, so too does cost. As such, the Shire needs to deliver the transport service at a level that the community is willing to pay.

Service Satisfaction

Periodically, the Shire engages with its community to understand their satisfaction with the various services that it provides. The results enable service performance and importance to be assessed. In addition, when other WA local governments perform the same survey, the Shire is able to benchmark its performance.

The community's satisfaction with the transport service at the last survey is shown in Figure 2. When compared with other Great Southern local governments, all Shire metrics are below the average.

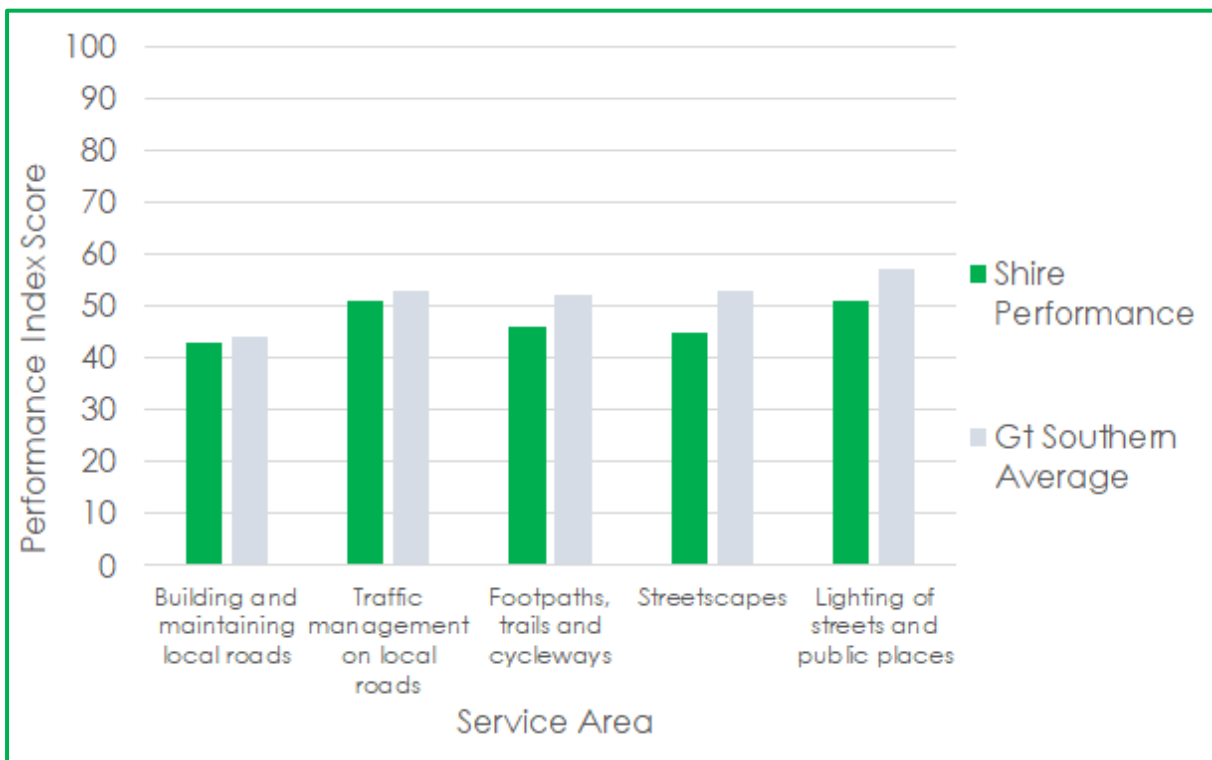


Figure 2: Transport Service Community Satisfaction

Service Levels

Service levels describe the quality performance that the Shire aims to provide for its transport service. These have been developed through consideration of strategic and customer inputs.

Strategic Inputs

The Strategic Community Plan (SCP) has been reviewed to identify any drivers that may directly relate to the transport service. Consideration of the SCP showed that the following transport service outcomes are of high importance. Service levels have then been selected for these outcomes, so that their performance can be monitored.

Objective	Initiative	KPI
Theme 1.3 – Enhance and develop the tourism industry to promote growth and prosperity.	3.2 – Leverage our environmental, built, heritage and social assets in the promotion of tourism.	Tourism growth
Theme 5.2 – Effective management to conduct business in a financially sustainably manner.	2.1 – Manage liabilities and assets through a planned, long-term approach.	Financial sustainability
	2.2 – Balance service levels for assets against long-term funding capacity.	
Theme 6.3 – To provide facilities of the highest quality which reflect the needs of the community now and into the future.	3.1 – Develop an understanding of the demographic context of local communities to support effective facility planning.	Fit for purpose

Table 4: Strategic Community Plan Strategies Influencing the Transport Network

Customer Inputs

As a service provider, it is important that the Shire clearly understands the needs of its stakeholders (e.g. customers). In January 2020, Shire staff considered who the major stakeholders are of its transport service. Eight were identified, as outlined in diagram 1. While there may be other minor stakeholders (e.g. Main Roads WA, PTA etc.), they have not been specifically considered by this TAMP.

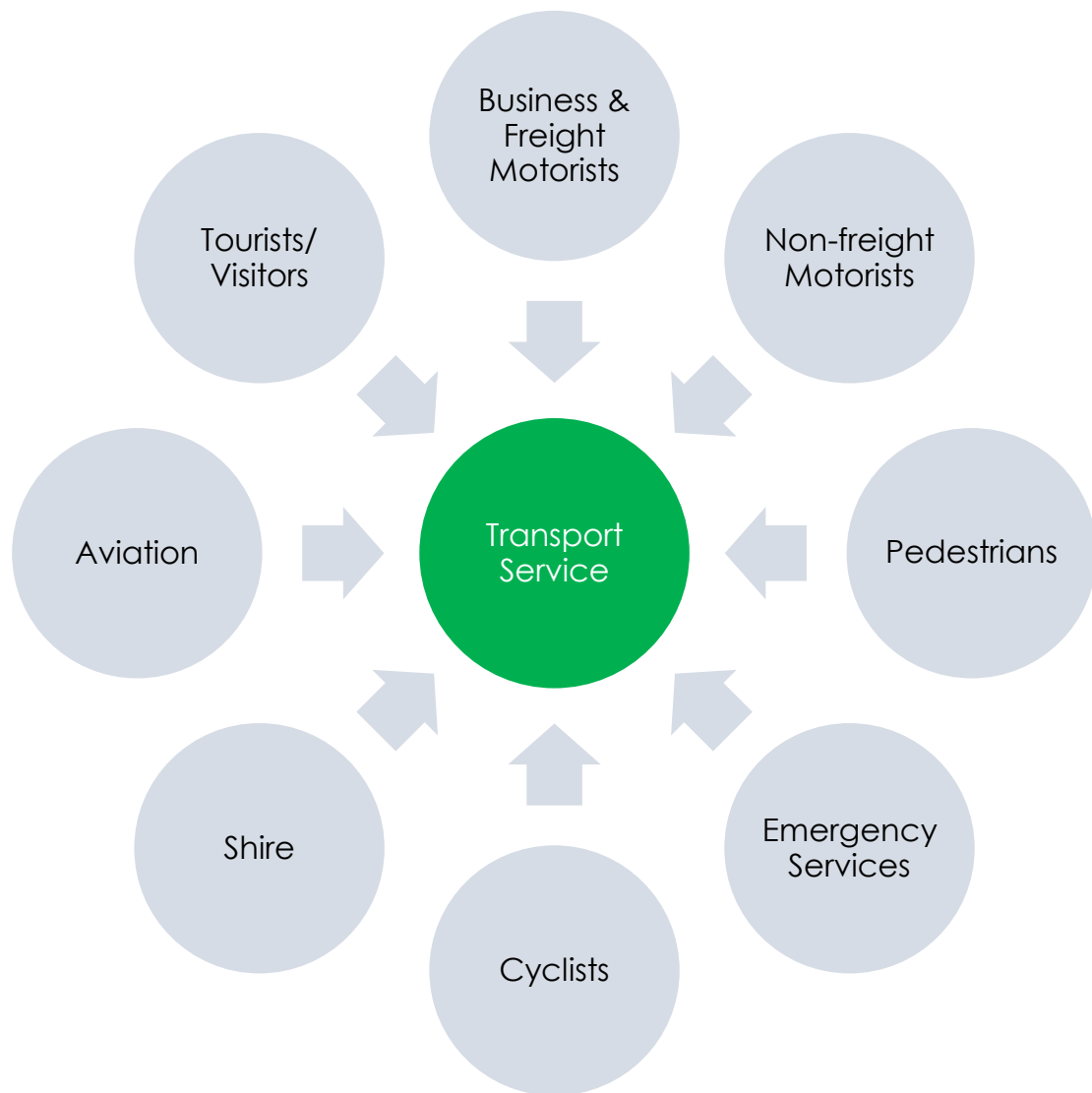


Figure 3: Transport Network Stakeholders

Analysis of stakeholders' service needs determined that the following attributes were most frequently required. These have been used, with the SCP KPIs, as the basis for the AMP's service levels.

- Accessibility (6 occurrences)
- Condition (5 occurrences)
- Safety (7 occurrences)

Service Level Targets and Performance

The SCP informing service attributes have been combined with the customer service needs. These informing service attributes have been selected for service levels. The following KPIs are used to monitor transport service delivery performance.

KPI	Driver	Performance Measure	Target	Current	Data Confidence
Accessibility	Stakeholders	Percentage of path segments that meet disability access standards.	-	-	-
		Percentage of survey respondents that are at least satisfied with their ability to access the Shire's transport network.	-	-	-
Condition	Stakeholders	Percentage of transport assets, by CRC, at or above a condition of average.	-	95%	Uncertain
Financial sustainability	SCP	Percentage of TAMP financial ratios within their target bands.	100%	66%	Very uncertain
Fit for purpose	SCP	Percentage of transport service community perception metrics that are at or above the Great Southern regional average.	-	0%	Highly reliable
Safety	Stakeholders	Percentage of survey respondents that are at least satisfied with the safety of the transport network.	-	-	-
Tourism growth	SCP	Percentage of non-resident survey respondents who are at least satisfied with the quality of transport assets.	-	-	-

Table 5: TAMP Service Levels

How is the service changing?

Generally, the demand for transport services changes over time. As a result, the assets that support this service, and the way in which they are managed, may also change.

Historic change

Looking backwards, a number of drivers may have changed the demand for the Shire's transport service, they were:

- Vehicle ownership – Fell from 541 to 429 households (2001 to 2016).
- Travel modes – 71% of all trips to work were as a sole occupant car driver (2016).
- Population – Fell from 1,507 to 1,219 (2001 to 2016).
- Demographics – Median age rose from 32 to 40 (2001 to 2016).
- Tourism – Number of visitors to the southwest grew from 6.5m to 7.2m (2015/16 to 2019/20).
- Rainfall – Fell from ~420mm to ~380mm (1913 to 2019).
- Temperature – rose from ~29C to ~29.5C (1967 to 2019)

Future change drivers

Looking forward, over the life of this Plan, the Shire considers the following drivers to likely affect the demand for transport services.

- Climate change
- Construction and maintenance cost increases
- External funding availability
- Staff availability
- State government requirements
- Water availability

Change mitigation

To meet the challenges that will arise from service change, the Shire plans to:

- Maintain the workforce management plan.
- Consider the effects of climate change when designing new assets.
- Maintain appropriate road asset data (e.g. road imagery, traffic data) so that grants (i.e. Disaster Recovery Funding Arrangements (DRFAWA) can be accessed when required.
- Improve its capital works programme, so that projects are ready for grant opportunities.
- Continue to engage with State Government.

- Continue to improve its asset management practices (e.g. planned maintenance schedules).
- Investigate local sources of gravel/aggregate for road purposes.
- Continue to construct tanks and dams, and explore other opportunities, for water harvesting.

How is the service managed?

Our transport assets have varying lengths of physical life. However, a key goal is to try to maximise life, so as to keep costs down. We manage each stage of our assets' lives as follows.

Operation and Maintenance Works

The Shire operates and maintains its transport assets by employing preventative maintenance strategies wherever possible. We do this through regular inspection, and through some planned operation and maintenance schedules. However, there is scope to improve the breadth and robustness of the schedules. This task is listed as an improvement action.

Renewal Works

Transport assets are periodically inspected to determine their physical condition. Using this information, the Shire then predicts assets' potential year of renewal. Staff then consider these assets to determine the final timing, scope and budget of any future renewal project. Projects are then listed on to the works program.

Upgrade & New Works

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 prioritised against similar projects. Approved projects are then listed onto the long term works program.

What will the service cost?

The transport network represents a significant ongoing cost commitment to our community. To ensure that we can continue to sustainability provide the service, the Shire maintains a long term works programme. This programme contains all planned works activities, and sets out how much the service will cost, to deliver the agreed performance (Figure 4). On an annual basis, the works programme in this TAMP informs the Shire's broader Long Term Financial Plan (LTFP). In the event that the TAMP and the LTFP do not balance financially, then the Shire can adjust its practices (e.g. service level performance) to reach a sustainable point (Figure 5).

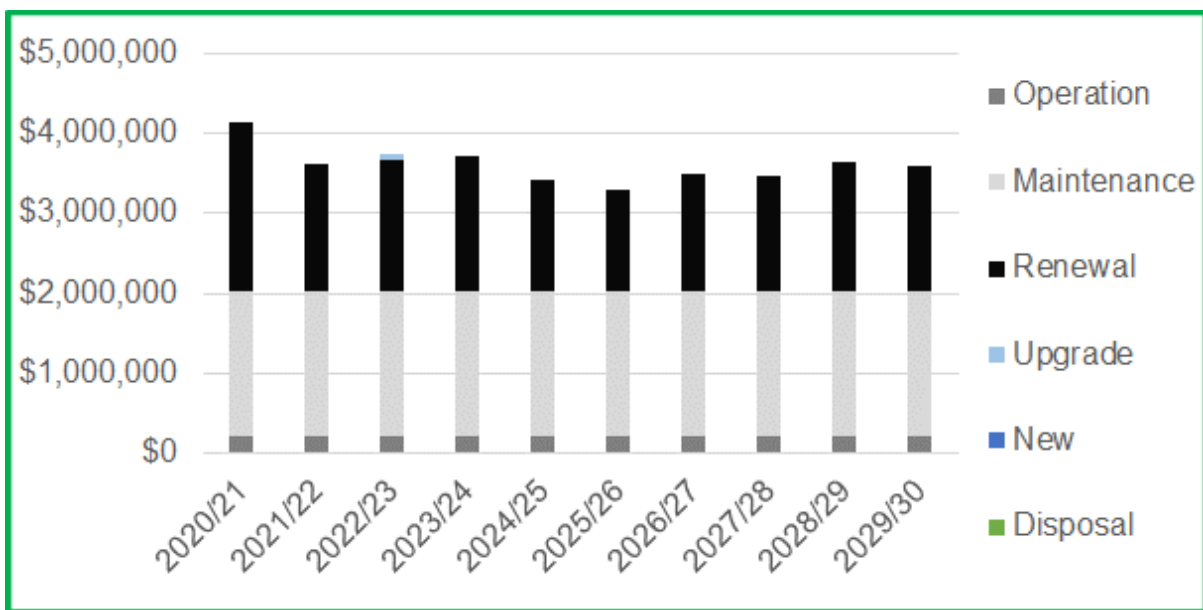


Figure 4: Projected Service Cost

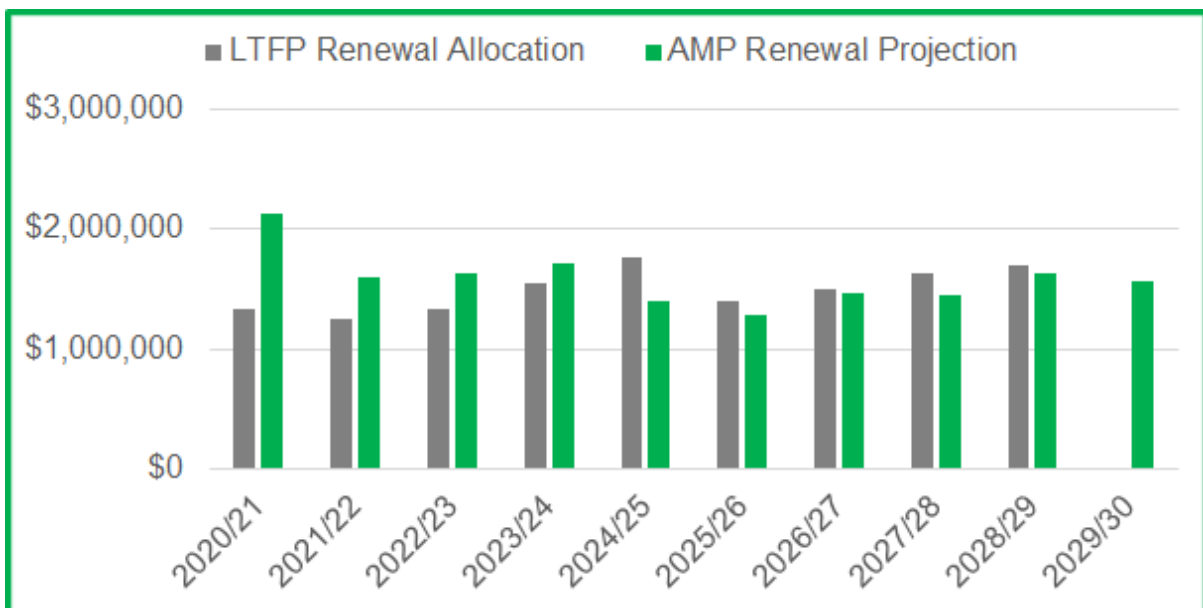


Figure 5: Annual Planned vs Projected

Is the service sustainable?

The Shire monitors the effectiveness of the TAMP through three financial ratios. They measure the past, present and future ability to renew assets when required.

Past - Sustainability Ratio (ASR)

This ratio indicates whether a local government is replacing or renewing existing non-financial assets at the same rate that its overall asset base is wearing out. The ratio compares the average actual expenditure on asset renewal to the annual depreciation expense.

Present - Consumption Ratio

This ratio seeks to highlight the aged condition of a local government's physical assets by comparing their fair value (worth in current state) to their replacement cost (worth in as new state).

Future - Renewal Funding Ratio

This ratio indicates whether the local government has the financial capacity to fund asset renewal as required, and can continue to provide existing levels of services in future. The ratio compares the available asset renewal expenditure in the Long Term Financial Plan to the required asset renewal expenditure in the Asset Management Plans.

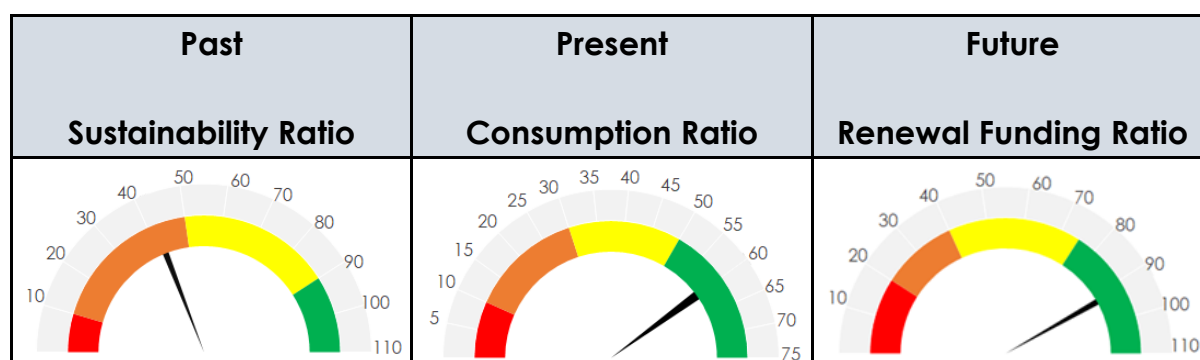


Table 6: TAMP Financial Sustainability Measures

How will the Shire improve its service management?

Where possible, and appropriate, the Shire is committed to improving its asset management practices. The following actions have been identified by this AMP for future implementation.

Task	Responsibility	Year
Improve data confidence for assets that are uncertain or lower.	MW	2021/22
Monitor all TAMP service level KPIs.	MW	Ongoing
Review the service demand mitigation tactics and allocate new initiatives to respective staff members.	MW	Ongoing
Further develop the long-term capital works programme, paying attention to culverts in either a poor or very poor condition.	MW	Annually
Further develop, and document, asset planned operation and maintenance schedules.	MW	Annually
Review the asset sustainability ratio, ensuring that renewal works are not being recorded as maintenance within the financial records.	DCEO/MW	Annually
Review the transport service delivery satisfaction levels to determine whether, and how, they can be improved.	DCEO/MW	2021/22

Table 7: Transport AMP Improvement Plan

Further reading

Shire of Gnowangerup – Strategic Community Plan

Shire of Gnowangerup – Asset Management Policy

Shire of Gnowangerup – Long Term Financial Plan (LTFP)

Shire of Gnowangerup – AMP Works Programme 2020-2030

AMP – LTFP relationship

The AMP is service based, and contains information about assets that support this service. The asset classes used by the LTFP are slightly different. To assist with cross referencing the documents, the following table lists the LTFP asset classes that align with this AMP.

LTFP Asset Class	AMP Asset Class
Aerodrome Assets	Aviation Facilities
Drainage Assets	Drainage
Footpath Assets	Paths
Infrastructure Assets Roads	Bridges & Floodways, Car Parks, Culverts, Roads

Table 8: AMP - LTFP Relationship