Transport Asset Management Plan

MELTON CITY COUNCIL

Contents

Executive **Summary**

Purpose of the Plan

The fundamental purpose of this Transport Asset Management Plan (TAMP) is to improve Council's long-term strategic management of its transport assets, in order to cater for the community's required levels of service into the future as detailed on page 12, Levels of Service. The plan defines the state of Council's infrastructure assets at the close of the past financial year, the 10-year funding required to achieve Council's adopted asset performance targets and planned asset management activities over a 10-year planning period.

Current State of Council's Assets

The value of assets covered by this TAMP is $1.63 billion, distributed across the categories shown in Table 1 below.

Figure 1 provides a high level snapshot of MCC transport assets overall condition as at 30 June 2020. It is noted that the Overall Score The Overall Score Index (OSI) is a numerical score given to an asset to represent its condition. This index takes into account all of the condition parameters and averages them to provide a score out of 5 with where 5 means being nearing the end of life.

Asset Funding Levels

The forecast lifecycle cost necessary to provide the services covered by this TAMP includes maintenance and capital expenditure of assets over a 10-year planning period is $77.6 million, or $7.8 million on average per year.

The breakdown of this by asset category over 10 years is summarised in Table 2.

Further information is detailed on page 22, Asset Funding Levels.

[1] Road Barriers, Signs, Signals and Street Lighting

ASSET CATEGORY	REPLACEMENT VALUE	ANNUAL DEPRECIATION	ACCUMULATED DEPRECIATION	WRITTEN DOWN VALUE
Roads	$938,026,265	$10,552,979	$126,910,943	$811,115,322
Kerbs	$254,967,198	$4,104,167	$53,723,060	$201,244,138
Pathways	$208,948,672	$3,529,620	$45,923,323	$163,025,349
Bridges and Major Culverts	$87,060,156	$1,256,195	$15,272,085	$71,788,071
Traffic Management Devices	$86,483,078	$2,917,527	$10,979,431	$75,503,648
Car Parks	$32,958,075	$456,573	$4,368,129	$28,589,946
Road Ancillary Assets[1]	$18,205,721	$797,073	$3,942,284	$14,263,437
Total	**$1,626,649,166**	**$23,614,133**	**$261,119,256**	**$1,365,529,910**

Table 1: Assets Valuations as at 30th June 2020

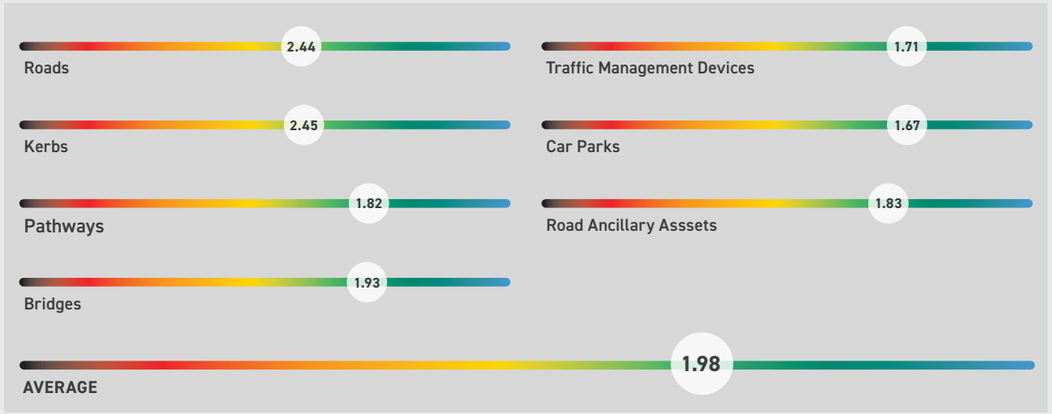


Figure 1: Overall Score Index Per Asset Category as at 30th June 2020

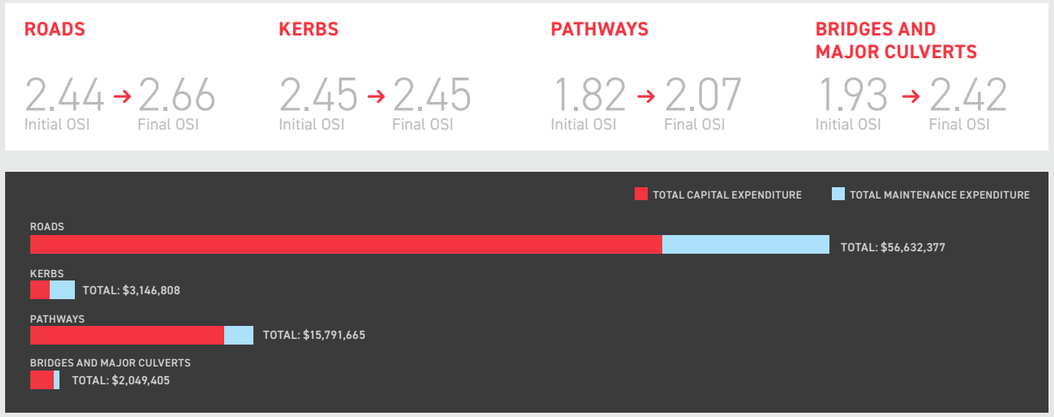


Figure 2: Forecast Transport Lifecycle Cost over a 10-year planning period

ROADS	KERBS	PATHWAYS	BRIDGES AND MAJOR CULVERTS
$44,764,152 Renewal Cost	$1,364,485 Renewal Cost	$13,707,005 Renewal Cost	$1,630,955 Renewal Cost
$11,868,225 Maintenance Cost	$1,782,323 Maintenance Cost	$2,084,660 Maintenance Cost	$418,450 Maintenance Cost
$56,632,377 TOTAL COST	**$3,146,808 TOTAL COST**	**$15,791,665 TOTAL COST**	**$2,049,405 TOTAL COST**

SUM TOTAL		
$61,466,597 Renewal Cost	$16,153,658 Maintenance Cost	**$77,620,255 TOTAL COST**

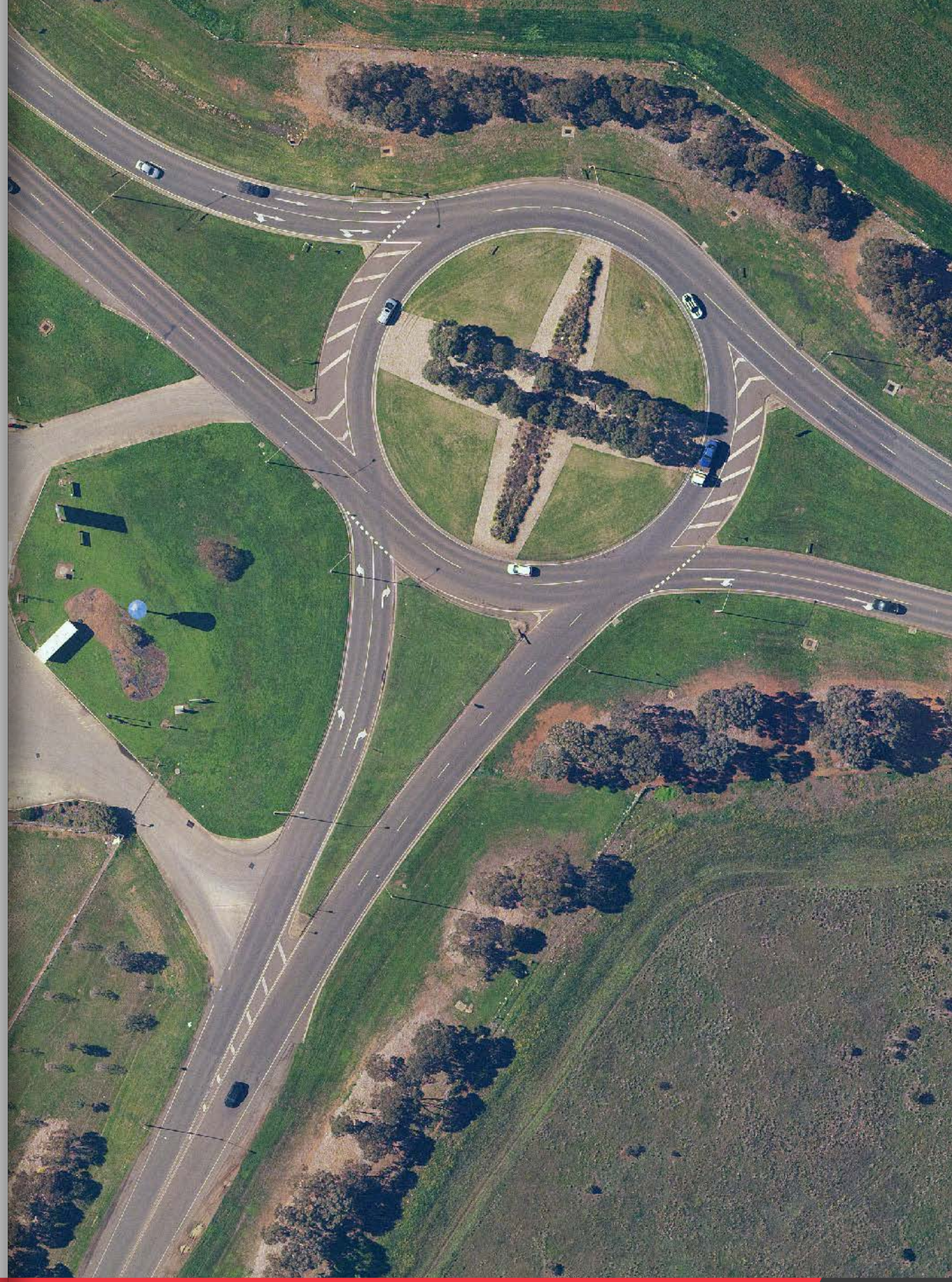
Table 2: Estimated Asset Funding Level over a 10-year planning period

Monitoring and Improvement Program

The next steps resulting from this TAMP to improve asset management practices are as follows:

- Undertake a review of all paper roads within the municipality;
- Review of all Memorandum of Understanding (MOU) and declarations with neighbouring Councils and other road authorities;
- Enhance Councils Asset Management System with value added attributes to assist planning and decision making;
- Improve information in AMS for transport assets based on gap analysis review;
- Improve AMS with current traffic count data to improve renewal and transport planning;
- Update AMS to accommodate changes to Vicmap transport datasets to improve Victorian Grants Commission reporting.

Further information is detailed on page 28, Asset Funding Levels.



Current State of **Council's Assets**

Background

Council has documented a detailed transport condition assessment manual that has been used to assess the transport network condition and this is referred to as Transport Business Process Model (TBPM). By understanding the condition of Council's assets and the various types of distresses that affect these assets, Council can utilise this data to maintain the levels of service the community wants, in the context of affordability and also minimise the risk of asset failure.

Typically, network wide condition assessments are undertaken on a cyclic basis and used to identify where assets are within their defined useful lives at any given point in time.

Condition audits on Council's transport assets are generally carried out by external consultants or internal Council staff on cyclical basis, every four years as follows:

- Roads, kerbs and bridges were completed in 2019. The next condition audit is scheduled for 2023-24 financial year;
- Pathways were completed in February 2020. The next audit is scheduled for 2023–24 financial year;
- Carparks were completed in 2016. A new audit is scheduled for this current 2020-21 financial year;
- Traffic Management Devices were last completed in 2016. A new audit is scheduled for this current 2020-21 financial year;
- Road barriers were completed in April 2020. The next audit is scheduled for 2024-25 financial year;
- Road signage are monitored and maintained or renewed through the road maintenance contract budget.

Council's Asset Register is updated to reflect changes resulting from major renewal and upgrade works delivered via Council's capital works program, as well as factoring in disposals and additions as at 30 June 2020.

Table 3 provides an overall view with regards to the details of the condition rating scales for Council's transport asset stock.

Key Indicators

Table 4 provides the quantum of transport assets by asset category managed by Council as at 30 June 2020.

Excellent	**RATING 0**
Brand new asset or recently rehabilitated to as new condition. Only cyclical routine maintenance is required.	
Very Good	**RATING 1**
Asset is in very good overall condition only routine maintenance is required.	
Good	**RATING 2**
Superficial defects may be present requiring minor maintenance, in addition to cyclical routine maintenance.	
Fair	**RATING 3**
Moderate deterioration. More frequent maintenance is required in addition to cyclical routine maintenance, in order to maintain adequate serviceability.	
Poor	**RATING 4**
High deterioration is evident. Maintenance costs rising in order to maintain serviceability. The asset would be at the point where it can be considered for renewal.	
Very Poor	**RATING 5**
Evidence of high level of deterioration affecting serviceability. Maintenance cost is high. The asset is now nearing the end of its useful life and should be considered for renewal.	
End of Life	**RATING 6**
Asset is no longer serviceable and should not remain in service.	

Table 3: Asset Condition Rating Description

ROADS

1,121km Sealed

127km Unsealed

TOTAL: 1,248km

PATHWAYS

207km Shared Paths

1,253km Footpaths

TOTAL: 1,461km

TRAFFIC MANAGEMENT DEVICES

46 Chicanes

72 Crossings

91 Garbage Pickup Aprons

73 Intersection Platforms

378 Medians

323 Roundabouts

653 Speed Bumps

5,303 Splitter Island

1,345 Threshold Treatments

TOTAL: 8,284

CAR PARKS

0.83km^2 On Road

0.58km^2 Off Road

TOTAL: 1.41km^2

KERBS

749km Barrier

43km Edge Strip

193km Mountable

9km Open Channel

766km Semi Mountable

TOTAL: 1,759km

BRIDGES

10 Boardwalk

138 Pedestrian Bridge

75 Vehicular Bridge

4 Viewing Platform

TOTAL: 227

Table 4: Transport Asset Category

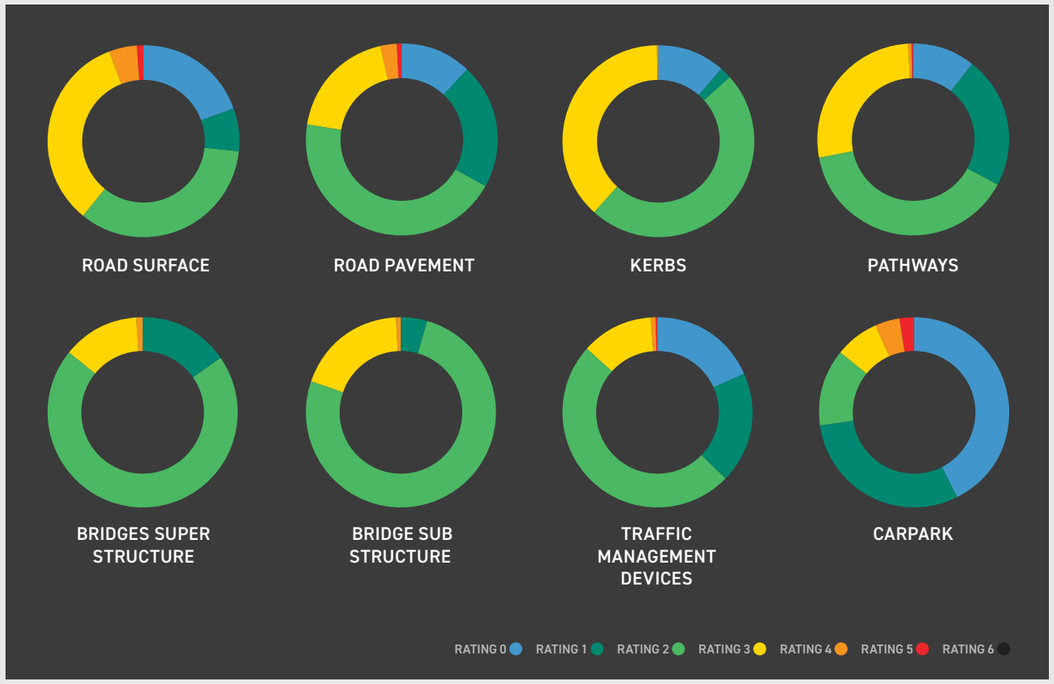


Figure 3: Transport Condition Distribution by Category

Asset Category Status

Figure 3 illustrates Council's overall asset stock condition distribution by replacement value for each asset category.

In order to ensure that appropriate management, engineering standards and planning practices are applied to Council's transport assets, a hierarchy system is applied in accordance with the International Infrastructure Management Manual and based on the asset's function. This enables a more efficient use of limited resources, by allocating increased funding to those assets that are in higher demand.

Melton City Council has documented a transport asset hierarchy that classifies the portfolio into different levels based on the current function and criticality of the individual asset. Hierarchy is documented in the Transport Business Process Model (TBPM). Table 5 provides a summary of these hierarchies.

In addition to the definition above, the location of bridges, kerbs and TMD assets will also determine the type of hierarchy that will be applied. This is detailed in Table 6.

ASSET CATEGORY	HIERARCHY	DEFINITION
Roads, Kerbs, Pathway, Bridges, Carparks, TMDs	Access Place	Kerbed local roads with less than 500 vehicles per day (vpd) or un-kerbed road with less than 100 vpd
	Access Street	Kerbed local roads with 500 vpd to less than 1,000 vpd or un-kerbed roads with 100 to less than 500 vpd
	Collector Road	Kerbed local roads with 1,000 vpd to less than 5,000 vpd or un-kerbed roads with 500 vpd to less 1,000 vpd
	Trunk Collector	Kerbed local roads with at least 5,000 vpd or unkerbed local roads with at least 1,000 vpd
Pathways and Bridges	Low Pedestrian	Based on proximity to CBD, main transportation nodes and high profile recreation amenities like Caroline Springs Lake
	High Pedestrian	

Table 5: Transport Hierarchy Description

ASSET LOCATION	HIERARCHY
Bridges, Kerbs and TMDs within road reserves	Inherit the road hierarchy: • Access Place • Access Street • Collector Road • Trunk Collector
Bridges, Kerbs and TMDs within open space facility scape	Inherit the open space facility hierarchy: • Local • District • Regional

Table 6: Transport Hierarchy Description

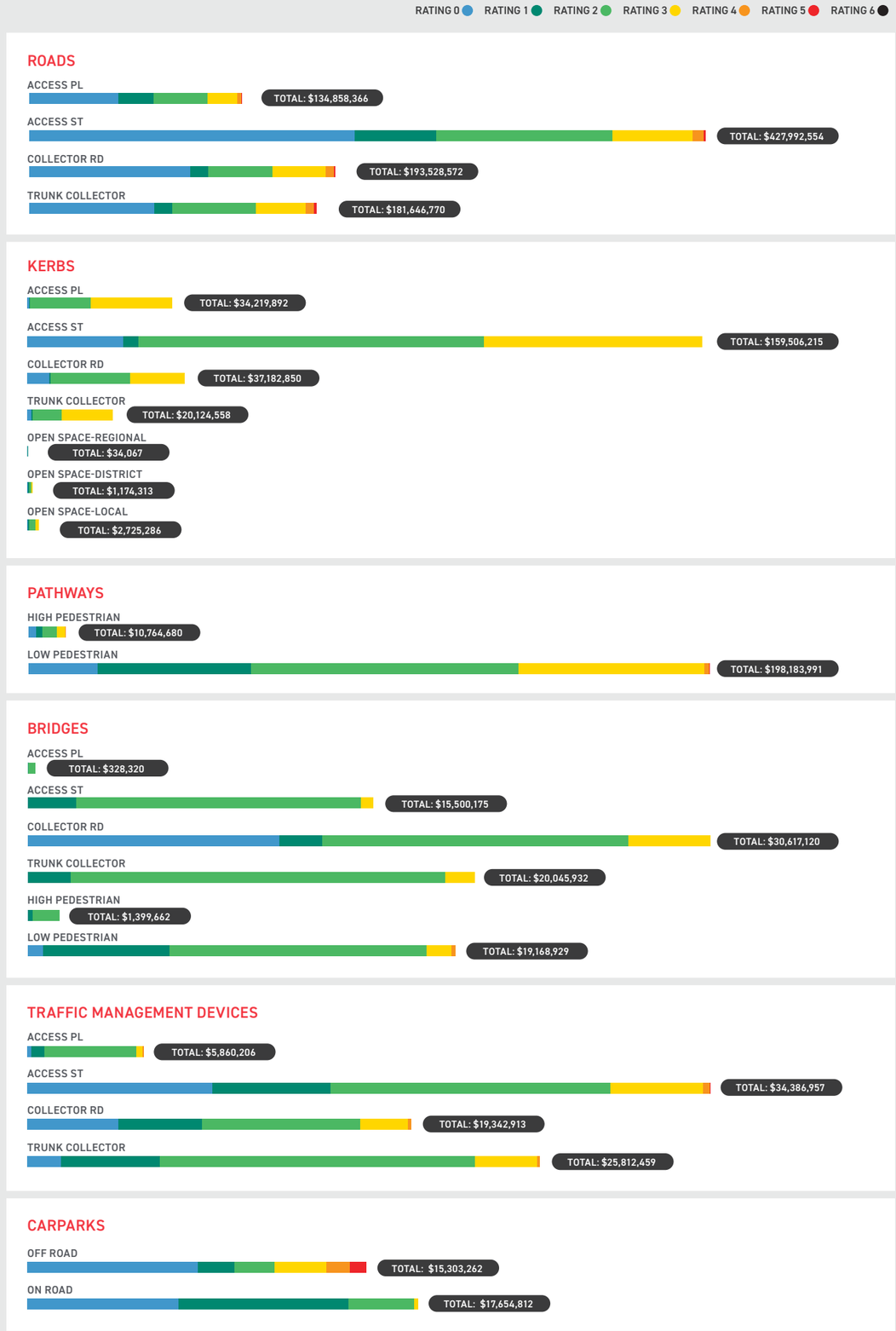


Figure 4: Condition Distribution by Category and Hierarchy

Key Stakeholders

Assets controlled by Council are utilised by a broad cross-section of the community. It is critical that assets are maintained and renewed based on need and fit for purpose. The best judge of an asset being fit for purpose is likely to be the user of the asset. Asset users are key stakeholders of this Transport Asset Management Plan.

Table 7 identifies stakeholders where consultation is necessary when Council seeks input in relation to the determination of levels of service and intervention levels.

COUNCIL

Endorsement of the asset management policy, strategy and plans. Set high level direction through the development of asset management principles in the Community Strategic Plan.

SENIOR MANAGEMENT

Endorse the development of asset management plans and provide the resources required to complete this task. Set high level priorities for asset management development in Council and raise the awareness of this function among Council staff and contractors. Support the implementation of actions resulting from this plan and prepared to make changes to a better way of managing assets and delivering services. Support for asset management driven budget and Long Term Financial Plans.

ASSET MANAGEMENT & GIS DEPARTMENT

Maintaining Council's asset registers and performing strategic predictive modelling analysis works to inform Council's Long Term Financial Plans. Responsible for coordinating the development and implementation of asset management processes and frameworks within Council and for developing a 10 year renewal schedule for all asset categories based on adopted Strategic Asset Management Framework (SAMF).

FINANCE DEPARTMENT

Ensuring that the asset valuations are accurate. Development of supporting policies i.e. Asset Capitalisation Policy and Asset Valuation and Revaluation Policy. Preparation of asset sustainability and financial reports, incorporating asset depreciation in compliance with current Australian accounting standards.

CAPITAL PROJECT MANAGER

Responsible for the delivery of renewal and upgrade projects to Council's approved design standards, and for ensuring efficient handover of project information to enable accurate update of Council's official register of assets.

OPERATIONS AND MAINTENANCE MANAGERS

Business Unit Managers are responsible for understanding expectations of levels of service through effective, ongoing engagement with the community (users of the service). Planning for changes to operations and maintenance as well as undertake minor renewal works.

COUNCIL OFFICERS

Provide local knowledge level detail on all infrastructure assets. They verify the size, location and condition of assets. They can describe the maintenance standards deployed and Council's ability to meet technical and customer levels of service.

MAINTENANCE CONTRACTORS

Provide regular inspections on Council's assets and perform routine maintenance works.

Table 7: Key Stakeholders

Levels of **Service**

Customer Research and Expectation

Council is continually working to improve its community consultation practices through implementing a combination of methods to encourage stakeholder engagement to gain knowledge of expectations.

The most recent customer satisfaction survey which was conducted in 2018, reported satisfaction levels on key service areas as illustrated in Table 8.

Further details on the customer satisfaction survey can be found on Council's website.

https://www.melton.vic.gov.au/files/assets/public/council/about-the-city/community-satisfaction-survey/overview-report-melton-2018-community-satisfaction-survey-overview-report-final.pdf

Strategic and Corporate Goals Alignment

This Transport Asset Management Plan is prepared under the direction of Council's vision, mission, goals and objectives and has been aligned to deliver cost-effective, transparent, realistic and affordable service levels in accordance with community expectations.

Council's vision is

"A Thriving Community Where Everyone Belongs"

Council's mission is:

"Support The Growth, Wellbeing and Aspirations of Our Community Through Leadership, Excellence and Inclusion."

Relevant Council goals and objectives and how these are addressed in this TAMP are detailed in Table 9.

PERFORMANCE MEASURE	SATISFACTION LEVEL							
	MEAN SCORE	EXTREMELY POOR	VERY POOR	POOR	SOLID	GOOD	VERY GOOD	EXCELLENT
Overall performance	7.12					●		
On and off-road bike or walking paths	7.30						●	
Maintenance and repair of sealed local roads	6.81					●		
Footpath maintenance and repairs	6.75					●		
Traffic management issue	6.55					●		

Table 8: Community Satisfaction Survey Levels

Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of Council transport services are outlined in Table 10.

Strategic Levels of Service

Council's Strategic Levels of Service that have been adopted as a result of this TAMP are detailed in table Table 11.

Operational Levels of Service

For the levels of service delivered on a day to day nature (i.e. responding to customer requests for maintenance faults and responding to breakdowns), these are detailed in RMP. It is noted that all maintenance contracts are based on RMP and it is also referenced in Council's Transport Business Process Manual. Council's RMP can be found at:

https://www.melton.vic.gov.au/files/assets/public/services/building-planning-amp-transport/roads/road-management-plan-_adopted-2016.pdf

The contract document specifies the required services which include but not limited to the annual service program, monthly service reporting requirements, 24-hour emergency response service, customer service response details and quality assurance.

STRATEGIC OBJECTIVE	OUTCOME	HOW GOAL AND OBJECTIVES ARE ADDRESSED IN TAMP
A proud, inclusive and safe community	A City of people leading happy and healthy lives.	Continued investment in infrastructure assets.
A thriving and resilient natural environment	A City that preserves and Enhances its natural environment for future generations.	Facilitating the provision of waste management and cleaning services that include kerbside waste, recycling and organics collection, street and footpath sweeping services, litter collection, graffiti removal and the operation of the Melton Recycling Facility. Maintenance of our parks, open spaces, trees, property, drainage and roads.
A well planned and built City	A City with a clear vision to manage growth in a sustainable and accessible way.	Provision of and access to services and amenities. Promote active transport options in the road and open space network. Ensure road networks are adequate, safe and contribute to the wellbeing of the community. Support creation of a connected and active community through the design and delivery of walking and cycling networks.

Table 9: Council's Strategic Objectives

How we engaged with our community

In February 2021, through the establishment of Council's first Community Panel people from a broad, representative range of social, economic, age, religious, and cultural backgrounds, shared what they loved about the City of Melton; what they felt needed improvement; and what their hopes for the future of our community were.

The result is a unique vision that captures the aspirations of our residents for what our municipality will become in the next 20 years, along with the principles to guide the development of the Asset Plan 2021-2031 (see *Asset Management Strategy* page 14).

The Community Panel ensured the community's voice was at the heart of Council's strategic planning and formed part of Council's deliberative engagement requirements under the *Local Government Act 2020*.

LEGISLATION	REQUIREMENT
Disability Discrimination Act 1992	Sets out the responsibilities of Council and staff in dealing with access and use of public infrastructure.
Local Government Act 1989 Local Government Finance and reporting Regulations 2004	Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by transport assets asset management plans for sustainable service delivery.
Melton City Council Local Law, such as the Asset Protection and Footpath Trading	Various local laws exist to protect the well-being of the community, the amenity of local neighbourhoods and the environment. Local laws guide communities on appropriate behaviour and actions, and they outline legally enforceable standards for issues such as protection of our built and natural environment, behaviour in public spaces, neighbourhood nuisances, safety concerns and health matters.
National Asset Management Framework Legislation 2010	Focuses on long term financial sustainability and provides a mandate to have long term strategy, financial statements and annual reporting mechanisms. AM plans are likely to be audited.
Native Title Act 1993	To provide for the recognition and protection of native title as well as establish ways in which future dealings affecting native title may proceed and to set standards for the dealings.
Occupational Health and Safety Act 2004	Aims to secure the health, safety and welfare of people at work. It lays down general requirements that must be met at places of work in Victoria. The provisions of the Act cover every place of work in Victoria. The Act covers self-employed people as well as employees, employers, students, contractors and other visitors.
Occupational Health and Safety Regulations 2007	Outlines minimum actions to be taken to comply with OH&S Act. It explains plants such as Lifts, boilers maintenance, inspection and testing and WorkCover registration requirements.
Planning and Environment Act 1987	Planning and Environment Act 1987. Sets of legislative requirements for planning and environmental concerns in new and upgrades areas. Allows for the impact of asset construction and growth and sets parameters to trigger Council activities/actions.
Road Management Act 2004 and associated Regulations and Codes of Practice	The purpose is to establish a coordinated management system for public roads that will promote safe and efficient State and local public road networks and the responsible use of road reserves for other legitimate purposes, such as the provision of utility services. Defines the responsible authorities for all roads within the state. It makes Council the controlling authority for Public Local Roads, Boundary Roads and parts of Declared Roads within the municipal area and it is therefore responsible for managing the infrastructure assets within them.
Road Safety Act 1986	Safety requirements relating to the use and operation of the road network.
Road Safety Regulations 2009	Sets out regulations for implementing the Road Safety Act.
Transport Act 1983	Sets up structure for the provision and regulation of public and commercial transport.
Workplace Health & Safety Act 2011	The objective of this Act is to prevent a person's death, injury or illness being caused by a workplace, by a relevant workplace area, by work activities, or by plant or substances for use at a relevant place.

Table 10: Legislative and Strategic Requirements

KEY PERFORMANCE MEASURE	LEVELS OF SERVICE	PERFORMANCE MEASURE
COMMUNITY LEVELS OF SERVICE		
Function	Transport assets are well connected and accessible to users allowing for efficient traffic movements	Community Satisfaction Survey
Function	Transport assets are fit for purpose and meet community needs	Number of customer complaints relating to transport asset services
Function	Customer service requests relating to road line marking deficiencies	Customer satisfaction in relation to line marking
Function	Footpath compliance with DDA	Compliance requirements
Quality	Bridges are free from hazards and are in a condition appropriate for use	Measure of customer service requests relating to reported bridge hazards
Quality	Bridges are structurally sound and load capacities meet current and future demands	All bridges are structurally adequate based on Level 2 inspections
Quality	Roads are adequate with the amount of traffic	Community Satisfaction Survey
Quality	Roads are smooth to drive on	Community Satisfaction Survey
Quality	Roads are safe and well maintained	Community Satisfaction Survey
Quality	Signage is adequate for the standard of road to assist with directions	Community Satisfaction Survey
Quality	Speed of traffic on main roads and residential streets is appropriate	Community Satisfaction Survey
Responsiveness	Response time to customer requests for transport related assets	Measure of response time to customer requests
Safety	Footpaths are free of hazardous debris and trip hazards	Number of successful claims against Council
Safety	General safety of transport assets i.e. safe road, unbroken kerbs, etc that are outlined in Road Management Plan (RMP)	Compliance with RMP
Upgrade/New	Transport assets capacity and function match usage	Transport upgrade and expansion are guided by Council strategies
Utilisation	Buildings used to their full potential	Annual assessment of usage levels and buildings used within capacity
TECHNICAL LEVELS OF SERVICE		
Quality	Road conditions are maintained to agreed service level targets	Lesser than 20% of the total network in condition above score 4 out of 5
Quality	Kerb, footpath, bridge and major culverts conditions are maintained to an acceptable level	Lesser than 10% of the total network in condition above score 4 out of 5
Condition	Condition assessment of transport assets every 3 to 4 years	Overall Condition Index to be in condition 3 (out of 5) or better

Table 11: Strategic Levels of Service - MCC Transport Assets

Future
Demand

Demand Drivers

Drivers affecting demand include things such as population change, changes in demographics, technological changes, environmental awareness and new assets.

Demand Forecasts

The present position and projection for demand drivers due to population growth that may impact future service delivery can be found at:

https://forecast.id.com.au/melton

Demand factor trends and impacts on service delivery are summarised in Table 12.

Changes in Technology

Council is continuously monitoring new asset treatments that may be available to increase the life of its assets. Table 13 details technology changes that are forecasted to affect the delivery of services covered by this plan.

These technological factors need to be assessed in determining the scoping requirements for maintenance works, renewal, upgrade and new transport projects. There will be changes to asset management technology, in particular, the monitoring and data collection roles. These upgrades in technology may require consideration of modifications to service levels as and when appropriate.

[2] City of Melton – .idCommunity

[3] Melton Retail and Activity Centres Strategy – Background Analysis & Discussion

DEMAND FACTOR	PRESENT POSITION	PROJECTION	IMPACT ON SERVICES
Population	172,017[2] in 2019 which is an increase of 8,095 from the previous year	485,061 by 2051, a 194.79% increase.	Population growth will be mostly supported by green-field development meaning a greater number of gifted transport assets to Council. Additionally, all of Council's transport assets will be subjected to an increased volume in traffic.
DEMOGRAPHIC Age group 0-4 years	12,396 in 2016	The largest 5 year age group in 2031 is 0 to 4 years, with a total of 24,340 persons.	Increased demand for access to walking and cycling network to support the creation of a connected and active community.
DEMOGRAPHIC Age group 80+ years	2003 in 2016	Population in the age group above 80 will increase to 7672 in 2031.	An increase in older residents will require Council to ensure adequate footpaths are provided.
Length of congested roads[3]	AM peak period: 62km in 2016 PM peak period: 119km in 2016	AM peak period: 152km by 2031, a147% increase PM peak period: 279km by 2031, a 287% increase.	Significant increase in traffic volume which will require an increase in roads and bridges that are well planned and maintained.

Table 12: Demand Factors, Projections and Impact on Services

TECHNOLOGY CHANGE	EFFECT ON SERVICE DELIVERY
Asset data capture by video inspection and the transportation of this information onto Council's GIS	Spatial location and condition of assets able to be verified from GIS reducing the need for reactive inspections.
Bitumen alternative	Improvements to bitumen quality may mean roads have a longer useful life and require less maintenance over their life.
Engineering standards	More robust structures.
Increase the use of recycled material in pavement construction and maintenance	Incorporation of recycled material will have a dual impact in terms of reduction in greenhouse gas emissions and reduction in initial asset construction costs, enabling more assets to be renewed with the same allocation of annual funds.
Road pavement materials	New techniques may strengthen and increase the life of pavement materials.
Traffic control devices	High likelihood of introduction of electronic sensor technology to vehicles, signals and other fixed traffic control measures. It may reduce the necessity for some on-street installations.
Trenchless technologies	By using trenchless methodologies, this will have a better impact on Council's assets as the soundness of the road and footpath pavements is not compromised when installing new services within the road reserve.
Vehicle construction	Reduced axle loading due to the use of lighter products in vehicle manufacturing may contribute to longer pavement life expectancy.
Vehicle ownership trend	Fossil fuel scarcity may reduce the number of private vehicles, reducing current traffic growth.

Table 13: Changes in Technology and Forecast effect on Service Delivery

New Assets from Growth

Since the publication of the last TAMP in 2014, Council's transport portfolio has expanded significantly with new asset additions. These additions are considered to have increased the replacement value of Council's transport portfolio in the vicinity of $867 million (allowing for CPI increases). This equates to a total annual increase in the order of $145 million over the past 6 years.

Table 14 provides the quantum of asset increases in the transport asset portfolio over the past 6 years since 2014.

It is envisaged that over the next 10 years, there will be more major development and growth in the precinct structure plan areas of: Plumpton, Rockbank, Rockbank North, Toolern, Mt Atkinson and Kororoit, which will directly add new assets into Council's transport asset portfolio. Council approved precinct structure plans which have been incorporated into the Melton Planning Scheme can be found at:

https://www.melton.vic.gov.au/Services/Building-Planning-Transport/Strategic-Planning/Precinct-Structure-Plans

Demand Management Plan

The demand for transport assets at MCC will increase proportionally with the predicted population growth and predicted demographic changes. This is also in line with the community expectation where provisions of cycling or walking paths, roads as well as footpaths maintenance and repairs have scored high as a priority for increased services by Council.

Demand for new services will be managed through a combination of managing existing assets, upgrading existing assets and providing new assets to meet demand and demand management. Demand management practices include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to date for demand management are shown in Table 15. Further opportunities will be developed in future revisions of this TAMP.

This Transport Asset Management Plan sets the strategic direction for Council service planning for transport assets over the next 10 years.

ASSET CATEGORY	MEASURE ON JULY 2014	2014 REPLACEMENT VALUE (MILLION)	2020 MEASURE	LENGTH ADDITION SINCE LAST TAMP	2020 REPLACEMENT VALUE (MILLION)	REPLACEMENT VALUE INCREASE SINCE LAST TAMP (MILLION)
Roads	854 km	$427.80	1247.7 km	394 km	$938.03	$510.23
Kerbs	1367 km	$77.20	1759.2 km	392 km	$254.97	$177.77
Pathways	967 km	$101.90	1460.4 km	493 km	$208.95	$107.05
Bridges and Major Culverts	135 (number)	$15.00	227 (number)	92 km (number)	$87.06	$72.06

Table 14: New Assets from Growth since last TAMP

SERVICE ACTIVITY	DEMAND MANAGEMENT PLAN
Transport assets capacity	Rapid population growth increases pressure to expand/upgrade Council's transport infrastructure networks and to improve understanding of cost and capacity to maintain current service levels. Engage with stakeholders to ensure developed transport assets are at the required capacity to meet commuter needs.
Capital/ maintenance works	Increased in the age of assets and community expectation to quality of road network increases Council's pressure to upgrade transport infrastructure networks. Monitor community expectations and communicate service levels and financial capacity with the community.
Land development	Additional infrastructure required due to development will require continuous monitoring and management of development controls and infrastructure planning.
Vehicle ownership trends	An increase in ownership of SUVs or "light trucks" may increase expectations for a smoother ride and greater road safety measures. Review and document levels of services after consultation with the Service Managers and the community.
Public transport	Pursue a greater use of public transport to reduce the number of vehicles on the road. Further information is detailed in the Moving Melton - Integrated Transport Strategy 2015.
Traffic facilities	Control vehicle speed and safety within built-up areas.
Bridges	Load limits to be placed on bridges in poor conditions, where reasonable alternate access is available.
Capital works	Schedule long term capital works plan.

Table 15: Demand Management Plan Summary

Risk Management
Planning

Risk Management Plan

Council's Risk Management Policy sets the overall framework for addressing risk within the framework of ISO31000-2009. The elements of this framework are described as follows:

- **Risk Management Context:** Establishes the objectives, stakeholders, key issues and criteria against which risks will be evaluated;
- **Identify the Risk:** Identifies what risk events are likely to impact on assets and services;
- **Analyse the Risk**: Reviews the existing controls and then analyses the likelihood of an event occurring and the consequence of the event to determine the level of risk;
- **Assess the Risk:** Assesses and ranks the identified risks in a Risk Register;
- **Treat the Risks:** Identifies actions to reduce/control the risk.

Risks Assessment

Council has developed an asset hierarchy, giving higher importance to risk assessment and the appropriate levels of inspection and maintenance for each classification. A robust risk identification and management approach has the following anticipated benefits:

- A reduction in risk related events;
- Improved transport assets knowledge;
- Managers better understand and manage risk. That is, risk is articulated and the relationship of risk and an individual's accountabilities and responsibilities are more clearly understood;
- Improved transport performance such that services are not unexpectedly impacted by failure resulting in uncontrolled reactive maintenance works;
- Transport assets remain in a fair condition for a longer period of time extending their economic life;
- Improved compliance levels;
- Improved financial and environmental sustainability via more strategic investment in transport asset management.

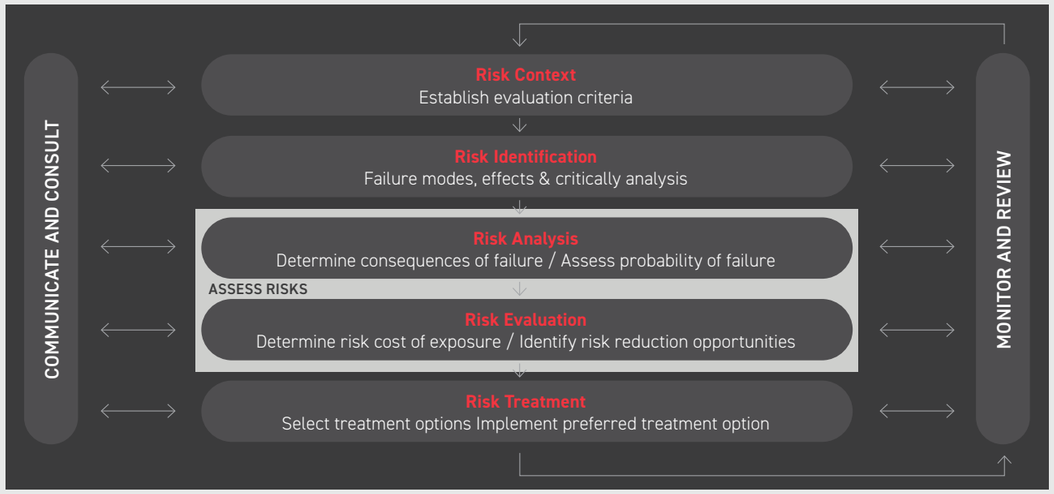


Figure 5: Risk Management Process, Source: ISO31000:2018, p9

The risk assessment process identifies credible risks, the likelihood of the risk event occurring and the consequences should the risk event occur. Council's risk register is a high level document that covers all the key risks that Council is exposed to which can be found at:

https://www.melton.vic.gov.au/Services/Building-Planning-Transport/Engineering/Asset-management

Table 16 summarises the identified key transport risks.

Climate change and resource sustainability are environmental factors that will be considered as part of the risk assessment process. Risks associated with climate change and strategy are detailed under City of Melton Environmental Plan 2017-2027 which can be found at:

https://www.melton.vic.gov.au/files/assets/public/services/environment-and-sustainability/environment-plan/environment-plan-2017-2027.pdf

PRIMARY CONSEQUENCE	CAUSE	CURRENT CONTROLS
Failure to execute renewal works in a timely manner thereby creating a personal safety risk or premature loss of an asset	Lack of planning to develop and deliver the renewal program and delaying decisions to dispose of transport assets or undertake renewal works.	Implementation of an ongoing condition audit program and subsequent preparation of renewal programs.
Provision of community infrastructure does not meet current day needs or operates as originally designed or intended	Failure to provide an appropriate amount of funding to renew Council assets in a sustainable manner to maintain the desired levels of service and support service provision. Deferral of asset renewal projects due to changing priorities. Surplus assets yet to be disposed of or retired.	Capital Works Program/ Long Term Financial Plan Asset Management Policy & Strategy
Unexpected ground conditions	Ground conditions encountered on site differ from those indicated in the project ground investigation.	Monitor work in progress. Use the experienced staff on site. Ensure that site staff are aware of the results of the ground investigations and the basis of the design for the transport assets.

Table 16: Council Transport Risks

Asset
Funding Levels

Forecast 10-Year Funding

The transport strategic modelling analysis predicts the deterioration of Council's transport asset stock by calculating the results of different funding options. The snapshot of the transport dataset utilised for modelling is as at March 2020. The length of time predicted for each option is for a period of 10 years. The asset categories within the transport asset portfolio that are modelled are roads, pathways, kerbs and bridges and major culverts. Carparks and traffic management devices will be modelled and the output to be provided once condition audits are completed before the end of 2020-2021 financial year.

The following subsections provide the summary results for proposed budget spending for each transport asset category.

Roads

Figure 6 displays the proposed budget spending and predicted average road conditions over the following ten years.

Kerbs

Figure 7 displays the proposed budget spending and predicted average kerb conditions over the following ten years.

Bridges and Major Culverts

Figure 8 displays the proposed budget spending and predicted average bridge and major culvert conditions over the following ten years.

Pathways

Figure 9 displays the proposed budget spending and predicted average pathway conditions over the following ten years.

Estimated Funding

Council had considered multiple scenarios in the process of deriving a 10-year budget to be adopted in the Long Term Financial Plan (LTFP). The estimated capital expenditure of $61.4 million on renewal of transport asset portfolio over the next 10 years is forecasted with Net Present Value (NPV) analysis detailed in Table 17.

The LTFP shown above is based on a series of internal consultations on a range of budget vs service level scenarios. These scenarios include and are not limited to the following:

- Funding constraints
- Service level interventions
- Criticality based levels of service
- Political influences
- Community aspirations

The adopted scenario is the proposed funding and agreed by Council Executive Leadership Team (ELT) as the most affordable and equitable from the community perspective and based on comparatives with other asset categories. This is also in line with the LTFP required by Victorian regulation as well as the principles of Victorian Asset Management Accountability Framework (AMAF).

New transport assets and upgrades or expansion of existing assets are identified from various sources such

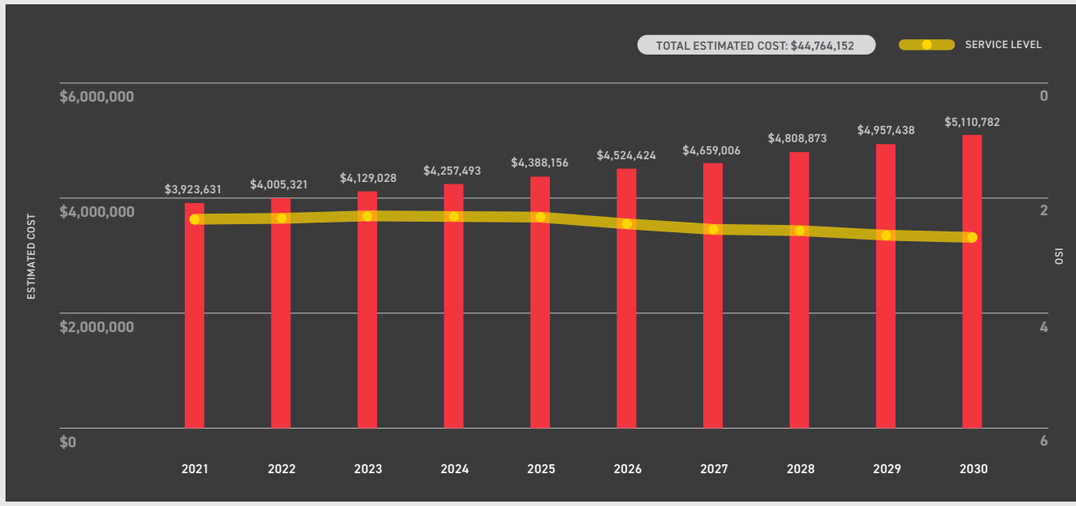


Figure 6: Forecast 10-Year Funding Analysis for Roads

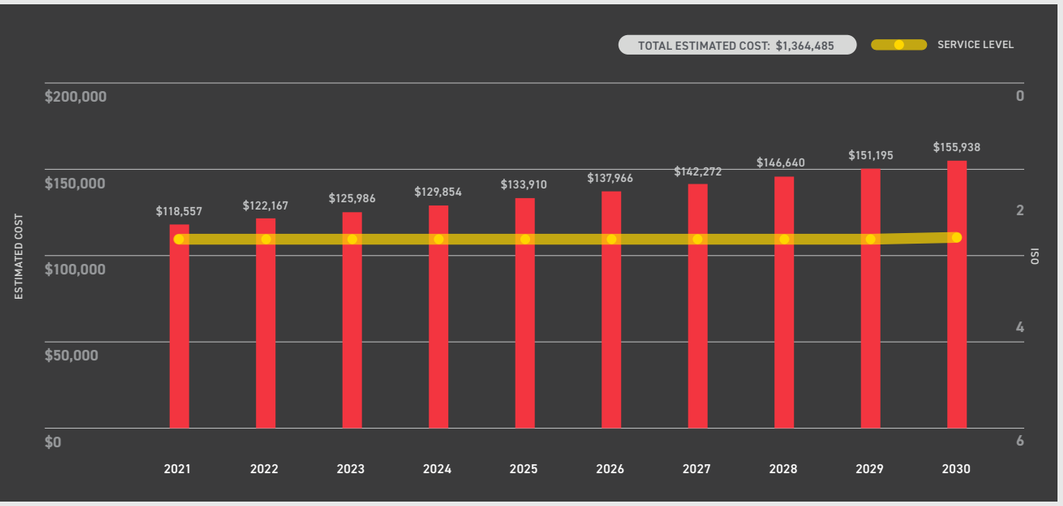


Figure 7: Forecast 10-Year Funding Analysis for Kerbs

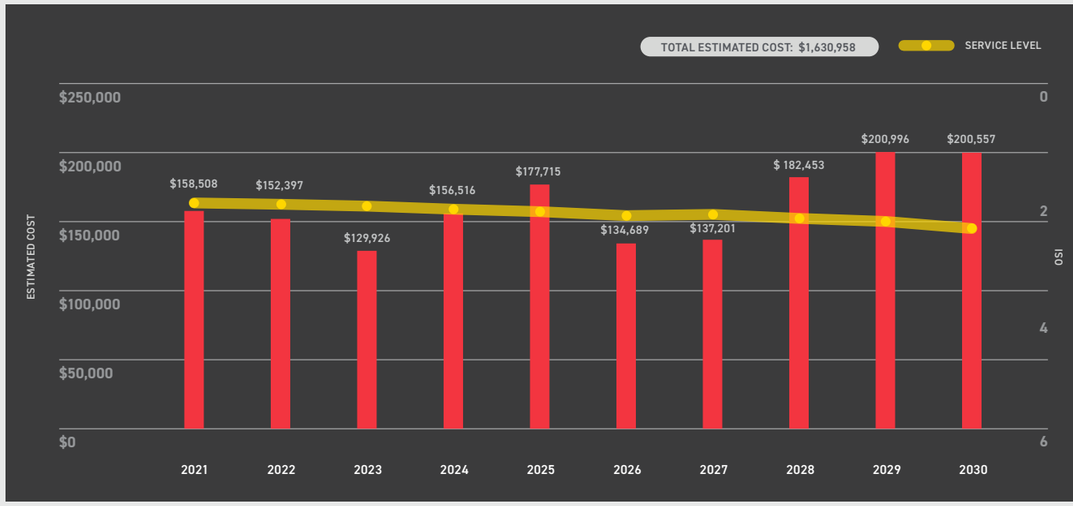


Figure 8: Forecast 10-Year Funding Analysis for Bridges and Major Culverts

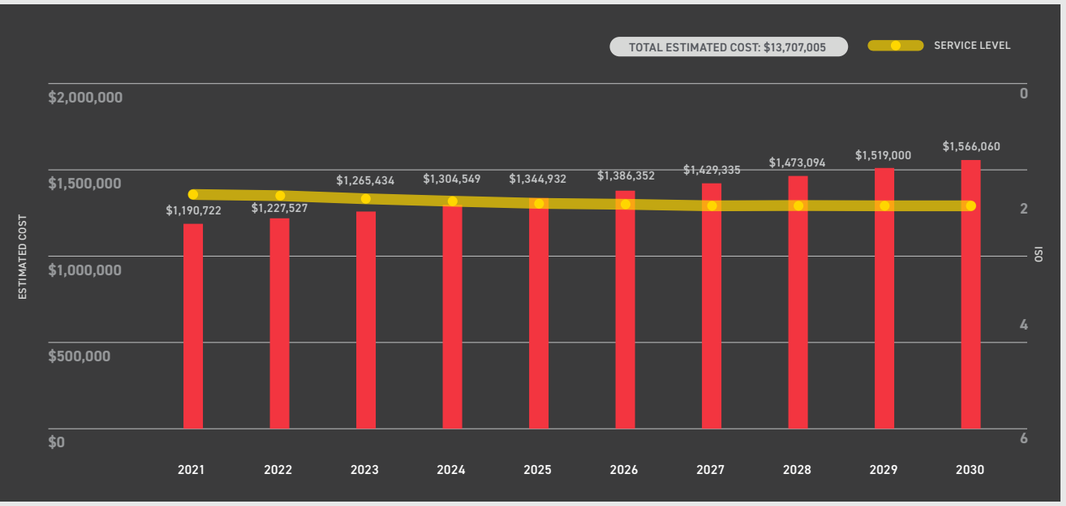


Figure 9: Forecast 10-Year Funding Analysis for Pathways

as Councillor or community requests, proposals identified by strategic plans or partnerships with other neighbouring municipalities or organisations. The requirement for new assets to be constructed will generally be dependent on the forecast growth in the region and will be identified in the 10-year capital works program with further commentary on the need for upgraded and new assets available in the Moving Melton - Integrated Transport Strategy 2015. Further information can be found at:

https://www.melton.vic.gov.au/files/assets/public/services/building-planning-amp-transport/strategic-planning/studies-strategies-guidelines/moving-melton-its/moving-melton-integrated-transport-strategy-report.pdf

New transport assets are also acquired by Council from land developments which are typically constructed by private developers who then gifted the assets to Council, after a 12-month maintenance period. Acquiring these new assets will commit the Council to fund ongoing operations and maintenance costs for the period that the service is provided by these assets which are typically indefinitely. Given the long life-cycle of the transport assets, the impact of this growth (future renewal costs) is only likely to be material after ten years.

Financial Ratios

Asset management ratios provide insight into an organisation's performance and success in managing its assets. Council's asset management ratios for its asset portfolio calculated as at February 2020 have been reported in Table 18.

The definition and calculation of the ratios above are as follows:

Asset Sustainability

Definition: This ratio is an approximation of the extent to which assets managed by a local government are being replaced as these reach the end of their useful lives.

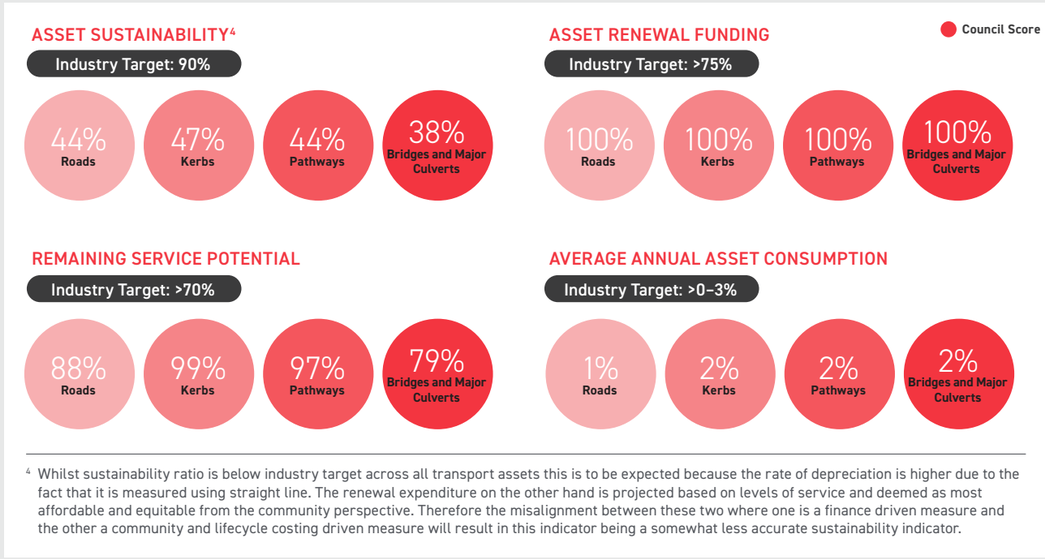
Calculation: Capital Renewal Expenditure divided by Depreciation Expense.

ASSET CATEGORY	TOTAL CAPITAL RENEWAL	TOTAL MAINTENANCE	TOTAL COST	% IN CONDITION 4 & 5 YEAR 0	% IN CONDITION 4 & 5 YEAR 10	RENEWAL GAP / BACKLOG MOVEMENT
Roads	$44,764,152	$11,868,225	$56,632,377	0.47%	0.87%	($3,047,574)
Kerbs	$1,364,485	$1,782,323	$3,146,808	0.11%	0.12%	($29,455)
Pathways	$13,707,005	$2,084,660	$15,791,665	0.92%	0.58%	($518,368)
Bridges and Major Culverts	$1,630,955	$418,450	$2,049,405	0.47%	7.08%	($7,458,520)

Table 17: Estimated Budget NPV Analysis

Remaining Service Potential

Definition: This ratio seeks to highlight the aged condition of a local government's stock of physical assets. If a local government is responsibly maintaining and renewing/replacing its assets in accordance with a well prepared asset management plan, then the fact that the Asset Consumption Ratio may be relatively low and/or declining should not be cause for concern - providing it is operating sustainably.



[4] Whilst sustainability ratio is below industry target across all transport assets this is to be expected because the rate of depreciation is higher due to the fact that it is measured using straight line. The renewal expenditure on the other hand is projected based on levels of service and deemed as most affordable and equitable from the community perspective. Therefore the misalignment between these two where one is a finance driven measure and the other a community and lifecycle costing driven measure will result in this indicator being a somewhat less accurate sustainability indicator.

Table 18: Asset Management Ratios

Calculation: Written Down Value divided by Current Replacement Value.

Asset Renewal Funding

Definition: 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, without additional operating income; or reductions in operating expenses.

Calculation: Net Present Value (NPV) of planned capital Renewal expenditure divided by the Net present value of desired capital renewal expenditure.

Average Annual Asset Consumption

Definition: 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, without additional operating income; or reductions in operating expenses.

Calculation: Annual Depreciation divided by Depreciable Amount.

Funding Strategy

Projected expenditure identified in Table 17 is to be funded from Council's operating and capital budgets, loans and reserves and Federal and State Government grants. The funding strategy is detailed in Council's 10-year long term financial plan. The 10-year LTFP is a dynamic document in that it is reviewed and refined on a continual basis, to reflect as accurately as possible changes in financial circumstances.

The key assumptions made in presenting the information contained in this TAMP and in preparing forecasts of required capital expenditure and asset values, depreciation expense and carrying amount estimates. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions made in this TAMP are:

- The current levels of service will remain constant over the life of this TAMP;
- The treatment and maintenance costs are based on Council's current schedule of rates and may not directly compare to Council's internal service provision actual costs;
- All predicted financial figures are based on current rates and are not adjusted by the inflation rate for the particular year of works;
- Continued use of current construction techniques and materials in alignment with current standards;
- Current maintenance funding levels are meeting service level requirements;
- Capital renewal is generally 'like for like' however mandated improvements are factored into replacement costs;
- Depreciation is in accordance with Council Policy;
- The proposed capital renewal program will be funded as per the scenario recommended.

A well informed funding strategy ensures economic viability and sustainability of Council's assets.

Plan Improvement **and Monitoring**

This section outlines how Council can measure its asset management performance. The identified action items in Table 19 will enable Council to improve our asset management capability, to enhance asset value and deliver more for stakeholders while balancing cost, risk and performance.

AM Document Register

Refer to Table 19.

Improvement Plan

In the course of preparing this TAMP, it has been identified that there is a need to further develop Council's asset management processes and practices in relation to its transport assets. The asset management improvement plan which is set out in Table 20 details the key improvement tasks. Completion of these tasks will improve Council's asset management capabilities for the transport asset portfolio.

Monitoring and Review Procedures

This TAMP will be reviewed during annual budget preparation and amended to recognise any changes in service levels and/or resources available to provide those services as a result of the budget decision process. The TAMP is a 10 year document, to be revised every 4 years. The revision will consider emerging trends, changing priorities and technological advances in asset management.

An asset management plan is a dynamic document, reflecting and responding to change over time. Monitoring of this transport asset management plan is required to:

- Ensure compliance with the proposed improvement program milestones;
- Ensure compliance with adopted standards and procedures for condition and performance.

A monitoring plan ensures compliance with desired service outcomes.

DOCUMENTS	DOCUMENT LINK	ADOPTED DATE	PLANNED REVISION
AM Policy	https://www.melton.vic.gov.au/Services/Building-Planning-Transport/Engineering/Asset-management	Jul-2018	Jul-2022
AM Strategy	https://www.melton.vic.gov.au/Services/Building-Planning-Transport/Engineering/Asset-management	Feb-2020	Jul-2022

Table 19: AM Document Register

Performance Measures

The effectiveness of this TAMP will be measured and monitored on the basis of annual strategic Council indicators as follows:

- The degree to which the required cash flows identified in this asset management plan are incorporated into Council's long-term financial planning process and works planning;
- The performance of Council against the Strategic Levels of Service documented in this TAMP. Measuring the target levels and actual achievement levels;
- The degree to which detailed works programs, budgets, business plans and organisational structures take into account the trends provided by the TAMP;
- Performance against the Asset Management Ratios;
- The level of execution of the identified actions in the plan.

TASK NO	IMPROVEMENT TYPE	IMPROVEMENT ITEMS	RESPONSIBLE SERVICE UNIT	TIMELINE
1	Business Process	Determine the location of all private roads within the urban growth zone, with the intention to transfer ownership to Council, using the Land Transfer Act	Engineering Services Legal Services Statutory Planning	Dec-22
2	Business Process	Update AMS to accommodate changes to Vicmap transport datasets to improve Victorian Grants Commission reporting	Engineering Services	Dec-23
3	Data Management	Improve information in AMS for transport assets based on Pathway and Cycling Plan gap analysis review	Engineering Services	Dec-21
4	Data Management	Review of all Memorandum of Understanding (MOU) and declarations with neighbouring Councils and other road authorities	Engineering Services Operations	Dec-21
5	Data Management	Improve AMS with current traffic count data to improve renewal and transport planning	Engineering Services	Jun-22
6	Data Management	Undertake a review of all paper roads within the municipality	Engineering Services Operations	Dec-22

Table 20: Improvement Actions

CITY OF MELTON

Melton Civic Centre
232 High Street, Melton
T 9747 7200

Melton Library and Learning Hub
31 McKenzie Street, Melton
T 9747 7200

Caroline Springs Library and Learning Hub
193 Caroline Springs Boulevard
Caroline Springs
T 9747 7200

melton.vic.gov.au