



Transport Assets Asset Management Plan 2020

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Executive Summary

The requirements for transport are closely aligned with the City of Charles Sturt Development Plan (soon to be known as the Planning and Design Code) and are considerate of local community expectation of streets and transport systems and the principles of “Living Neighbourhoods”. This is consistent with the 30-Year Plan for Greater Adelaide that facilitates a sustainable city through more compact communities, provision of opportunities for multiple land uses and reducing reliance on the use of private vehicles through investment in – walking, cycling, public transport and shared mobility platforms.

The City of Charles Sturt aims to encourage transport design that promotes a sense of place for people and the sharing of streets to meet all their community, transport and service needs. Our transport network objectives include:

Protect our environment and minimise our ecological footprint

The City of Charles Sturt is committed to protecting and enhancing our natural environment while balancing the needs of the built environment. Creating a diverse environment is integral to promoting the wellbeing of residents and businesses and needs to be balanced with the needs of the transport network.

Create a safe, healthy and supportive community which encourages participation, creativity and diversity

The City of Charles Sturt aims to establish connected communities and spaces that create and embrace social inclusion and healthy, liveable environments. A planned transport network is integral to connecting communities with spaces, and land use planning is the key to positioning communities with transport infrastructure.

Build an economically thriving and competitive city

An efficient transport network is vital to providing cost efficient freight services for the economy which benefits the whole community. Development and land zoning challenges have caused recent changes to manufacturing and service based industries in our council, and this has resulted in needing a flexible transport system.

Demonstrate effective leadership with strong community collaboration

The City of Charles Sturt works with many partners, including all levels of governments, and our community. Community partners include residents, businesses, investors and developers, community interest groups, and service providers. We work with our partners in many ways to show leadership, develop innovative approaches and share risk. Our community partners play an important role in providing feedback through consultation and collaboration.

Build healthy, functional and attractive neighbourhoods

This action develops local places for our residents to provide them with a sense of community and place. By developing neighbourhood ‘hearts’, such as main streets, meeting places and community open spaces, this will create locations where residents can interact and build community ties. These ties are critical to creating social inclusiveness and developing healthy and active communities.

Asset Management Plans play an important role in facilitating the delivery of our objectives in a considered and sustainable way. The Transport Asset Management Plan (AMP) aims to establish a service level for Transport Assets to ensure the overall Transport Network is in suitable condition, functions correctly and has sufficient capacity for existing use and future demand to minimise risk of incident and injury.

Council is becoming much more advanced in its Asset Management practices and manages Transport Assets at a network level using a Strategic Asset Management (SAM) system. This assists in modelling the likely timing of intervention to ensure the service level across the entire network can be managed through a sustainable funding scenario and assists Council in prioritising and integrating transport asset works.

What are Transport Assets?

Transport Assets are all assets that have a primary function of facilitating the movement of people and goods within our City. They include;

- Roads (consisting of road seals, road pavement, kerb & gutter and including on-street car parking areas)
- Walking and Cycling Paths and Kerb Access Ramps
- Bridges and Boardwalks
- Traffic Control Devices (i.e. roundabouts and speed humps)
- Bus Stop Assets (Pads and Shelters)
- Off Street Carparks

Condition audits, revaluation and revision of capital expenditure has been undertaken for all these assets. This AMP has also reviewed maintenance and expenditure practices to ensure renewal and maintenance service levels are optimised throughout the life of the plan. Overall it can be observed that the Transport Asset network is in generally good condition with less than 5% of the network below what would typically be considered an acceptable service level. This is due to the ongoing investment and maintenance practices conducted by the City of Charles Sturt.

WHAT IS THE CONDITION OF THE NETWORK?

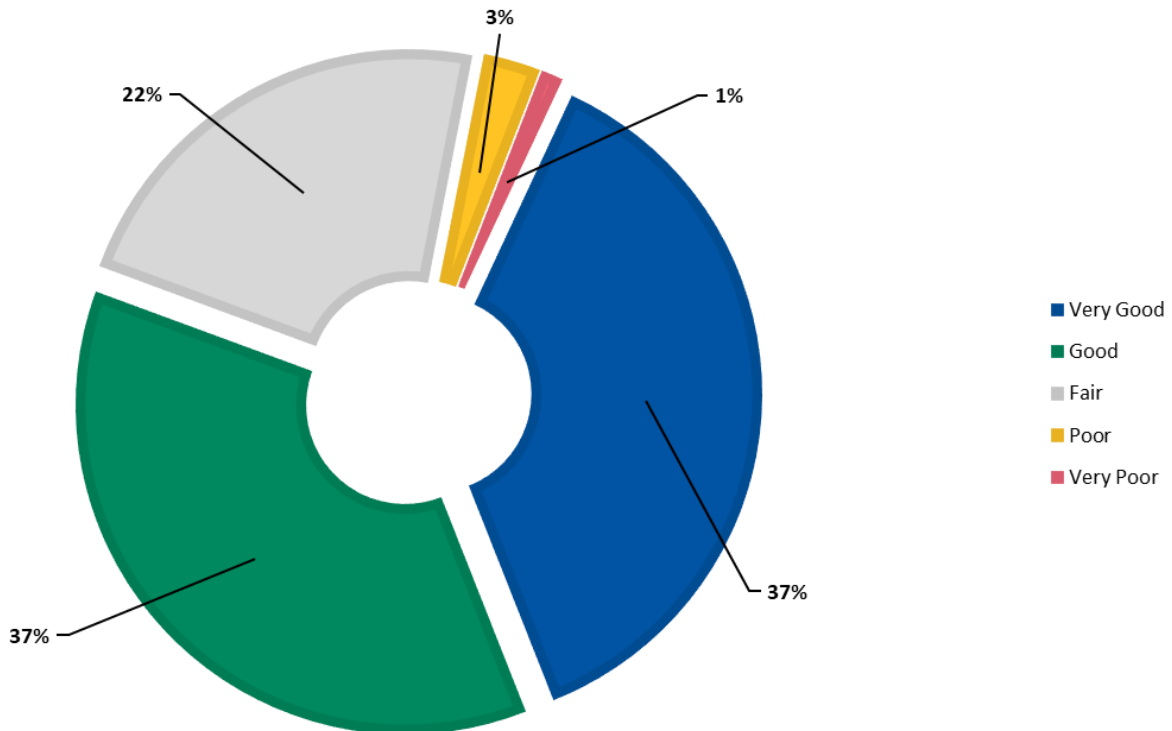


Figure 1 – Overall Network Condition

The City of Charles Sturt's Transport Assets, which are financial and are represented as the book value, have a current replacement cost of **\$883,844,805** (as at 10th January 2020).

Asset Strategy

This AMP aims to keep all Transport Assets at a condition 3 (Fair) or better. Where reasonably possible the City of Charles Sturt maintains and renews assets and installs new assets consistent with the objectives and actions of endorsed corporate documents (strategic plans/City Plan). Key criteria that are considered in decision making include asset condition, risk, current/future use demands, changing travel patterns, population and interaction with adjoining land uses.

In order to fulfil the above asset strategy and continue to provide services over the 10-year planning period from 2020/2021 until 2029/2030, an average spend of approximately \$20,180,936 per year on maintenance, renewal and upgrade of Transport Assets would be required (inclusive of strategic upgrade projects)

The major revision and inclusion of multiple asset classes into this AMP has identified that Council is currently allocating more funding towards its Transport Assets than are likely to be required to achieve its desired asset strategy. This is largely the result of a the current approach to path renewals which requires a high capital spend.

This AMP proposes a reduction in the full replacement of path assets but an increase in localised path works to address major defects. This approach will ensure that major defects, which present the most risk to the public and Council, are addressed in a timely manner while also reducing annual expenditure and providing better value to the community. It is estimated that this change in strategy will reduce the annual capital spend for path assets and result

in an average spend of \$18.5 Million for the planning period. This provides an average saving of \$1.95 Million to Council's LTFP for the planning period.

The spend that each asset class contributes to the overall Transport Asset LTFP can be seen below. Currently on average over the planning period Council spend 60% of funding on Roads, 35% of funding on Paths, 2% on off street carparks and 3% on bridges and bus shelters. Just over 10% (\$2Mil) of the overall spend contributes to bicycle facilities across the City of Charles Sturt budget.

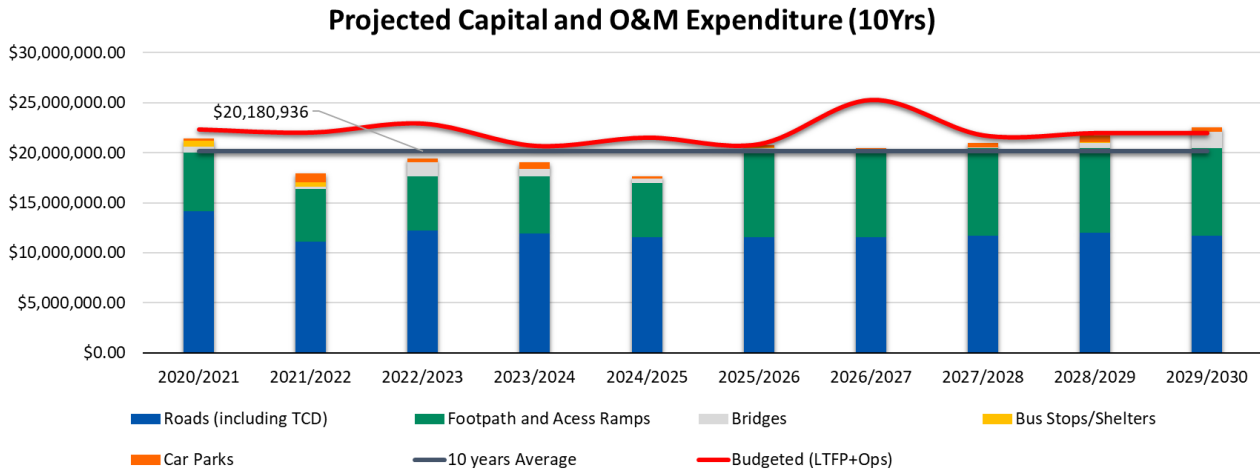


Figure 2 – Overall projected expenditure for Transport Assets

****Note the above graph shows entire spend of all Maintenance, Renewal and Upgrade costs for Transport Assets. Hence, average spend is higher than average capital spend of 18.5Million****

This AMP was endorsed in Draft format in February 2020 for consultation and inclusion of these figures in the LTFP. projected expenditure required to provide services in the AMP compared with planned expenditure currently included in the LTFP are shown in the graph above.

Upon completion of Consultation the following has been included in the FINAL version of the AMP;

- Inclusion of consultation results and confirmation of proposed service levels.
- Results of 2019/20 Kerb and Gutter Asset Audit and changes to condition results.
- Climate change and sustainability factors and the effects on Transport Assets.
- Additional future improvement for a detailed condition audit of beach access ramps. With anticipation to include them in the Path Asset Class after the condition audit.
- Inclusion of strategic walking and cycling upgrade projects in path asset class.
- Increased investment in Sustainable Transport Infrastructure.
- Amended works programs optimised for resourcing and community benefits purposes.

A summary of each asset class has been provided as follows;

Bridge Assets

(Bridges and Boardwalk Structures)

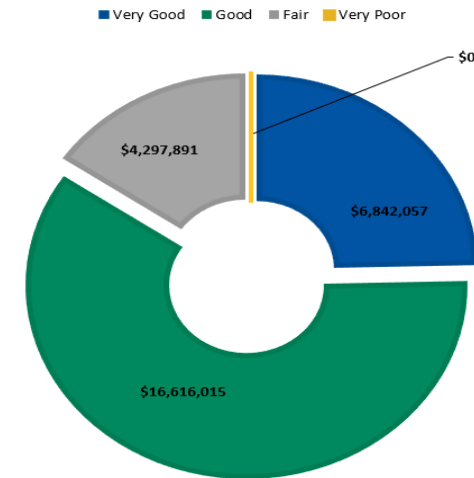
The City of Charles Sturt manage 70 Bridge Assets, they are worth \$27.7 Million. Currently Bridge Assets are in good condition due to the significant increase and investment in planned maintenance the City of Charles Sturt has undertaken since 2017.

In 2018 a bridge condition audit and revaluation was completed to assist the forming of this asset management plan.

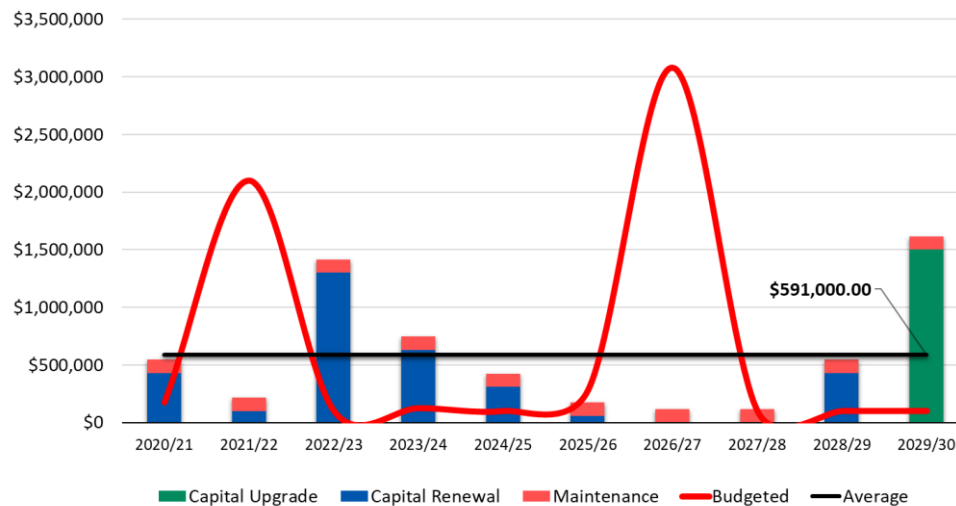
CCS manages bridges by prioritising works to each component to ensure they are safe and accessible for the local community.

All bridges are ranked based on condition, risk and function for renewal/maintenance and upgrade to form the major revision of the bridge LTFP.

BRIDGE CONDITION PROFILE



Projected Renewal, and Maintenance 10yrs Forecast



The Existing LTFP has been revised based on new audit data. Existing funding has been altered but the average spend on bridges remains almost the same as the previous LTFP.

Major renewals for the South Road/Hindmarsh Cemetery underpass are in progress and renewals for Jetty Square Boardwalk, Port Road Underpass and Seaview Road Underpass are all planned for renewal within the next 5 years.

Path Assets

(Footpaths, Shared use paths and Kerb Access Ramps)

The City of Charles Sturt manage approximately 1,300km's of path assets and 10,031 Kerb Access Ramps. These assets are worth a combined \$207.7 Million.

Paths and ramps are required to ensure access is available to strategic destinations for pedestrian, cyclists and for people with mobility disabilities.

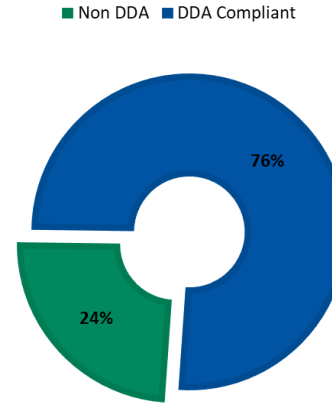
In 2019 a path condition audit and revaluation was completed to assist the forming of this AMP. The audit identified that paths are in an acceptable condition but identified a large amount of isolated path defects. These isolated defects are a high risk to path users and a planned maintenance strategy has been developed to inform the changes to this AMP.

This AMP proposes a reduction in the full replacement of path assets but an increase in localised path works to address major defects. This approach will ensure that major defects, which present the most risk to the public and Council, are addressed in a timely manner while also reducing annual expenditure and providing better value to the community.

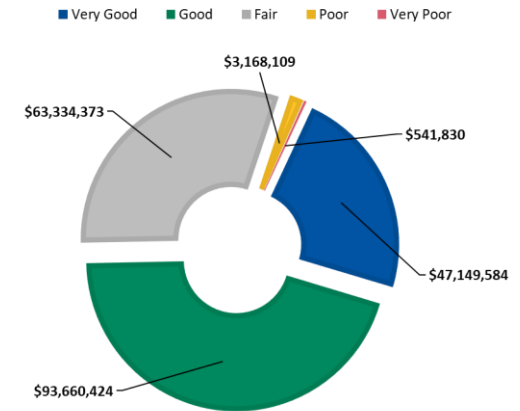
Overall the adjacent graph shows a reduction in spending against the existing LTFP. It is estimated that the proposed path management strategy will reduce the annual capital spend for path assets from \$9 Million to \$6.1 Million for the planning period.

Kerb access ramp renewals have been integrated with the path renewal and road rehabilitation/reconstruction programs to ensure alignment of these works. This approach has reduced the annual spend for this program from \$400K per year to \$200K per year.

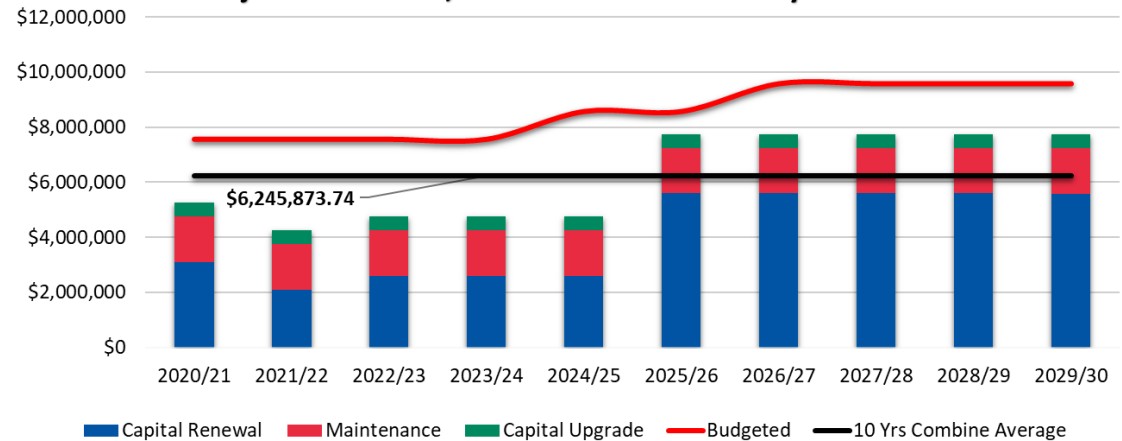
DDA ACCESS KERB RAMPs



FOOTPATH CONDITION PROFILE



Projected Renewal, New and Maintenance 10yrs Forecast



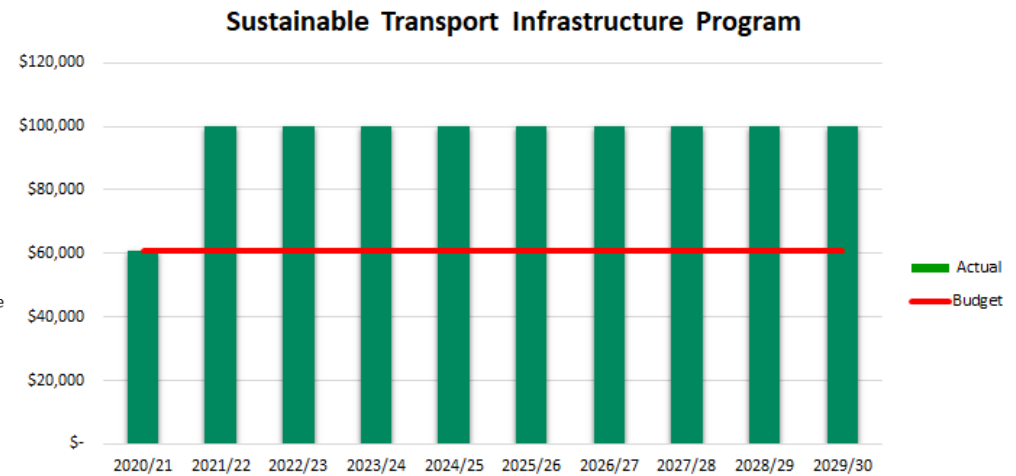
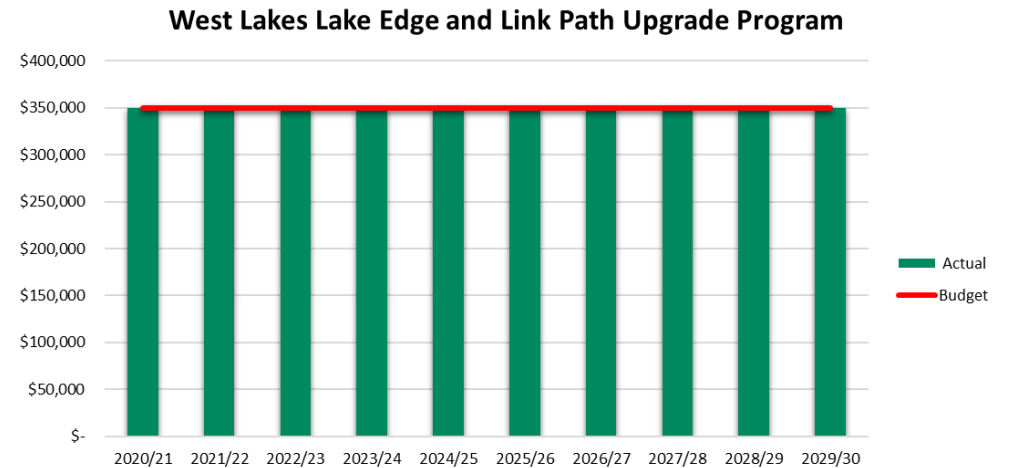
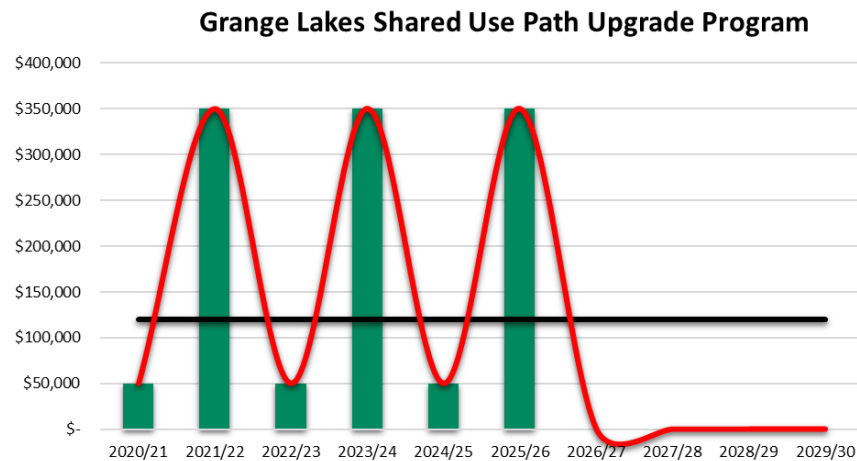
In addition to renewing and constructing new footpaths, the City of Charles Sturt also constructs strategic walking and cycling paths. These paths typically form part of a strategic network for walking and cycling across the Council and are either new assets or upgrades of existing assets.

These projects contribute directly to the City of Charles Sturt strategic planning documents, including the Open Space Strategy, the Transport Plan and the Corporate Plan and supporting documents such as the Walking & Cycling Strategy.

These strategic path projects are separated out in the Council's LTFP due to their significance. They are;

- Grange Lakes Corridor Shared Use Path Program
- West Lakes Lake Edge and Link Path Program
- CCS Sustainable Transport Infrastructure Program

A funding summary for new/upgrade works for strategic walking and cycling projects can be seen below. This AMP proposes to increase funding associated with the Sustainable Transport Infrastructure program from \$61K to \$100K from 2021/2022 to facilitate healthier communities and minimise our environmental impact.



Bus Stop Assets

(Bus stop pads/surface and bus stop shelters)

The City of Charles Sturt owns 583 Bus stops with an asset value of \$1.73 Million.

Bus stops ensure patrons can access public transport provided by the Department of Planning Transport and Infrastructure (DPTI). DPTI determine the location of the stop and Council provide the Bus stop pad and maintain existing shelters.

The City of Charles Sturt has been investing \$400K per annum since 20008 to undertake DDA replacements of bus stop pads/surfaces to meet legislative targets. The City of Charles Sturt aims to renew all bus stop pads to ensure they are DDA compliant by 31st December 2022.

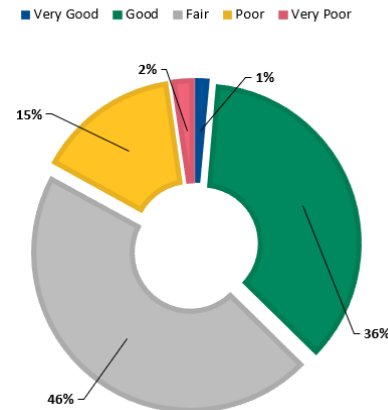
By the 30th of June 2021 only 6 bus stop surfaces will remain as not DDA compliant due to significant challenges and costs associated with design and construction of a compliant bus stop. An application for these stops will be sent to the Commission for an exemption to comply with the Disability Standards for Accessible Public Transport (DSAPT) for 6 bus stops along Seaview Road under section 33a of the DSAPT.

Council is on track to achieve their goal of DDA compliant but stop pads/surfaces prior to 31st of December 2022 subject to the outcome of this application.

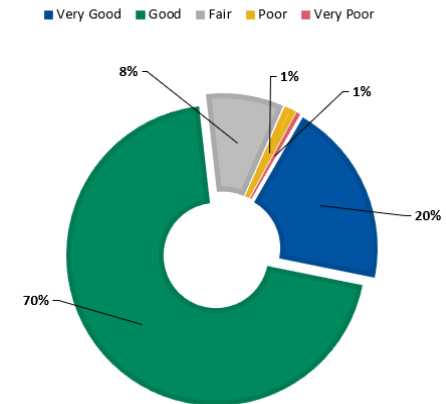
A recent condition audit has identified that the majority of bus shelters are below Councils satisfactory service level and a backlog in shelter maintenance exists. This AMP aims to increase maintenance to ensure they are safe for patrons until they reach the end of their useful life and are removed.

A budget of \$100K has been approved for 2020/21 with a further \$100K to be sought in 2021/22 and then \$20K per year thereafter to keep shelters safe and remove shelters at the end of their life.

BUS SHELTER CONDITION PROFILE

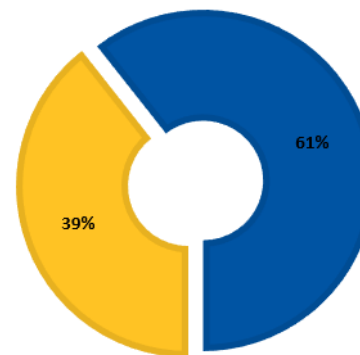


BUS STOP SURFACE CONDITION PROFILE



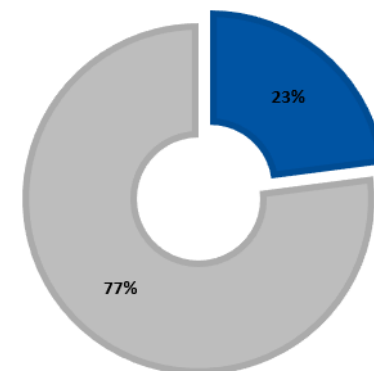
DDA ACCESS BUS STOPS (PADS)

■ Non DDA ■ DDA Compliant



DDA COMPLIANT SHELTERS (%)

■ Non DDA ■ DDA Compliant



Road Assets

(On street carparks, Road seal, Road Pavement, kerb & gutter)

The City of Charles Sturt manage a 4,732,248m² area of road network and approximately 1,400km's of road kerbing. Road Assets have a replacement value of \$632.5 Million and are the highest valued Transport Asset.

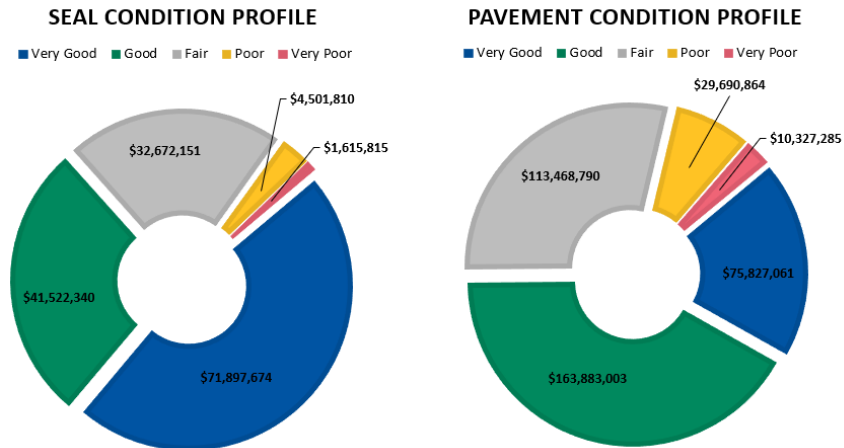
Road Assets support easy movement of people whether by bicycle or vehicles and the transport of goods for different industries and services. Roads provide access to schools, shopping centres, recreational areas and strategic destinations.

A major revision of the Road Asset Management Plan was presented and endorsed by Council in March 2018. This AMP has assessed the existing condition data and LTFP of the 2018 AMP.

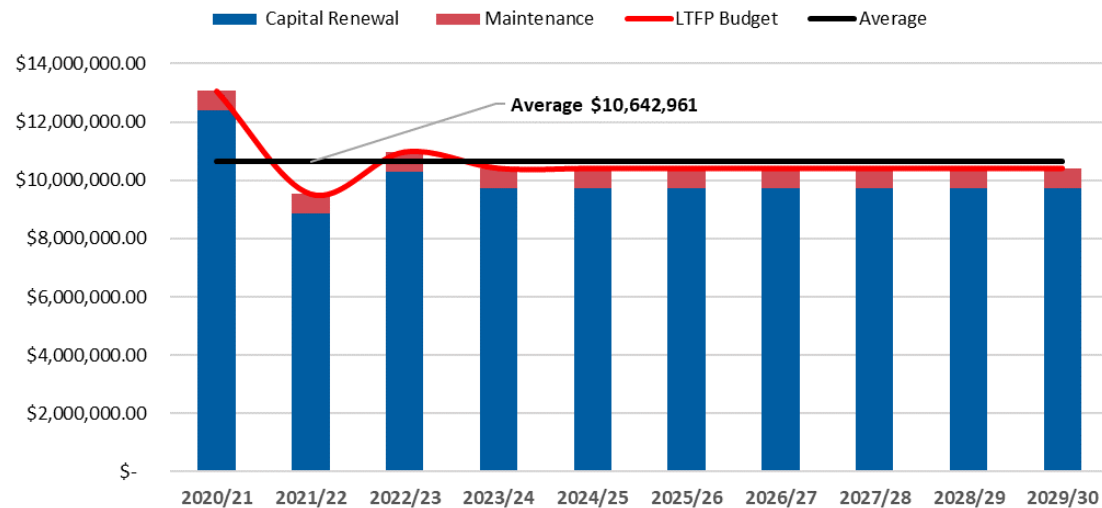
Currently Council's LTFP has sufficient funding to ensure that road maintenance and renewal remains as per the current desired service level for all road seal and pavement assets.

Council have been able to use the existing LTFP to also invest into planned maintenance and undertake a formal seal preservation program to compliment the Road Rehabilitation and Road Reconstruction programs.

A condition audit of road kerbing was undertaken in the 2019/2020 financial year and a summary of the results is presented on the adjacent page.



Projected Renewal and Maintenance 10 Year Forecast

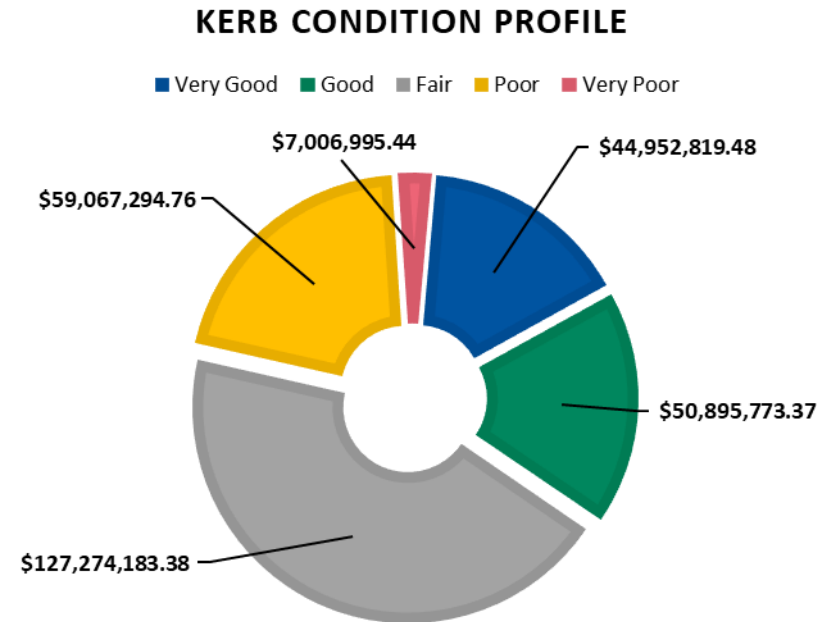


The 2019/2020 Kerb and Gutter Asset Audit was undertaken to better understand the condition of the City of Charles Sturt's Kerb and Gutter asset class. Council currently do not have a nominated service level for the Kerb and Gutter asset class. Council's renewal strategy for this asset class is based on when the road surface needs repair or replacement.

This asset class includes assets such as Kerb and gutter, spoon drains, road edge plinths, blue stone kerbing etc. The primary function of these assets is to provide edge restraint the road pavement and the secondary function of these assets is to convey surface runoff to the City of Charles Sturt's stormwater system.

The audit is approaching completion and shows results of a change in kerb and gutter asset condition. Upon completion of the audit any changes to the renewal strategy and impacts to the above road LTFP will be presented in a future revision of this AMP.

Council's kerb renewal strategy will continue to be to renew condition 5 assets when the road surface requires intervention. This will ensure the current desired service level for road seals and pavements will continue to remain.



Off Street Carparks Assets

The City of Charles Sturt own and Manage 139 off street carparks.

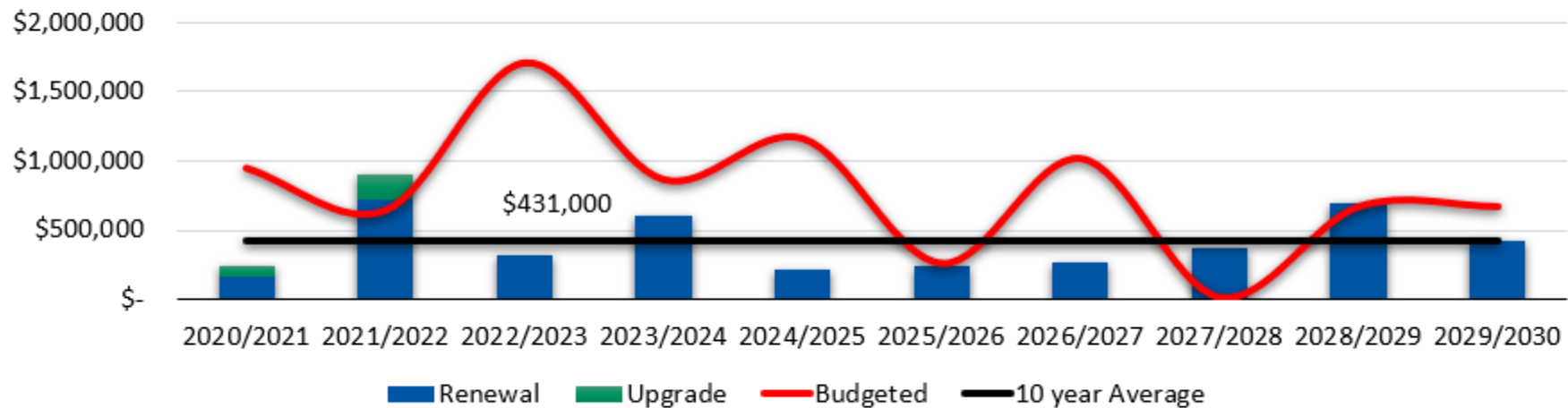
Similar to road assets, off street carparks provide access to schools, shopping centres, recreational areas and strategic destinations.

In January 2019, a detailed condition audit was conducted on off street carparks which led to a major revision of the City of Charles Sturts LTFP.

The new LTFP will provide an overall reduction in average spending of \$366,000 per year for this AMP.

Major Upgrades have also been included in this AMP for Cooke Reserve Carpark and Point Malcolm Carpark.

Projected Renewal 10yrs Forecast



Traffic Control Devices

The City of Charles Sturt manage 979 Traffic Control Devices with a replacement cost of \$3.7 Million.

Traffic Control Devices exist to assist with functionality of the road network, control traffic movements and keep road users safe. Council needs to ensure they have enough funding to replace existing assets during major road works and also have funding when traffic control devices are required to be retrofitted to an existing street.

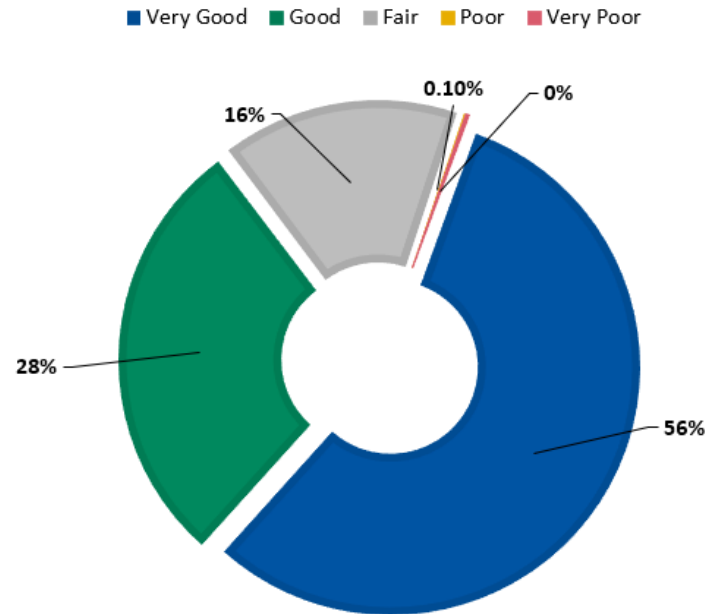
On average the City of Charles Sturt spends \$300K per annum renewing existing assets and on average the City of Charles Sturt spends \$600K per annum on new traffic control devices.

The City of Charles Sturt's budgeted expenditure for new Traffic Control Devices each year is identified through strategic projects and residents' requests. They are submitted to Council through the budget process for approval.

A future planned revaluation of Traffic Control Devices is planned and any proposed changes to LTFP figures will be presented in a further revision of this AMP.

****NOTE:** The adjacent condition chart is based on count and not financial values as some Traffic Control Devices are non-financial assets. ******

TRAFFIC CONTROL DEVICE CONDITION PROFILE



Introduction

This Asset Management Plan (AMP) communicates the actions required for the management of Transport Assets owned and maintained by the City of Charles Sturt (and services provided from assets), compliance with regulatory requirements, and funding needed to provide the required levels of service over a 20-year planning period.

The AMP is to be read in conjunction with the City of Charles Sturt's planning documents. This should include the Asset Management Policy and Asset Management Strategy (where these have been developed) along with other key planning documents:

- City of Charles Sturt Corporate Plan 2016-2027
- City of Charles Sturt Community Plan 2013-2027 – A city where people come first
- City of Charles Sturt Asset Accounting Policy
- City of Charles Sturt Asset Fund Policy
- Engineering and Open Space Guidelines
- City of Charles Sturt Environmental Sustainability Policy
- City of Charles Sturt Living Green to 2020
- City of Charles Sturt Transport Plan 2016-2031
- City of Charles Sturt Path Policy and Guidelines
- SA Infrastructure Guidelines

The Transport Infrastructure assets covered by this AMP are;

- Bridges and Boardwalks
- Roads (Seals, kerbing and Pavement)
- Footpaths and Shared Use Paths
- Traffic Control Devices
- Bus Stop Assets (Pads and Shelters)
- Off Street Carparks

Transport Infrastructure supports movement of people across the Council area, whether by bicycle, walking, public transport or vehicles. The network also ensures the transport of commuters to businesses, key destinations and allows transport of goods for commercial and industrial purposes.

This AMP update is a major revision of the Council endorsed 2018 Road AMP. This major revision of that AMP seeks to include and combine multiple existing AMP's for roads, car parks, paths, bus stops, traffic controls and bridges to form a holistic integrated Asset Management Strategy for all Council Transport Assets. Major revisions of Long-Term Financial Plans (LTFP), condition audits and renewal/maintenance strategies for all assets in the class have been conducted for the preparation of this AMP, these are summarised as follows;

- Integration of all of City of Charles Sturt's Transport Assets into a single AMP. Bridges assets, path assets, road assets, off street carparks and traffic control devices asset stock are all included in this revision of the AMP.
- Community consultation in regards to condition satisfaction and proposed service levels
- Independent condition audits and financial revaluations of path assets, bridge assets, bus stop assets and off-street carparks.
- Results of 2019/20 Kerb and Gutter Asset Audit and changes to condition results
- Revised renewal strategy for path and kerb access ramp assets. This includes a major revision to the existing LTFP to reduce capital spending for full path renewals, an increase to spending to address known defects and alignment of the kerb ramp and path/road programs.
- Prioritising of bridge assets to establish major revision of Bridge Renewal Program and increase in Bridge Maintenance funding by 10% to account for increase in asset stock and replacement costs.
- Inclusion of bus shelters with Bus Stop Assets to this asset category. A maintenance strategy has been developed for existing shelters based on the current adopted position of Council for shelters.
- Updated 4 year works programs for Roads, Paths, Bridges and Off-Street Carparks
- Inclusion of allowances to prepare for major transport upgrade projects;
 - Woodville Road Streetscape Upgrade
 - Military Road/Main Street Streetscape Upgrade
 - Bartley Terrace Streetscape Upgrade
 - Chief Street Streetscape Upgrade (renewal costs only – future upgrade costs TBD)
- Investigation into climate change and sustainability factors and their effects on Transport Assets
- Inclusion current ongoing strategic transport projects (shared use paths, walking and cycling upgrades and alternative modes of transport) along with updates to the existing LTFP;
 - Grange Lakes Corridor Shared Use Path Program
 - West Lakes Lake Edge and Link Path Program
 - Sustainable Transport Infrastructure Program

Asset Management Framework

The City of Charles Sturt exists to provide services to its community, some of which are provided by Transport assets. Transport assets have been acquired by construction undertaken by Council and through contribution of new public infrastructure from developers. The organisations goal in managing transport assets is to meet a defined level of service in the most cost-effective manner for present and future consumers. This AMP is prepared as a combination of 'core' and 'advanced' AMP over a 20 year planning period in accordance with the International Infrastructure Management Manual¹. Core asset management is a 'top down' approach where analysis is applied at the system or network level. An 'advanced' asset management approach uses a 'bottom up' approach for gathering detailed asset information for individual assets.

The organisation uses a Strategic Asset Management (SAM) system which uses advanced asset management principles to model service levels, future demands and network risks. This assists in modelling the timing of intervention to ensure the service level across the entire network can be managed through a sustainable funding scenario and assists Council in integrating transport assets into single projects where possible.

The data used in generating this AMP has been broken down into individual assets using advanced principles however the AMP will focus on network level transport assets.

The process the City of Charles Sturt follows for preparing an asset management plan is shown on the following page.

¹ IPWEA, 2015, IIMM.

INFORMATION FLOWS

- Asset register data on size, age, value, remaining life of the network
- Unit rates for categories of work/material
- Adopted service levels
- Projections of various factors affecting future demand for services
- Correlations between maintenance and renewal, including decay models
- Data on new assets acquired by council

ASSET MANAGEMENT PLAN

- Assumed Works Program and trends
- Resulting budget, valuation and depreciation projections
- Useful life analysis

- Long term financial plan
- Strategic business plan
- Annual budget
- Departmental business plans and budgets

Level of Service for Transport Assets

Levels of Service are a commitment to carry out a given action or actions within a specified time frame in response to an event or asset condition data. The levels of service defined in this section will be used to:

- Identify the desired level of service that our customers seek and clarify the level of service that our customers should expect;
- Identify works required to meet these levels of service;
- Identify the costs and benefits of the services offered; and
- Enable Council and customers to discuss and assess the suitability, affordability and equality of the existing service level and to determine the impact of increasing or decreasing this level in future.

The adopted levels of service transport assets are based on legislative requirements, customer research and expectations and technical requirements set out by industry standards.

Legislative Service Level Requirements

There are many legislative requirements and regulations relating to the management of assets. Council must comply with these requirements and ensure their assets meet these legislative service levels these include;

- South Australian Local Government Act 1999
- South Australian State Records Act 1977
- Environment Protection Act
- Disability Discrimination Act 1992
- Australian Road Rules
- Development Act 1993
- Work Health and Safety Act 2011
- AUSTROADS Guidelines
- Australian Standards

Community Level of Service

Transport Assets

The Community Level of Service measures how the customer receives the service and whether value to the customer is provided. The City of Charles Sturt undertook a Community Survey immediately prior to consultation of this AMP to capture City of Charles Sturt residents' and business owners' satisfaction with aspects of services and facilities provided by Council. This task is also undertaken to test the importance of specific aspects of service provided to the community.

The City of Charles Sturt community believe Transport Assets are of high importance and show that they are generally satisfied with local roads, shared use paths and footpaths. It should however be noted that there has been a slight decrease in satisfaction in 2020 through community survey results for path assets.

Unfortunately the Community Survey results do not provide us with a thorough understanding of why an individual is satisfied, dissatisfied or neutral towards Transport Assets. For instance for path assets, we are unclear whether the dissatisfaction is the result of path condition (cracks and tripping hazards), amenity reasons (material choice and colour), functionality (path widths and obstacles) or some other factors. Future Community Survey questioning will be structured to provide more clarity in this regard.

The 2019 results were considered when developing the level of service for Transport Assets and the 2020 results were considered when developing the Community Consultation material for this AMP.

	Importance	Satisfaction (2020)	Change in satisfaction (since 2019)
Local Roads	95%	60%	1% increase
Footpaths	92%	46%	4% decrease
Off road shared use walking and cycling paths	88%	66%	5% decrease

Table 1 - Community Survey Report Results 2020

Upon Council endorsement of the draft version of this AMP a 4-week community consultation period between May and June 2020 was undertaken. The purpose of the consultation was to understand community is satisfaction with Transport Assets and their proposed service levels in this AMP.

The community consultation included a focus on the following items;

- Satisfaction with Local Roads and educating the community on the different ownership between Council and DPTI
- Satisfaction with Local Roads and educating the community on the different ownership between Council and DPTI
- Satisfaction with the current condition of path assets and the proposed service level changes in this AMP
- Feedback on using strategic targets when considering the replacement of Transport Assets; for the purposes of adapting to climate change, street greening and creating safer streets.
- General comments on the strategy of all asset classes in this AMP and if any future considerations need to be taken into the Transport AMP service levels.

We asked our community how satisfied they are with the condition of paths and roads within our local streets and how they felt about other assets within their neighbourhoods. 46 people across the City of Charles Sturt participated and provided feedback for the update of this AMP.

The community remain generally satisfied with the condition of local roads/streets.

SATISFACTION WITH THE CONDITION OF LOCAL STREETS

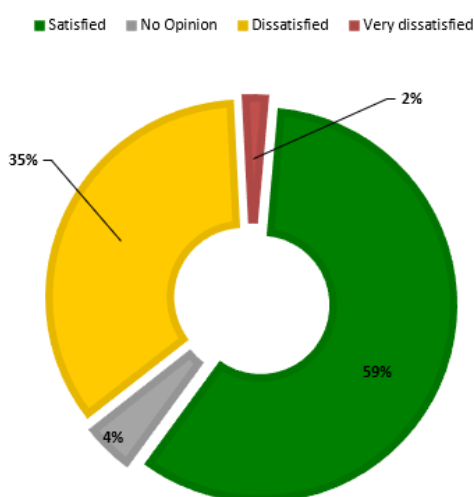


Figure 3 - Community satisfaction of local streets

The consultation results showed a similar level of community satisfaction in regards to the condition of paths (50%) however a greater level of dissatisfaction (48%).

The community were educated in what the proposed service level strategy for footpaths is, cost implications for increasing the service level and risk implications for lowering the service level. It was found that the majority (67%) of

the community are satisfied or have no opinion/are neutral on the current proposed service level strategy for paths with 33% indicating they are not satisfied with the proposed level of service in the AMP. Based on these results the proposed service level strategy is deemed as acceptable.

It should also be noted that the service level strategy in this AMP is a long-term renewal and maintenance strategy in the early years of its implementation. It is expected that the results of the strategy and any associated changes to community satisfaction will not be evident until some 18 months into the AMP planning period.

Comments also recognised tree foliage in some areas create unwalkable/narrow paths; some paths are uneven and dangerous; and with liveability lacking in the Inner West suburbs.

Community also provided feedback in regards to shared use walking and cycling paths and their forward strategy. They have also now been included within the Transport Asset Management Plan

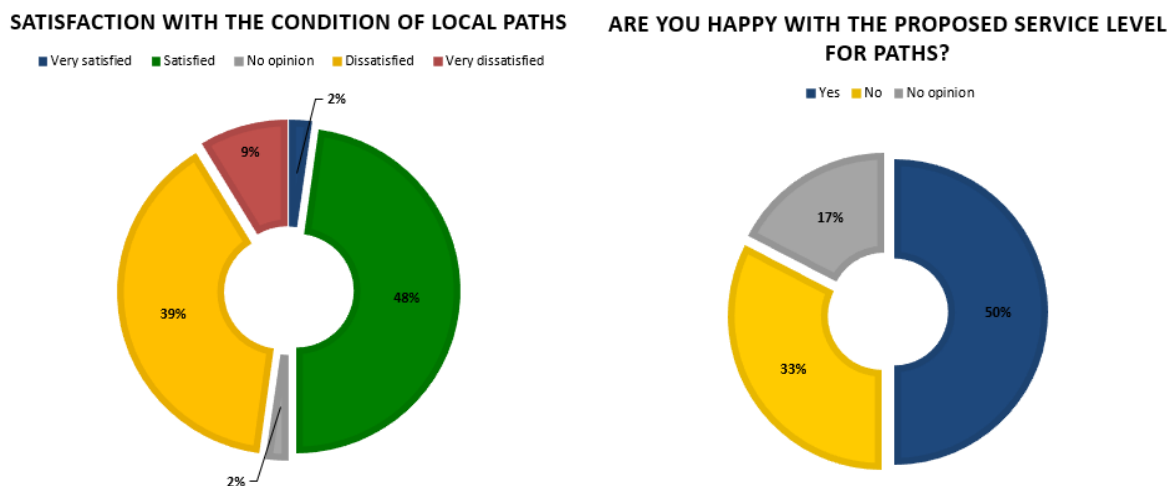


Figure 4 - Community satisfaction of condition of paths and proposed service level

We are starting to look at how Transport Assets can assist with the impact of climate change, population density, pressure on our open spaces and how our transport network can be more sustainable for our community in the future.

These ties are critical to creating social inclusiveness and developing healthy and active communities. Key considerations include:

- Increased Tree canopy - Increase the number of trees in streets to promote cooler streets and help prevent urban heat islands across the city.
- Increased street greening - Improve streetscapes and the way streets look with higher quality landscaping other integrated treatments
- Improved transport function – Provide an appropriate balance of the road reserve to the various transport modes to accommodate current and future demand.
- Safer streets - Ensure transport assets promote slower speed limits, better connectivity to strategic destinations and integrate design for opportunities for different modes of transport.

**TO WHAT EXTENT WOULD YOU AGREE OR DISAGREE THAT
COUNCIL SHOULD USE STRATEGIC TARGETS WHEN
CONSIDERING THE REPLACEMENT OF TRANSPORT ASSETS?**

■ Strongly agree ■ Somewhat agree ■ No opinion ■ Somewhat disagree ■ Strongly disagree

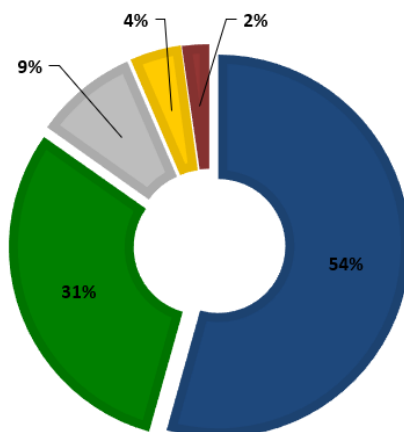


Figure 5 - Community Consultation; future strategic drivers and consideration

Public Transport

In the past Council has also undertaken consultation and research into levels of service of public transport to understand the future expectations of the community in regards to their expectation to what type of Bus Stop Assets the City of Charles Sturt Should be providing.

In 2017/2018 a city-wide community engagement process to inform the development of a Public Transport Action Plan. Key areas of importance for the community were:

1. Improved frequency of services (17%)
2. Reduced cost of fares (8%)
3. New services and connections (7%)
4. Improved safety and security (7%)
5. Improvements to waiting areas (5%)

The community generally has a desire for public transport waiting areas to be improved. Some of the key improvements the community would like to see include better presentation/design of waiting areas, features such as real time information, shelter, lighting, landscaping and drinking fountains.

Council has a responsibility for the provision and maintenance of lighting and hard surfaces at bus stops and path connections to bus stops. There is some debate about who should be responsible for providing other 'value add' infrastructure at bus stop waiting areas (Local or State Government).

Most of these improvements could be delivered by Council if there is a desire to respond to these suggestions from the community or Council could play an advocacy role to the State Government. Council is also exploring partnership opportunities with private industry to provide some of these facilities at no cost to Council i.e. via advertising revenue to the provider.

Technical Level of Service

Supporting the Community Level of Service are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities to best achieve the desired customer outcomes and demonstrate effective performance.

Council's current technical level of service is to aim to keep all Transport Assets at a condition 3 (Fair) or better on average throughout the network. The Technical Level of Service measures are linked to ensure the correct activities and appropriate budgets exist to cover the intended service level:

Operations & Maintenance

The activities necessary to retain assets as near as practicable to the City of Charles Sturt's desired service level throughout the network. Maintenance activities enable an asset to provide service for its planned life (e.g. road patching, path defect replacement, bridge maintenance, bus shelter maintenance).

Renewal

The activities that return the service capability of an asset up to that which it had originally (e.g. road resurfacing and pavement reconstruction, path replacement, bridge reconstruction) or in line with current standards.

Upgrade/New

The activities to provide a higher level of service (e.g. widening a path or bridge) or a new service that did not exist previously (e.g. a new path or bridge).

Asset Managers plan, implement and control technical service levels to influence the Community Level of Service, the table below identifies the City of Charles Sturt's Technical levels of service for all Transport Assets

Technical levels of service				
Maintenance/Operations				
Transport Assets and are well maintained and services provide value for money to the local community				
Roads & TCD’s	Paths Assets	Bridge Assets	Bus Stop Assets	Carparks
Roads remain functional and safe.	Paths remain free of significant trip hazard defects.	Planned maintenance is undertaken to bridges to ensure access is safe and well maintained.	Bus shelters remain safe and functional for use of commuters and bus stop pads remain free of trip hazard defects.	Off street carparks remain functional and safe.
Roads are free of localized damage to the roadway (potholes and unsafe edges).				Off street carparks are free of localized damage to the roadway (potholes and unsafe edges).
Renewal				
Transport Assets are renewed and replaced in accordance with asset lifecycle requirements				
Roads & TCD’s	Paths Assets	Bridge Assets	Bus Stop Assets	Carparks
Successfully planning and delivering annual asset renewal programs to ensure the road network meets current service levels and vehicle loading.	Successfully planning and delivering annual asset renewal programs to ensure paths are safe and serviceable for the community and comply with best practice design.	Successfully planning and delivering annual asset renewal programs to ensure connectivity is not effected in the transport network and comply with best practice design.	Successfully planning and delivering annual asset renewal programs to ensure all bus stops are DDA compliant.	Successfully planning and delivering annual asset renewal programs to ensure carparks meet current service levels and vehicle numbers.
Upgrade/New				
Transport Assets are constructed or upgraded to meet current and future function or demand in the network				
Roads & TCD’s	Paths Assets	Bridge Assets	Bus Stop Assets	Carparks
New roads are constructed to ensure connectivity in the transport network, designed to incorporate adjacent land uses and anticipated vehicle loading.	New paths are constructed to ensure access is available to strategic destinations and for people with mobility disabilities.	Bridges are widened or extended to ensure connectivity in the transport network.	Determined by State Government Service levels and decision making.	Carparks are upgraded or newly constructed to accommodate measured demand from adjacent land use.

Table 2 - Technical Level of Service

Transport Asset Lifecycle Management

The City of Charles Sturt uses all principles of Asset Lifecycle Management to manage Transport Assets. and aims to encourage transport design that promotes a sense of place for people and the sharing of streets to meet all of their community, transport and service needs.

Overall expenditure is provided in the executive summary for all asset classes in this AMP.

Asset Strategy

Transport Assets located in different areas of the Transport Network may require very different designs or layouts and these are reviewed on a case by case basis depending on different demand drivers. Generally, there is an aim for assets in high density areas are to incorporate shared spaces, wide paths, encourage low speeds, and Water Sensitive Urban Design treatments due to the competing demands.

Demographics, density, land use, network hierarchy, technology, legislation and environmental impacts all effect the requirements and demand for Transport Assets. As these factors change, the way Transport Assets are used will also change and subsequently alter the demand for Transport Assets.

This AMP's strategy is to ensure Transport Assets are renewed depending on how they fit into the transport network now and for in the future. The city of Charles Sturt uses the following main criteria to priorities transport assets when undertaking renewal, upgrade and new planning;

- Condition
- Risk
- Network Hierarchy
- Strategic Importance
- Land Use

Condition and risk form the basis of renewal required in the network and then all other criteria are used to priorities works.

Condition

Council annually audits conditions of Transport Asset classes to ensure data is up to date and the overall condition of the network is understood.

Conditions are determined as per table 3 below;

Condition Grading	Description of Condition
1	Very Good: only planned maintenance required
2	Good: minor maintenance required plus planned maintenance
3	Fair: significant maintenance and or renewal required
4	Poor: significant renewal/rehabilitation required
5	Very Poor: physically unsound and/or beyond rehabilitation

Table 3 - Description of Condition

Risk

Council uses the risk assessment in this AMP to evaluate where risks in the network are and ensures that when required maintenance and replacement is undertaken.

Network Hierarchy

Assets that provide a high function in the network hierarchy get higher weighting on renewal as they have a higher function in the network.

E.g. a collector road performs a key function in the road network by providing safe and convenient access to properties within a local area for relatively high volumes of traffic. These assets are generally prioritised over lower traffic volume local streets when they are due for renewal at the same time.

Strategic Importance

Assets that form part of a strategic corridor are a key driver for the future of the network. Prioritising the replacement of assets with a high weighting on this criteria will ensure the network can cater for future demands.

E.g. paths along the River Torrens Linear Park which cater for much higher pedestrian and cyclist numbers than most local paths will generally be prioritised when they are due for renewal.

Land Use

The City of Charles Sturt is undergoing significant urban redevelopment. This redevelopment and re-zoning of land changes the demand on the transport network and changes what assets are suitable for different uses.

These key criteria are then broken down into many test points to develop renewal/new/upgrade programs using the Council's Strategic Asset Management system. This strategy has been developed specifically by CCS for CCS and uses all principles from the following Asset Management Lifecycle;

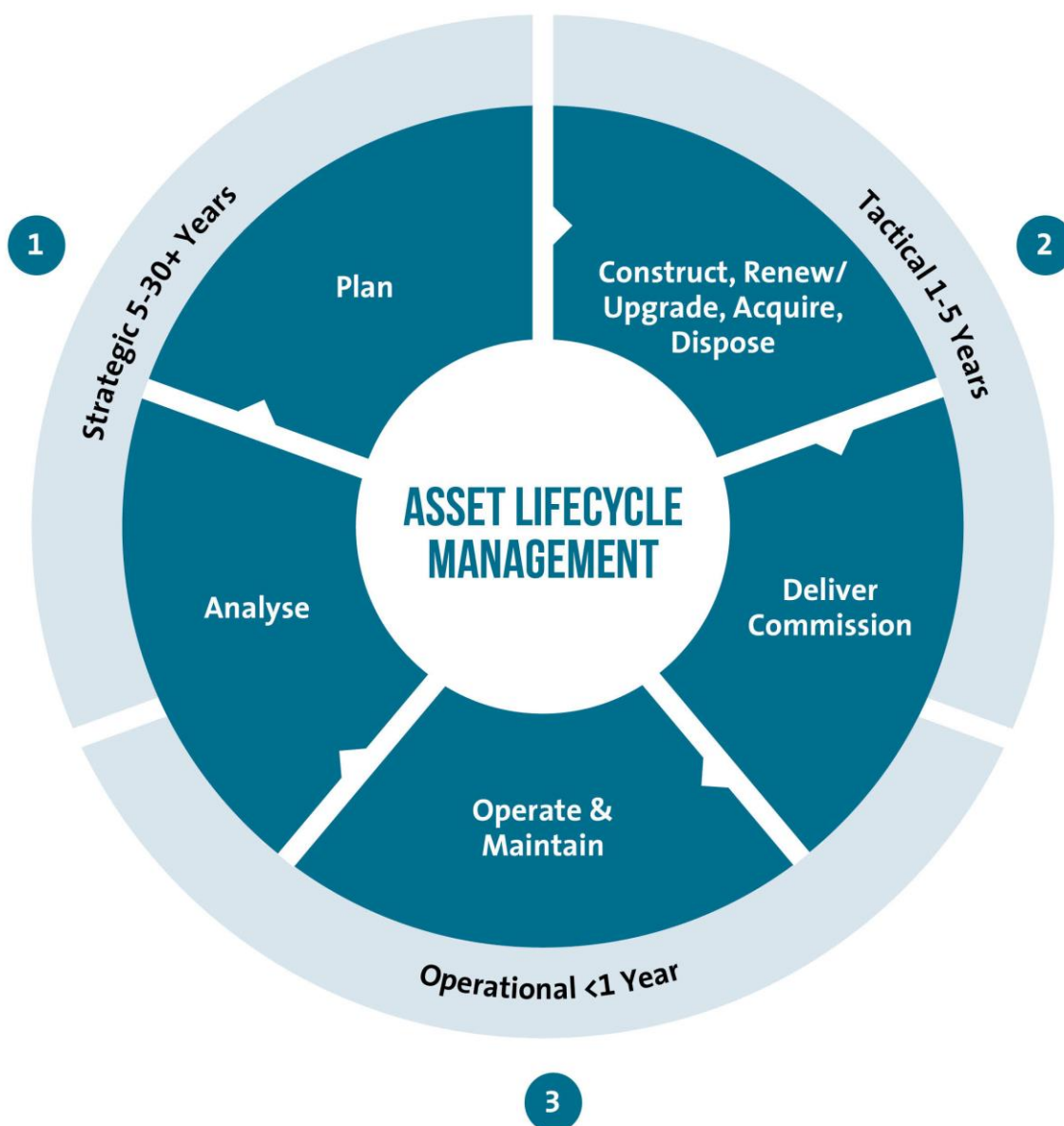


Figure 6 - Asset Lifecycle Management

Asset Maintenance Strategy

In order to minimise risks and keep service levels acceptable during the life of the asset, Council undertakes key maintenance tasks to ensure all transport assets are still serviceable until they require replacement.

Each asset class requires a different strategy for maintenance intervention and associated expenditure.

The Transport Asset Maintenance strategy is as follows;

Asset Class	Activity	Budget	Maintenance Tasks
Roads, Carparks & TCD's	Reactive Maintenance	\$235,000.00	Replacement of pot holes/ road patches funded through Council's operating expenditure
	Surface Preservation	\$500,000.00	Seal Preservation treatments funded through the road rehab program Capital expenditure
	Concrete Maintenance	\$450,000.00	Minor replacement of Kerb and Gutter funded through Capital expenditure
Paths	Concrete Defect Renewal	\$1,650,000.00	Planned replacement of high-risk defects identified through condition audits and customer requests. Funded through Capital expenditure.
	Scheduled Maintenance	\$250,000.00	Footpath grinding funded through Council's operating expenditure.
Bridges	Planned Maintenance	\$110,000.00	Planned maintenance is undertaken to bridges to ensure access is safe and well maintained based on their condition and specific technical requirement. Funded through Council's operating expenditure
	Reactive Maintenance	\$5,000.00	For quick activity work to minimise urgent safety issues. Funded through Council's operating expenditure
Bus Stop Assets	Shelter Maintenance (Year 1 and 2)	\$100,000.00	For years 1 and 2 of this AMP only to cover backlog of maintenance expenditure. Funded through Council's operating expenditure
	Shelter Maintenance (Year 3 onwards)	\$20,000.00	General maintenance of shelters onwards. Funded through Council's operating expenditure

Table 4 - Transport Asset Maintenance Strategy

Transport Asset Risk Management

The purpose of risk management for this AMP is to understand and document consequences and outcomes related to the risks associated with managing Transport Assets at a network level. Risks identified in the Transport Asset Risk Assessment have been used to form the basis of analysing and determining renewal priorities. Risks need to be managed in a key way to ensure operations, maintenance and renewal all follow the same direction to ensure all risks are mitigated throughout the network consistently.

Risk priorities are determined due to level of risk consequence, risk likelihood, strategic priorities, financial outcome, Land use and asset condition. CCS manages risks in the following way;

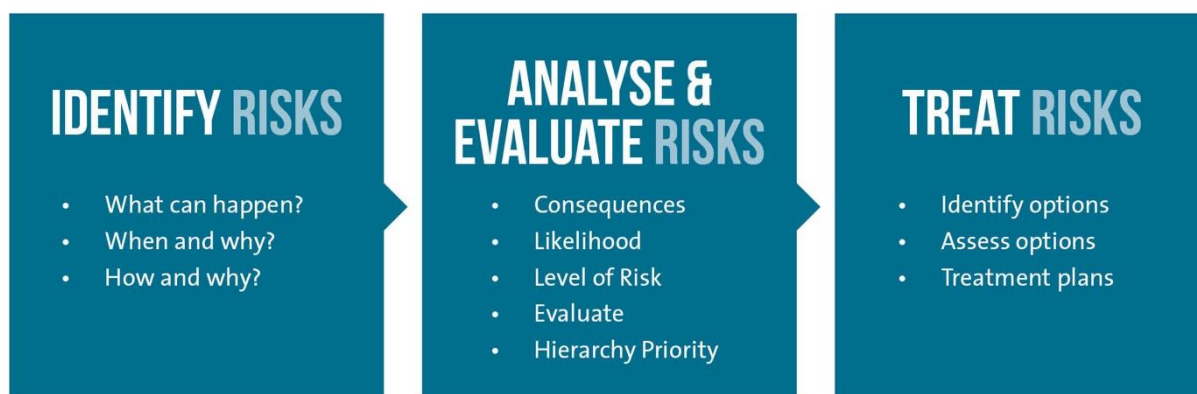


Figure 7 - Risk Management Process

The above risk assessment process:

- identifies credible risks.
- the likelihood of the risk event occurring.
- the consequences should the event occur.
- evaluates the risk.
- develops a risk treatment plan for non-acceptable risks.

The organisation has prioritised decisions made in adopting this AMP to obtain the optimum benefits from its available resources. Council has an existing budget that allows the AMP to balance the risks of Transport Assets and the asset register data provides a basis for where the AMP and future works is generated from. The LTFP that coincides with this AMP ensures major risks are mitigated and the network remains safe and useable for all users.

There are some operations and maintenance activities and capital projects that are unable to be undertaken within the 20 year planning period . These include:

- Renewal of roads with poor base that may fail prematurely or suddenly.
- Renewal of roads associated with transport routes that may fail prematurely due to increased traffic conditions.
- Renewal of large kerb and gutter sections that are not associated with the CCS Road Rehab program.
- Renewal of path assets impacted by development or damaged by a third party suddenly.

Operations and maintenance activities and capital projects that cannot be undertaken as a result of the above will effect the level of service of the network and pass on risks to users. These result in lack of connectivity for public transport, vehicular and cycling activities, deterioration of residential access, increase in area maintenance costs in residential streets.

Financial Summary

This section contains the financial requirements resulting from all the information presented in the previous sections of this AMP. The financial projections will be improved as further information becomes available with strategic asset management modelling in future AMPs, on desired levels of service and current and projected future asset performance.

The expenditure and valuations projections in this AMP are based on best available data. Currency and accuracy of data is critical to effective asset and financial management.

Data confidence is assessed as reliable with high confidence for this AMP. Data based is based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate $\pm 10\%$.

Asset valuations

The Overall value of Transport Assets is almost \$884 Million, and the value of each asset class can be found below;

THE VALUE OF THE TRANSPORT NETWORK IS \$884 MILLION

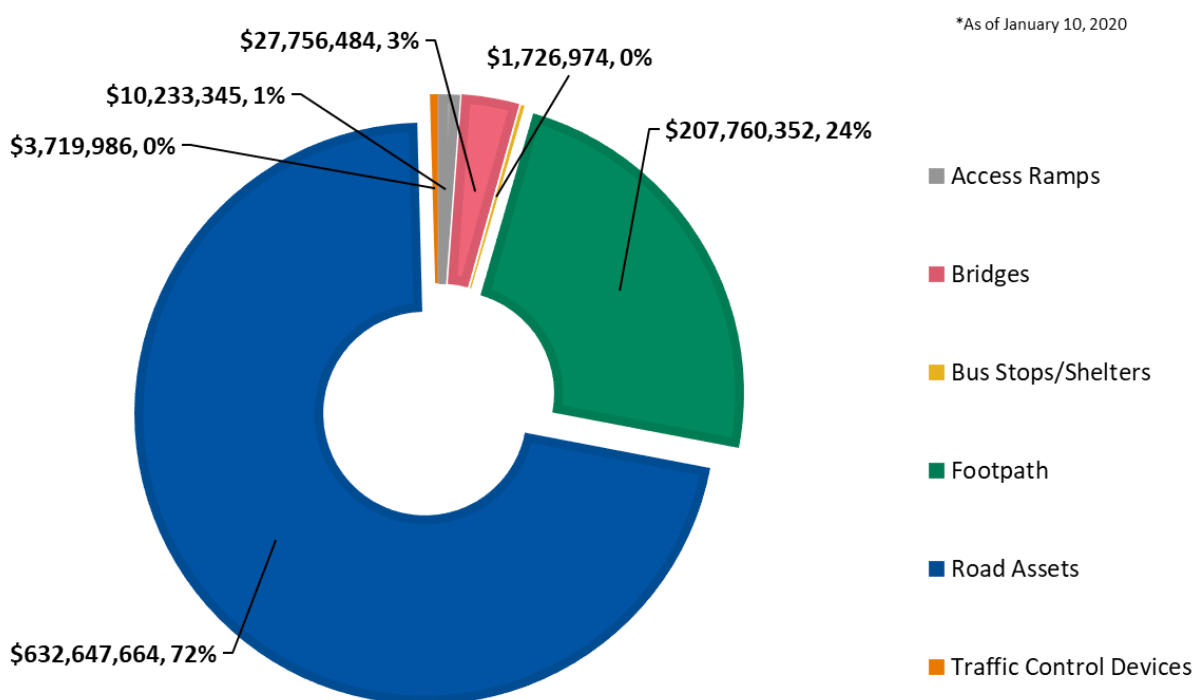


Figure 8 - Transport Asset Network Values

The best available estimate of the value of assets included in this Asset Management Plan are outlined below;

- | | |
|---|------------------|
| • Gross Replacement Cost | \$883,737,452.16 |
| • Depreciable Amount | \$883,797,452.16 |
| • Depreciated Replacement Cost ² | \$560,875,507.17 |

² Also reported as Written Down Value, Carrying or Net Book Value.

- Annual Average Asset Consumption \$13,839,100.69

Gross Replacement Cost

Refers to the current replacement value of all open space and recreation assets.

Depreciable amount

Refers to the cost of an asset, or other amount substituted for its cost, less its residual value.

Depreciated replacement cost (DRC)

Refers to the current replacement cost of an asset less, where applicable, accumulated depreciation calculated based on such cost to reflect the already consumed or expired future economic benefits of the asset.

Annual average asset consumption

Refers to the ratio of annual asset consumption relative to the depreciable amount of the assets. It measures the amount of the consumable parts of assets that are consumed in a period (depreciation) expressed as a percentage of the depreciable amount.

Long Term Asset Renewal Funding Costs

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the asset life cycle. Life cycle costs include, renewal, operations and maintenance expenditure and asset consumption (depreciation expense). The life cycle cost for the services covered in this asset management plan is **\$19,141,961** per year (average operations and maintenance expenditure plus depreciation expense projected over 10 years).

This AMP has identified the current City of Charles Sturt's LTFP contains a funding surplus. This occurs as the AMP Proposes a reduction in overall renewal replacement of paths but an increase in capital maintenance.

The proposed LTFP will ensure that Life cycle expenditure is **100%** of life cycle costs. The life cycle costs and life cycle expenditure comparison highlights any difference between present outlays and the average cost of providing the service over the long term. If the life cycle expenditure is less than that life cycle cost, it is most likely that outlays will need to be increased or cuts in services made in the future.

Sustainability of service delivery

Two key indicators for service delivery sustainability that have been considered in the analysis of the services provided by this asset category, these being the:

- asset renewal funding ratio; and
- long term budgeted expenditures/projected expenditure (over 10 years of the planning period).

Projected expenditures for Long Term Financial Plan

LTFP's and projected expenditure can be found above in the executive summary of Transport Assets and asset classes.

Expenditure projections are in 2019 real values. It is evident that Transport Assets are the City of Charles Sturt's Major Asset class and have significant impact on LTFP spending. Due to changes in renewal and maintenance strategies proposed in this AMP the projected required renewals do not provide any funding gap per year for the life of the plan with the City of Charles Sturt's existing LTFP budget.

Building for the future

Future Demand

Our population has continued to grow over the past 12 months with the current estimated resident population being 117,382. The chart below shows the growth in our City's population in the past 7 years, increasing in that time by 7,459 people. Based on such projections, over the 20-year planning period for this AMP it is expected that population will increase by approximately 20,000 people. This will deliver a greater demand on Transport Assets and the greater Transport Network across the City of Charles Sturt.

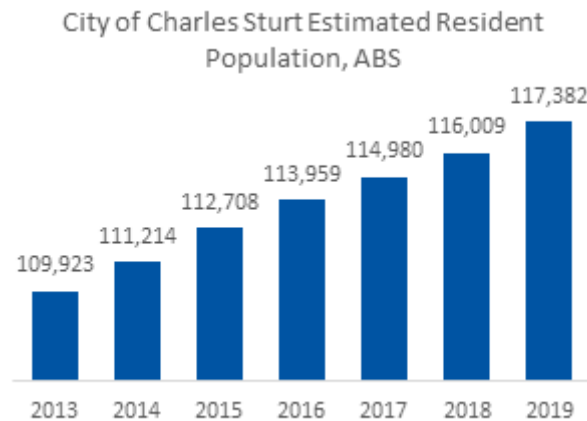


Figure 9 - City's Population Growth

Climate Change

The City of Charles Sturt is working to adapt to climate change and reduce our environmental footprint. This requires investigation into renewing transport assets with a focus of street greening, increasing tree canopies, investing into alternative modes of transport and investing in recycled materials.

We are already feeling the effects of climate change. Predictions for Western Adelaide indicate further reduction in annual rainfall, more frequent and intense heatwaves along with sea level rise. These are all significant risks for the City of Charles Sturt area and risks to Transport Assets. The ongoing effect of climate change will affect the serviceable life of Transport Assets and have potential to increase service level costs over time. The City of Charles Sturt are committing to understanding these risks and impacts to better inform decision making through the improvement plan in this AMP.

Sustainable Transport Infrastructure

Transport Assets play a key role in reducing our carbon footprint. They assist in reducing the impacts of climate change, population density, pressure on our open spaces and connection between destinations. This is critical to creating social inclusiveness and developing healthy and active communities.

Council currently invests in sustainable and recycled road surfaces, recycled construction materials, diverts CO2 emissions through sustainable construction of transport assets, invests in alternative modes of transport (scooters, walking and cycling) along with partnering with 3rd party providers to provide such transport facilities (ride share initiatives, EV Chargers, bus shelters etc).

Designing for predicted future climate conditions, changes in demographic, future transport choices (walking, bicycle, autonomous vehicles and electric vehicle use) and their cost implications is yet to be understood and a key improvement of this AMP.

Such items for future renewal strategy and cost implications include;

- Increased Tree canopy - Increase the number of trees in streets to promote cooler streets and help prevent urban heat islands across the city.
- Increased street greening - Improve streetscapes and the way streets look with higher quality landscaping other integrated treatments

- Improved transport function – Provide an appropriate balance of the road reserve to the various transport modes to accommodate current and future demand.
- Safer streets - Ensure transport assets promote slower speed limits, better connectivity to strategic destinations and integrate design for opportunities for different modes of transport.
- Alternative modes of Transport – continued investment in shared use and cycling paths and future consideration in the renewal of Transport Assets for other alternative modes of transport (e.g. driverless vehicles and ride share initiatives) that promote low carbon transport choices.
- Data Collection and Research – continued investment in understanding how to develop resilience in council's assets for the change in climate.

In order to understand these key themes of Sustainability and Climate Change for Transport Assets, this AMP proposes to increase Councils budgeted LTFP expenditure for the Sustainable Transport Program to \$100K per annum from the 2021/22 financial year onwards.

Continuous Improvement

In May 2018 Council endorsed the latest revision of the Road Asset Management Plan. The Road AMP aimed to undertake significant improvements in the next revision and combine the Road Asset Management Plan with other existing Asset Management Plans to form a Transport Asset Management Plan for all Transport Assets.

This has been achieved with this latest revision and first AMP for transport Assets.

To undertake this AMP the City of Charles Sturt undertook the following tasks;

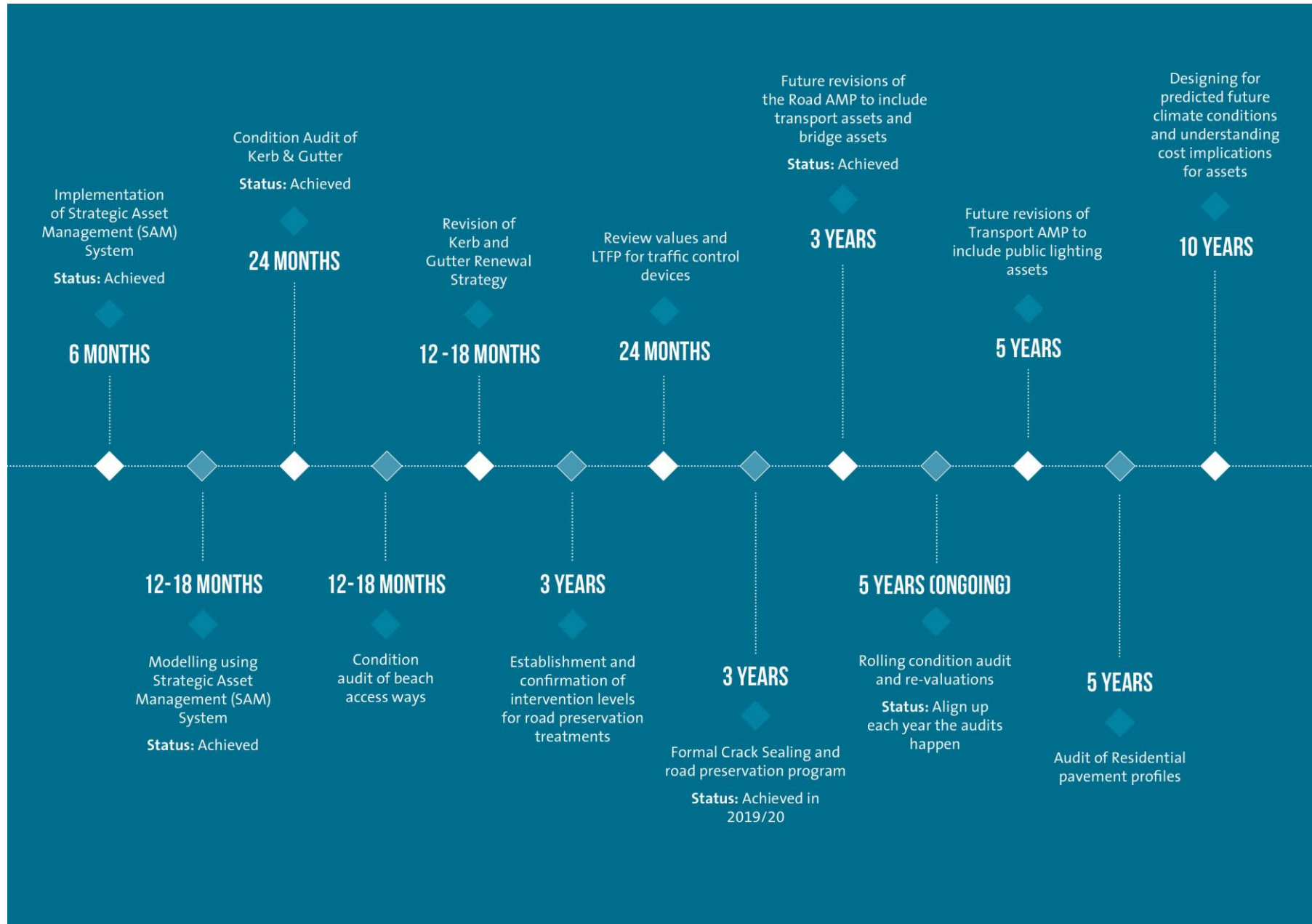
- Scheduled Condition Audit and Financial Valuation of Bridges (mid 2018)
- Scheduled Condition Audit and Financial Audit of Paths (mid 2018)
- Scheduled Condition Audit of Off Street carparks (early 2019)
- Scheduled Condition Audit of Bus Stop Shelters (late 2019)
- Scheduled Condition Audit of Kerb and Gutter Assets (mid 2020)
- Revision of Bridge Maintenance, Renewal and Upgrade Programs (early 2019)
- Revision of Path Maintenance and Renewal Strategy (mid 2019)
- Revision of Bus Stop Shelter Maintenance Strategy (late 2019)
- Update of all Transport Asset Data (mid 2019)
- Revision of LTFP's for all Transport Assets (late 2019)

The improvement plan below shows that many actions have been achieved in this current revision or are in progress to ensure continual improvement of the Transport AMP.

This AMP will be reviewed during annual budget planning processes and amended to show any material changes in service levels and/or resources available to provide those services as a result of budget decisions.

The AMP will be updated every 2-4 years to ensure it represents the current service level, asset values, projected operations, maintenance, capital renewal and replacement, capital upgrade/new and asset disposal expenditures and projected expenditure values incorporated into the LTFP.

The AMP has a life of 4 years but is due for complete revision and updating within 12 months of the upcoming Council election.



Conclusion

This Asset Management Plan (AMP) communicates the actions required for the management of Transport Assets owned and maintained by the City of Charles Sturt (and services provided from assets), compliance with regulatory requirements, and funding needed to provide the required levels of service over a 20-year planning period.

The identified funding scenarios and asset lifecycle management strategies in this AMP have been designed to ensure that Transport Infrastructure supports movement of people and goods across the Council area while ensuring the overall asset network is in an acceptable and safe condition.

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