Mid Murray Council
Transport Asset Management Plan 2022

Introduction

Mid Murray Council has one of the largest road networks of any council under its care and control. This significant asset is a vital service connecting community members and visitors over a distance of 6270 km2. This Transport Asset Management Plan covers the capital and operational management of all sealed and unsealed roads within the Councils network. This asset management plan is to be read in conjunction with Councils Road Management Plan (2022). As described in Figure 1 below, a strategic plan is different to an asset management plan. The strategy provides a management plan based on rationale and procedures, the asset plan incorporates the strategy and reports on how this will be managed and costed in the long term financial plan.

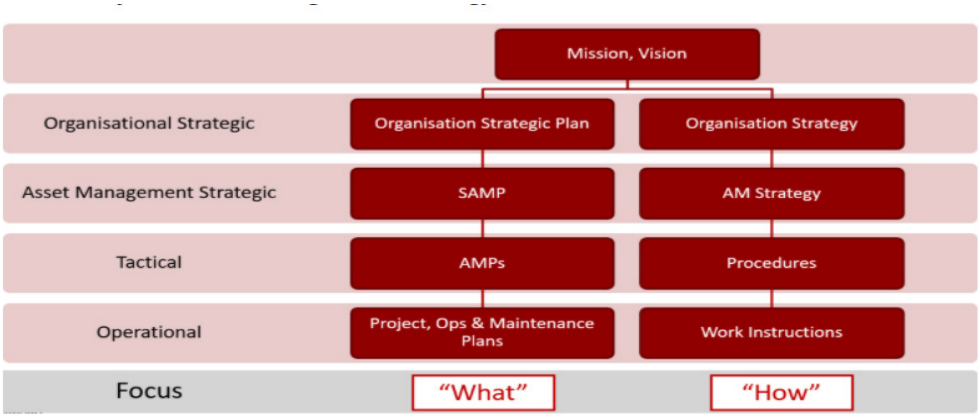


Figure 1. Differentiating Strategy from Plan

Please note, previous versions of this asset plan have also included footpaths and kerbing assets which will be reported via a separate asset management plan. A summary of Councils road network are listed on the following page.

The key elements of this plan are:

- To adopt the defined service level as described in the Road Management Plan (2022)
- Take a whole of life approach to asset investment
- Develop a cost effective management approach, including establishing a cost benefit analysis for all proposed new and upgraded infrastructure, to ensure funding is appropriate to the known demands
- Managing risks associated with performance deficiencies and failures
- Meeting the needs to all roads users including the impact of freight, seasonal use, passenger vehicle demands and paddock access
- Continue to review and improve asset management practices, ensuring greater accuracy with adopted unit rates, useful lives and road demands
- Prioritise infrastructure planning on all aspects of asset maintenance and renewal

Summary

Class	Type	Total Length (Km)	Total Replacement Cost (2022)
Class 3	Sealed	18.3	$4,850,627
	Unsealed	18.8	$979,677
Class 4A	Sealed	20.2	$5,731,098
	Unsealed	0.9	$42,638
Class 4B	Sealed	192.8	$38,737,391
	Unsealed	335.5	$16,225,660
Class 5A	Sealed	120.9	$19,460,434
	Unsealed	430.4	$19,565,533
Class 5B	Sealed	0.4	$45,704
	Unsealed	463	$0
Class 5C	Unsealed	1169.7	$0
Class 5D	Nil	Undetermined	$0
Total		**2770.9**	**$105,638,763**

Service Levels

The Murraylands Riverland Local Government Association (MRLGA) is a subsidiary of eight (8) Councils and undertakes regional strategies aligning with the member Councils. The MRLGA commenced a Regional Road Transport Strategy (the Strategy) for the development of priority setting and future applications under the Special Local Roads Program.

In conjunction with the Strategy, cross boundary and uniformity of road infrastructure is being assessed and aligned for the suitability of each road's own specific "use or purpose" as a road standard. The road use is defined as the principle primary road use or purpose demanded of the road, whether freight, tourism, residential and paddock access.

A structured road hierarchy has been adapted from the Strategy to provide a consistent approach to the full regional road network, road structure and accessibility. For more information on the strategy, please refer to the accompanying document to this asset management plan, the Road Management Plan (2022).

Risk Management

An assessment of the risks associated with the service delivery and management of the Road infrastructure has been undertaken by Council. The risk assessment process is in line with Council's Risk Management Policy and Framework. It identifies credible risks, the likelihood of the risk even occurring, the impact should the event occur, develops a risk rating and evaluates the risk and develops an appropriate treatment plan for non-acceptable risks.

Figure 2. Risk Management Framework – Risk Matrix

Likelihood \ Consequence	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	Extreme	Extreme
Possible	Low	Medium	Medium	High	Extreme
Unlikely	Low	Low	Medium	High	Extreme
Rare	Low	Low	Low	Medium	High

The following table is a summary of the risks as identified and detailed by Council:

Risk	Consequence	Likelihood	Risk Rating	Treatment/s	Responsibility	Due Date
Extreme weather event results in significant replacement or upgrade of capital works	Moderate	Likely	High	Emergency management policy and procedures, road capacity and demand reports and preventative works, asset maintenance program and asset insurance	WHS & Risk Management Coordinator and Asset Management Coordinator	Ongoing
Poor quality data in asset management systems	Moderate	Unlikey	Low	Independent asset valuation sampling, asset management and financial management dataset integration (Synergy), regular condition assessment, regular review of AMP	Asset Management Coordinator	Ongoing
Insufficient resources available to deliver asset management plan requirements	Major	Almost Certain	Extreme	Review of LTFP and other asset management plan requirements, adjust service level provisions to meet LTFP requirements, explore cost effective solutions for identified deficiencies.	Asset Management Coordinator and Director Corporate & Financial Services	Ongoing
Failure to deliver and maintain infrastructure that meets service level demands	Moderate	Possible	Moderate	Reactive and proactive routine maintenance program, staff training, asset management planning, community engagement, referencing Australian Standards.	Infrastructure Services & Asset Management Cooridnator	Ongoing
Service level standards and strategic targets not aligning with community expectations	Minor	Likely	Moderate	Community engagement (public consultation), community surveys, linking service levels directly to budget, constant review of asset and strategic plans.	Assets, Infrastructure & Elected Members	Ongoing

Lifecycle Management Plan

The lifecycle management plan details how Council plans to manage and operate the assets at the agreed levels of service while optimsing life cycle costs. It presents an analysis of the known asset information covering the three key work activities to manage the road infrastructure.

Maintenance Plan - Maintenance includes reactive, planned and specific maintenance work activities.

Reactive maintenance is unplanned repair work carried out in response and assessed from service requests and management/supervisory directions. The aim of both the asset management plan and road management plan is to minimise reactive maintenance.

Planned maintenance is repair work that is identified and managed through a routine maintenance management program. The road management program includes inspections, assessing the condition against failure/ breakdown experience, prioritising, scheduling, actioning the work and reporting what was done to develop a maintenance history and improve maintenance and service delivery performance.

Specific maintenance is replacement of higher value components/sub-components of assets that is undertaken on a regular cycle including such as short length roads and demands and remediation of the wear surface that can be managed operationally. This work generally falls below the capital/maintenance threshold (Refer to Council's Asset Accounting Policy (AAP)) but may require a specific budget allocation.

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

Enhancement Plan- New works are those works that create a new asset that did not previously exist, or works which upgrade or improve an existing asset beyond its existing capacity. Presently, the only identified and required enhancement is the Class 3 unsealed road, namely Murraylands Road between Morgan and Blanchetown. The predicted required funding has been endorsed by Council and committed in the long term financial plan and is to be delivered in stages over various financial years.

Asset Valuations

The value of Council's Sealed and Unsealed Road assets as at 1 July 2021 is summarised in the table

Asset Valuation	Current Replacement Cost	Annual Depreciation	Depreciated Amount	Depreciated Replacement Cost
Sealed Total	$68,825,255	$1,325,033	$22,839,879	$45,985,376
Unsealed Total	$36,813,508	$1,751,580	$19,416,119	$17,397,389
Total	$105,638,763	$3,076,613	$42,255,998	$63,382,765

Maintenance Plan

Council have developed a routine maintenance program, as described in the Road Management Plan 2022, which aims to deliver regular, ongoing work relative to the known demands and predicted consumption estimation to ensure the ongoing operation of infrastructure.

Reactive maintenance still arises and is often work carried out in response to service requests or supervisory direction, based on a specific occurrence or reason. An example being a unsealed road surface deterioration due to weather events or stormwater matters.

Maintenance expenditure trends have been historic and have now been be broken down into the planned works and available internal resources conducted by the routine maintenance program, including inspections, grading, contractor sealed road repairs and replacement of assets below capital thresholds (AAP).

Renewal 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 covered in the enhancement plan for new or upgrade works expenditure.

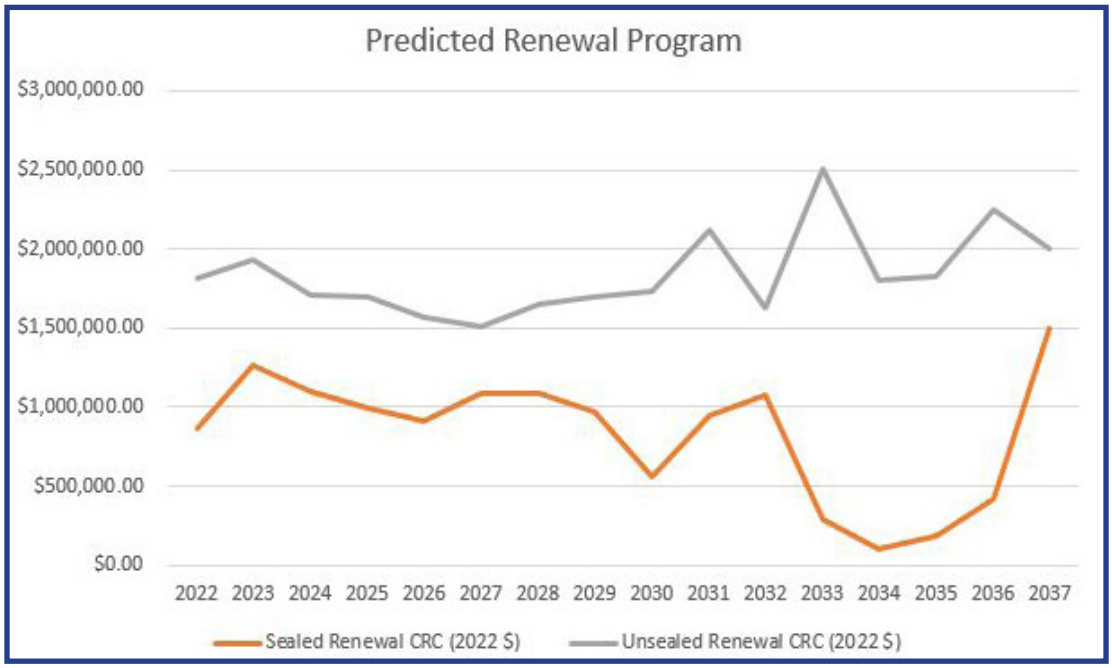
Council's road network is some of the first assets constructed and historic records for acquisition dates are often unknown. Through condition inspections it is evident, construction practices varied dependent on the time of construction and the local government body that has previous care and control.

Due to the long useful life of road pavement coupled with fact that geographically Council's pavement material and subgrade is stable and sound, this asset component is in relatively good condition and it is not predicted that major renewal works will be required for renewal.

Surface components are a much shorter lived asset and condition is the other factor that can affect accessibility and comfort for road users. Deterioration and wear has been assessed and future consumption predicted based on known demands. Council's road network experiences relatively low road utilization, compared to industry standards, as such local deterioration rates and predictions are necessary and are explained in further detail in the Road Management Plan 2022.

Although there is a significant length of unsealed roads that make up the majority of Council's road network, their current demand means existing service levels are consistent with consumption. Roads that service farm paddock gate access and receive less than 10 vehicles per day, are planned to be managed operationally as capital investment is considered an over-investment. Material loss of these roads will be replenished by supplementing Council's current routine maintenance program with additional surface material without needing to create a separate program.

Milendella Road condition prior to removal



Enhancement Plan

Murraylands Road (Thiele Highway, Morgan to Sturt Highway Blanchetown) has been identified as a road of local, regional and state significance for freight movements as its predominant use. Murraylands Road, in sections, also caters for intensive farming industries and primary production with an element of through-traffic and high tourism usage, and is a candidate for supplement funding at a State and Federal level.

It has been endorsed by Council (January 2021) to enhance the existing seal width, upgrade and seal the remaining unsealed sections of the road and further upgrade Yandiah Road as this forms a linkage for freight and over-dimensional use to the Murraylands Road and as a heavy vehicle bypass for the Morgan Township.

The estimated cost provided to upgrade the remaining unsealed section between Morgan and Blanchetown is $6.2m over a staged approach, subject to support from LGIPP and SLRP funding, and Council's Long Term Financial Plan (LTFP).

The presently unsealed 18.4km upgrade was costed conservative rate of $335k per linear km (without land acquisition and ancillary works etc). Both internal and specialised consultant assessments of the current corridor and road base condition has been conducted and the estimated residual of unsealed road pavement may be better than initially estimated. If the substantial amount of in-situ pavement material available can be utilised in the sealed road pavement construction, the original budget estimation could be revised and potentially reduce the financial burden on the LTFP. Council's Asset & Project Management Team will continue to prove the remaining condition and unit rates for construction to ensure the upgrade is efficiently delivered.

Plan Improvement & Monitoring

The ability to meet and fund the requirements of this plan will be reviewed annually as part of Council's long term financial plan review process and future versions of this plan will be amended to include any changes in service levels, valuations, condition assessments and/or resources available to provide the services.

Council is committed to working toward continuous improvement in the quality and accuracy of its asset management practices. The asset management improvement plan for this asset management plan is shown below:

Item	Action	Responsibility	Target Date	Funding Source
1	Establish and breakdown the unit rate costs for the maintenance delivery program, in order to measure the effectiveness of the investment	Asset Management Coordinator	Ongoing	Internal Resourcing
2	Implement and refine the routine maintenance and inspection program, ensuring the assets are maintained to an acceptable service standard	Asset Management Coordinator & Construction Coordinator	Ongoing	Internal Resourcing
3	Continue to measure and quanitfy asset consumption and useful lives in relation to road utilisation and demand	Asset Management Coordinator & Construction Coordinator	Ongoing	Internal Resourcing
4	Facilitate and enable real time data condition capturing for increased use of mobile devices	Asset Management Coordinator	Ongoing	Internal Resourcing

Definitions

Asset Condition Assessment – The process of a continuous inspection program, assessment and record of condition (against an industry standard - IPWEA) which determines the timeline for current or future remediation.

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

Assets – Resources owned by Council which have a current and future economic value (AAS27.12).

Capital Expenditure – Expenditure which contributes to the resources required to construct and install a physical asset.

Capital Grants – money received from an external party, which is generally tied to the specific projects for which they are granted.

Component – The individual part of an asset which contributes to the composition of the whole and can be separated from an asset or system.

Current Replacement Cost – The cost to acquire the asset on the reporting date. The cost is based on the equalivalent cost based on a modern asset with the same economic and performance benefits.

Depreciated amount – The cost of an asset less it's residual value (AASB 116.6).

Depreciated Replacement Cost – The current replacement cost of an asset less the accumulated depreciation calculated on the amount of useful life it has consumed.

Depreciated – The systematic allocation of the depreciable amount of an asset over its useful life.

Infrastructure Assets – Physical assets of Council that contribute to meeting the public's needs for access to economic and social facilities and services. The components of these assets may be separately maintained, replaced or upgraded individually so that the service level of the network of assets is sustained.

Level of Service – The defined service standard for a particular asset class. Service levels relate to quality, quantity, reliability, responsiveness, acceptability and cost.

Maintenance Expenditure – Recurrent expenditure which is required to deliver a schedule of works which ensure the asset achieves the designed and predicted useful life at the required service level.

Nuisance Inundation - Pooling of stormwater run-off in low-lying areas due to poor drainage. This is a frequent hazard but rarely causes major damage.

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

Routine Maintenance – Repair work that is managed through a routine maintenance program. Activities include inspections, assessing condition, actioning repair work, collecting maintenance history and seeking way to continuously improve maintenance efficiency.

Remaining life – The time remaining until an asset ceases to provide the required service level or economic usefulness.

Risk Management – The application of a formal process to assessing the key factors associated with the risk in order to determine the resultant range of outcomes and their probability of occurrence.

Useful Life – The period over which an asset is expected to be available for use.