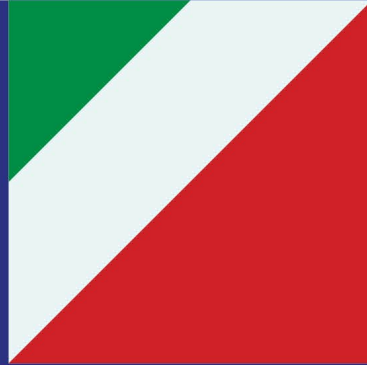




MEANS
THE WORLD



TRANSPORT ASSETS ASSET MANAGEMENT PLAN 2024-2034



Document Control		Transport Asset Management Plan Asset Management Plan 2024-2034			
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1. Executive Summary

The requirements for our Transport Assets are closely aligned with the State Government 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.

It should be noted that the 30-Year Plan for Greater Adelaide is currently under review as is the City of Charles Sturt Community Plan. Once these strategic documents have been finalised, we will undertake a further review of our Asset Management Plans to ensure that they continue to align or to identify changes that might be required.

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, Boardwalks and Beach Access Ways
- 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 10% of the network below what would typically be considered an acceptable service level. It should be noted that assets in “poor” condition in the network has increased from 3% in 2020 to 8% in 2023. This increase is due to the inclusion of further accurate condition data Transport Assets.

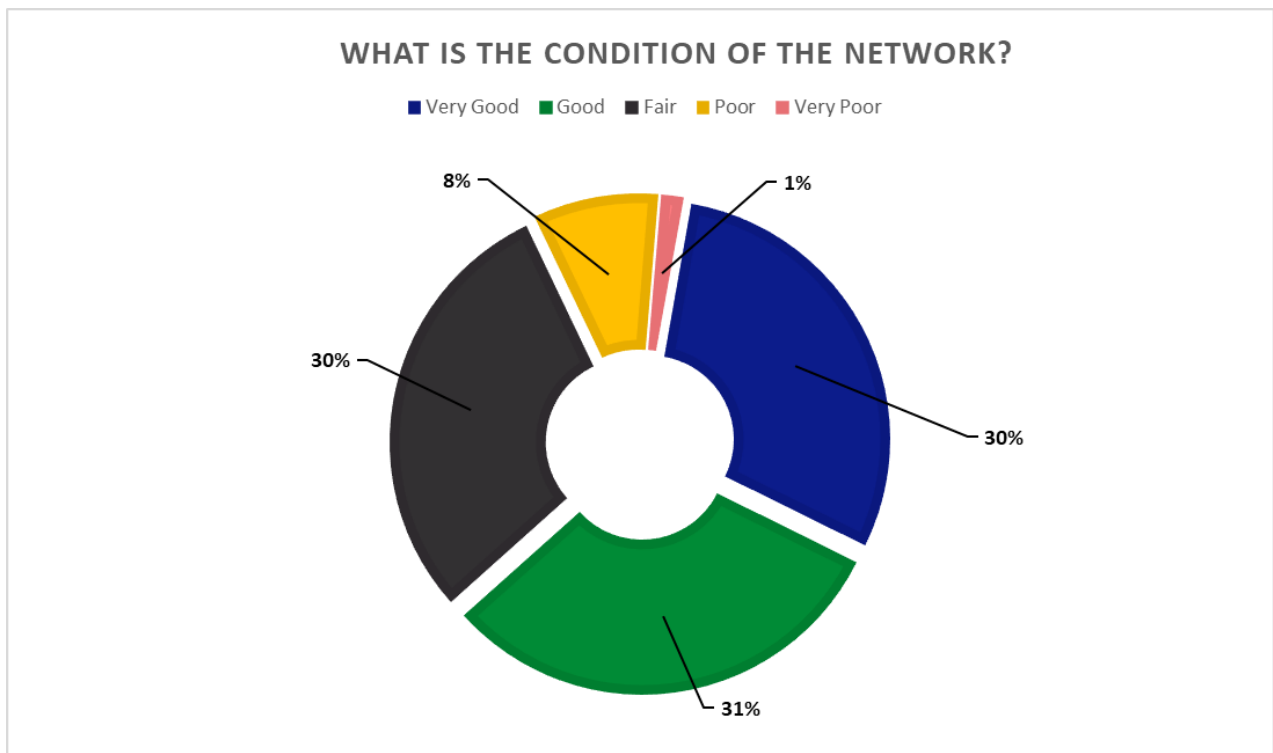


Figure 1 – Overall Network Condition

The City of Charles Sturt's Transport Assets, which are financial and are represented as the book value, have a current replacement cost of \$1,204,969,442.97 (as of October 2023).

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, climate risk, population, and interaction with adjoining land uses.

To fulfil the above asset strategy and continue to provide services over the 10-year planning period from 2023/2024 until 2032/2033, an average spends of approximately \$21,658,883.10 per year on maintenance, renewal and upgrade of Transport Assets would be required (inclusive of endorsed strategic upgrade projects).

This AMP proposes to make amendments to the current Long Term Financial Plan funding for transport projects to re-prioritise spending for major projects (due to external factors altering their programs) and include endorsed income from the State Government for Renewal projects.

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 65% of funding on Roads and carparks, 30% of funding on Paths, and 1% on bridges and bus shelters. Just over 10% (approx. \$2.5Mil) of the overall spend contributes to bicycle facilities across the City of Charles Sturt budget.

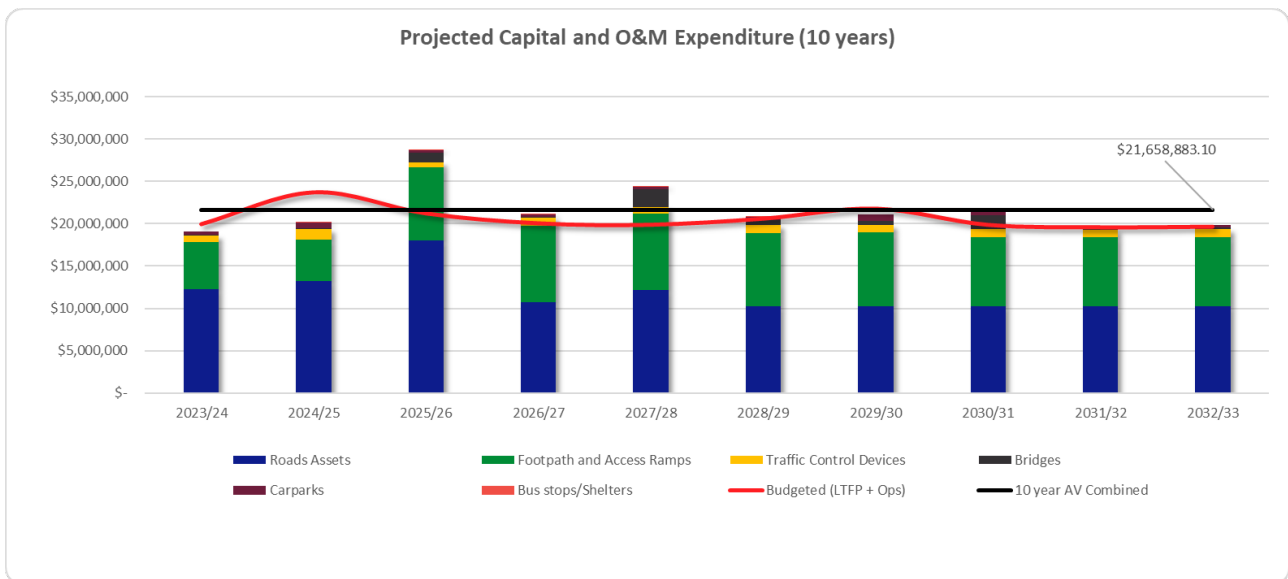


Figure 2 – Overall projected expenditure for Transport Assets

****Note the above graph shows entire spend of all Maintenance, Renewal and Upgrade costs for Transport Assets.**

Upon endorsement of this AMP all figures will be included in Councils Long Term Financial Plan expenditure to continue to fund services included in this AMP.

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

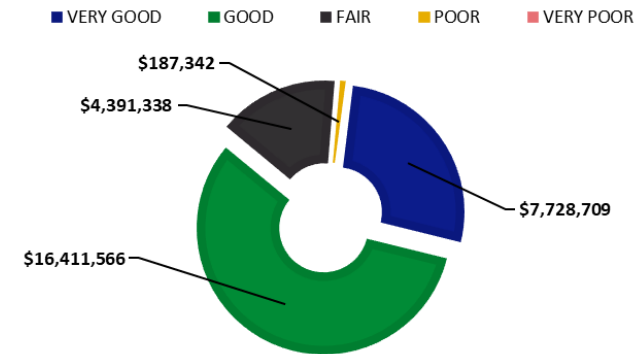
Bridge Assets (Bridges and Boardwalk Structures)

The City of Charles Sturt manage 70 Bridge, Boardwalks and Beach Accessway Assets, they are worth \$28.7 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 over the last 5 years.

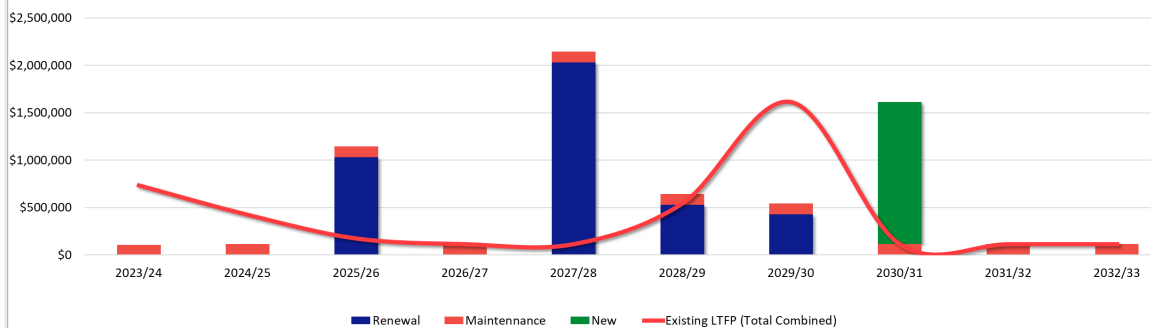
CCS manages bridges by prioritising works to each component to ensure they are safe and accessible for the local community.

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, New and Maintenance 10yrs forecast



The Existing LTFP has been revised as major projects were recently deferred due major state government initiatives over the last 3 years that impacted Council undertaking renewal of these assets.

Major renewals for 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)

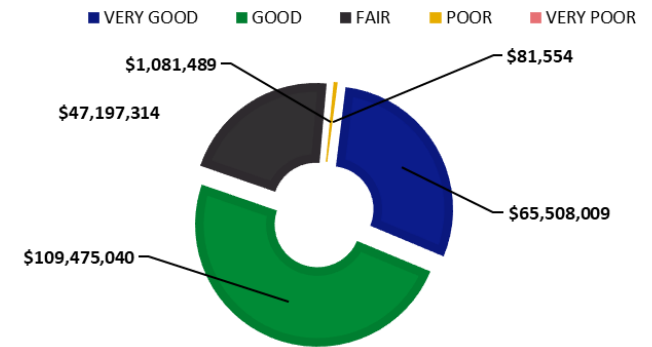
The City of Charles Sturt manage approximately 1,300km's of path assets and almost 10,000 kerb access ramps. These assets are worth a combined \$232.8 Million.

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

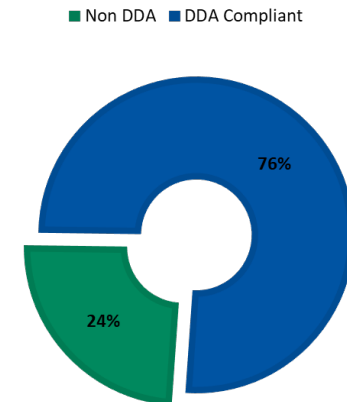
In 2019 a path condition audit and revaluation was completed to assist the forming of the previous version of this AMP. The audit identified that paths are in an acceptable condition but identified a large amount of isolated path defects. These isolated defects are a high risk to path users and a planned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

Early indication of asset data shows that the change in strategy is further improving the condition of the network and a recent community infrastructure survey shows an increase in satisfaction of path assets. This AMP proposes a scheduled path audit for 2024 to verify the revised maintenance and renewal service levels endorsed by Council in the previous revision of this AMP in 2020. A path condition audit is scheduled for early 2024.

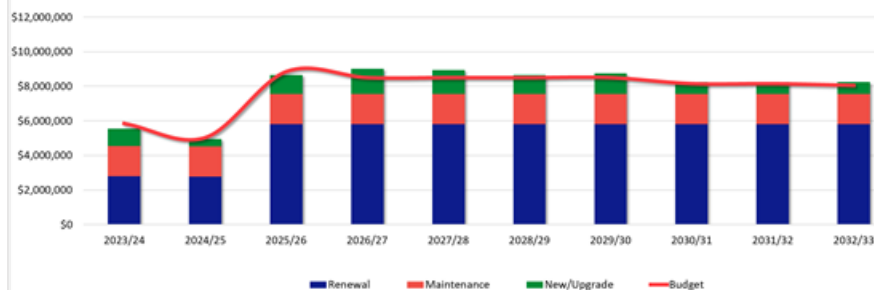
FOOTPATH CONDITION PROFILE



DDA ACCESS KERB RAMPS



Projected Renewal, New/Upgrade and Maintenance 10yrs forecast



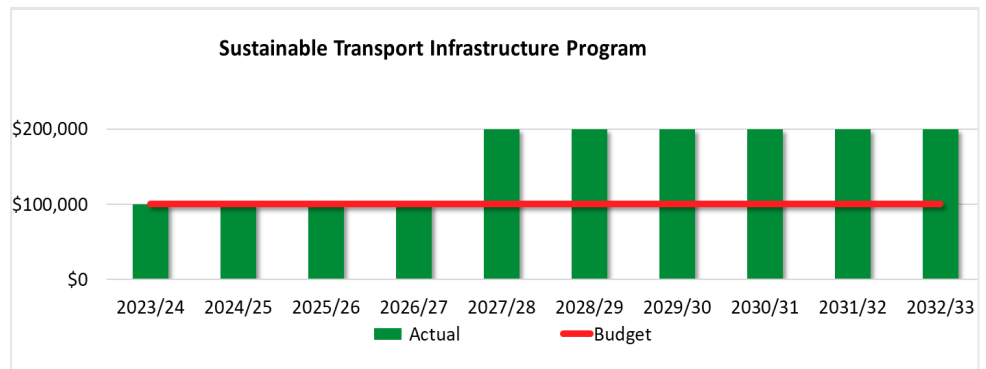
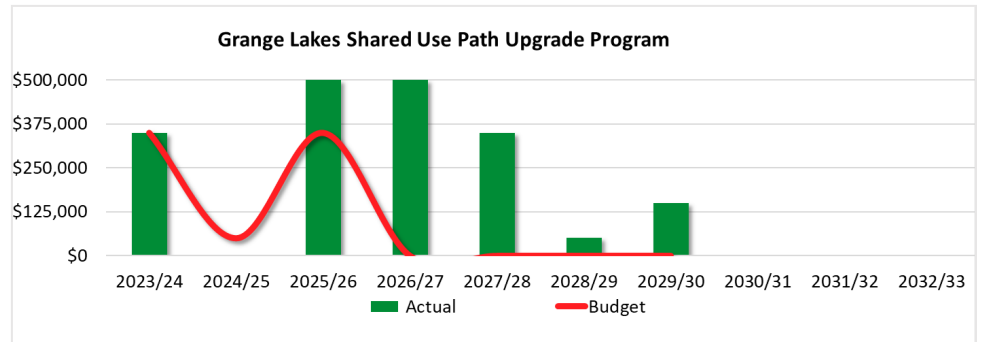
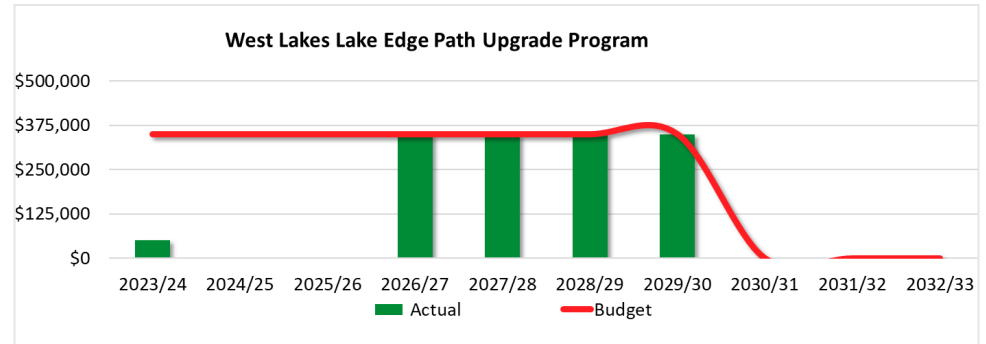
In addition to renewing and constructing new footpaths, the City of Charles Sturt also constructs strategic walking and cycling corridors. These paths typically form part of a strategic network for walking and cycling across the Council and are either new assets or upgrades of existing assets.

These projects contribute directly to the City of Charles Sturt strategic planning documents, including the Open Space Strategy, the Transport Plan and the Community 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 changes to funding for these programs to ensure ongoing investment and extension of key walking and cycling corridors are planned and delivered for the community.



Bus Stop Assets

(Bus stop pads/surface and bus stop shelters)

The City of Charles Sturt owns 585 Bus stops with an asset value of \$2.27 Million.

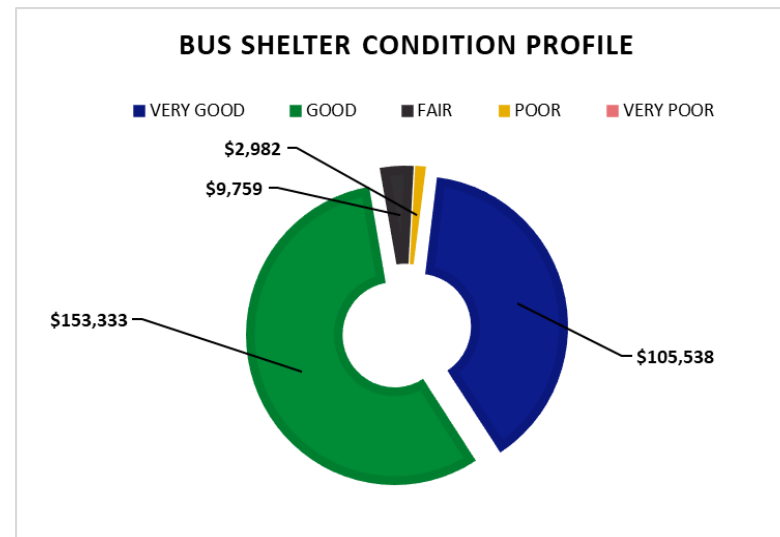
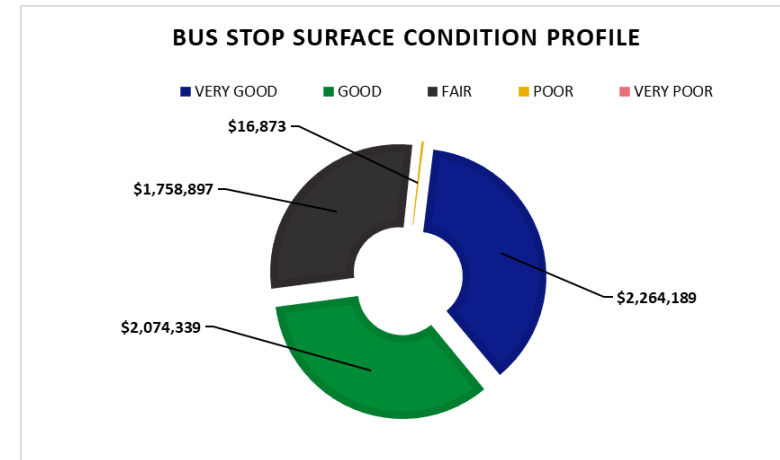
Bus stops ensure patrons can access public transport provided by the Department of Planning Transport and Infrastructure (DPTI). DPTI determine the location of the stop and Council provide the Bus stop pad and maintain existing shelters.

The City of Charles Sturt has invested \$400K per annum since 2008 to undertake DDA replacements of bus stop pads/surfaces to meet legislative targets. The City of Charles Sturt completed this program of upgrades well before the required Disability Discrimination Act (DDA) legislated deadline of 31st December 2022.

Although the City of Charles Sturt renewal program is completed; 6 bus stop surfaces 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 was submitted to the Human Rights Commission for an exemption to comply with the Disability Standards for Accessible Public Transport (DSAPT) under section 33a of the DSAPT for these 6 locations.

The 6 stops are located along Seaview Road between Grange and West Beach. The Commission has informed staff that although there are significant challenges and cost implications to ensure these 6 bus stop surfaces are DDA compliant the City of Charles Sturt's exemption has been declined. This AMP proposes to fund these last 6 stops within Councils AMP over the next 3 years (from 2024/25 onwards).

Council also owns a small amount of bus shelters which are slowly being phased out as they reach end of life and replaced (where demand exists) with shelters by a 3rd party provider (whom has been issued a licence to advertise on the shelters) at no cost to Council.



Road Assets

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

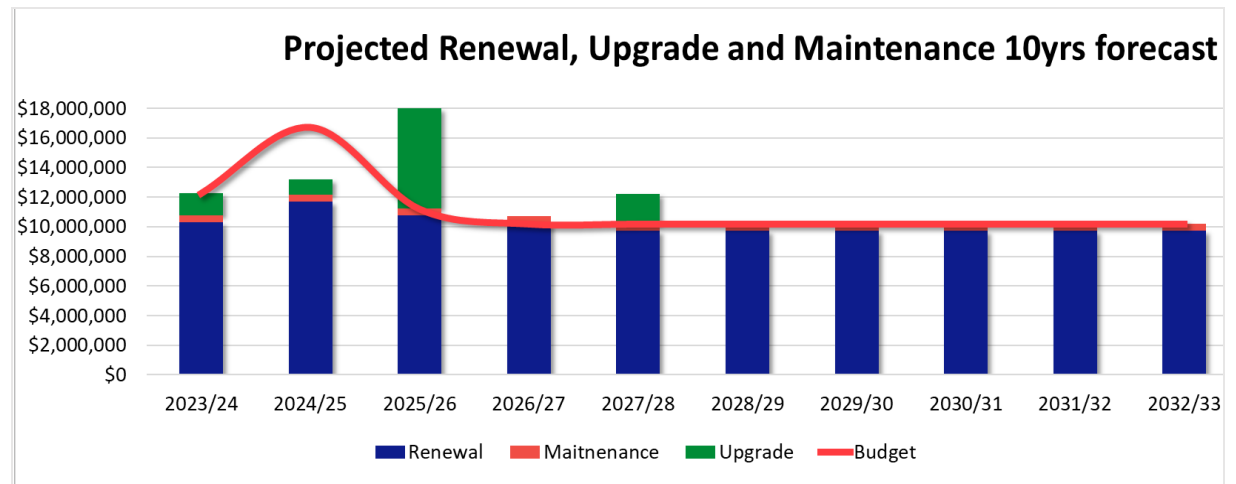
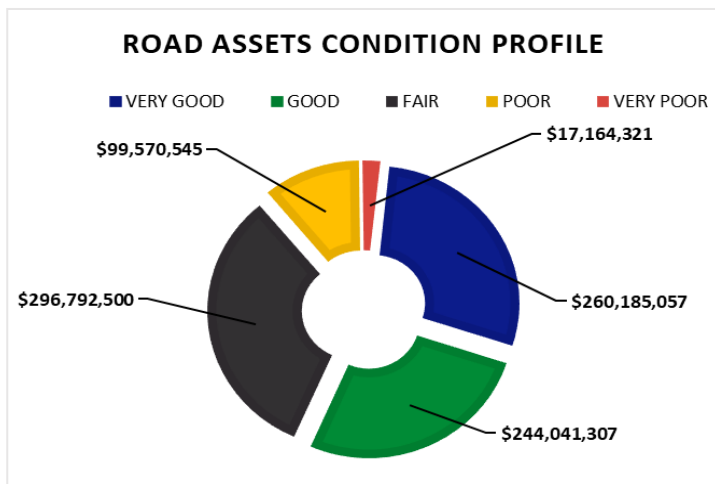
The City of Charles Sturt manage approximately 4.5 Million m² area of road network and approximately 1,400km's of road kerbing. Road Assets have a replacement value of just under \$920 Million and are the highest valued Transport Asset. From an overall perspective less than 12% of the road network is in poor condition or considered below current service level.

Road Assets support 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.

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.

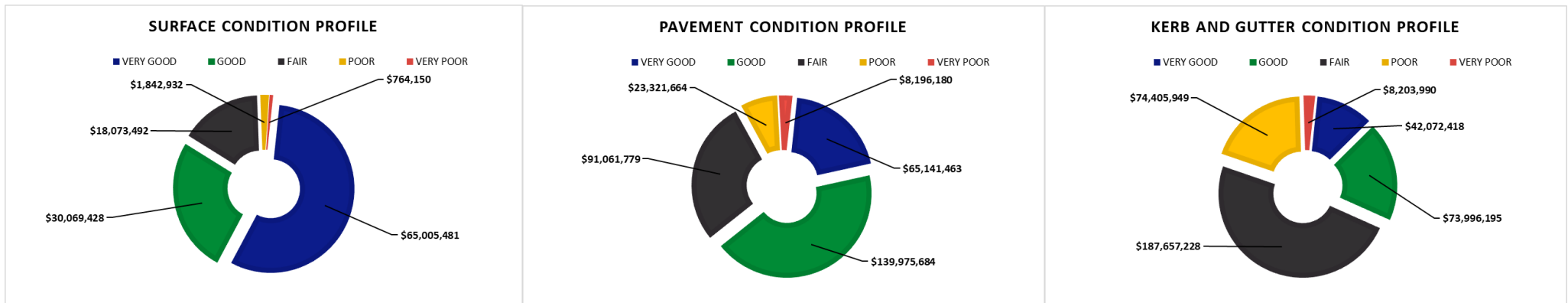
Council staff have been able to use the existing LTFP to also invest into planned maintenance and undertake a formal seal and kerb and gutter preservation program to compliment the Road Rehabilitation and Road Reconstruction programs.

This AMP proposes minor changes to the existing LTFP to recognise income received from the State Government for road works associated with the Ovingham Level Crossing Project and include \$900K of renewal funding that was deferred from Council's expenditure during the COVID-19 pandemic.



The condition of each asset from the road asset class is shown below. The key contributing factor in the condition profile of road assets is the outcome of the 2020/21 kerb and gutter asset condition audit. The outcome of the audit identified a large portion of the network below current service level identified in this AMP.

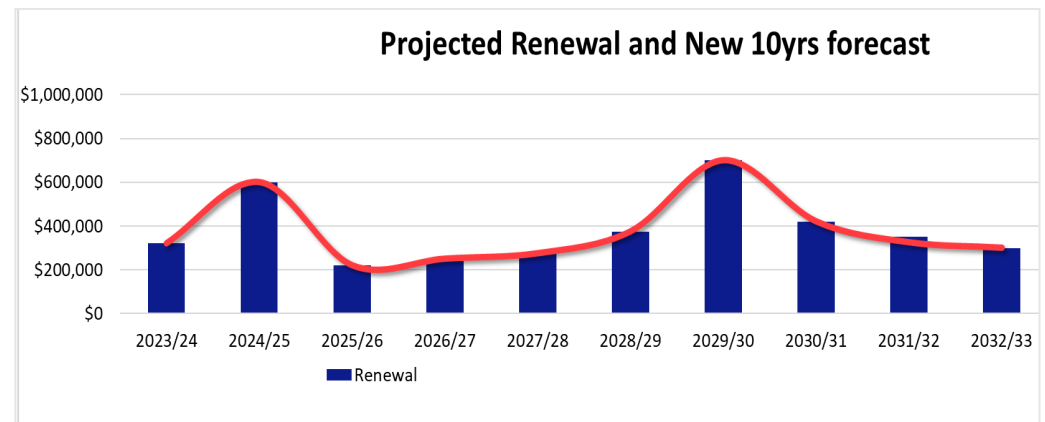
Since the completion of the audit Council staff have begun to revise Council maintenance and renewal strategies for kerb and gutter assets. Staff have been able to use Council's existing LTFP to also begin investment into further renewal and maintenance of kerb and gutter assets to improve its condition profile over the next 5-10 years.



The City of Charles Sturt own and Manage 139 off street carparks valued at \$19.6 Million. Like road assets, off street carparks provide access to schools, shopping centres, recreational areas, and strategic destinations.

The management of car parking in high utilisation areas and strategic destinations e.g., the Coastal areas and core retail and business areas is of importance to our community. In these locations parking controls are installed to best support the various stakeholder interest. As our City continues to grow the management of these parking controls is becoming increasingly difficult by traditional means and more innovative methods are required. This AMP makes allowance within the current renewal program to install 'smart' and parking technology at strategic locations in on and off-street parking areas to ensure that we can continue to manage parking in line with community expectations.

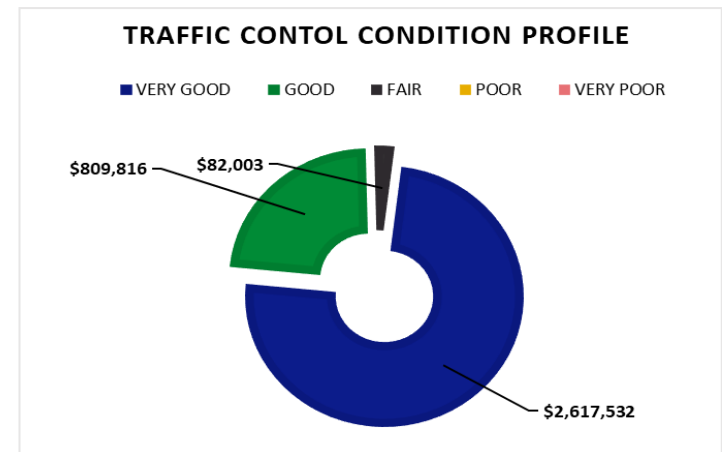
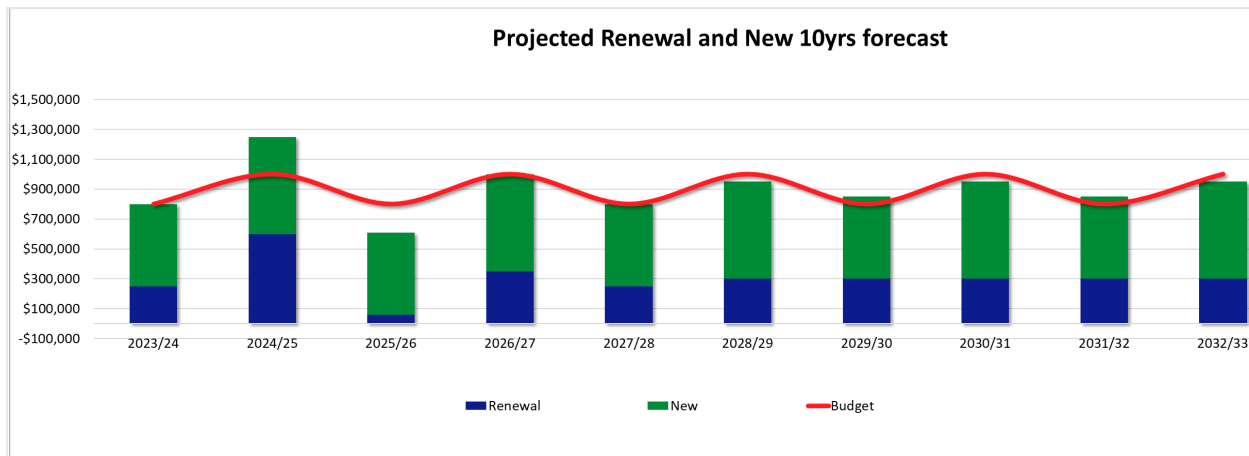
Off Street Carparks Assets



Traffic Control Devices

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 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 \$650K per annum on new traffic control devices. This AMP proposes minor changes to the current LTFP as projects continue to be prioritised over the next 4 years.



2. 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:

-
- | | |
|---|---|
| <ul style="list-style-type: none"> • City of Charles Sturt Organisational Plan 2020-2025 • Community Plan 2020-2027, Charles Sturt – A Leading, Liveable City • City of Charles Sturt Asset Accounting Policy • City of Charles Sturt Asset Fund Policy • Engineering and Open Space Guidelines • SA Infrastructure Guidelines • City of Charles Sturt Endorsed Road Safety Assessment Procedure | <ul style="list-style-type: none"> • City of Charles Sturt Environmental and Sustainability Policy • Net Zero – Our Map to Net Zero Corporate Emissions 2020-2025 • City of Charles Sturt Open Space Strategy • City of Charles Sturt Transport Plan • City of Charles Sturt Your Neighbourhood Plan • City of Charles Sturt Path Policy and Guidelines |
|---|---|
-

The Transport Infrastructure assets covered by this AMP are:

- | | |
|--|---|
| <ul style="list-style-type: none"> • Bridges, Boardwalks and Beach Accessways • Roads (Surfaces, Kerbing and Pavement) • Footpaths and Shared Use Paths | <ul style="list-style-type: none"> • 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 2020 Transport AMP. This AMP forms a wholistic integrated Asset Management Strategy for all Council Transport Assets. 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:

- Community Infrastructure Survey to understand community satisfaction with Transport Assets.
- Inclusion of Council's endorsed road hierarchy in all asset data for Transport Assets.
- Asset condition audits of traffic control devices and Kerb and Gutter Assets.
- Revised renewal strategy for traffic control devices.
- 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.
- Updated renewal works programs for Roads, Traffic Control Devices, Paths, and Bridges.
- Major revision of asset maintenance service levels for Field Services.
- Inclusion of allowances to prepare for major transport upgrade projects.
 - Chief Street Streetscape Upgrade
 - Bartley Terrace Streetscape Upgrade
 - Gibson Street Streetscape Upgrade

- Preliminary investigation into climate change and sustainability factors and their effects on Transport Assets along with commencement of support tools for understanding climate change impacts.
- Revision of 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
 - Grange Greenway Corridor (planning only)

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 organisation's 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 10-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

3. 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 1993
- Disability Discrimination Act 1992
- Australian Road Rules
- Planning, Development, and Infrastructure Act 2016
- Planning and Design Code for South Australia
- Work Health and Safety Act 2012
- 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 satisfaction of infrastructure assets has historically been measured using a Council wide community survey every 2 years. This survey seeks general feedback on many services undertaken by the City of Charles Sturt from the community.

In June 2023 the City of Charles Sturt undertook a targeted Community Infrastructure Survey prior to developing this AMP. This has lead service levels and assisted understanding residents' and business owners' satisfaction with aspects of services and facilities provided by Council.

A total of 620 people responded to the Community infrastructure Survey. 93% of respondents were residents and 7% of respondents were visitors.

The survey results identified the following community satisfaction regarding Transport Infrastructure over the last 5 years.

	CCS Community Survey Satisfaction 2018	CCS Community Survey Satisfaction 2020	ESA Infrastructure Survey Satisfaction 2023
Local Streets	62%	59%	55%
Footpaths	51	50%	51%
Shared Use Paths	79%	71%	77%

Table 1 - Community Survey and Infrastructure Survey Results

Key themes of the survey identified the following:

- More bike paths that are separated from vehicles/need more bike friendly paths.
- Kerb maintenance (weed poisoning, gutter sweeping, leaf litter) should be undertaken on a more frequent basis.
- Tree maintenance and pruning.
- More cleaning and upkeep of streets.
- We need more footpaths and wider paths.
- The speed limit should be reduced, and more design cues introduced to help people slow down such as more street trees, speed bumps, slow points, narrowing etc.
- More investment into active transport.

Respondents felt that the condition and maintenance of assets could be improved along with an expectation of improving amenity in local streets. Based on the following comments.

In addition to the above in response to Council's Climate Emergency declaration (2019), Council's Asset Management Plans are being updated to include the identification and assessment of risks or vulnerabilities to climate change risks. This also reflects community sentiment, evident by our Community Survey (2022), with 80% of respondents agreeing that taking action to combat climate change is important, and 81% of respondents agreeing that local council's play an important role in this.

Upon endorsement of the draft version of this AMP a 4-week community consultation period was undertaken in February 2024. The purpose of the consultation will be to understand the community satisfaction with Transport Assets and the proposed service levels in this AMP that have been based on the City of Charles Sturt's initial Community Infrastructure Survey and past Asset Management Plan practices.

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 the current condition of transport assets and the proposed service levels in this AMP.
- 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.

5 people across the City of Charles Sturt participated and provided feedback for the update of this AMP. The consultation results showed 40% of people who complete the survey are satisfied with the condition of Transport Assets. Although there is not majority satisfaction with regard to the condition of Transport Assets 60% of respondents were satisfied with the service level in the AMP. In addition to this only 40% of respondents support Council investing further resources and increasing service levels for this AMP.

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 Sturts Technical levels of service for all Transport Assets

Technical levels of service				
<u>Maintenance/Operations</u>				
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).
<u>Renewal</u>				
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 best practice 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 affected 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.
<u>Upgrade/New</u>				
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 road & TCD assets are constructed to ensure connectivity in the transport network, designed to incorporate adjacent land uses, low speed environments 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 and comply with the Disability Discrimination Act.	Carparks are upgraded or newly constructed to accommodate measured demand from adjacent land use.

Table 2 - Technical Level of Service

4. 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 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, climate risks 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 regularly 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 these 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.

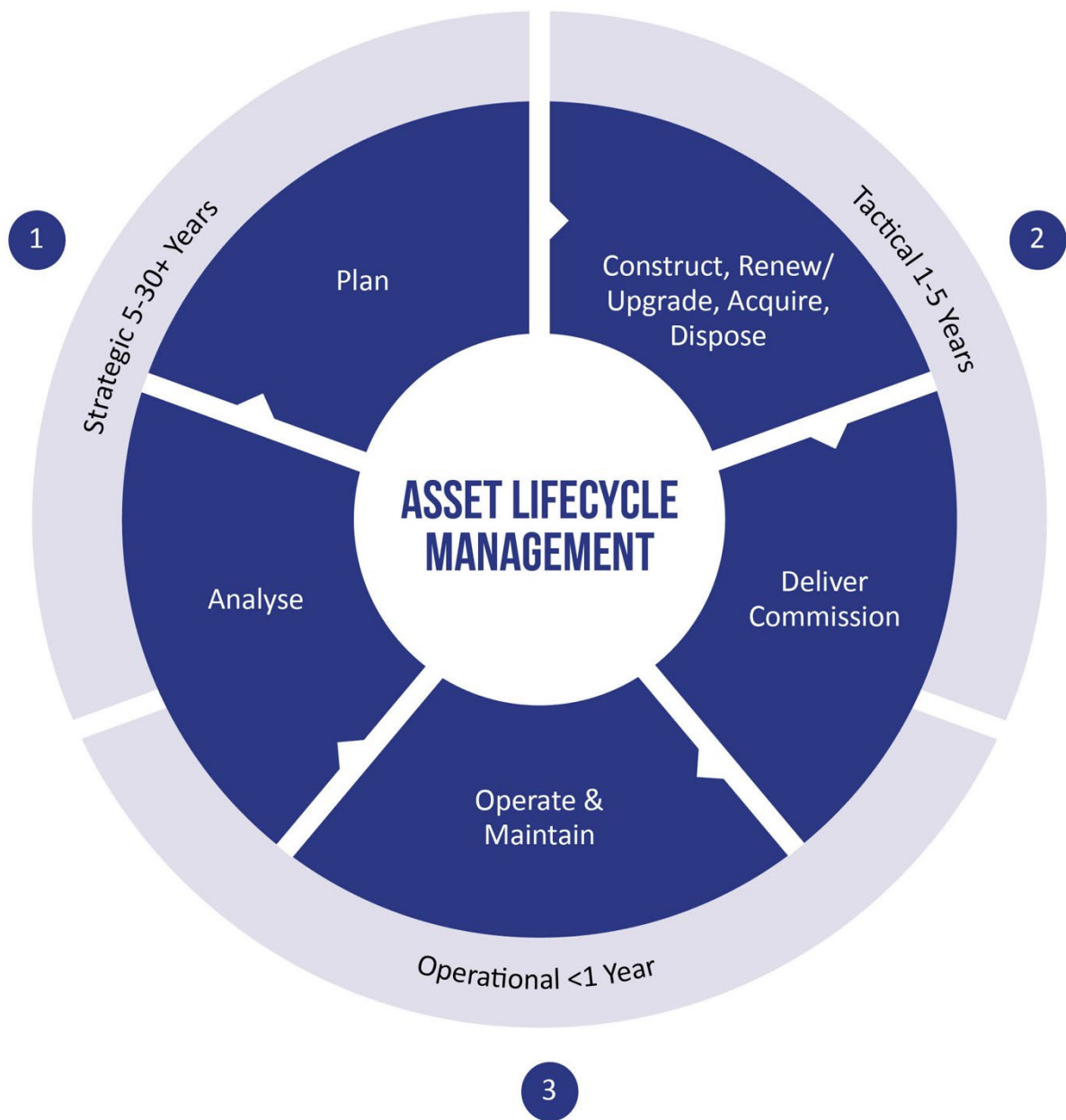


Figure 3 - Asset Lifecycle Management

Asset Maintenance Strategy

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 and is maintained in accordance with the City of Charles Sturt Civil and City Maintenance Service Level Agreements (for detailed information refer CM 22/12532 - Civil Maintenance and Construction and City Maintenance - Maintenance Service Standards, 22/125396 - Civil Maintenance and Construction and City Maintenance - Maintenance Plan).

The Transport Asset Maintenance strategy is as follows.

Asset Class	Activity	Budget	Maintenance Tasks
Roads, Carparks & TCD's	Reactive Maintenance	\$322K	Replacement of potholes/ road patches funded through Council's operating expenditure
	Concrete Maintenance	\$150K	Minor replacement of Kerb and Gutter assets funded through Capital expenditure. <u><i>This is currently funded through Councils Concrete Path Defect Program and this AMP proposes to review maintenance practices from 25/26 onwards.</i></u>
	Surface Preservation	\$850K	Surface Preservation, crack sealing and Large area patch treatments funded through the road rehab program Capital expenditure.
Paths	Concrete Defect Program	\$1.5 Mil	Planned replacement of high-risk defects identified through condition audits and customer requests. <u><i>Councils Concrete Path Defect Program is currently funded through capital expenditure and this AMP proposes to review maintenance practices from 25/26 onwards.</i></u>
	Scheduled Maintenance	\$250K	Footpath grinding funded through Council's operating expenditure.
Bridges	Planned Maintenance	\$110K	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. This AMP proposes to increase this budget line by \$10K ongoing.
	Reactive Maintenance	\$5K	For quick activity work to minimise urgent safety issues. Funded through Council's operating expenditure
Bus Shelters	Shelter Maintenance	\$20K	General maintenance where Charles Sturt is responsible for maintaining bus shelters

Table 4 - Transport Asset Maintenance Strategy

Majority of Council's maintenance programs are funded through capital expenditure due to historical practices. This AMP proposes a review of operating vs capital expenditure for maintenance programs at the conclusion of a future path condition audit to understand the ratio of operational vs capital expenditure for maintenance.

5. 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 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.

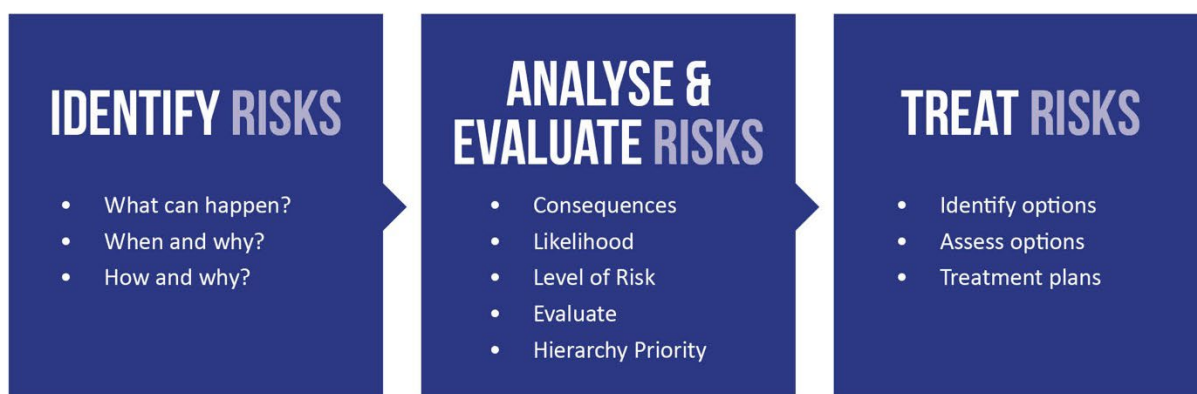


Figure 4 - Risk Management Process

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 10-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 Transport Assets associated with transport routes that may fail prematurely due to increased traffic conditions or climate change impacts.

- Renewal of large kerb and gutter sections that are not associated with the CCS Road Rehab program.
- Renewal of Transport Assets impacted by development or damaged by a third party suddenly.

Operations and maintenance activities and capital projects that cannot be undertaken because of the above will affect 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.

Transport Assets are also exposed to both physical and transition climate change-related risks requiring different types of risk reduction measures:

- **Physical risks (Acute)** result from extreme weather events including storms, floods, and heatwaves. These can damage physical infrastructure and present disruptions to service delivery or asset function.
- **Physical risks (Chronic)** result from the gradual change in climate. For example, increasing frequency and intensity of heavy rainfall events can undermine road surfaces.
- **Transition risks** are associated with the social, economic, and technological transition to a low-carbon economy. These risks can result from policy changes to limit greenhouse gas emissions, technology advancement, and shifts in market supply and demand, including increased demand for low-emissions technologies and products.

Better understanding the scale and extent of these climate change risks on Council's assets will help inform our asset management and planning and identify priorities to build resilience in our assets, so they can function effectively into the future and contribute to the climate resilience of our community.

6. 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 $\pm 5\%$.

Asset valuations

The Overall value of Transport Assets is more than \$1.2 Billion, and the value of each asset class can be found below.

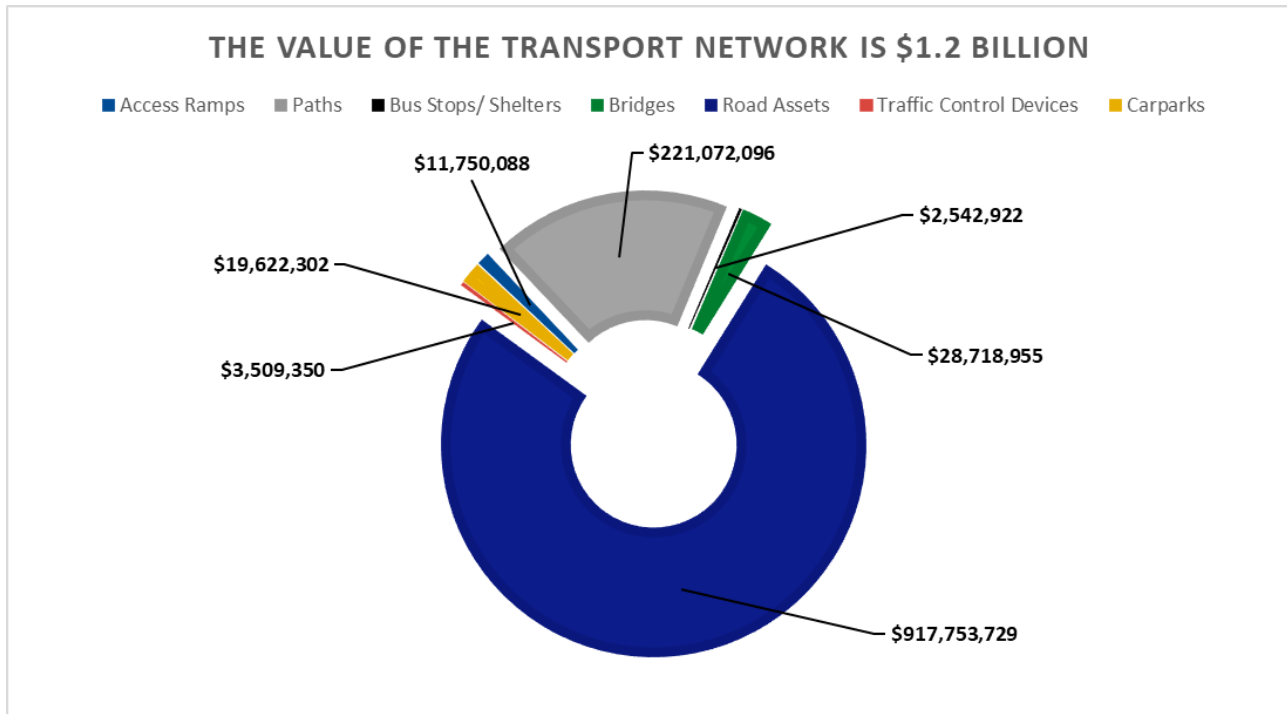


Figure 5 - Transport Asset Network Values

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

• Gross Replacement Cost	\$1,204,969,442.97
• Current Depreciation	\$428,794,956.90
• Carrying Amount	\$777,752,326.40
• Annual Average Asset Consumption	\$15,664,564.42

Gross Replacement Cost

Refers to the current replacement value of all Transport Assets.

Current Depreciation

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

Carrying Amount

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 **\$37,550,447** per year (average operations and maintenance expenditure plus depreciation expense projected over 10 years).

This AMP proposes to make amendments to the current Long Term Financial Plan funding for transport project to re-prioritise spending for major projects (due to external factors altering their programs) and include endorsed income from the State Government for Renewal projects.

The proposed LTFP will ensure that Life cycle expenditure is **102%** 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 2023 real values. It is evident that Transport Assets are the City of Charles Sturts 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 Sturts existing LTFP budget.

7. Building for the future

Future Demand

Our population continues to grow with the current estimated resident population being 124,864. The chart below shows the growth in our City's population in the past 10 years, increasing in that time by more than 14,000 people.

Planning and Land Use Services South Australia forecast high population projections for Adelaide West. It is projected that an average of 642 dwellings per annum will be required in Charles Sturt over the next 30 years. This is slightly less than the last ten years average of 690 dwellings per annum. Based on such projections, over the next 20 years it is expected that population will increase by approximately 30,000 people. This will deliver a greater demand on Transport Assets and the greater Transport Network across the City of Charles Sturt. It is imperative that the City of Charles Sturt continue to invest in the Transport Asset Network to ensure the network remains safe and the network provides availability and expansion for all modes and types of transport.

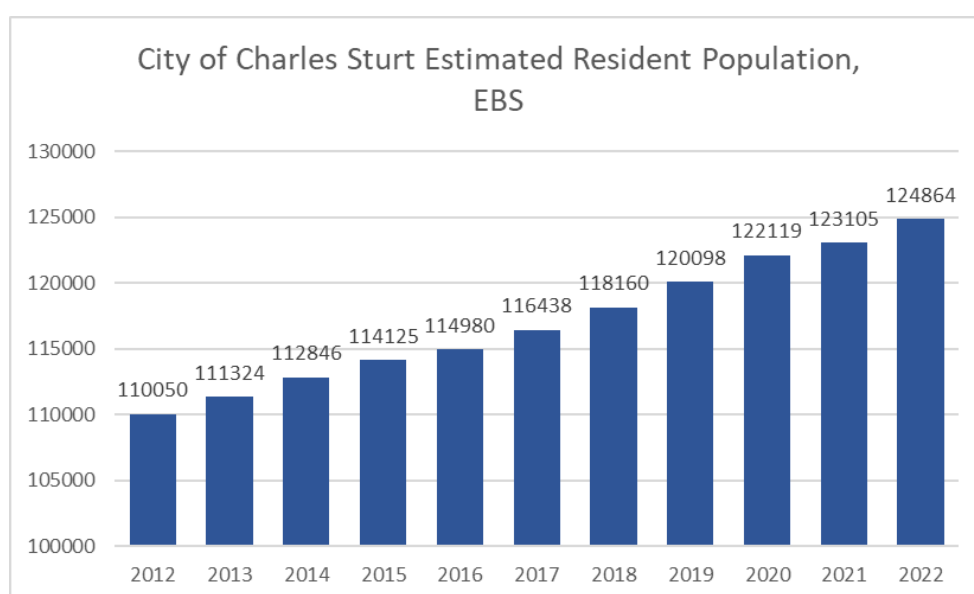


Figure 6 - City's Population Growth

The 30-Year Plan for Greater Adelaide is currently under review as is the City of Charles Sturt Community Plan. Once these strategic documents have been finalised, we will undertake a further review of our Asset Management Plans to ensure that they continue to align or to identify changes that might be required.

Climate Impacts

In response to its climate emergency declaration (2019), Council is seeking to improve its understanding of, and response to, climate change risks and adapt to climate change to 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.

This AMP identifies an improvement for future revisions to develop a decision support tool to understand the vulnerability of our assets to both the physical and economic transition risks of climate change and provides a process for our asset managers to consider climate-resilient response options. Staff will continue to refine this process over time as knowledge and capacity grows with an emphasis on addressing embodied emissions of our Transport Assets.

With climate change, our Transport Assets may be exposed to climate hazards based on their location and their materials and design. As our climate warms and evenings are a better time to be outside, lighting of public spaces may become increasingly important for safe access by our community. Energy efficiency and power reliability will be key objectives for climate resilient public lighting. Consideration of design and materials that consider minimizing impacts to fauna and biodiversity is also key for supporting climate resilience across our city.

Through our asset management planning, we aim to:

- Minimise our greenhouse gas (GHG) emissions.
- Design, construct and manage assets to reduce exposure to, and build resilience to, the impacts of climate change.
- Support the circular economy.
- Consider the whole of lifecycle costs (incl emissions) of managing assets.
- Improve our environment through design, construction, and maintenance of natural and built assets.

Opportunities for Transport Assets to have major positive impact on climate change include the investment into recycled construction materials which diverts CO2 emissions through sustainable construction of Transport Assets, invests in alternative modes of transport (E-scooters, walking and cycling) along with partnering with 3rd party providers to provide such transport facilities (ride share initiatives, EV Chargers, bus shelters etc).

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.

Over the last 5 years Council has progressively begun to invest in the construction of sustainable and recycled road materials. Staff and the industry are now understanding the best way to use recycled materials and can integrate using recycled materials in day-to-day practices for the benefit to our future climate condition.

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.

Staff have begun working with other Council's and state departments to undertake an analysis of Council's current greenhouse gas (GHG) emissions from construction of Transport Assets to lead decision making for best practice design for future renewal projects.

Such items for future renewal strategy and any associated 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.
- Increasing in permeable surface treatments (for paths and streets) – Improve streetscape amenity, assist with flood events and promote natural infiltration for street greening.
- 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.
- Increase in recycled material in construction of Transport Assets and standardising the use of recycled materials in Engineering design standards.

8. 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 Financial Valuation of Road Assets (mid 2023)
- Scheduled Condition Audit of Kerb and Gutter Assets (mid 2020)
- Scheduled Condition Audit of Traffic Control Devices (mid 2021)
- Scheduled Condition Audit of Beach Access Ways (Mid 2023)
- Revision of Major renewal and upgrade programs.
- Revision of Maintenance Strategy for all assets.
- Update of all Transport Asset Data.
- Revision of LTFP's for all Transport Assets.
- Major revision of all maintenance and operational service levels

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 because 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.

Initiative	Status	Year
Implementation of Strategic Asset Management (SAM) System	Completed in 2020	Min 2021
Establishment and confirmation of intervention levels for road preservation treatments	Completed in 2020	2022
Kerb and Gutter asset condition audit	Completed in 2020	2024
Condition Audit of Beach Accessways	Completed in 2023	2024
Condition Audit of Traffic Control Devices	Completed in 2021	2025
Revision of Kerb and Gutter Renewal Strategy	Completed in 2023	2024
Formal Crack Sealing and Road Preservation Program included in Road Rehabilitation Program	Completed in 2020	2023
Future revisions of the Road AMP to include Transport Assets and Bridge Assets	Completed in 2020	2023
Rolling Condition audits and re-valuations 5 years ongoing – due for path and road surface condition audits respectively	Scheduled	2024 and 2025
Review Capital and Operating expenditure practices for Maintenance of Kerb & Gutter and Path Assets	Yet to commence	2025
Review values and LTFP for Traffic Control Devices	Completed in 2023	2025
Undertake lifecycle analysis to understand financial impact of investment into greening and tree canopy strategies for Transport Assets	Yet to commence	2027
Review design standards to support Predicted Future Climate Conditions and climate response initiatives.	Early works commenced	2027

Table 5 - Transport AMP Improvement Plan

9. 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 10-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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