Public Document Pack

CITY OF ADELAIDE

INFRASTRUCTURE AND PUBLIC WORKS COMMITTEE

AGENDA & REPORTS

for the meeting

Tuesday, 19 March 2024
at 7.30 pm

in the Colonel Light Room, Adelaide Town Hall

© 2024 CITY OF ADELAIDE. ALL RIGHTS RESERVED.

COPYRIGHTAGENCY
LICENSED COPY
Tel: +612 9394 7600
www.copyright.com.au

Members – The Right Honourable the Lord Mayor, Dr Jane Lomax-Smith

Councillor Elliott (Deputy Chair)

Councillors Abrahimzadeh, Couros, Davis, Giles, Hou, Li, Martin, Noon, Dr Siebentritt and Snape

1. Acknowledgement of Country

At the opening of the Infrastructure and Public Works Committee meeting, the Chair will state:

'Council acknowledges that we are meeting on traditional Country of the Kaurna people of the Adelaide Plains and pays respect to Elders past and present. We recognise and respect their cultural heritage, beliefs and relationship with the land. We acknowledge that they are of continuing importance to the Kaurna people living today.

And we also extend that respect to other Aboriginal Language Groups and other First Nations who are present today.'

2. Apologies and Leave of Absence

Nil

3. Confirmation of Minutes - 20/2/2024

That the Minutes of the meeting of the Infrastructure and Public Works Committee held 20 February 2024, be taken as read and be confirmed as an accurate record of proceedings.

View public 20 February 2024 Minutes here.

4. Declaration of Conflict of Interest

5. Deputations

6. Workshops

Nil

7. Reports for Recommendation to Council

7.1	Capital Works Monthly Project Update - February 2024	4 - 16
7.2	Melbourne Street Improvements - Update	17 - 21
7.3	St Aloysius College - Transport Safety	22 - 39
7.4	Charles Street Road Closure	40 - 43
7.5	Asset Management Plan - Park Lands and Open Space - Approval for Consultation	44 - 170
7.6	Asset Management Plan - Water Infrastructure - Approval for Consultation	171 - 271
7.7	Asset Management Plan - Public Lighting & Electrical- Approval for Consultation	272 - 368

8. Reports for Noting

Nil

9. Exclusion of the Public 369 - 371

In accordance with sections 90(2), (3) and (7) of the *Local Government Act 1999 (SA)* the Infrastructure and Public Works Committee will consider whether to discuss in confidence the reports contained within section 10 of this Agenda.

10. Confidential Reports for Recommendation to Council

10.1 Adelaide City Connector Deed of Agreement 372 - 377

11. Closure

Capital Project Update – February 2024

Strategic Alignment - Our Corporation

Tuesday, 19 March 2024

Infrastructure and Public Works Committee

Program Contact:
Mark Goudge, Associate Director Infrastructure

Public

Approving Officer:
Tom McCready, Director City Services

EXECUTIVE SUMMARY

This report provides a summary view of the Capital Works Program delivery and financial performance as of 29 February 2024 including a snapshot of headline projects either complete or in progress, future procurement activities and upcoming community consultation and engagement activities.

The Infrastructure Program will present a monthly report to the Infrastructure & Public Works Committee reflecting the previous monthly performance.

RECOMMENDATION

THAT THE INFRASTRUCTURE AND PUBLIC WORKS COMMITTEE RECOMMENDS TO COUNCIL

THAT COUNCIL:

1. Notes the Capital Works Program Update for February 2024 as contained within this report and Attachment A to Item 7.1 on the Agenda for the meeting of the Infrastructure & Public Works Committee held on 19 March 2024.

IMPLICATIONS AND FINANCIALS

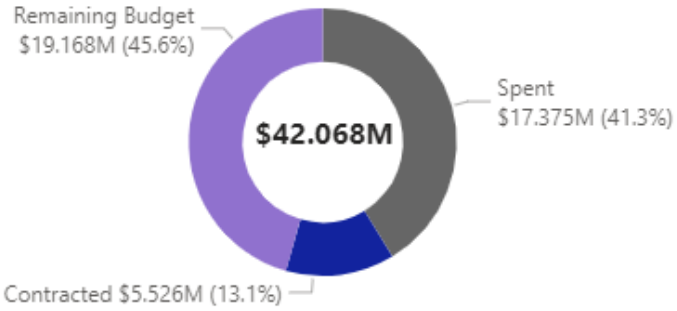
City of Adelaide 2024-2028 Strategic Plan	Strategic Alignment – Our Corporation Strategy, Value and Efficiency - Strategic and Capital Projects are delivered on time and on budget (target 75%)
Policy	Not as a result of this report
Consultation	Consultation to various levels as required for the delivery of each project has or will be undertaken.
Resource	Projects delivered through a combination of Council resources, contract staff and external contractors and suppliers.
Risk / Legal / Legislative	Not as a result of this report
Opportunities	Not as a result of this report
23/24 Budget Allocation	This report tracks capital works performance against the 2023/24 Capital Works budget of $110.336m
Proposed 24/25 Budget Allocation	Not as a result of this report
Life of Project, Service, Initiative or (Expectancy of) Asset	Life expectancy of assets varies by asset class.
23/24 Budget Reconsideration (if applicable)	Not as a result of this report
Ongoing Costs (eg maintenance cost)	Ongoing costs for the maintenance of new and/or renewed assets will be factored into future Asset Management and Maintenance Plans, Business Plans and Budgets.
Other Funding Sources	Projects reported on are primarily funded from Council's Capital Budget, however various State and Federal grant funding opportunities have been leveraged against a number of projects.

DISCUSSION

1. The total revised Capital Expenditure Budget for 2023/24 approved by Council is $110.336m.
2. The Capital Works Program is itemised as follows.
    2.1. Major Projects are defined as complex projects identified through Council strategies and plans; the funding allocated within 2023/24 financial period total $42.068m.
    2.2. New and Upgrade Projects are defined as installation of new infrastructure and upgrades to existing infrastructure, identified through Council strategies and plans, the funding allocated within 2023/24 financial period total $14.115m.
    2.3. Renewal Projects are defined as renewals and maintenance works which are aligned to Asset Management Plans and current assets, the funding allocated within 2023/24 financial period total $54.153m.
3. The monthly Capital Works Update will provide the status of these three capital programs as at the end of each calendar month.

Major Projects

4. Major Projects as of 29 February 2024 reflects $17.375m in spend and a further $5.526m in contracted works.

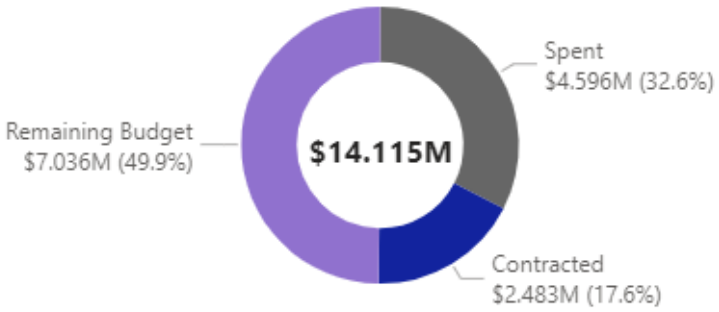


5. Examples of Major Projects within this category are:
    5.1. Pitt Street Improvements
    5.2. Rymill Park / Murlawirrapurka (Park 14) Lake Upgrade
    5.3. Melbourne Street Improvements
6. Major Project Summary:
    6.1. The Street Lighting LED project was completed in February. Works were undertaken to ensure that Street Lighting LED assets across the CBD are effectively maintained to deliver safe, secure, and continuous lighting to residents, visitors, and community.
    6.2. The Rymill Park Lake Upgrade project continues to make good progress, despite the tight program and risk of latent conditions and possible weather impacts. The project successfully removed contaminated soil from site over the previous month and has worked closely with event stakeholders at the Adelaide Fringe, Gluttony and the upcoming Adelaide Equestrian Festival to minimise disruption from construction activity.
    6.3. The Brownhill Keswick Creek (BHKC) project board recently endorsed their organisation entering a contract with City of Adelaide to allow us to undertake works associated with the Rymill Park Lake Upstream supply project. This is an important outcome that will ensure a consistent water source for the Lake.
    6.4. Gouger Street project is actively seeking community participation for design and scope requirements, with intention of holding 2 community workshops. Invitations to residents were distributed in February 2024 for participation at these events. Priorities are to be determined, with likely focus areas to include roads and footpaths, integration of public art opportunities, enhanced parking facilities, safety measures, lighting, and greening elements.
    6.5. Pitt Street improvements continue at pace, with works outside of Uniting Communities now completed including asphalt and concrete. A new work zone has been installed along the eastern side of Pitt

Street, between Hotel Metropolitan and Pitt Street Café to upgrade stormwater infrastructure. The project remains on budget and is scheduled for completion in mid-2024.

New and Upgrade

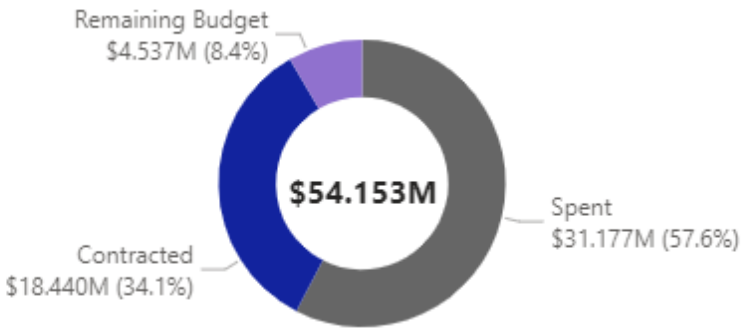
7. New and Upgrade Projects as of 29 February 2024 reflects $4.596m in spend and a further $2.483m in contracted works.



8. Examples of New and Upgrade Projects within this category are:
   - 8.1. Hutt Road Earthen Levee embankment
   - 8.2. Greener City Streets Program
   - 8.3. Light Square Electrical Installation
9. New and Upgrade Summary:
   - 9.1. There were 3 practical completions achieved last month which included: The Brougham Place Footpath improvements and Greening project, Currie Street and Morphett Street intersection Traffic Signal Safety Upgrade, and the Art Journeys project which delivered display cases and artwork onto Bentham Street.
   - 9.2. Construction of an earthen levee embankment as a stormwater risk mitigation solution in Carriageway Park / Tuthangga (Park 17) has progressed with the concept design completed and detailed design progressing. The project is expected to be completed by the end of June 2024.
   - 9.3. The Greener City Streets program has 5 of the 10 streets either completed or progressing at different stages – completed streets include: Tapley Street, Cairns Street, Hamilton Place, Gray Street and Brougham Place, while greening projects in progress include Ada Street, Wyatt Street (South), Wyatt Street (North), Walter Street, and Charlotte Street.
   - 9.4. The Field Street upgrade project aims to improve amenity through widened footpaths, pedestrian facilities and vehicle calming. Recent investigation on several difficult service locations, including gas has seen slight delays, but these have been overcome, and contracted work is expected to commence in earnest March 2024.
   - 9.5. Design of the Hutt Road / Parkland Trail signalised crossing is complete, and procurement is currently underway with the intention of construction timing to coincide with the Hutt Street entry statement project. The broader Hutt Road project comprises multiple scope elements; this flagship work will enhance the entrance to the Southwest city corridor and is expected to commence in March 2024.

Renewal Projects

10. Renewal Projects as of 29 February 2024 reflects $31.177m in spend and a further $18.440m in contracted works.



11. Examples of Renewal Projects within this category:
    11.1. Adelaide Town Hall Façade
    11.2. Hindley Street Toilet
    11.3. Field Street Improvements
12. Renewal Project Summary:
    12.1. There were 11 renewals projects reaching practical completions last month including:
        12.1.1. Footpath renewals – Brougham Gardens West
        12.1.2. Footpath renewal Red Gum Park / Karrawirra (Park 12) South Bank
        12.1.3. Traffic Signal Lantern Renewal Program
        12.1.4. Accelerated works (various) – Golf links
        12.1.5. Currie Street and Morphett Street Intersection Traffic Signal Safety Upgrade
        12.1.6. Jeffcott Street South
        12.1.7. Road Resurfacing: Anster Street and Surrounding Lanes / Waymouth Street to Dead End
        12.1.8. Road Resurfacing: Vardon Avenue - Rundle Street to East Terrace
        12.1.9. Street Lighting LED Renewals
        12.1.10. Traffic Signals
        12.1.11. Urban Elements – Retaining Wall Renewal Program.
    12.2. The renewals program continues to progress well, with over 90% of its budget contracted or committed, and 58% spent to date. The cities roads program is contributing to this performance and is more than 80% delivered.
    12.3. The Adelaide Town Hall Façade works are progressing well. Upper level works along the Pirie Street façade have been completed and following the removal of the gantry attention has now turned to completing ground floor works including restoration of stonework and rendering, damp proof course installation, painting of windows and restoration of slate thresholds at entry points. The King William Street Heritage Conservation works have now commenced. Practical completion of the project remains on track and is expected in December 2024.
13. Our footpath focus continues around the city; over the last month multiple footpath renewals have included:
    13.1. Bundey's Paddock
    13.2. Brougham Gardens West
    13.3. LeFevre Park / Nantu Wama (Park 6) Lefevre Terrace Footpath Renewal
    13.4. West Terrace Footpath Renewal
    13.5. King Rodney Park / Ityamai-itpina (Park 15) Access Path Footpath and Road Renewal

Capital Works Program

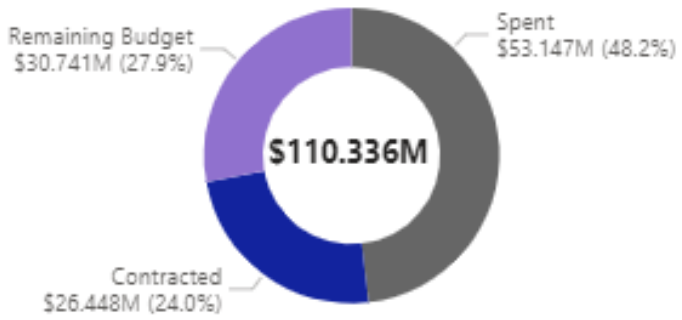
14. There are 395 projects within the approved 2023/24 financial year.

15. Within the 2023/24 Capital Works Program there are currently 108 projects within the Initiate, Concept and Design phase.

16. The total value of projects within the Initiate, Concept and Design Phase is $8.399m.

17. There are 287 projects in Delivery Phase with a total value of $101.938m. Of these projects, 102 have reached practical completion: 83 Renewals, 16 New & Upgrade and 3 Major Projects.

18. The total expenditure against the Capital Works Program to the end of February 2024 is $53.147m spent with a further $26.448m contracted, totalling $76.595m in the first eight months.

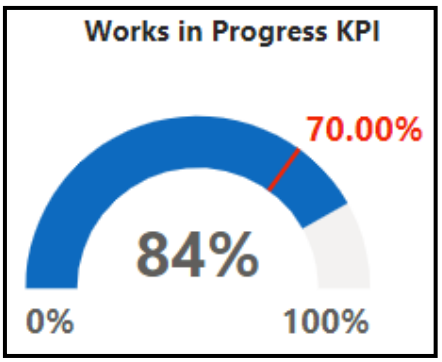


19. Summary of commitments and expenditure by asset class for month of February:

Capital Works	No. of Projects	Approved Budget	Commitments	Expenditure	Remaining Budget
Asset Renewals	**306**	**$54.153M**	**$18.440M**	**$31.177M**	**$4.537M**
Corporate Overhead		$5.500M	$0.000M	$3.805M	$1.695M
Major Projects	10	$6.110M	$3.474M	$2.491M	$0.145M
New/Upgrade Projects	23	$1.397M	$0.043M	$0.184M	$1.169M
Bridges	4	$0.360M	$0.000M	$0.123M	$0.237M
Buildings	41	$9.455M	$5.434M	$4.254M	($0.232M)
ICT Renewals	7	$1.793M	$0.467M	$1.324M	$0.002M
Light'g & Electrical	20	$1.491M	$1.331M	$0.540M	($0.379M)
Park Lands Assets	16	$3.100M	$0.507M	$2.551M	$0.042M
Plant and Fleet	5	$3.501M	$1.382M	$1.869M	$0.250M
Traffic Signal	12	$2.188M	$0.210M	$1.739M	$0.238M
Transport	114	$13.796M	$3.367M	$9.460M	$0.968M
Urban Elements	47	$3.795M	$1.273M	$1.506M	$1.016M
Water Infrastructure	7	$1.668M	$0.951M	$1.331M	($0.614M)
Major Projects	**26**	**$42.068M**	**$5.526M**	**$17.375M**	**$19.168M**
New/Upgrade Projects	**95**	**$14.115M**	**$2.483M**	**$4.596M**	**$7.036M**
Total	**395**	**$110.336M**	**$26.448M**	**$53.147M**	**$30.741M**

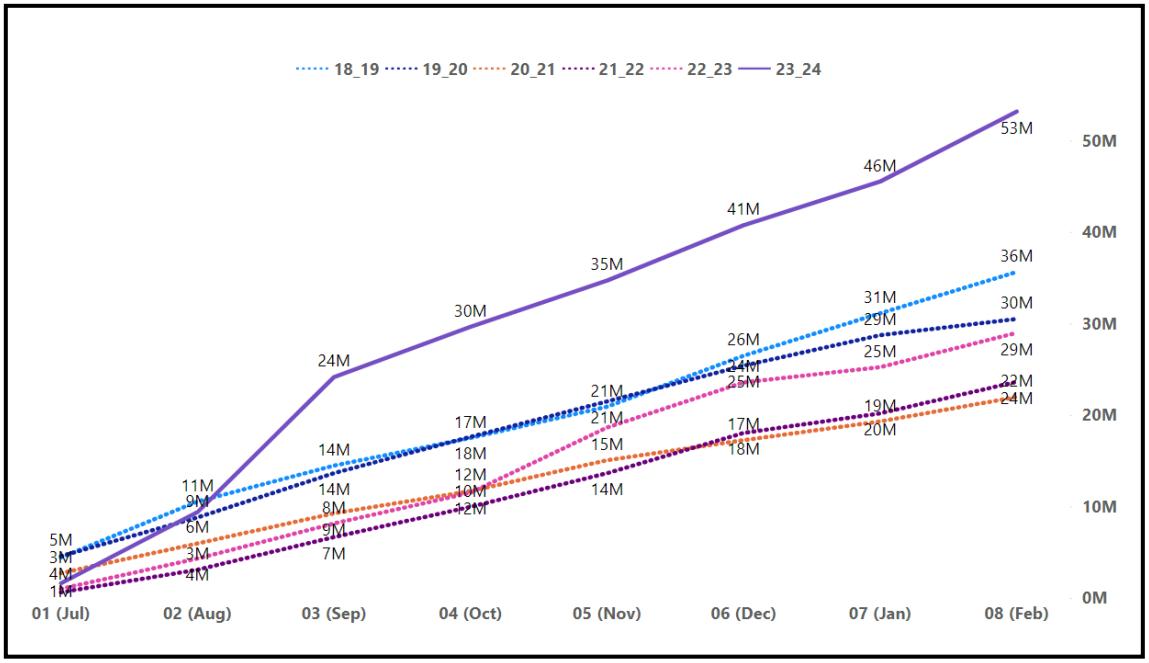
20. Examples of those works completed or in progress are reflected in **Attachment A - Capital Works**

21. Works in Progress (WIP) is the capitalisation of projects within 10 weeks following Practical Completion. WIP currently sits at 84%. The WIP KPI is 70%.



Capital Works Year on Year Spend Profile

22. The profile for February 2024 reflects a 46% higher capital spend of $53.147m year to date compared to $28.977m in February 2023.



Future Procurement Activities

23. The following procurement activities are currently being undertaken or will commence shortly:

    23.1. North-South Bikeways – award pending.

    23.2. Hutt Street Entry Statement – award pending.

    23.3. Hindley Street Project Management – award pending.

Future Community Consultation and Engagement Activities

24. The following are some of the community consultation activities and engagements that are ongoing or planned:

    24.1. Gouger Street revitalisation – Community Workshop invitations distributed.

    24.2. Vincent Street – Community Engagement plan developed.

    24.3. Field Street – various street meetings and letter drop.

25. The information provided reflects the first eight months of the 2023/24 financial year. For further details on the 2023/34 Capital Program, the Council Member Corporate Dashboard has a dedicated Capital Works section.

26. Should Council Members wish to understand the progress of a specific project/s outside of those highlighted, the Director, City Services and Associate Director, Infrastructure can be contacted to discuss.

ATTACHMENTS

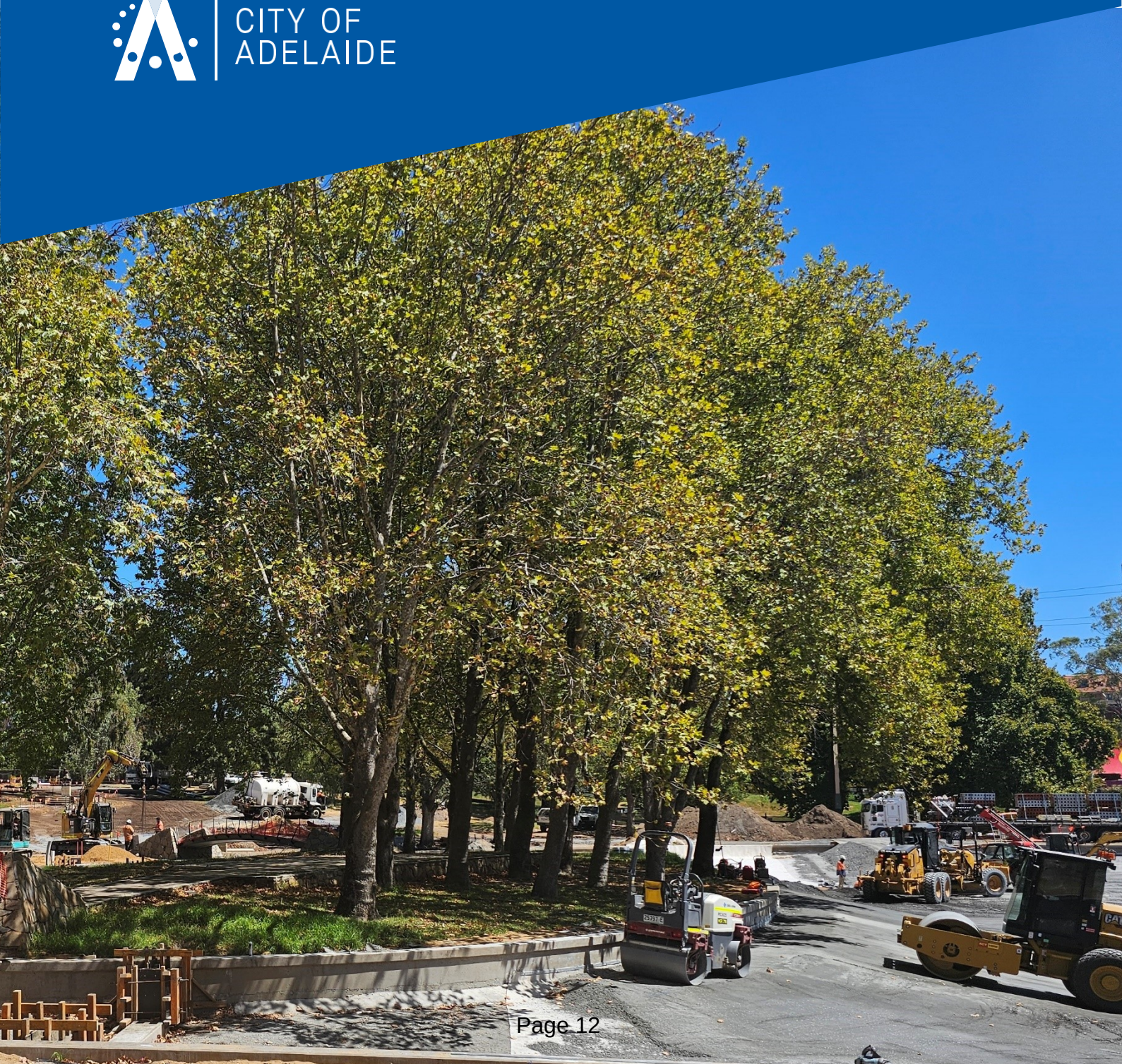
Attachment A – Capital Works Projects in Focus – February 2024

- END OF REPORT -

Capital Works
February Update
Infrastructure & Public Works Committee

This report provides an overview of Capital Projects either complete or progressing for the month of February 2024.

CITY OF ADELAIDE



Rymill Park Lake

$5.6m lake

Major Project

The Rymill Park lake base has been completed, the raingarden structures are constructed, and the underground storage tanks are progressing well.

Works have now started on the lake perimeter paths, preparing for turf to be laid and planting in the raingardens.

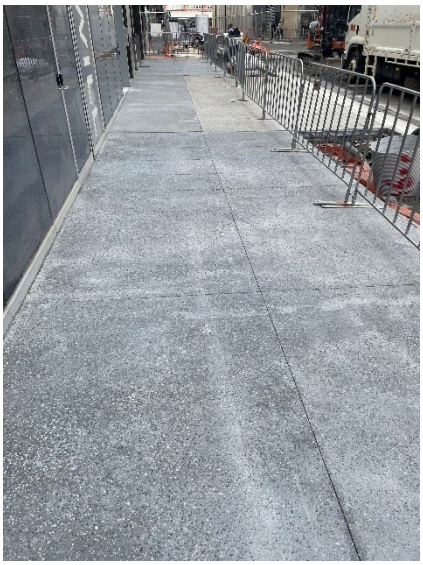
The final works include electrical and lighting works, and a significant program of turf installation.

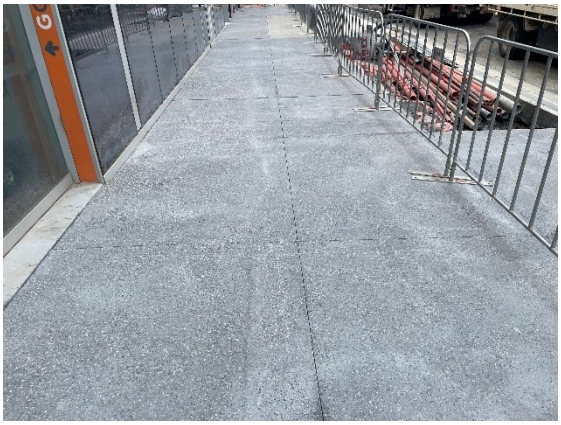
We anticipate the project will reach practical completion in early April.

Pitt Street

$2.65m

Major Project





Works are continuing on the Eastern side of Pitt Street with the first section of exposed concrete footpath being placed in February.

Stakeholder engagement continues during construction with weekly bulletins being distributed.

Works are on track to be completed in mid-2024.

Rymill Park Upstream Supply

$1m

New & Upgrade

The new pipeline from Rymill Park to the Victoria Park wetland is now installed and has been tested.

Final plumbing and electrical works will be completed in late March when the new connection will be commissioned.

Adelaide Town Hall Façade

$4.96m

Renewal

Works are progressing well on the Pirie Street Façade.

The following lower-level works commenced in February:

- Low level stone and render including damp proof course.
- Painting windows on ground floor.
- Slate work to steps.

King William Street Heritage Conservation works commenced in early March.

Practical completion is expected in December 2024.

Access Road & Shared Use Path Renewal

King Rodney Park / Ityamai-itpina (Park 15)

$188,000

Renewal

Works commenced on Monday 26 February to renew the asphalt pathway through King Rodney Park / Ityamai-itpina (Park 15).

Works are expected to be completed in late March.

Footpath Renewal

West Terrace

$337,000

Renewal

Works started on 29 January to renew five sections of footpath along West Terrace. Works were completed on 16 February.

Works included the replacement of drains and kerbing, renewing tree surrounds, removing redundant service pits and rectifying tree root damage.

Note: January Capital Works Report stated a project cost of $325,000. The updated project cost is the actual cost and includes $12,000 of variations, not known at time of the January report.

Footpath Renewal

Bundey's Paddock / Tidlangga (Park 9)

$60,000

Renewal

Works were completed on 16 February.

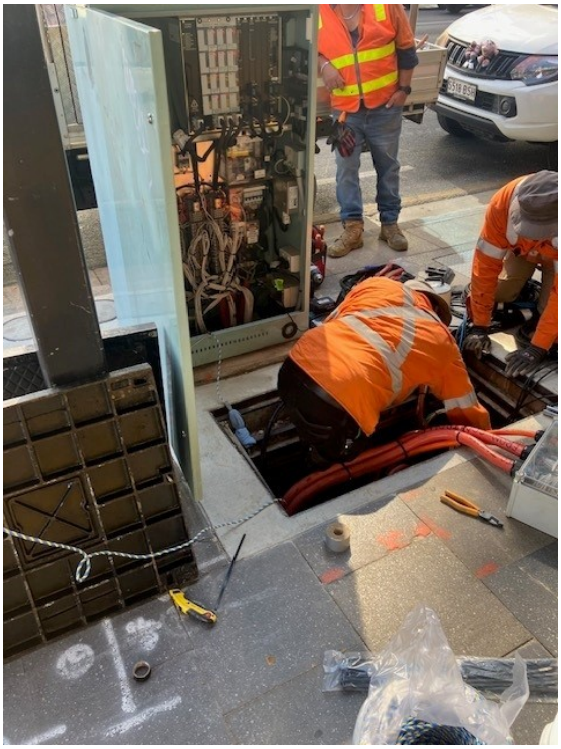
Renewal of pathway with exposed aggregate and reserve entrance with asphalt.

Traffic Signal Cables and Conduits Replacement

Pulteney Street / Angas Street

$327,000

Renewal



Renewal of conduits and cables of the traffic signals.

Works commenced in mid-February and were completed in mid-March.

Melbourne Street Improvements - Update

Strategic Alignment - Our Places

Public

Tuesday, 19 March 2024

Infrastructure and Public Works Committee

Program Contact:
Mark Goudge, Associate Director Infrastructure

Approving Officer:
Tom McCready, Director City Services

EXECUTIVE SUMMARY

Following a State Government election commitment of $1 million for Melbourne Street to undertake main street improvement works, public realm and placemaking upgrades to revitalise the precinct, the City of Adelaide entered into a grant funding agreement with the Government of South Australia in July 2022.

At its meeting on 9 August 2022, Council approved key deliverables of the grant including rationalisation and refurbishment of the flag poles and street furniture and a pedestrian crossing at Ronald McDonald House.

Since this time, the Government of South Australia, through the Department for Infrastructure and Transport, has advised that the grant funding is to be used for an amended list of deliverables. This includes focusing on street amenity through planter boxes, hanging baskets, lighting and signage for the Dunn Street Car Park.

This report provides a brief update on the change in scope and advises current status of works planned to be undertaken and funded by this grant.

RECOMMENDATION

The following recommendation will be presented to Council on 26 March 2024 for consideration:

THAT THE INFRASTRUCTURE AND PUBLIC WORKS COMMITTEE RECOMMENDS TO COUNCIL

THAT COUNCIL

1. Notes that in February 2024, the Department for Infrastructure and Transport, responsible for overseeing the grant agreement on behalf of the Government of South Australia, presented an alternative set of key deliverables eligible for funding under the grant. This revised list includes:
    1.1. Planter boxes, with consistency along the whole street.
    1.2. Installation of hanging baskets.
    1.3. Implementation of real-time vacant space signage for Dunn Street Car Park.
    1.4. Addition of tree bud lighting at Melbourne Street Plaza, specifically at the junction of Jerningham Street and Melbourne Street.
    1.5. Installation of under veranda festoon lighting for safety and ambiance, similar to lighting on O'Connell Street between Lombard and Gover streets, to support local restaurants.
    1.6. Retrofitting of banner brackets to existing entryway flag poles at Mann Terrace and Brougham Place ends of Melbourne Street.
    1.7. Upgrading and relocation of street furniture, along with the rationalisation and decluttering of existing infrastructure.
2. Notes that the construction of a wombat crossing in front of the Ronald McDonald House on Melbourne Street will not be funded through the Government of South Australia grant.

3. Notes the construction of wombat crossings on Melbourne Street remains part of Council's Main Streets Revitalisation Master Plan for Melbourne Street and design and planning works undertaken to date on the crossing will benefit any future construction opportunities.

IMPLICATIONS AND FINANCIALS

City of Adelaide 2024-2028 Strategic Plan	Strategic Alignment – Our Places Deliver quality street and laneway upgrades, mainstreets, precincts, and neighbourhood revitalisation and improvements that make Adelaide well-designed, safe and unique.
Policy	Not as a result of this report
Consultation	Stakeholder and community engagement has been ongoing, with feedback collected and assessed to help inform planned activities. An update regarding the status of the previously proposed wombat crossing works shall be provided to the community and stakeholders via a YourSay Adelaide update.
Resource	Not as a result of this report
Risk / Legal / Legislative	Risks and liabilities associated with installing lighting infrastructure on private property would need to be managed and mitigated by formal agreement with property owners; installation to relevant codes, technical standards and legislative requirements; regular maintenance; insurance arrangements and acceptance of residual risk.
Opportunities	Availing of the grant fund to implement scope that supports revitalisation of the street reduces Council's need to fund the works.
23/24 Budget Allocation	$694,762 (100% grant funded)
Proposed 24/25 Budget Allocation	$150,000 (100% grant funded)
Life of Project, Service, Initiative or (Expectancy of) Asset	Planter boxes – 10 to 15 years. Vegetation – 4 years Hanging baskets – approximately 5 years for infrastructure, plants 6 to 12 months. Dunn Street Car Parking sign system. Sensors - 5 years. Electronic sign/s 10 years Tree bud lighting – 5 years Under veranda lighting – 10 years Entry statement banner brackets – 30 years Bike racks – 15 years Seats – 20 years Bins – 10 years
23/24 Budget Reconsideration (if applicable)	Not as a result of this report
Ongoing Costs (eg maintenance cost)	Ongoing maintenance and operational costs associated the revised scope have not yet been assessed in detail. Once assessed, any cost implications will be incorporated into Council's future business plan and budget approvals processes.
Other Funding Sources	The entirety of the funding is sourced via the Government of South Australia's $1m Community Infrastructure Grants Program and has already been received. 2022/23: $155,238 (primarily related to temporary footpath extension works)

DISCUSSION

1. On 21 July 2022, the City of Adelaide (CoA) accepted a grant offer from the Government of South Australia following an election commitment of $1 million for Melbourne Street to undertake main street improvement works, public realm and placemaking upgrades to revitalise the precinct.

2. At its meeting on 9 August 2022 (Link 1), Council approved the proposed key deliverables:

   'That Council:

   2. Approves the proposed key deliverables for the State Government's funding of $1 million for Melbourne Street as detailed in Attachment B to Item 10.9 on the Agenda for the meeting of the Council held on 9 August 2022:

   2.1. Rationalisation and refurbishment of the flag poles including an illuminated public art gateway to the precinct.

   2.2. Rationalisation and refurbishment of non-fixed and fixed street furniture (including planter boxes).

   2.3. Installation of a pedestrian crossing to facilitate a safe crossing point for Ronald MacDonald House patrons and surrounding businesses.'

3. Since then, the Administration has installed temporary footpath extensions at two locations on Melbourne Street (one at the Lord Melbourne Hotel and the other at the recently completed Botten & Bowser development) and progressed planning and detailed design for the approved key deliverables and associated works. This also included detailed designs for a proposed wombat crossing.

4. Upon further consideration of the alignment of the proposal to fund a pedestrian (wombat type) crossing relative to the purpose of the grant, and with input from Ms Lucy Hood MP, Member for Adelaide, in February 2024, the Department for Infrastructure and Transport, on behalf of the Government of South Australia, advised the Administration of its preference to no longer fund the proposed wombat crossing and instead prioritise the delivery of the following key items:

   4.1. Planter boxes, with consistency along the whole street.

   4.2. Hanging baskets.

   4.3. Dunn Street Car Park signage, which would show number of vacant spaces – indicating real-time available spaces.

   4.4. Tree bud lighting to trees at Melbourne Street Plaza at the junction of Jerningham Street and Melbourne Street.

   4.5. Under veranda festoon lighting for safety and ambiance similar to lighting installed on O'Connell Street, between Lombard and Gover streets to support O'Connell restaurants.

   4.6. Retrofit of banner brackets to existing entry way flag poles and Mann Terrace and Brougham Place ends of the Melbourne Street.

   4.7. New street furniture / relocation / rationalisation.

5. Sixteen new planter boxes have been procured and will be prepared and installed at carefully selected locations on the street. Old planter boxes will be removed. No privately owned planter boxes will be removed. Locations for new and removal of old planter boxes have been carefully selected based on principles of de-cluttering the street, rationalising overall street furniture, improving pedestrian accessibility and visitor experience as well as feedback from the community.

6. Installation of new bicycle racks and relocation of seats and bins are planned. The location of these activities has also been carefully selected based on principles of de-cluttering the street, rationalising overall street furniture, improving pedestrian accessibility and visitor experience as well as feedback from the community.

Next Steps

7. The Administration has commenced planning for the implementation of the revised key deliverables.

8. Implementation of the proposed lighting infrastructure to private property would likely present many challenges, risks and issues for the CoA. Any lighting attached to private property is ideally owned, installed and managed by the property owner. The Administration's preference would be to not install lighting infrastructure to private structures or private trees as this leads to further complexity for the CoA. For instance, these would include, but not be limited to, matters such as:

   8.1. Requirement to establish and manage approval/operating/access agreements with multiple property owners.

8.2. Liability risks associated with structural damage aspects of mounting equipment to privately owned infrastructure.

8.3. Liability risks associated with potential personal injury to members of the public.

8.4. Approvals required from utilities service providers for provision of unmetered power and associated requirements.

8.5. Additional financial burden to the CoA for whole of life maintenance, operational and renewal costs.

9. As an alternative to CoA installing and owning under-veranda lighting infrastructure on private property and to mitigate or eliminate the risks outlined in item 8 above, the Administration will explore and consider some form of grant incentive or the like which may assist interested and eligible parties to install their own under-veranda lighting. Under such a scheme, property owners would own and be responsible for the installation, maintenance and energy supply for such lighting. Parameters and mechanisms that would need to be established and implemented, would include things such as;

9.1. Eligibility criteria

9.2. The upper limit value of individual grants available

9.3. Form of legal grant agreement covering various matters such as the mechanism and timing of payments, timing of works, insurance, liabilities and indemnities as well as technical and aesthetic standards to be adhered to.

DATA AND SUPPORTING INFORMATION

Link 1 - Council report dated 9 August 2022

ATTACHMENTS

Nil

- END OF REPORT -

St Aloysius College – Transport Safety

Strategic Alignment - Our Places

Public

Tuesday, 19 March 2024

Infrastructure and Public Works Committee

Program Contact:
Mark Goudge, Associate Director Infrastructure

Approving Officer:
Tom McCready, Director City Services

EXECUTIVE SUMMARY

At its meeting on 31 January 2023, Council resolved for the Administration to investigate and report by the end of the 2023 school year on the need for and the nature of any additional measures to enhance the safety of primary and secondary, public and private school children entering and leaving schools at the beginning and end of the school day, including the introduction of supervised or unsupervised “kiss and drop zones” at all schools in the City of Adelaide.

The Administration has undertaken a trial study of school drop off/pick up safety at St Aloysius College. St Aloysius College was made a priority due to the crash on Angas Street in June 2023 and ongoing safety concerns.

The review focussed on the streets immediately adjacent to the school and issues on these streets with informal crossing and dangerous driving behaviours. Based on this review, it is recommended that Council supports implementation of measures to prevent illegal U-turns on Angas Street, a median closure on Wakefield Street and the application to the Department for Infrastructure and Transport (DIT) to extend the school zone. Pending the outcomes of the speed limit review, implementation of a wombat or zebra crossing at the existing refuge island crossing on Angas Street should be investigated further. Any supervision of “kiss and drop zones” will remain the responsibility of the school.

RECOMMENDATION

The following recommendation will be presented to Council on 26 March 2024 for consideration

THAT THE INFRASTRUCTURE AND PUBLIC WORKS COMMITTEE RECOMMENDS TO COUNCIL

THAT COUNCIL

1. Receives the InfraPlan School Safety Review – St Aloysius College report included in Attachment A to Item 7.3 on the Agenda for the meeting of the Infrastructure and Public Works Committee held on 19 March 2024, including recommendations to:
   - 1.1. Install flexi-posts on Angas Street to reinforce where movements are illegal;
   - 1.2. Implement a median closure on Wakefield Street at Chancery Lane; and
   - 1.3. Apply to the Department for Infrastructure and Transport to extend the school zone on Angas Street.
2. Notes that Administration will review options for additional and/or safer crossings on Angas Street following the Speed Limit Review.
3. Notes similar reviews for all other schools within the City of Adelaide are currently unfunded and subject to funding approval in the 2024/2025 Business Plan and Budget.

IMPLICATIONS AND FINANCIALS

City of Adelaide 2024-2028 Strategic Plan	Strategic Alignment – Our Places Community assets are adaptable and responsibly maintained. Create safe, inclusive and healthy places for our community.
Policy	Not as a result of this report
Consultation	Consultation undertaken with St Aloysius College.
Resource	Not as a result of this report.
Risk / Legal / Legislative	As set out in *South Australia's Road Safety Strategy to 2031* Council, as a Road Authority, has a shared responsibility for road safety outcomes and to seek Safe System outcomes.
Opportunities	Opportunity to improve safety for students around St Aloysius College during school drop off and pick up times.
23/24 Budget Allocation	Not as a result of this report
Proposed 24/25 Budget Allocation	$80,000 for a Consultant to undertake the school zone reviews. $500,000 to commence implementing recommendations from the reviews, over two years. The item that is the subject of this report is currently unfunded. Any required funding for this item is subject to, and needs to be considered in the context of, the prioritisation of projects, initiatives and service enhancements for the development of the 2024/25 budget, and within the parameters of the LTFP to ensure long-term financial sustainability.
Life of Project, Service, Initiative or (Expectancy of) Asset	Reviews will be undertaken in 2024/25 subject to funding.
23/24 Budget Reconsideration (if applicable)	Not as a result of this report
Ongoing Costs (eg maintenance cost)	Not as a result of this report
Other Funding Sources	DIT grants may be available for implementation of projects.

DISCUSSION

Background

1. At its meeting on 31 January 2023, Council resolved the following:

   "That Council:

   Asks the Administration to investigate and to report to the appropriate Council Committee by the end of the 2023 school year the need for and the nature of any additional measures to enhance the safety of primary and secondary, public and private school students entering and leaving schools at the beginning and end of the school day, including the introduction of supervised or unsupervised so called "kiss and drop zones" at all schools in the City of Adelaide."

St Aloysius Transport Safety Review

2. An external consultant (InfraPlan) was engaged to undertake a safety review of the streets immediately adjacent to St Aloysius College in collaboration with City of Adelaide's Traffic and Transport team.

3. The consultant held a meeting with St Aloysius College management on Wednesday 18 October 2023 followed by a site survey. Discussion was focussed on improving the safety of the existing" kiss and drop zone".

4. The consultant attended the site at school pick-up on 18 October 2023 and observed behaviours and vehicle movements around the school.

5. The consultant produced a School Safety Review – St Aloysius College report, providing details of their site investigations and suggested measures to address existing road safety issues around the school. A copy of the InfraPlan report can be viewed in **Attachment A**.

6. Investigations / site review outcomes

   6.1. About 60% of drop-off and pick-up of students by car are on Angas Street (aligning with the primary school entrance), about 30% on Wakefield Street and about 10% on Chancery Lane.

   6.2. Some students use school buses which load/unload within the school site and egress on Angas Street. It is anticipated that students would be using public transport from nearby Victoria Square and older students would be drawn to Rundle Mall via Gawler Place (and may use this route to buses on Grenfell Street).

   6.3. The Consultant observed that some parents/carers are waiting for car parking spaces within the cycle lanes, undertaking illegal manoeuvres such as crossing double white lines to undertake U-turns and crossing double white lines to enter a car park.

   6.4. There is currently a pedestrian actuated crossing (PAC) on Wakefield Street which caters for the students' walking/wheeling desire lines. On Angas Street, the existing PAC is just west of Moore Street (and Chancery Lane) and there is a pedestrian refuge on the eastern side of Victoria Square. There is about 170m between this crossing points and both are in 50km/h speed areas (neither is covered by the 25km/h school zone). Parents are parking on both sides of Angas Streets and high rates of uncontrolled crossings of Angas Street were observed.

   6.5. There is a school zone along Chancery Lane and parallel car spaces on either side of the street to cater for school parent/carer car pick-up and drop-off between 8-9am and 3-6pm. The Consultant identified that queues along Chancery Lane due to drivers waiting to turn right onto Wakefield Street may be contributing to parents/carers having a preference for dropping students on Angas Street.

7. The Consultant proposed the following:

   7.1. To help address the risk to children and other people crossing Angas Street additional school zone signage and potential extension of the school zone to cover the pedestrian refuge and PAC on Angas Street.

   7.2. To eliminate the risks created by people doing illegal U-turns and parking manoeuvres across the existing centreline markings on Angas Street, install a median. This could be done using flexi posts in the short-term, with further investigation into the layout, potentially with another pedestrian refuge and kerb ramps.

   7.3. To make Chancery Lane more attractive for parents/carers to use for drop-off and pick-up rather than Angas Street, improve motorised vehicle traffic flow along Chancery Lane by modifying the median and implement a right turn ban onto Wakefield Street.

   7.4. To help address parking behaviours, information to be provided by the school to parents/carers about Road Rules and expectations to keep children and other road users safe.

7.5. To assist with safer crossing of Angas Street, investigate installing a PAC within the school zone on Angas Street.

7.6. The Consultant did not recommend new supervised or unsupervised ‘kiss and drop zones’.

Impacts

8. The recommended changes are not envisaged to result in a significant impact to vehicle travel times in and around the location of the changes. Installing infrastructure to prevent motorists from performing an illegal U-turn is expected to facilitate improved traffic movements.

Next steps

9. This review focused on immediate and measurable outcomes for school safety at St Aloysius College.

10. Implementing the recommended infrastructure changes in this report is unfunded and needs to be considered in the context of, the prioritisation of projects, initiatives and service enhancements for the development of the 2024/25 Business Plan and Budget, and within the parameters of the Long Term Financial Plan to ensure long-term financial sustainability.

11. A broader review of school zones within the City of Adelaide is unfunded and needs to be considered in the context of, the prioritisation of projects, initiatives and service enhancements for the development of the 2024/25 Business Plan and Budget, and within the parameters of the Long Term Financial Plan to ensure long-term financial sustainability.

ATTACHMENTS

Attachment A – InfraPlan School Safety Review – St Aloysius College

Attachment B - List of schools within City of Adelaide

- END OF REPORT -

infraPlan

CITY OF ADELAIDE – SCHOOL SAFETY REVIEW

St Aloysius College

December 2023

©InfraPlan Pty Ltd 2023

The information contained in this document produced by InfraPlan Pty Ltd is solely for the use of the Client for the purposes for which it has been prepared and InfraPlan Pty Ltd undertakes no duty or accepts any responsibility to any third party who may rely on this document.

All rights reserved. No sections or elements of this document may be removed from this document, reproduced, electronically stored or transmitted in any form without the written permission of InfraPlan Pty Ltd.

Because of the statistical nature of this report, care should be taken in interpreting the data presented throughout. Although every effort has been made to ensure the accuracy of the information included in this report, InfraPlan Pty Ltd and its contractors make no representations, either express or implied, that the information is accurate or fit for any purpose and expressly disclaims all liability for loss or damage arising from reliance upon the information in this report.

Project Name	CITY OF ADELAIDE – SCHOOL SAFETY REVIEW - St Aloysius College
Client contact details	**Jarrad Parsons** Team Leader, Traffic & Transport 5th Floor 25 Pirie Street ADELAIDE SA 5000 p: 8203 7203
Consultant contact details	**Nicholas Skordas** Transport Engineer - InfraPlan Pty Ltd Level 2, 44 Currie Street ADELAIDE SA 5000 p: 08 8227 0372 Nicholas.Skordas@infraplan.com.au

Document Control					
Name:	**IP23.016 St Aloysius College**				
Version	**Notes**	**Author**	**Date**	**Reviewer**	**Date**
0	DRAFT	NS	24 10 2023		
1	DRAFT	NS	15 11 2023		
2	REVIEWED	NS	29 11 2023		
3	FINALISED	NS	19 12 2023		

Table of Contents

1. Introduction **3**

2. Site Operations **4**

2.1 Traffic circulation 4

2.2 Infrastructure 5

2.3 Behaviour 6

3. Proposed Works **8**

1. Introduction

St Aloysius College is located at 53 Wakefield St, Adelaide SA 5000. The site fronts Wakefield St to the North, Chancery Ln to the East, and Angas St to the south, with ingress and egress points for pedestrians located across all three streets. The site is bordered by SAWater and Victoria Square to the West.

Figure 1 - Subject site view from Wakefield Street

Site parameters

- 367 m of road frontage.
- 1.6 ha of applicable area.
- ~1200 students enrolled.

Current infrastructure

- Pedestrian actuated crossings on:
  - Wakefield Street.
  - Angas Street.
- School zones designations on:
  - Angas Street.
  - Chancery Lane.
- Indented parking on Angas Street.

The site contains access points via Wakefield Street, Chancery Lane, and Angas Street. These roads are integral within the context of the local road network, with high traffic volumes throughout the day leading to increased rates of congestion during school peak drop-off and pickup periods. High levels of motorised vehicle traffic are a road safety concern and a health concern (including for air quality and noise), especially for children.

Roughly 60% of drop-off and pickup operations occur on Angas Street, with a further 30% occurring on Wakefield Street, and the final 10% occurring on Chancery Lane. A small group of students are loaded onto buses within the school site and egress through Angas Street. The southern egresses of the school primarily service junior and middle school students, with the northern egresses servicing middle and senior school students. Victoria Square provides most nearby public bus infrastructure, and Rundle Mall generates the largest pull of amenities for the local network for middle and senior school students.

Ticketed on street and indented parking surrounds the school, with segments of parking switching to free 10-minute parking for parents/carers between 8 – 9 AM and 3 – 6 PM. There is no on-site parking available for parents/carers. Some parents/carers waiting for car parking spaces are undertaking illegal manoeuvres such as crossing double white lines to perform a U-turn, crossing double white lines to enter a park, and parking within cycle lanes.

2. Site Operations

Following an investigation of the subject site, the following insights are provided:

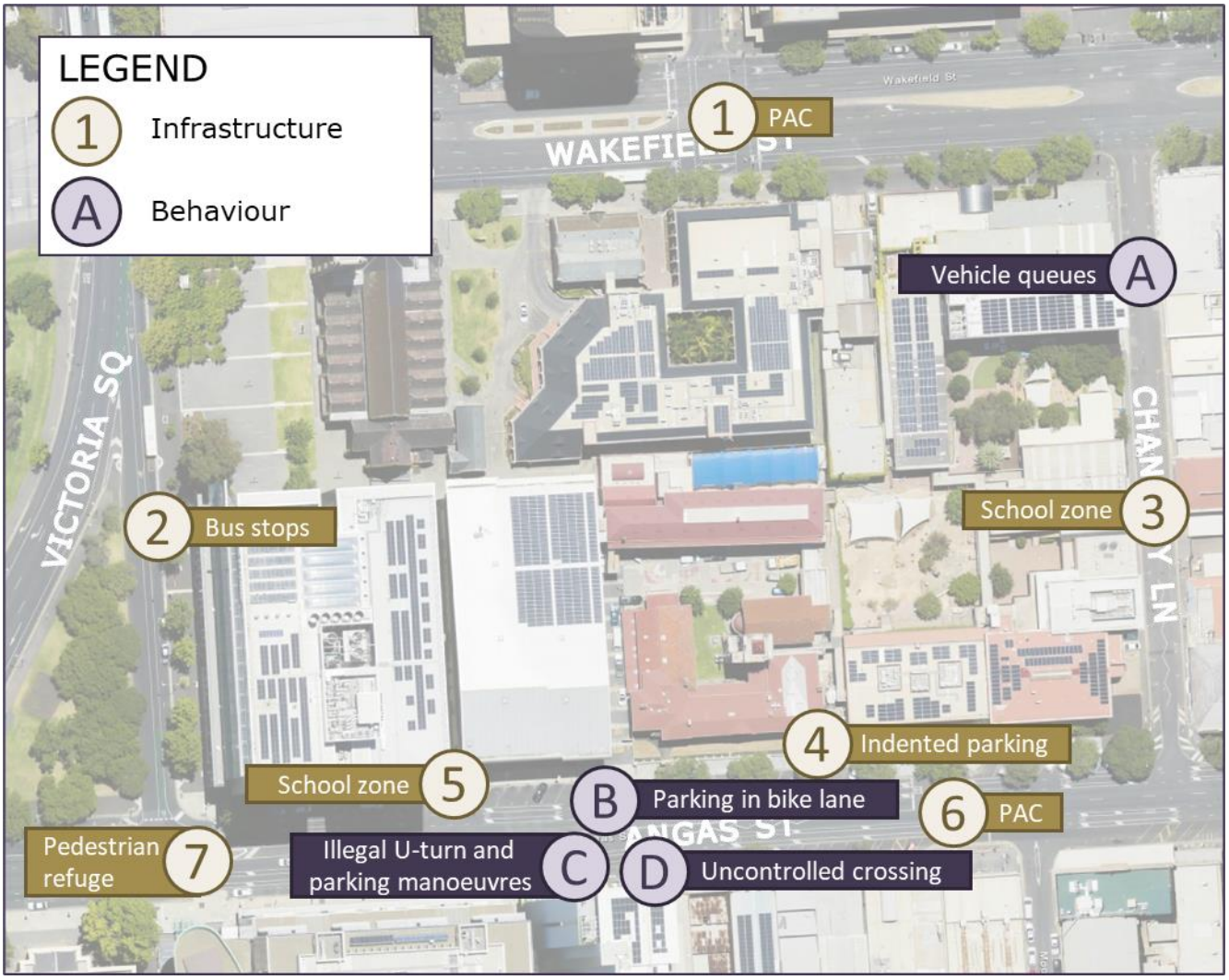


Figure 2 - Notable site operations

2.1 Traffic circulation

The site contains multiple access points via Wakefield St, Angas St, and Chancery Ln. These roads are highly trafficked within the context of the local network, with vehicles using the roads as primary routes to reach alternative destinations within the CBD. Congestion during peak school hours is common along Angas St, especially during the pickup period as parents/carers will arrive within a concentrated time period. The scattered arrival times of parents/carers throughout the drop-off period somewhat alleviates the severity of congestion within the morning peak.

The school's primary pickup point is located along the frontage of Angas St with an estimated 60% of students, consisting of primary and middle school students, egressing the site through this route. Wakefield St services an estimated 30% of students and consists primarily of high school students. The remaining 10% of students are serviced by Chancery Ln. Parents/carers will park on both sides of Angas St, leading to a high rate of uncontrolled crossings. Pedestrians on Wakefield St will primarily walk to bus stops or Rundle Mall.

2.2 Infrastructure

1. Pedestrian Actuated Crossing (PAC) on Wakefield Street

The PAC located on Wakefield Street provides a signalised crossing opportunity between the school, student foot traffic seeking to reach bus stops north of Victoria Square, and students walking to Rundle Mall. Sight distances on the school's side of the crossing are maintained through the use of parking restrictions.

2. Bus stops on Victoria Square

Bus stops along Victoria Square provide direct public transportation access to students, servicing primarily middle and high school students. The presence of the bus stops leads to high rates of pedestrian traffic heading west once egressing from the site. Students may have to cross multiple roads to reach bus stops further north or south. Most crossings are signalised, while some parts of the square have informal, uncontrolled crossing points.

3. School Zone on Chancery Lane

140 m of school zone encompasses the eastern egress point on Chancery Lane and is placed to capture pedestrian crossing movements from the school grounds to parked vehicles on either side of the one-way street. The school zone sees high pedestrian activity due to the high availability of on-street parking opportunities. Visibility is hindered by the presence of parking on either side of the road, justifying the necessity of the school zone's presence.

4. Indented Parking on Angas Street

Indented angled parking is provided on either side of Angas Street, servicing the two southern egresses of the school grounds. Parking restrictions are applied during peak pick-up or drop off periods for some groupings of parks, resulting in parking bans between 8 – 9 AM and 3 – 6 PM for all except parents/carers, who receive a free 10-minute parking pass. Outside of peak periods, parking is paid. Sight distances for the nearby PAC are assisted by the indented parking. Additional road width is provided to bike lanes to help accommodate the angled parking.

5. School Zone on Angas Street

140 m of school zone partially encompasses the southern egress points on Angas Street and is placed to capture pedestrian crossing movements from the school grounds to parked vehicles within the angled parks along either side of the street. The school zone contains the primary egress point for the site and sees high pedestrian activity due to the high availability of on-street parking opportunities. The western segment of the school zone contains a painted median, eventually converting into a double solid white line along the eastern segment.

6. Pedestrian Actuated Crossing (PAC) on Angas Street

The PAC located on Angas Street provides a signalised crossing opportunity between the school and parking along the southern side of the street. Sight distances on the school's side of the crossing are maintained through the use of indented parking.

7. Pedestrian Refuge on Angas Street

A pedestrian refuge is strategically located on Angas Street to capture movements heading south from the site, and was often used by student seeking bus stops further south of Victoria Square.

2.3 Behaviour

A. Vehicle queues on Chancery Lane

Chancery Lane currently operates as a direct connection between two major CBD streets while also accommodating numerous parking spaces. The inability to legally U-turn on Angas Street during the peak period leads to many detouring through Chancery Lane to turn around. This detour is performed by both parents/carers and unrelated motorists. Queues form along the length of Chancery Lane that intensify during school pick up hours. Those turning right off of Chancery Lane cause the most delays within the queue. The queues along Chancery Lane may contribute to parents/carers having a preference for dropping students on Angus Street. Some drivers are then choosing to be impatient and undertake illegal manoeuvres.

B. Parking within the bike lane on Angas Street

Parents/carers will often park within the bike lane along the school frontage, primarily within the northern segment of the school zone along Angas Street. People cycling are forced to enter the car lane to overtake these vehicles, leading to an unsafe cyclist environment. Other motorists will cross the double solid white line to overtake these parked vehicles. This behaviour is caused by the lack of any desire to park further away from the school grounds to pick up students. Site observations and inquiries revealed that parents/carers were reluctant to walk long distances with primary school students.

C. Illegal U-turns and parking manoeuvres on Angas Street

The centre of Angas Street contains a double solid white line, which is meant to restrict the use of unexpected and large sweeping manoeuvres within the school zone. These lines are seemingly ignored by motorists due to a multitude of factors. The high demand for parking opportunities leads to aggressive and competitive parking behaviours, with motorists crossing the centre lines to claim available angled parks. Motorists will take advantage of wide carriageway of Angas Street to perform U-turns, circumnavigating the need to drive through roads such as Chancery Lane to change travel direction. The ease of these and short-term benefits of these actions has led to their common use by both parents/carers and regular CBD motorists.

D. Uncontrolled crossing on Angas Street

The availability of angled parking on either side of Angas Street, in addition to the distance of the nearest PAC or pedestrian refuge from the primary egress of the school grounds, lead to high numbers of uncontrolled pedestrian crossings along the length of the school zone within Angas Street.

The following figure provides a summary of observed pedestrian crossing locations, parking locations during school pickup, bus stops, and observed illegal manoeuvres.

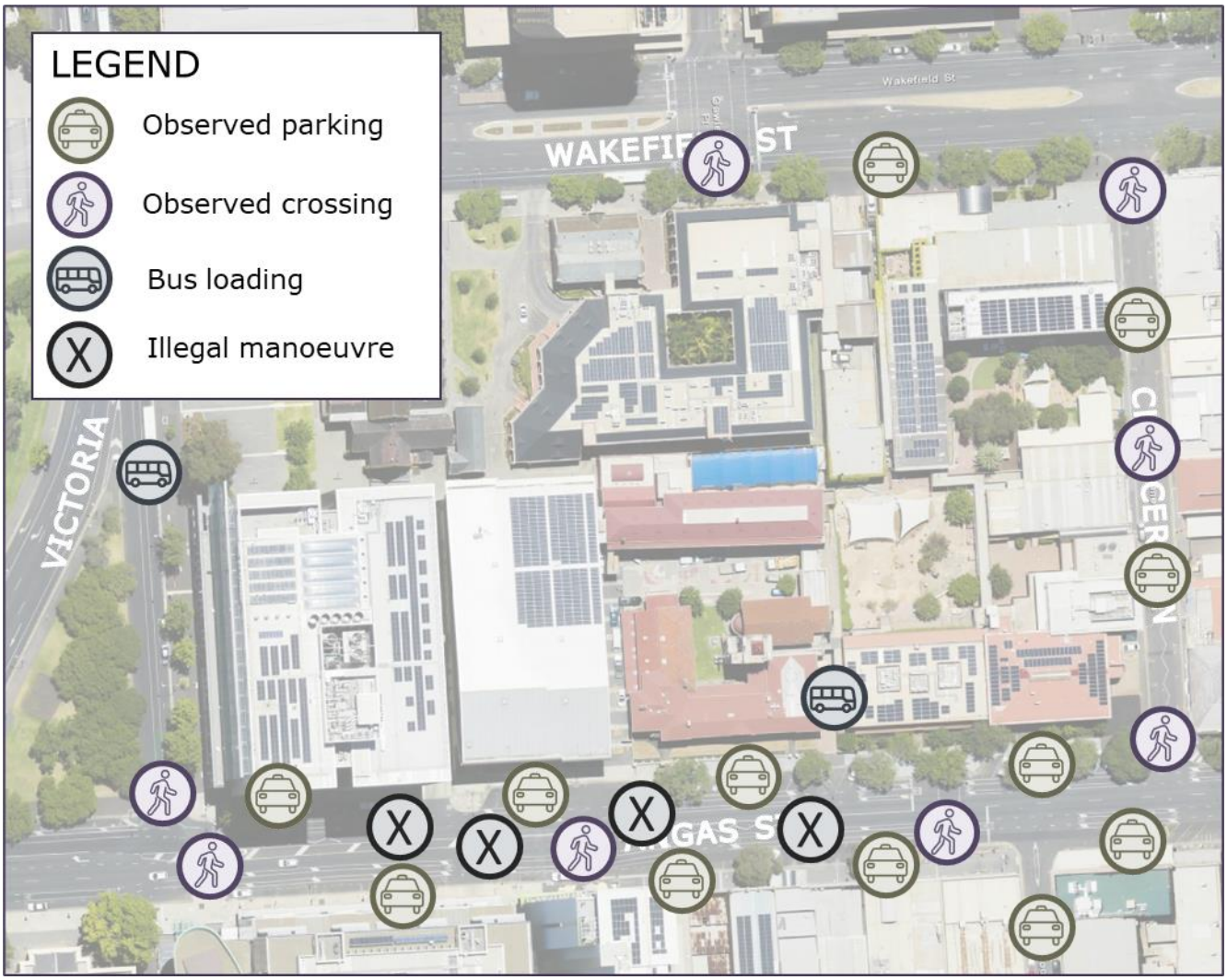


Figure 3 - Summary of observed crossing and parking locations during school pickup

3. Proposed Works

The proposed works focus on improving awareness of the school zone for motorists along Angas Street, along with potential solutions to reduce uncontrolled crossings and illegal manoeuvres.

The idea of implementing a median fence within the Angas Street school zone was proposed to address uncontrolled crossings and illegal manoeuvres, but was decided against due to the following reasons:

- Parents/carers and students may attempt to cross despite the presence of a waist high barrier, potentially leading to increasingly hazardous scenarios.
- In its current design, pedestrians desire to cross at all points along Angas Street to reach parked cars through the quickest possible route.
- The implementation of a fenced median within the Adelaide CBD environment currently has no existing precedent.
- The negative push back to such a design from local businesses and residents, especially cafés located directly across from the school site, would be immense.

Instead, site works will focus on the movement of pedestrian egressing from the site by improving the safety of crossing within the existing network.

Refer to appendix for a mud map of proposed works as an indicative summary of subject site deficiencies.

Proposed Works **Estimated cost**

A. Encourage alternative parking behaviours across school site **Regular Maintenance**

School staff should be encouraged to monitor parents/carers parking behaviours in streets surrounding the school to identify illegal parking practices and communicate these to the school community through the appropriate school channels to encourage parking compliance. This includes parking within the bike lane along Angus Street, the off-street staff parking directly adjacent to the primary egress, and the off-street staff parking along the south of Chancery Lane. These existing parking behaviours and sites have been identified as potential points of risk, especially regarding visibility, and can only be mitigated through communication with staff and parents/carers. Persist with these preventative measures until new parking behaviours are established.

B. Duplication of school zone signage on Angas Street **$900**

Existing signage meets the minimum requirements outlined within the *Speed Limit Guideline for South Australia*, however there is evidence that this signage may be insufficient for the site. Installing additional new signage within the school zone in accordance with *Section 7.18* will help remind motorists that the school zone is still active, increasing safety and traffic flow.

- Installation of new 25km/h school zone signage on existing signposts.

C. Ban right turn on Chancery Lane **$105,900**

Implement a right turn ban on the egress of Chancery Lane to help improve flow of traffic as parents/carers filter through to pick up and drop off students. Connect existing medians on Wakefield St to ensure compliance with the proposed ban.

- Connection of existing medians.
- Installation of painted left turn arrow.

D1. Investigation: Installation of median with pedestrian refuge on Angas Street $109,600

Installation of a median and pedestrian refuge within the school zone on Angas Street to match desire lines for pedestrians, and prevent illegal manoeuvres within high risk zones. Ideally connect the existing pedestrian refuge and PAC. Otherwise, the median must have a minimum width of 1.5 meters and length of 25.0 metres to effectively cover the primary egress of the school grounds. The traffic calming capabilities of a median will also help in maintain compliance of school zone speed limits.

- Installation of 2 kerb ramps.
- Installation of new pedestrian refuge.
- Installation of new median (Ideally extending to existing pedestrian refuge and PAC).
- **Further investigation** into the layout of pavement markings and parks to account for the changes in allocated carriageway width is required to pursue this option.
- **Further investigation** into use of flexi posts as a short-term solution; allowing for potential upgrade opportunities in the future.

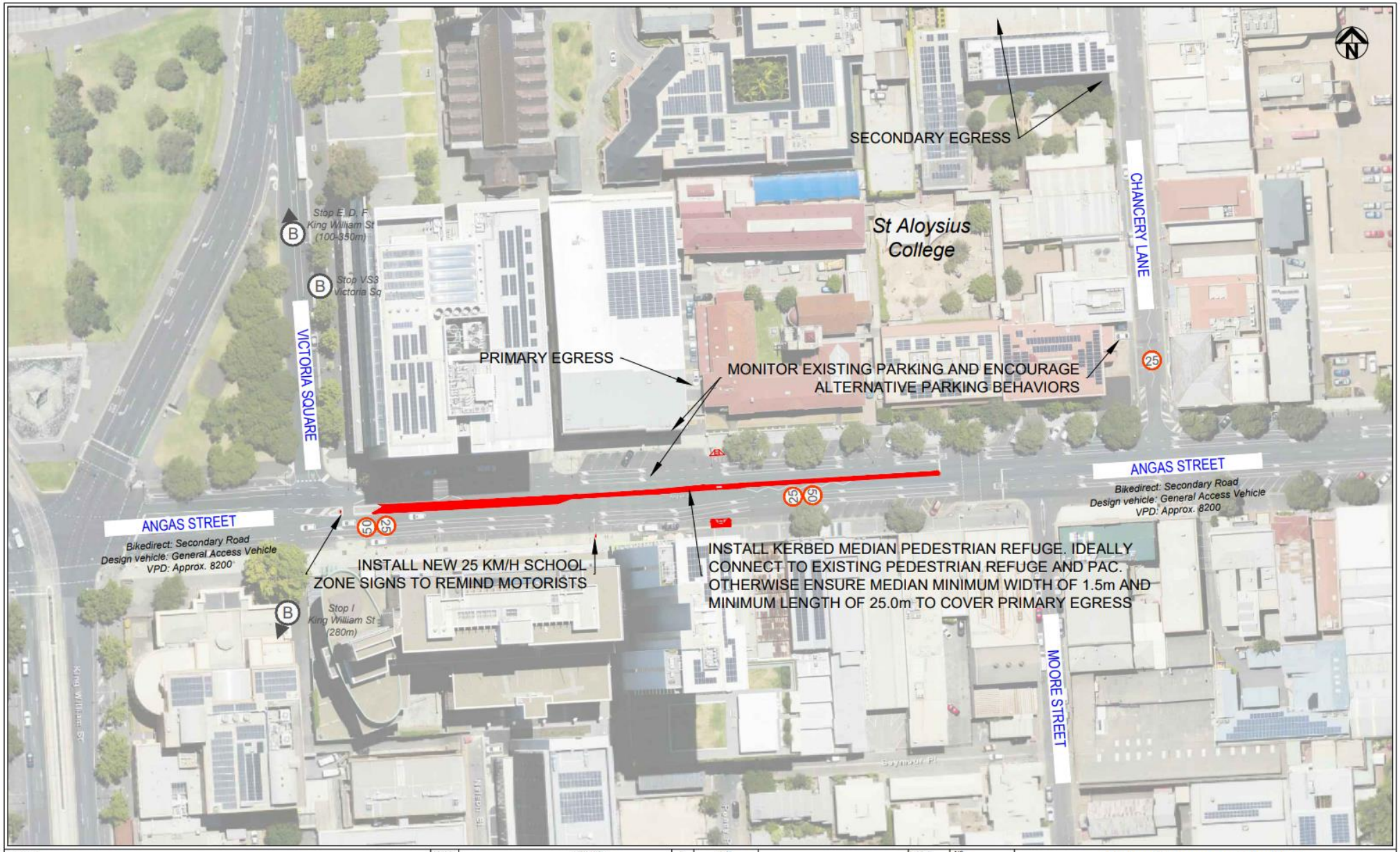
D2. Investigation: Installation of PAC within school zone on Angas Street $313,000

Installation of typical school zone crossings (Emu, Zebra, Wombat) is not recommended due to the carriageway width exceeding the acceptable maximum width outlined in the *Supplement to AS 1742.10 Part 10: Pedestrian control and protection, Clause 6.3*. It is worth noting that the high traffic volumes outside of school hours may also lead to a lack of compliance for these aforementioned crossings during school peak periods. This behaviour would be similar to the existing lack of compliance witnessed on site regarding the 25 km/h speed limit. The existing PAC east of the school zone has proven to be ineffective and not along the current pedestrian desire lines. **It must be noted that a PAC within a school zone is not permitted under DIT's *Speed Limit Guideline for South Australia* guidelines;** however, there is recent precedent for such a design, with Gilles Street incorporating a PAC within the school zone. Accommodating this design may require adjustments to the existing eastern PAC.

- Installation of 2 kerb ramps.
- Installation of traffic signals with pedestrian push buttons (Ensure driveways have visibility of traffic signals).
- Installation of pedestrian fencing.
- **Further Investigation required** due to such a design deviating from DIT standards, especially regarding safety factors and ideal crossing placement location.
- **Potential Investigation** into expanding existing school zone coverage.
- **Potential Investigation** into the feasibility of a raised crossing design.

Table 1 - Summary costings of proposed works. Note, discrepancy in sum total due to individual item rounding.

Proposed works	Estimated item cost
Duplication of school zone signage on Angas Street	$900
Ban right turn on Chancery Lane	$105,900
Investigation: Installation of median with pedestrian refuge on Angas Street	$168,600
Investigation: Installation of PAC within school zone on Angas Street	$313,000
Total with option D1	**$275,400**
Total with option D2	**$419,800**



NOTES

1. CONCEPT DESIGN ONLY PREPARED ON AERIAL PHOTOGRAPH AS BASE. AN ENGINEERING SURVEY AND DETAILED DESIGN IS REQUIRED PRIOR TO ANY WORKS.

2. UNDERGROUND SERVICES, STOBIE POLES, LIGHT POLES AND TREES TO BE LOCATED AND CONCEPT ALIGNMENT TO BE MODIFIED TO AVOID CONFLICT.

Preferred suppliers
Procurement Local Government Association of South Australia

REVISION	DESCRIPTION	BY	DATE
A	For client review	NS	24 10 2023
B	For client review	NS	21 11 2023

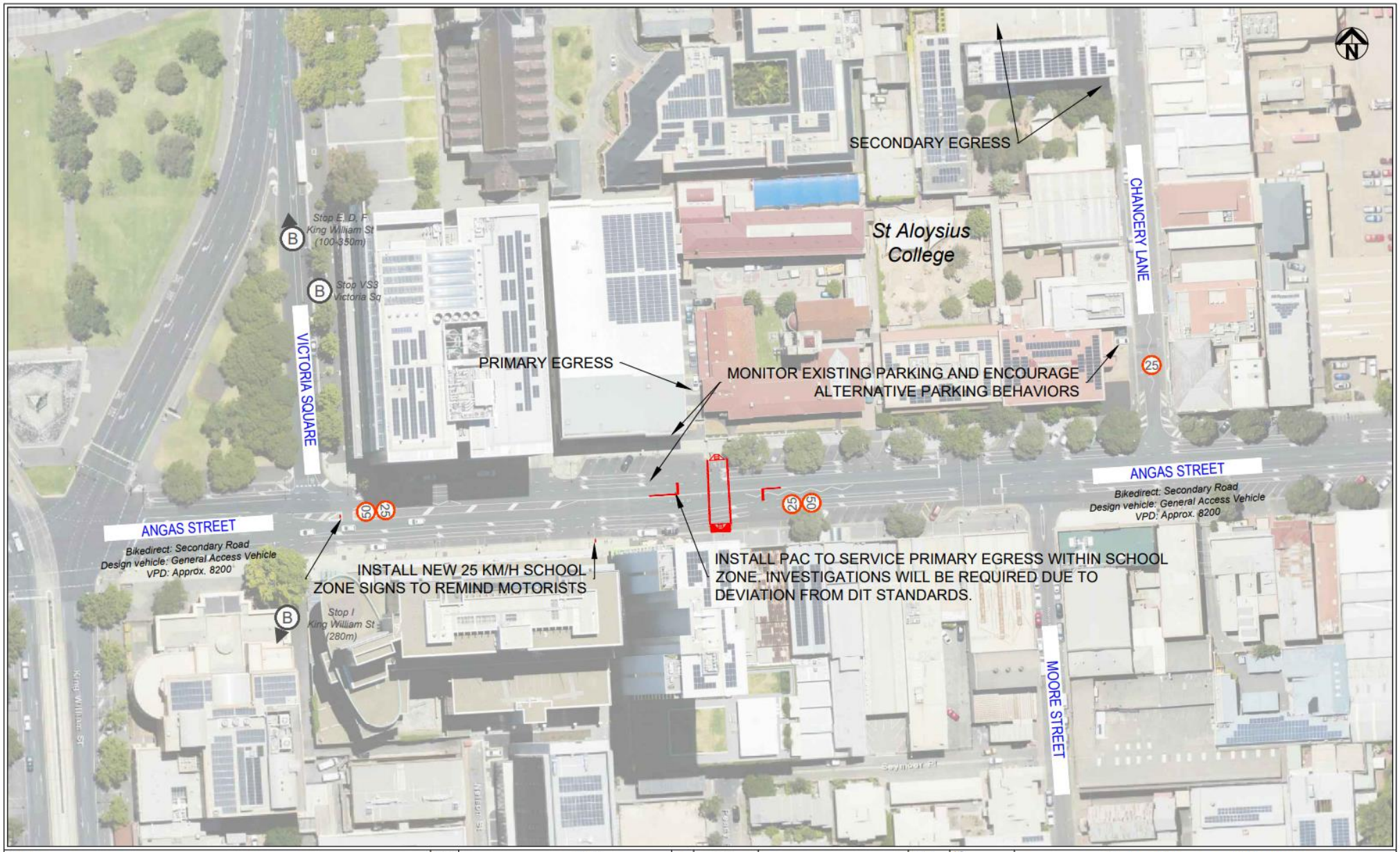
Level 2, 44 Currie Street Adelaide SA 5000
P (08) 8227 0372
e: Nicholas.Skordas@infraplan.com.au
infraPlan

DESIGNED	NS
CHECKED	
DATE	NOV 2023
SCALE	1:1000
NUMBER IN SET	1 of 3
PROJ NUMBER	IP23.016
DRAWING SET NUMBER	IP23.016-01-B

School Transport Review

City of Adelaide

St Aloysius Primary School



NOTES

1. CONCEPT DESIGN ONLY PREPARED ON AERIAL PHOTOGRAPH AS BASE. AN ENGINEERING SURVEY AND DETAILED DESIGN IS REQUIRED PRIOR TO ANY WORKS.

2. UNDERGROUND SERVICES, STOBIE POLES, LIGHT POLES AND TREES TO BE LOCATED AND CONCEPT ALIGNMENT TO BE MODIFIED TO AVOID CONFLICT.

Preferred suppliers
Procurement
Local Government Association of South Australia

REVISION	DESCRIPTION	BY	DATE
A	For client review	NS	24 10 2023
B	For client review	NS	21 11 2023

Level 2, 44 Currie Street Adelaide SA 5000
P (08) 8227 0372
e: Nicholas.Skordas@infraplan.com.au
infraPlan

DESIGNED	NS
CHECKED	
DATE	NOV 2023
SCALE	1:1000
NUMBER IN SET	2 of 3
PROJ NUMBER	IP23.016
DRAWING SET NUMBER	IP23.016-02-B

School Transport Review

City of Adelaide

St Aloysius Primary School

NOTES

1. CONCEPT DESIGN ONLY PREPARED ON AERIAL PHOTOGRAPH AS BASE. AN ENGINEERING SURVEY AND DETAILED DESIGN IS REQUIRED PRIOR TO ANY WORKS.

2. UNDERGROUND SERVICES, STOBIE POLES, LIGHT POLES AND TREES TO BE LOCATED AND CONCEPT ALIGNMENT TO BE MODIFIED TO AVOID CONFLICT.

Preferred suppliers
Procurement
Local Government Association of South Australia

REVISION	DESCRIPTION	BY	DATE
A	For client review	NS	14 11 2023

Level 2, 44 Currie Street Adelaide SA 5000
P (08) 8227 0372
e: Nicholas.Skordas@infraplan.com.au
infraPlan

DESIGNED	NS
CHECKED	
DATE	NOV 2023
SCALE	1:1000
NUMBER IN SET	3 of 3
PROJ NUMBER	IP23.016
DRAWING SET NUMBER	IP23.016-03-A

School Transport Review

City of Adelaide

St Aloysius Primary School

ATTACHMENT B - List of schools within City of Adelaide

CITY OF ADELAIDE

School	Address	Type	Review to be undertaken for school	Notes
Adelaide Botanic High School	2 Frome Rd, Adelaide	Public School	Yes	
Adelaide High School	West Terrace, Adelaide	Public School	Yes	
Christian Brothers College	214 Wakefield St, Adelaide	Private College	Yes	
Christian Brothers College Junior College	324 Wakefield St, Adelaide	Private College	Yes	
Gilles Street Primary	91 Gilles St, Adelaide	Public School	Yes	
North Adelaide Primary School	62-80 Tynte St, North Adelaide	Public School	Yes	
Pulteney Grammar School	190 South Tce, Adelaide	Private College	Yes	
St Aloysius College	53 Wakefield St, Adelaide	Private College	Yes	
St Dominic's Priory	139 Molesworth St, North Adelaide	Private College	Yes	
St Mary's College	253 Franklin St, Adelaide	Private College	Yes	
Sturt Street Community School	221-239 Sturt Street, Adelaide	Public School	Yes	
University Senior College	The University of Adelaide	Private College	Yes	Years 10-12
Adelaide International School	Level 4 127 Rundle Mall, Adelaide	Private College	No	Provides SACE Stage 1 & 2 and English courses at school level.
Youth Inc.	110 Hindley St, Adelaide	Private College	No	Registered as an independent, senior secondary school. Provides for 17-24 yo to complete Year 12/SACE
Youth Space Learning	40 Sturt St Adelaide	Private College	No	Youth Space offers flexible learning for young people, aged 14-21 years who have disengaged from mainstream schooling

Charles Street Road Closure

Strategic Alignment - Our Places

Public

Tuesday, 19 March 2024

Infrastructure and Public Works Committee

Program Contact:
Mark Goudge, Associate Director Infrastructure

Approving Officer:
Tom McCready, Director City Services

EXECUTIVE SUMMARY

Charles Street, between Rundle Mall and North Terrace, is a key laneway in the Rundle Mall precinct requiring a full streetscape upgrade to replace aged assets, improve pedestrian safety, enhance the public realm and improve the retail experience for customers and retailers.

Due to its proximity to the cultural precinct on North Terrace and internal linkages with other arcades, Charles Street offers a significant opportunity to reinvigorate the north-eastern portion of the Rundle Mall Precinct.

Closing Charles Street to vehicular traffic will enable Council to create a high-quality, safe and un-cluttered street, that complements the Rundle Mall precinct.

Access for removalists, service vehicles (including waste, property owners which back onto Charles Place) etc. will be available through the Rundle Mall permit scheme and as agreed with property owners and retailers within Charles Street and Charles Place.

RECOMMENDATION

The following recommendation will be presented to Council on 26 March 2024 for consideration

THAT THE INFRASTRUCTURE AND PUBLIC WORKS COMMITTEE RECOMMENDS TO COUNCIL:

THAT COUNCIL

1. Approves in accordance with Section 32 of the *Road Traffic Act 1961*, the closure of the road known as Charles Street, Adelaide ('the Road'), between Rundle Mall and North Terrace to all motor vehicles other than the following vehicles which are to be exempted from the closure:
   1.1. Vehicles which have permission from the Adelaide Economic Development Agency (AEDA) in their role as managers of the Rundle Mall Precinct, officers or employees of the City of Adelaide and identified utility and service vehicles.
   1.2. Emergency vehicles including SA Police, SA Ambulance Service and Metropolitan Fire Service.
   1.3. Vehicles driven by employees of the City of Adelaide during the course of their work.
2. Authorises the Acting Chief Executive Officer or delegate to cause notice of the closure to be:
   2.1. Published in 'The Advertiser.'
   2.2. Provided by post to each ratepayer of land immediately abutting the portion of the Road, the subject of the closure.
   2.3. Published on the City of Adelaide's website.
   2.4. Made available at the City of Adelaide's Customer Centre, Libraries and Community Centres.
3. Authorises the Acting Chief Executive Officer or delegate to, after observing any relevant requirements of the *Road Traffic Act 1961*, cause to be erected, installed, operated maintained and removed, on behalf of Council, any traffic control device necessary to give effect to the closure.

IMPLICATIONS AND FINANCIALS

City of Adelaide 2024-2028 Strategic Plan	Strategic Alignment – Our Places
Policy	The review of traffic and parking for safety and amenity aligns with the Smart Move Transport and Movement Strategy for Calm Traffic.
Consultation	Consultation has been undertaken with affected stakeholders including emergency services, in accordance with City of Adelaide's (CoA) Public Consultation Policy and s32 of the *Road Traffic Act 1961*.
Resource	Not as a result of this report
Risk / Legal / Legislative	Council has a responsibility to monitor and improve road safety by taking measures to protect its area from hazards, and to mitigate the effects of such hazards within the city.
Opportunities	Not as a result of this report
23/24 Budget Allocation	Not as a result of this report
Proposed 24/25 Budget Allocation	The item that is the subject of this report is currently unfunded. Any required funding for this item is subject to, and needs to be considered in the context of, the prioritisation of projects, initiatives and service enhancements for the development of the 2024/25 budget, and within the parameters of the LTFP to ensure long-term financial sustainability.
Life of Project, Service, Initiative or (Expectancy of) Asset	Not as a result of this report
23/24 Budget Reconsideration (if applicable)	Not as a result of this report
Ongoing Costs (eg maintenance cost)	Ongoing Maintenance Cost to retractable bollards per annum approximately $1,500, asset renewal every 10 years.
Other Funding Sources	Not as a result of this report

DISCUSSION

Background

1. Charles Street is an important pedestrian link between Rundle Mall and the cultural precinct of North Terrace. As the infrastructure has reached end of life, this is an opportune time to close the road and upgrade the street to provide:

    1.1. Disability Discrimination Act (DDA) compliant paths.

    1.2. Restrict and control vehicle movement to reduce conflicts between pedestrians and motorists undertaking multiple point turns in a narrow street.

    1.3. Increase opportunities for retail, outdoor dining, events, etc.

2. The closure would assist in creating a safer, more pedestrian friendly environment and address concerns regarding road safety to align with the future streetscape upgrade of Charles Street.

3. There are no existing parking spaces in Charles Street, however access to parking spaces in Charles Place, a private road that runs east of Charles Street, will still be accessible to those authorised.

Summary of consultation approach

4. Consultation was undertaken between 23 October 2023 and 24 November 2023 in accordance with the City of Adelaide's (CoA) Public Consultation Policy and the *Road Traffic Act 1961*. It included the following actions:

    4.1. A letter was circulated to 117 affected stakeholders (property owners and occupiers).

    4.2. Consultation packs and feedback forms were made available on the 'YourSay' website and through CoA libraries and community centres.

    4.3. Consultation packs and feedback forms were sent to SA Police, SA Ambulance Service and SA Metropolitan Fire Service.

5. Council Members were notified via E-News on 20 October 2023 of the public consultation process.

Results of consultation

6. The below summarises the feedback received during the consultation:

    6.1 Of the 65 responses received, 59 stakeholders supported the proposal. The objections were predominately regarding drop off/pick up and parking of removalist vehicles for Martin Towers. It should be noted that of the 59 supports received, nine also were concerned with drop off/pick up, service vehicles and removalists not having anywhere to park. Verbatim comments can be found here (Link 1).

    6.2 Currently within Charles Street there is no parking within the street, albeit vehicles do occasionally stop or park on the siding to allow vehicles to pass one another to exit from Charles Street. Access for removalists, service vehicles (including waste, property owners which back onto Charles Place) etc. will be available through the Rundle Mall permit scheme and as agreed with property owners and retailers within Charles Street and Charles Place. This would in affect provide better controls to who has access to this section of the Rundle Mall Precinct and discourage casual or illegal parking.

    6.3 This proposal was forwarded to SA Police, SA Ambulance Service and Metropolitan Fire Service. No response was received from the three emergency service providers, although SAMFS has been consulted about the new streetscape design. Emergency Services vehicles will have their current access maintained in line with the Rundle Mall permit scheme.

Next steps

7. Following approval, the following will be undertaken:

    7.1 A letter advising of Council's decision will be sent to affected stakeholders.

    7.2 Notice of the closure published in The Advertiser and on the 'Your Say' website.

DATA AND SUPPORTING INFORMATION

Link 1 – Charles Street verbatim comments

ATTACHMENTS

Nil

- END OF REPORT -

Asset Management Plan – Park Lands and Open Space - Approval for Consultation

Tuesday, 19 March 2024

Infrastructure and Public Works Committee

Program Contact:
Mark Goudge, Associate Director Infrastructure

Strategic Alignment - Our Places
Public

Approving Officer:
Tom McCready, Director City Services

EXECUTIVE SUMMARY

Asset Management is a key business function undertaken by Councils to ensure their infrastructure portfolio is managed responsibly and effectively. Under the *Local Government Act 1999 (SA)*, Councils are legislatively required to establish a suite of Strategic Management Plans, which guide future planning, asset management and financial sustainability. Included in this suite are six Asset Management Plans (AM Plans), which are currently in the process of being reviewed and updated. Each AM Plan will require Council adoption prior to 30 June 2024 to enable review by the Essential Services Commission of South Australia (ESCOSA).

The draft Park Lands and Open Space AM Plan has been informed by a community engagement process to understand current levels of community satisfaction and has been developed consistently with the Recommended Levels of Service report approved by Council in November 2023. The AM Plan has been prepared on the basis of documenting the asset management activities and funding requirements (operations, maintenance and renewal) recommended for inclusion into the Long-Term Financial Plan (LTFP) to achieve our asset performance targets (levels of service).

Our Park Lands and Open Space assets are comprised of green assets (trees, turf, biodiversity and landscaped areas) and infrastructure assets (irrigation systems, playgrounds, sportsfields, and water features). Green assets provide various benefits and contribute significantly to the aesthetic and environmental quality of our surroundings. They are not recognised as capital assets holding financial value from an accounting perspective and the management of green assets is primarily funded through operational and maintenance budgets. Infrastructure assets are classified as capital assets and the replacement of these assets is managed through capital renewal budgets. This approach allows us to effectively balance the preservation of our natural assets while maintaining and renewing our infrastructure.

The draft AM Plan's renewal strategy aims to minimise the number of assets that deteriorate into a poor condition and prohibit assets reaching a very poor condition. This ensures we continue to provide services in line with the community's expectations, appropriately manage risk and optimise whole-of-life costs. The forecast renewal costs are approximately $2.85 million on average each year across the ten-year planning period. The current LTFP accommodates renewal funding of $4.32 million on average each year (152% of the forecast costs). This means the funding requirement of the AMP is $1.47 million on average each year, less than the current LTFP.

While this AM Plan does not identify forecast costs associated with new and upgrade projects, ongoing integrated planning will ensure asset renewals are aligned (where practical) with key new and upgrade projects required to deliver our Strategic Plan objectives, identified within the Resource Plan and Business Plan and Budget.

The purpose of this report is to seek Council endorsement to undertake community consultation for a six-week period, ahead of the future adoption of the Park Lands and Open Space AM Plan scheduled for June 2024. The consultation will include a YourSay engagement page in conjunction with a drop-in session proposed for the City and North Adelaide, with physical and electronical promotion through City of Adelaide (CoA) platforms (e.g. community centres, social media).

RECOMMENDATION

The following recommendation will be presented to Council on 26 March 2024 for consideration.

THAT THE INFRASTRUCTURE AND PUBLIC WORKS COMMITTEE RECOMMENDS TO COUNCIL

THAT COUNCIL

1. Notes the draft Park Lands and Open Space Asset Management Plan as per Attachments A and B to Item 7.5 on the Agenda for the meeting of the Infrastructure and Public Works Committee held on 19 March 2024.
2. Endorses the draft Park Lands and Open Space Asset Management Plan as per Attachments A and B to Item 7.5 on the Agenda for the meeting of the Infrastructure and Public Works Committee held on 19 March 2024, for the purposes of public consultation.

IMPLICATIONS AND FINANCIALS

City of Adelaide 2024-2028 Strategic Plan	Strategic Alignment – Our Places
Policy	Asset Management Policy Strategic Asset Management Plan Public Communication and Consultation Policy
Consultation	Consultation on the draft Park Lands and Open Space AM Plan will be open for a six-week period from Tuesday 2 April 2024 to Friday 10 May 2024. The results of the consultation feedback and analysis will be reported to Council in June 2024.
Resource	Consultation will be conducted using existing resources. There are no additional resources required as a result of this report.
Risk / Legal / Legislative	The review and update of Asset Management Plans, including levels of service, is required every four years or within two years of a general Council election pursuant to Section 122 of the *Local Government Act 1999 (SA)*.
Opportunities	Not as a result of this report
23/24 Budget Allocation	Not as a result of this report
Proposed 24/25 Budget Allocation	2024/25 budgets will be set by Council through the Annual Business Plan and Budget process (noting Asset Renewal Funding Ratio targets of between 90-110%). Asset renewal is generally funded through operational revenue, which includes rates, commercial revenue and grant allocations.
Life of Project, Service, Initiative or (Expectancy of) Asset	Not as a result of this report
23/24 Budget Reconsideration (if applicable)	Not as a result of this report
Ongoing Costs (e.g. maintenance cost)	As documented within AM Plan (no change)
Other Funding Sources	External funding opportunities will continually be pursued to offset costs, bring forward works, or provide for additional enhancements.

DISCUSSION

1. The purpose of this report is to present the draft Park Lands and Open Space AM Plan and seek Council endorsement to release the summary and comprehensive versions of the Plan (as presented in **Attachments A and B**) to community consultation for a six-week period, ahead of the future adoption of the Park Lands and Open Space AM Plan currently scheduled for June 2024.

Background

2. Under the *Local Government Act 1999 (SA)*, we are required to develop AM Plans for a period of at least 10 years, which includes information about the operation, maintenance, renewal, acquisition, expansion, upgrade and disposal for each infrastructure asset class under our care and control.
3. The City of Adelaide has six AM Plans, which include Transportation, Buildings, Park Lands and Open Space, Water Infrastructure, Lighting & Electrical and Urban Elements.
4. The City of Adelaide's Park Lands and Open Space assets portfolio is valued at approximately $46.3 million and are comprised of green assets (trees, turf, biodiversity and landscaped areas) and infrastructure assets (irrigation systems, playgrounds, sportsfields, and water features).
5. Green assets provide various benefits and contribute significantly to the aesthetic and environmental quality of our surroundings. They are not recognised as capital assets holding financial value from an accounting perspective and the management of green assets is primarily funded through operational and maintenance budgets. Infrastructure assets are classified as capital assets and the replacement of these assets is managed through capital renewal budgets.
6. The Park Lands and Open Space AM Plan has been developed with alignment to the City of Adelaide Strategic Plan 2024-2028.
7. The Park Lands and Open Space AM Plan has been informed by a community engagement process to understand current levels of community satisfaction and has been developed consistently with the Recommended Levels of Service report approved by Council November 2023.
8. AM Plans are technical documents, which are prepared in accordance with industry standard templates developed by the Institute of Public Works and Engineering Australasia (IPWEA) to ensure alignment with best practice and ISO 55000.
9. Due to the length of the Park Lands and Open Space AM Plan, a concise standalone summary document has also been prepared (Park Lands and Open Space Asset Management Plan Summary) to improve community engagement and understanding.

Lifecycle Management Summary

10. The Park Lands and Open Space AM Plan defines the current state/condition of our $46.3 million asset portfolio, as well as the asset management activities and associated funding requirements recommended for inclusion into the LTFP to achieve our asset performance targets (levels of service).
11. This AM Plan's renewal strategy aims to minimise the number of assets that deteriorate into a poor condition and prohibit assets reaching a very poor condition. This strategy ensures we can continue to provide services in line with the community's expectations, appropriately manage risk and optimise whole-of-life costs.
12. Renewal forecasts within the Park Lands and Open Space AM Plan are presented in FY24/25 dollars and have been derived utilising predictive deterioration modelling for playground equipment & softfall, sportsfields, irrigation systems and water features. Playground areas are planned for full renewal at the expiration of a recommended 20-year design life to ensure playgrounds remain fit-for-purpose and meet with the evolving needs of the community.
13. This AM Plan does not identify forecast costs associated with new and upgrade projects, however ongoing integrated planning will ensure asset renewals are aligned (where practical) with key new and upgrade projects required to deliver our Strategic Plan objectives, identified within the Resource Plan and Business Plan and Budget.
14. This AM Plan does not identify financial forecasts associated with asset disposal, however where recommended, significant assets will be identified for decommissioning and disposal through Council Reports, to then be considered within the LTFP and Business Plan and Budget.

15. Operational and Maintenance activities are generally evaluated and prioritised with respect to budget provisions within the LTFP and Business Plan and Budget, where any critical maintenance requirements that cannot be accommodated within exiting budgets and assessed through regular budget reviews to ensure resources are appropriately re-allocated. Following the completion of this AM Plan, we will be reviewing operations and maintenance standards for Park Lands and Open Space assets, with a view to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. The associated financial impacts will need to be further considered in future revisions of the Park Lands and Open Space AM Plan and LTFP.

Financial Summary and Implications

16. The development of the draft Park Lands and Open Space AM Plan has identified an asset renewal funding surplus for continuing to provide current levels of service.

17. The draft Park Lands and Open Space AM Plan forecasts renewal costs of approximately $2.85 million (un-escalated) on average each year across the ten-year planning period, which sets the base for measuring the ARFR. That is, if $2.85 million is fully expended, this would reflect an Asset Renewal Funding Ratio (ARFR) of 100%.

18. Currently, the renewal funding allocation for Park Lands and Open Space Assets within the LTFP is $4.32 million (un-escalated) on average each year, which represents 152% of the funding required to deliver the recommended asset renewals outlined in the draft AM Plan.

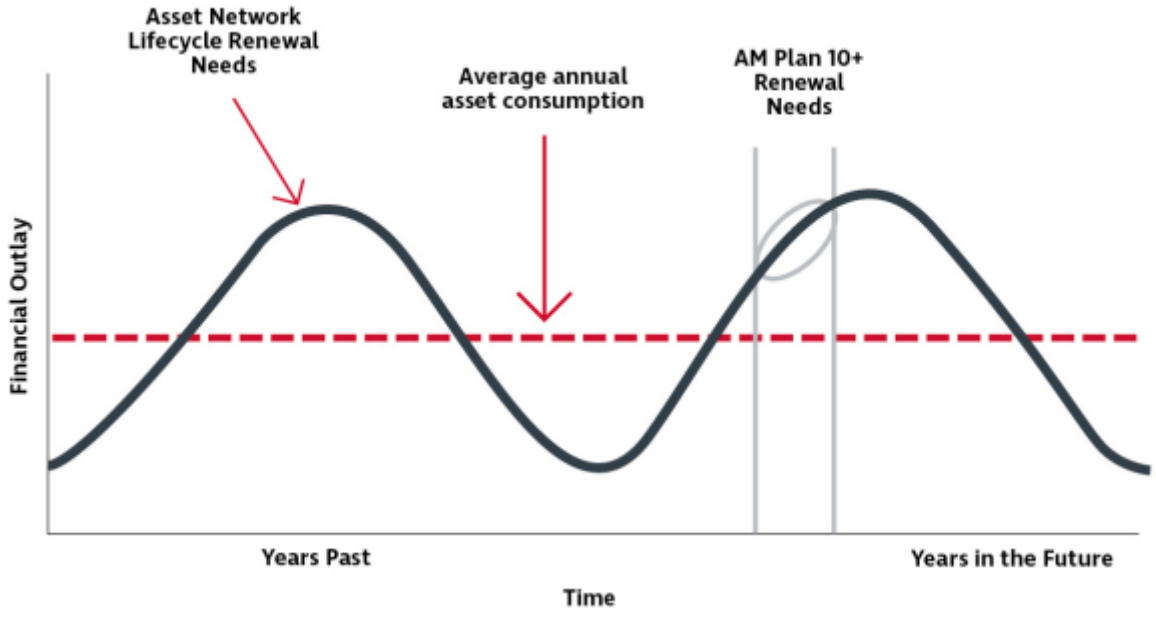
19. Contributing factors for the identified surplus, when comparing the forecast renewal costs and current budgets within the LTFP include:

    19.1. Undertaking a comprehensive review of the current condition and replacement cost of our assets and re-forecasting asset renewal requirements within this Asset Management Plan

    19.2. Undertaking a comprehensive review of the asset lifecycle management in conjunction with utilising predictive modelling to better understand asset renewal investment needs to maintain services levels over short, medium and long term.

    19.3 Re-aligning this Asset Management Plan with City of Adelaide's Fixed Asset Guideline and advice from an external auditor. This involves the replacement of green assets (e.g. trees, turf and garden beds) being managed through operating budgets and the replacement of infrastructure assets (e.g. playgrounds, irrigation and sportsfields) being managed through capital budgets.

20. It is important to understand that infrastructure networks are comprised of assets with varying age profiles and different useful lives and replacement costs. This results in AM Plans often identifying the need to replace more assets in some periods when compared with others and means that it is very unlikely that asset renewal needs will be consistent over time. The figure below highlights a typical scenario of varying asset renewal expenditure requirements over the asset lifecycle.



21. The financial strategy associated with funding the AM Plans is proposed to be consistent with the 2023/24 to 2032/33 LTFP, ensuring we continue to deliver upon our current suite of services and asset maintenance requirements, where asset renewals are prioritised based on audit condition and risk.

Improvement Plan

22. Through the development of this AM Plan, a number of improvement actions and next steps have been identified to promote continuous improvement and improved overall asset management maturity. These are identified in Section 9 of the Park Lands and Open Space Asset Management Plan Summary (**Attachment A**).

Community Consultation

23. In accordance with *section 122(6) of the Local Government Act 1999 (SA)*, Council will follow the relevant steps in our public consultation policy to facilitate community feedback on the draft Park Lands and Open Space AM Plan.

24. The consultation process will seek feedback from the community including our residents, ratepayers, businesses, and other key stakeholders.

25. Consultation will open on Tuesday 2 April 2024 and close on Friday 10 May 2024 (6-week duration in line with our Public Consultation Policy, noting the minimum legislative requirement is 21 days).

26. Notification of public consultation will be provided through the following avenues:

    26.1. A Public Notice in the Government Gazette and an advertisement in The Advertiser.

    26.2. Information published on the City of Adelaide website.

    26.3. Promotional advertisements on all Customer Service points including the Digital screens that Council operates, our Libraries and Community Centres.

    26.4. Social Media campaign via City of Adelaide social media channels.

27. 'Your Say Adelaide' - the community will be encouraged to engage and make written submissions on the draft Park Lands and Open Space AM Plan through City of Adelaide's website, linking to detailed information on the 'Your Say Adelaide' platform.

28. Two drop-in sessions will also be scheduled at community centre locations in the City and North Adelaide.

29. Submissions and feedback will also be able to be sent in writing or through e-mail.

30. Hard copy submission forms will be available inside Consultation Packs from the City of Adelaide's Customer Service Centre, libraries and community centres.

31. The community will have the opportunity to have their questions answered by City of Adelaide project staff over the phone or by booking an appointment to chat to staff in person.

Next Steps

32. Subject to Council endorsement, the draft Park Lands and Open Space AM Plan will be released for public consultation, with community engagement scheduled to occur from on Tuesday 2 April 2024 and close on Friday 10 May 2024.

33. Following the six-week public consultation period, engagement feedback will be reviewed and findings will be presented to Council in conjunction with the finalised Park Lands and Open Space AM Plan in May 2024 for adoption.

34. Following Council adoption of the Park Lands and Open Space AM Plan, the LTFP will be updated.

35. Adoption of renewal budgets will be considered by Council on an annual basis through the Business Plan and Budget process.

ATTACHMENTS

Attachment A – Draft Park Lands and Open Space Asset Management Plan Summary

Attachment B – Draft Park Lands and Open Space Asset Management Plan (Comprehensive)

- END OF REPORT -

Park Lands and Open Space Draft Asset Management Plan

Summary

CITY OF ADELAIDE

Contents

1	PURPOSE OF THE PLAN	4
2	OUR PARK LANDS AND OPEN SPACES ASSETS	5
3	COMMUNITY ENGAGEMENT & CUSTOMER SATISFACTION	6
4	CURRENT AND FUTURE DEMANDS	7
5	STRATEGIC PLANNING	8
6	LIFECYCLE MANAGEMENT	10
7	FINANCIAL SUMMARY	12
8	POTENTIAL SERVICE AND RISK IMPACTS	14
9	MONITORING AND IMPROVEMENT PROGRAM	15

EXECUTIVE SUMMARY

1 The Purpose of the Plan

The City of Adelaide is responsible for an extensive and diverse asset portfolio valued at more than $2 billion, which represents a significant investment made over multiple generations. These assets play a vital role in providing essential services to our community and it is critical to ensure these assets continue to be effectively managed to enable ongoing service provision and benefits for both current and future generations.

Under South Australia's *Local Government Act 1999*, we are required to develop Asset Management Plans for a period of at least 10 years, which includes information about the operation, maintenance, renewal, acquisition, expansion, upgrade and disposal for each infrastructure assets class under our care and control.

City of Adelaide has six Asset Management Plans (AM Plans), which include Park Lands and Open Space, Transportation, Buildings, Water Infrastructure, Lighting & Electrical and Urban Elements.

The fundamental purpose of this Park Lands and Open Space Asset Management Plan is to outline the Council's high-level asset management priorities for the operation, maintenance and renewal of our assets over the next 10 years. Additionally, it aims to improve the long-term strategic management of our Park Lands and Open Space, to cater for the community's required levels of service both now and into the future.

The plan defines the current state of our $46.3 million Park Lands and Open Space portfolio, as well as the asset management activities and associated funding requirements recommended for inclusion into the Long-Term Financial Plan to achieve our asset performance targets.

Our Park Lands and Open Space assets are comprised of green assets (trees, turf, biodiversity and landscaped areas) and infrastructure assets (irrigation systems, playgrounds, sports fields, and water features).

2 Our Park Lands and Open Space Assets

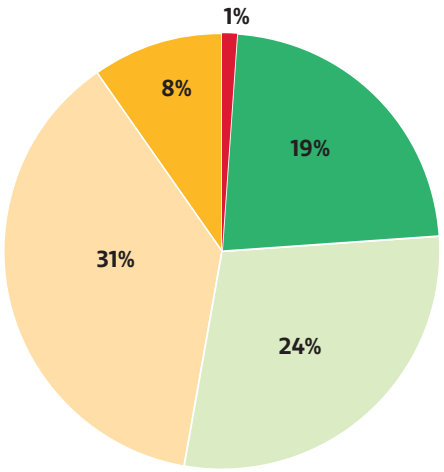
The City of Adelaide's Park Lands and Open Space assets portfolio is valued at approximately $46.3 million and provides essential services which enable the health and wellbeing of our community and enhance the utilisation and accessibility of our natural environment.

Green assets provide various benefits and contribute significantly to the aesthetic and environmental quality of our surroundings, however they are not recognised as capital assets holding financial value from an accounting perspective. This results in the management of green assets being primarily funded through operational and maintenance budgets.

Infrastructure assets are classified as capital assets and the replacement of these assets is managed through capital renewal budgets.

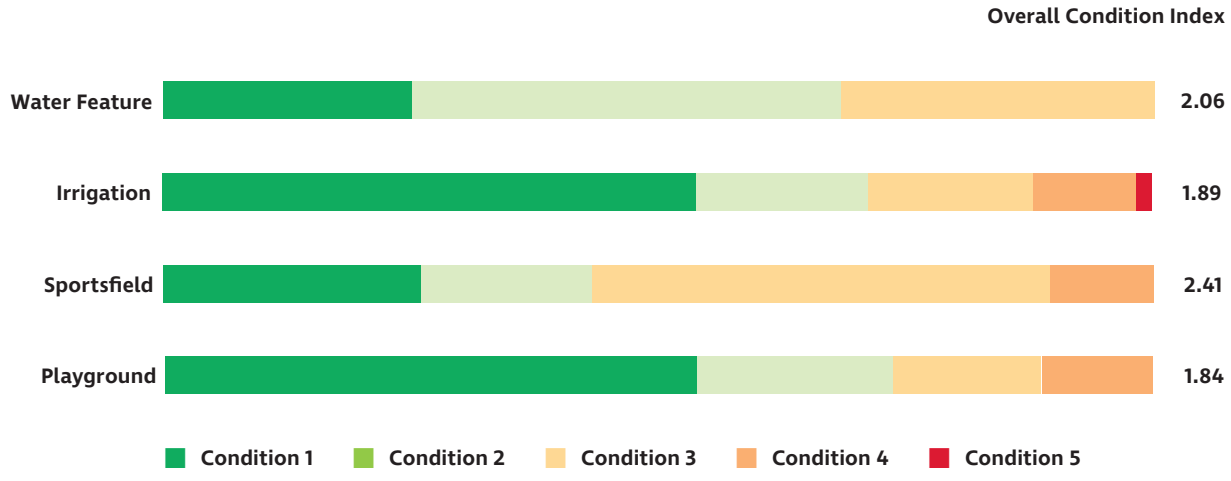
This approach allows us to effectively balance the preservation of our natural assets while maintaining and renewing our infrastructure.

To monitor the performance of our Park Lands and Open Space assets, we undertake regular condition audits (typically every 4 years). Asset condition information is analysed with respect to technical intervention criteria to inform our maintenance and renewal programs. The current condition of our Park Lands and Open Space portfolio is rated in a good to fair condition, with an overall condition index rating of 2.1. 91% of assets are rated in a very good to fair condition and 9% of assets are rated in poor or very poor condition, which form the general basis of our renewal program priorities.



Condition Grading	Description of Condition
1	**Very Good:** free of defects, only planned and/or routine maintenance required
2	**Good:** minor defects, increasing maintenance required plus planned maintenance
3	**Fair:** defects requiring regular and/or significant maintenance to reinstate service
4	**Poor:** significant defects, higher order cost intervention likely
5	**Very Poor:** physically unsound and/or beyond rehabilitation, immediate action required

Overall, the majority of our Park Lands and Open Space Assets are rated in a very good to fair condition with only a small proportion of assets rated poor and very poor condition. This is considered a healthy condition distribution, however ongoing investment will be required to ensure levels of service are maintained.



3 Community Engagement & Customer Satisfaction

In November 2021, we undertook an engagement process with city residents and visitors to better understand and measure levels of customer satisfaction for the services provided by our Park Lands and Open Space assets. A summary of the responses is shown below.

Category	Average Score	Very Poor (<40%)	Poor (40-54%)	Average (55-69%)	Good (70-84%)	Excellent (>85%)
Playgrounds and Sportsfields	94%					●
Water Features	89%					●
Green Infrastructure	89%					●

The overall feedback confirmed appropriate levels of customer satisfaction for all Park Lands and Open Space assets.

A Recommended Levels of Service Report was presented to Council, with the recommendations approved in November 2023. This report noted the community consultation undertaken and the associated benchmarking of current user satisfaction. Additionally, Council also approved the development of the Park Lands and Open Space Asset Management Plan based on the planning principles and recommended management strategies presented within the report and its attachments.

4 Current and Future Demands

It is anticipated that the City of Adelaide will be subject to considerable change over the next ten years. This will result in our Park Lands and Open Spaces being subject to new demands that have the potential to impact future service delivery and the requirements of our existing assets.

Key demand drivers and future challenges will include:

- City growth
- Changing demographic
- Tourism and event growth
- Climate change and carbon neutrality
- Emerging technology
- Legislation and regulation

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets, providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, such as educating the community around alternative options, which facilitates service provision without the need to invest in new or upgraded infrastructure.

Demand management will include:

- Continuing to engage with our community through annual City User Profile surveys
- Finalising the Urban Greening Strategy (2024)
- Undertaking an Adelaide Park Lands Strategic Water Resource Study
- Finalising the update of the Adelaide Park Lands Management Strategy
- Delivering priority upgrade/new projects identified within the Strategic Plan and Strategic Documents
- Ensuring climate risk mitigation and adaptation is a key focus for Strategic Planning, Asset Management and Project Delivery
- Continuing to review and update design standards and technical specifications to ensure our assets transition towards having a lower carbon footprint with improved circular economy outcomes through increased usage of recycled materials
- Continuing to partner with industry, to monitor and evaluate new and emerging technologies, with trials of new materials, approaches, and methodologies to inform appropriate changes to standards and practices
- Continuing to monitor changes to legislation and ensure appropriate adaptation into asset management practices

5 Strategic Planning

Under the *Local Government Act (SA) 1999*, we are legislatively required to establish a suite of Strategic Management Plans, which guide Council's future planning, asset management and financial sustainability. An overview of these strategic management plans are shown below:

Strategic Plan *Community*	Long term with a four year delivery focus. *Planning for the vision and aspirations of the Adelaide Capital City.*
Long-Term Financial Plan *Financial*	Ten year Plan, revised annually to ensure a ten year view is maintained. *Planning for the long-term financial sustainability of the City of Adelaide.*
Asset Management Plans *Infrastructure*	Suite of ten year Plans. *Planning for the sustainable renewal and maintenance of Council assets.*
City Plan *Development / Built Form*	Ten year Spatial Plan. *Planning for the future land uses and built form of the Adelaide Capital City.*

Through the City of Adelaide Strategic Plan 2024 – 2028, Council's vision is:

Our Adelaide. Bold. Aspirational. Innovative.

Achieving our vision for the future will be guided by our long term aspirations:

Our Community: Vibrant, connected and inclusive
Our Environment: Resilient, protected and sustainable
Our Economy: Growing, innovative and responsive
Our Places: Interesting, purposeful and safe
Our Corporation: High performing, customer-centric and bold

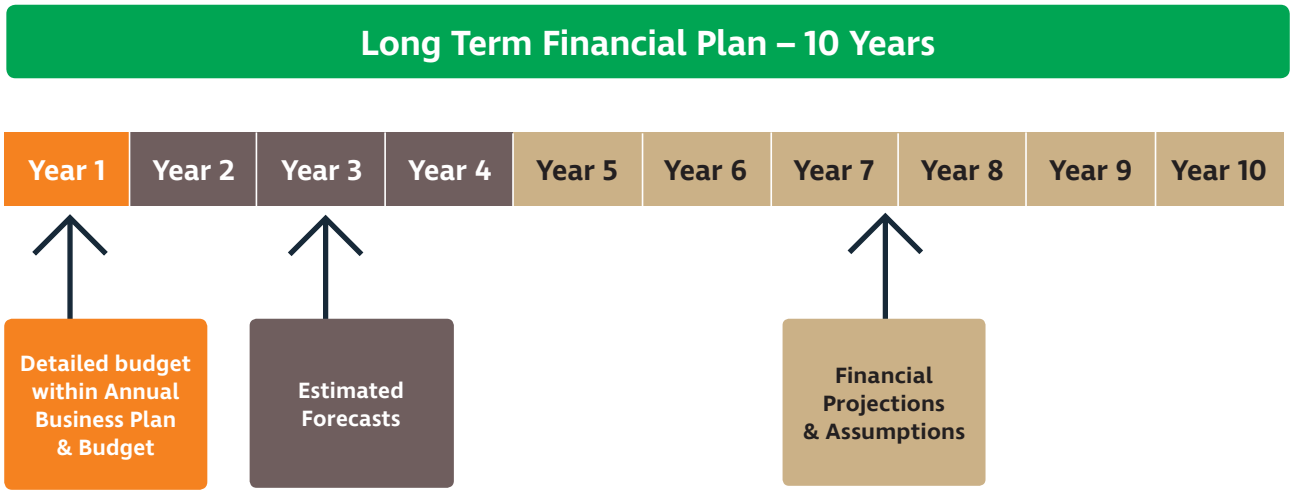
As Adelaide grows, we will need to consider economic vitality, social connectivity and wellbeing, distinctive precincts, environmental and financial sustainability, asset management and service delivery. To ensure we maintain our liveability and to support growth, these principles will underpin everything we do:

- Exceptional Amenity – Be bold and courageous in our pursuit of excellence for our city
- Quality Housing – Strive for liveability and affordability to attract and retain residents
- Community Connection – Strengthen connection, accessibility, diversity and inclusivity by putting people first
- Unique Experiences – Create interesting experiences for our residents, workers and visitors
- Climate Resilience – Embed climate resilience in all that we do
- Economic Growth – Encourage innovation, investment and development in current and emerging sectors
- Budget Repair – Provide quality services and ensure long-term financial sustainability

The Strategic Plan is supported by a suite of long and short-term strategies and action plans as well as a Resource Plan. The Resource Plan provides a four-year view of new and upgrade projects, resources, and budget requirements to deliver our Strategic Plan aspirations and objectives.

Integrated Delivery Planning ensures that prudent and efficient decisions are made, with line-of-sight between Council's Strategic Plan objectives and the major infrastructure projects we deliver. While this Asset Management Plan does not identify financial forecasts associated with new and upgrade projects, it does ensure required asset renewals are aligned (where practical) with key new and upgrade projects specified within the Resource Plan.

Each year our annual business plan and budget formalises funding allocations to continue providing services and progress new projects. It enables existing projects to move from one delivery stage to the next (eg progress concept design to detailed design and detailed design to construction) as well as consider emerging risks and opportunities that may result from Council decisions, community requests or other external factors.

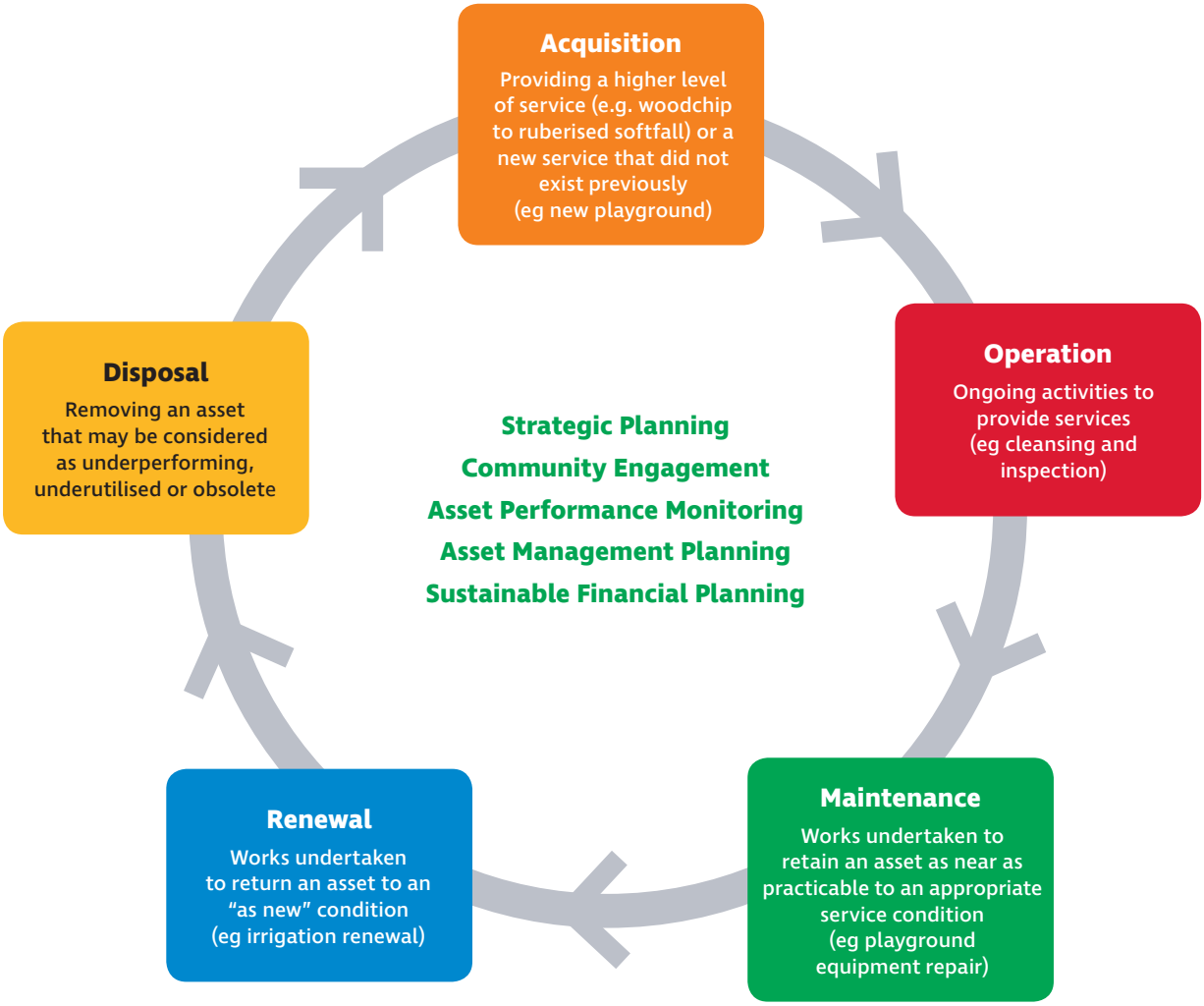


6 Lifecycle Management

In order to effectively manage our assets, it is important to understand the relationship between all stages of the asset lifecycle. Effective asset management and sustainable financial planning requires a balance between the maintenance, renewal and disposal of existing assets and the delivery of new and upgraded assets.

Our goal is to provide assets that service the needs of the community, providing the agreed levels of service at the lowest lifecycle cost. To enable this, it is important to understand:

- How our assets are performing
- How our assets should be operated and maintained
- When our assets should be renewed
- When we should consider upgrading existing assets or constructing new assets
- How funding for new and upgraded assets is prioritised
- When we should consider disposing underperforming or underutilised assets



This Asset Management Plan's renewal strategy aims to minimise the number of assets that deteriorate into a poor condition and prohibit assets reaching a very poor condition. This strategy ensures we can continue to provide services in line with the community's expectations, appropriately manage risk and optimise whole-of-life costs. Renewal requirements have been identified through a combination of condition audits, engineering recommendations and predictive modelling.

Operational and Maintenance activities are generally evaluated and prioritised with respect to budget provisions within the Long-Term Financial Plan and Annual Business Plan and Budget. Following the completion of this Asset Management Plan, we will be reviewing operations and maintenance standards for Park Lands and Open Space assets, with a view to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. The associated financial impacts will need to be further considered in future revisions of this Asset Management Plan and the Long-Term Financial Plan.

This Asset Management Plan does not identify financial forecasts associated with asset disposal, however where recommended, significant assets will be identified for decommissioning and disposal through Council Reports, to then be considered within the Long-Term Financial Plan and Business Plan and Budget.

7 Financial Summary

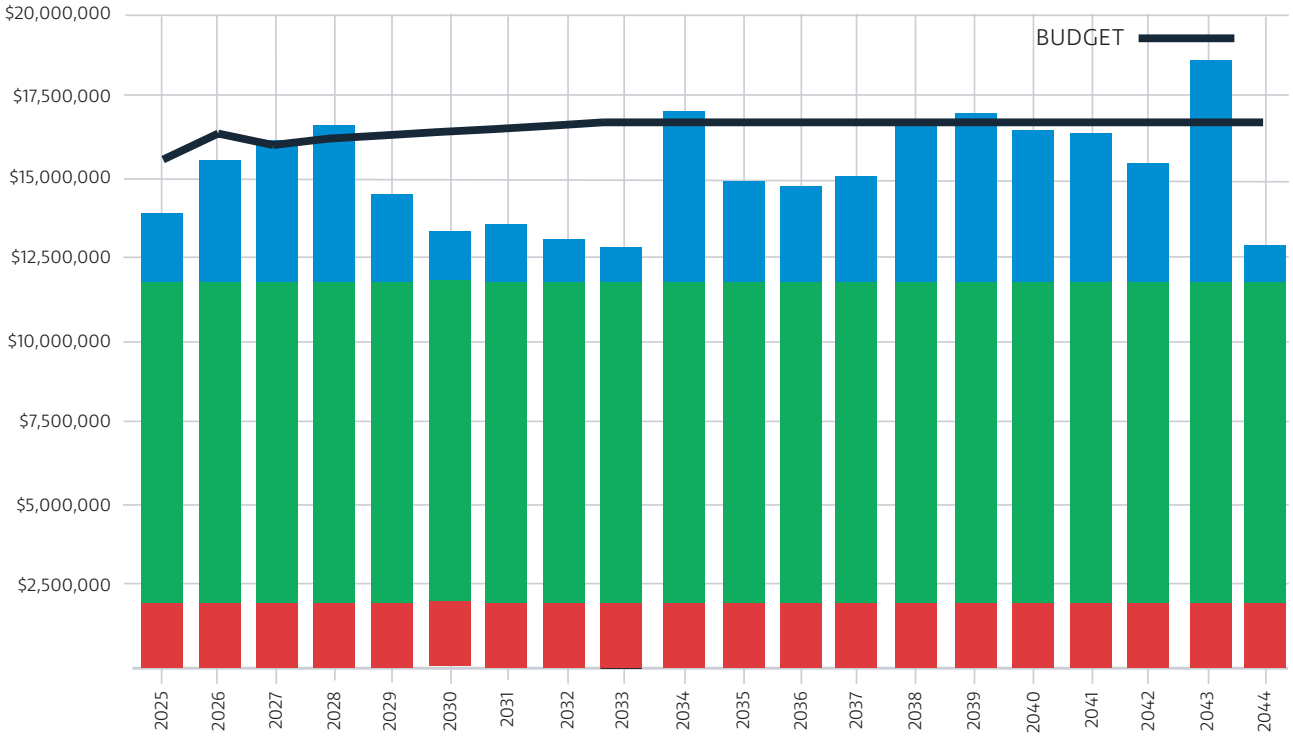
This Asset Management Plan defines the asset management activities and associated funding requirements recommended for inclusion into the Long-Term Financial Plan to achieve our asset performance targets. The lifecycle costs necessary to operate, maintain and renew our assets as outlined within this Asset Management Plan is approximately $14.69 million on average each year across the 10-year planning period. The associated 10-year annual average financial forecasts for renewal, maintenance and operation are presented below for each asset class.

Playgrounds	Sports Fields	Green Infrastructure	Water Feature	Total
$0.89 M Renewal Cost	**$0.87 M** Renewal Cost	**$1.00 M** Renewal Cost	**$0.09 M** Renewal Cost	**$2.85 M** Renewal Cost
$0.34 M Maintenance Cost	**$0.04 M** Maintenance Cost	**$9.20 M** Maintenance Cost	**$0.25 M** Maintenance Cost	**$9.83 M** Maintenance Cost
$0.10 M Operation Cost	**$0.007 M** Renewal Cost	**$1.74 M** Operation Cost	**$0.17 M** Operation Cost	**$2.01 M** Operation Cost
$1.32 M Lifecycle Cost	**$0.91 M** Lifecycle Cost	**$11.94 M** Lifecycle Cost	**$0.51 M** Lifecycle Cost	**$14.69 M** Lifecycle Cost

Currently, the lifecycle budget allocation within the Long-Term Financial Plan is $16.17 million on average each year. This results in an identified funding surplus of $1.48 million on average each year and means we currently have 110% of the costs (Lifecycle Financial Ratio) to deliver the required activities to sustain current levels
of service.

10-year Lifecycle Financial Ratio
152%

10-year Asset Renewal Funding Ratio
110%



LIFECYCLE SUMMARY
Annual Average first 10 years

Lifecycle Forecast	$14,693,445
Planned Budget	$16,169,006
Surplus	$1,475,561

MAINTENANCE
Annual Average first 10 years

Maintenance Forecast	$9,834,167
Planned Budget	$9,834,167

OPERATION
Annual Average first 10 years

Operation Forecast	$2,011,428
Planned Budget	$2,011,428

RENEWAL
Annual Average first 10 years

Renewal Forecast	$4,323,412
Planned Budget	$2,847,851

Noting that this Asset Management Plan has not forecast any additional operational and maintenance requirements, the identified lifecycle funding surplus is associated with the revised asset renewal forecasting. Park Lands and Open Space asset portfolio as a whole has sufficient funding across the 10-year planning period.

The Asset Renewal Funding Ratio indicates that over the next 10 years our current budgets within the Long-Term Financial Plan account for 152% of the forecast funding required for the optimal renewal of our Park Lands and Open Space assets. This indicates a budget surplus that can be reallocated to other Council priorities.

Contributing factors that have impacted on forecast renewal costs include:

- Undertaking a comprehensive review of the current condition of our assets and re-forecasting asset renewal requirements within this Asset Management Plan.
- Ensuring we accurately recognise asset replacement costs, utilising current unit rates that take into consideration increasing costs associated with inflation and industry escalations (We have experienced significant increases in project unit rates, noting that the Local Government Association (LGA) have indicated that costs and materials have increased up to 25% post pandemic).

For this Asset Management Plan, while the material and project costs have increased, a renewal funding surplus has been identified. This is due to a comprehensive review of the asset lifecycle management approach in conjunction with utilising predictive modelling to better understand asset renewal investment needs to maintain service levels over the short, medium and long term.

Continuing to leverage off external funding opportunities will allow us to maintain and enhance the quality of the services we provide. We will continue to work in partnership with both State and Federal Governments to pursue these opportunities for both renewal and significant new and upgrade projects.

8 Potential Service and Risk Impacts

If the forecast activities outlined within this Asset Management Plan (operations, maintenance, renewal) are unable to be accommodated into the Long-Term Financial Plan, there will be potential service consequences for users. These service consequences include:

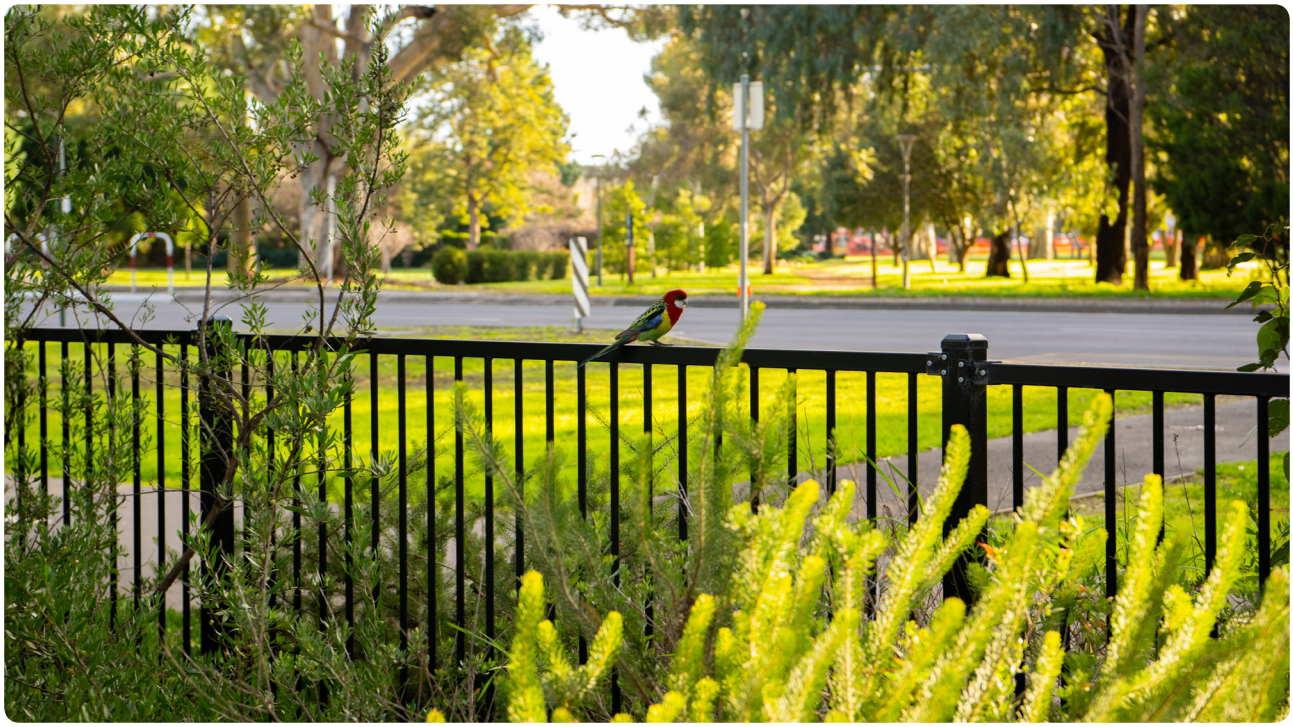
- Reduced levels of service for the Park Lands and Open Space portfolio
- Reduced customer satisfaction levels associated with the management of our existing assets
- Intergenerational inequity (burdening future generations)

These associated risk consequences include:

- Increased safety risks associated with assets deteriorating beyond recommended intervention levels
- Increased reputational risks associated with services not aligning with community expectations
- Increased financial risks associated with additional maintenance requirements that cannot be accommodated within existing budgets
- Increased financial risks associated with higher renewal and/or rehabilitation treatments as asset renewals are not funded at the optimal point in time
- Increased economic risk associated with reduced business activity, events and tourism
- Intergenerational inequity (passing on costs and risk to future generations)

If the forecast activities outlined within this Asset Management Plan are unable to be accommodated into the Long-Term Financial Plan, we will endeavour to manage these risks within available funding by:

- Continuing to undertake regular asset condition and maintenance inspections
- Prioritising all asset renewal and maintenance activities with respect to available budget
- Revising our levels of service to establish an acceptable balance between cost, level of service and risk
- Developing a communication strategy to manage expectations and educate the community around affordable levels of service
- Continuing to seek out external funding opportunities
- Prioritisation of the delivery of key actions from the Improvement Plan



9 Monitoring and Improvement Program

The next steps resulting from this Asset Management Plan to improve asset management practices are:

	Improvement Plan Actions
1	Finalise a 4-year Resource Plan to identify key upgrade/new projects to deliver Council's Strategic Plan objectives. Once key projects are recognised within the LTFP, Asset Management Plans will be updated to ensure associated acquisition costs (upgrade/new) and ongoing operational and maintenance costs are appropriately recognised, in conjunction with any scheduling adjustments required for asset renewal programs.
2	Review and update operations and maintenance standards, to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. Include changes into future revisions of this Asset Management Plan and LTFP.
3	Continue to work in partnership with State Government to pursue external funding opportunities and partnerships for Park Lands and Open Space upgrades.
4	Continue to undertake regular condition audits and revaluation for all of our Park Lands and Open Space asset portfolio within the nominated 4-year cycles, including regular review of asset useful lives.
5	Review and standardise asset hierarchies for all asset classes within Streets, Park Lands and Buildings Categories.
6	Review customer service requests codes to better align with Level of Service reporting and operational and maintenance sub-activities.
7	Review community engagement survey questions to better align with specific asset categories and Level of Service measures.
8	Continue to review our technical standards and their application across the city and Park Lands, with respect to climate resilience, performance, whole-of-life cost and amenity.
9	Continue to monitor forecast climate change impacts to ensure we remain resilient through proactively implementing appropriate mitigation and adaptation controls.
10	Improve the capture of carbon emission data for technical standards and project procurement to support lower carbon decision making.
11	Review of corporate performance measure targets for customer satisfaction, to assist with performance gap analysis.
12	Further develop processes to ensure asset data is updated following the completion of maintenance work and emergency asset replacement resulting from vandalism.

CITY OF ADELAIDE

Park Lands and Open Space Draft Asset Management Plan

CITY OF ADELAIDE

Contents

1	EXECUTIVE SUMMARY	5
2	INTRODUCTION	17
3	LEVELS OF SERVICE	25
4	FUTURE DEMAND	42
5	LIFECYCLE MANAGEMENT PLAN	47
6	RISK MANAGEMENT PLANNING	60
7	FINANCIAL SUMMARY	68
8	PLAN IMPROVEMENT AND MONITORING	74
9	REFERENCES	77
10	APPENDICES	78

1.0 EXECUTIVE SUMMARY

1.1 The Purpose of the Plan

The City of Adelaide is responsible for an extensive and diverse asset portfolio valued at more than $2 billion, which represents a significant investment made over multiple generations. These assets play a vital role in providing essential services to our community and it is critical to ensure these assets continue to be effectively managed to enable ongoing service provision and benefits for both current and future generations.

Under South Australia's *Local Government Act 1999*, we are required to develop Asset Management Plans for a period of at least 10 years, which includes information about the operation, maintenance, renewal, acquisition, expansion, upgrade and disposal for each infrastructure assets class under our care and control.

City of Adelaide has six Asset Management Plans (AM Plans), which include Park Lands and Open Space, Transportation, Buildings, Water Infrastructure, Lighting & Electrical and Urban Elements.

The fundamental purpose of this Park Lands and Open Space Asset Management Plan is to outline the Council's high-level asset management priorities for the operation, maintenance and renewal of our assets over the next 10 years. Additionally, it aims to improve the long-term strategic management of our Park Lands and Open Space, to cater for the community's required levels of service both now and into the future.

The plan defines the current state of our $46.3 million Park Lands and Open Space portfolio, as well as the asset management activities and associated funding requirements recommended for inclusion into the Long-Term Financial Plan to achieve our asset performance targets.

Our Park Lands and Open Space assets are comprised of green assets (trees, turf, biodiversity and landscaped areas) and infrastructure assets (irrigation systems, playgrounds, sports fields, and water features).

1.2 Our Park Lands and Open Space Assets

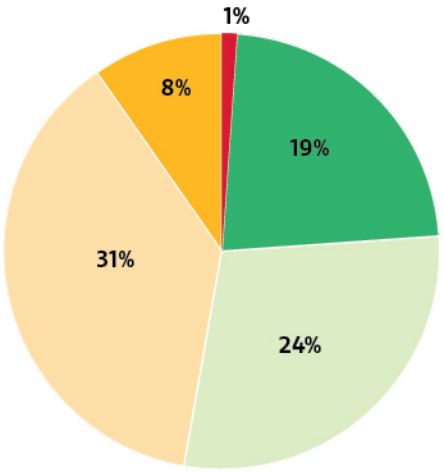
The City of Adelaide's Park Lands and Open Space assets portfolio is valued at approximately $46.3 million and provides essential services which enable the health and wellbeing of our community and enhance the utilisation and accessibility of our natural environment.

Green assets provide various benefits and contribute significantly to the aesthetic and environmental quality of our surroundings, however they are not recognised as capital assets holding financial value from an accounting perspective. This results in the management of green assets being primarily funded through operational and maintenance budgets.

Infrastructure assets are classified as capital assets and the replacement of these assets is managed through capital renewal budgets.

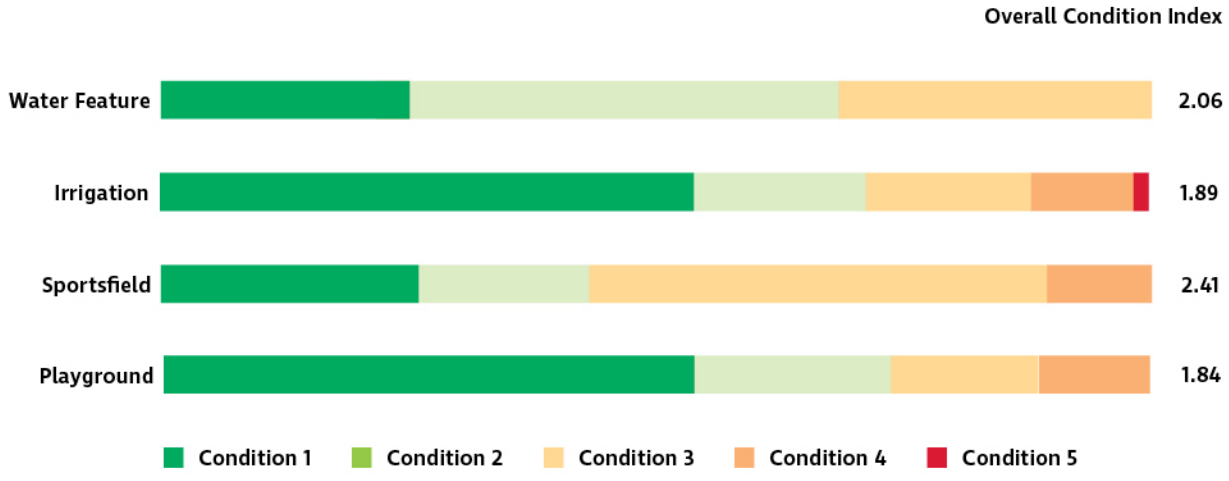
This approach allows us to effectively balance the preservation of our natural assets while maintaining and renewing our infrastructure.

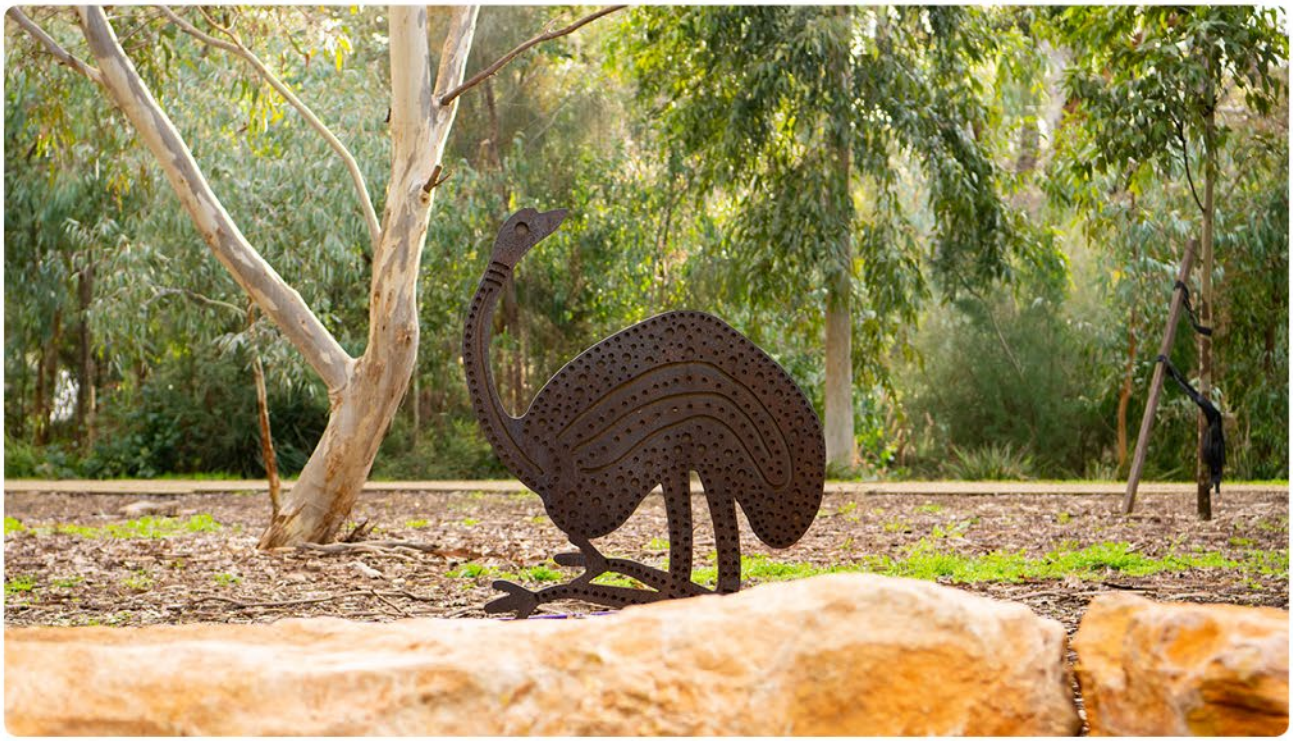
To monitor the performance of our Park Lands and Open Space assets, we undertake regular condition audits (typically every 4 years). Asset condition information is analysed with respect to technical intervention criteria to inform our maintenance and renewal programs. The current condition of our Park Lands and Open Space portfolio is rated in a good to fair condition, with an overall condition index rating of 2.1. 91% of assets are rated in a very good to fair condition and 9% of assets are rated in poor or very poor condition, which form the general basis of our renewal program priorities.



Condition Grading	Description of Condition
1	**Very Good:** free of defects, only planned and/or routine maintenance required
2	**Good:** minor defects, increasing maintenance required plus planned maintenance
3	**Fair:** defects requiring regular and/or significant maintenance to reinstate service
4	**Poor:** significant defects, higher order cost intervention likely
5	**Very Poor:** physically unsound and/or beyond rehabilitation, immediate action required

Overall, the majority of our Park Lands and Open Space Assets are rated in a very good to fair condition with only a small proportion of assets rated poor and very poor condition. This is considered a healthy condition distribution, however ongoing investment will be required to ensure levels of service are maintained.





1.3 Community Engagement & Customer Satisfaction

In November 2021, we undertook an engagement process with city residents and visitors to better understand and measure levels of customer satisfaction for the services provided by our Park Lands and Open Space assets. A summary of the responses is shown below.

Category	Average Score	Very Poor (<40%)	Poor (40-54%)	Average (55-69%)	Good (70-84%)	Excellent (>85%)
Playgrounds and Sportsfields	94%					●
Water Features	89%					●
Green Infrastructure	89%					●

The overall feedback confirmed appropriate levels of customer satisfaction for all Park Lands and Open Space assets.

A Recommended Levels of Service Report was presented to Council, with the recommendations approved in November 2023. This report noted the community consultation undertaken and the associated benchmarking of current user satisfaction. Additionally, Council also approved the development of the Park Lands and Open Space Asset Management Plan based on the planning principles and recommended management strategies presented within the report and its attachments.

1.4 Current and Future Demands

It is anticipated that the City of Adelaide will be subject to considerable change over the next ten years. This will result in our Park Lands and Open Spaces being subject to new demands that have the potential to impact future service delivery and the requirements of our existing assets.

Key demand drivers and future challenges will include:

- City growth
- Changing demographic
- Tourism and event growth
- Climate change and carbon neutrality
- Emerging technology
- Legislation and regulation

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets, providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, such as educating the community around alternative options, which facilitates service provision without the need to invest in new or upgraded infrastructure.

Demand management will include:

- Continuing to engage with our community through annual City User Profile surveys
- Finalising the Urban Greening Strategy (2024)
- Undertaking an Adelaide Park Lands Strategic Water Resource Study
- Finalising the update of the Adelaide Park Lands Management Strategy
- Delivering priority upgrade/new projects identified within the Strategic Plan and Strategic Documents
- Ensuring climate risk mitigation and adaptation is a key focus for Strategic Planning, Asset Management and Project Delivery
- Continuing to review and update design standards and technical specifications to ensure our assets transition towards having a lower carbon footprint with improved circular economy outcomes through increased usage of recycled materials
- Continuing to partner with industry, to monitor and evaluate new and emerging technologies, with trials of new materials, approaches, and methodologies to inform appropriate changes to standards and practices
- Continuing to monitor changes to legislation and ensure appropriate adaptation into asset management practices

1.5 Strategic Planning

Under the *Local Government Act (SA) 1999*, we are legislatively required to establish a suite of Strategic Management Plans, which guide Council's future planning, asset management and financial sustainability. An overview of these strategic management plans are shown below:

Strategic Plan *Community*	Long term with a four year delivery focus. *Planning for the vision and aspirations of the Adelaide Capital City.*
Long-Term Financial Plan *Financial*	Ten year Plan, revised annually to ensure a ten year view is maintained. *Planning for the long-term financial sustainability of the City of Adelaide.*
Asset Management Plans *Infrastructure*	Suite of ten year Plans. *Planning for the sustainable renewal and maintenance of Council assets.*
City Plan *Development / Built Form*	Ten year Spatial Plan. *Planning for the future land uses and built form of the Adelaide Capital City.*

Through the City of Adelaide Strategic Plan 2024 – 2028, Council's vision is:

Our Adelaide. Bold. Aspirational. Innovative.

Achieving our vision for the future will be guided by our long term aspirations:

Our Community: Vibrant, connected and inclusive
Our Environment: Resilient, protected and sustainable
Our Economy: Growing, innovative and responsive
Our Places: Interesting, purposeful and safe
Our Corporation: High performing, customer-centric and bold

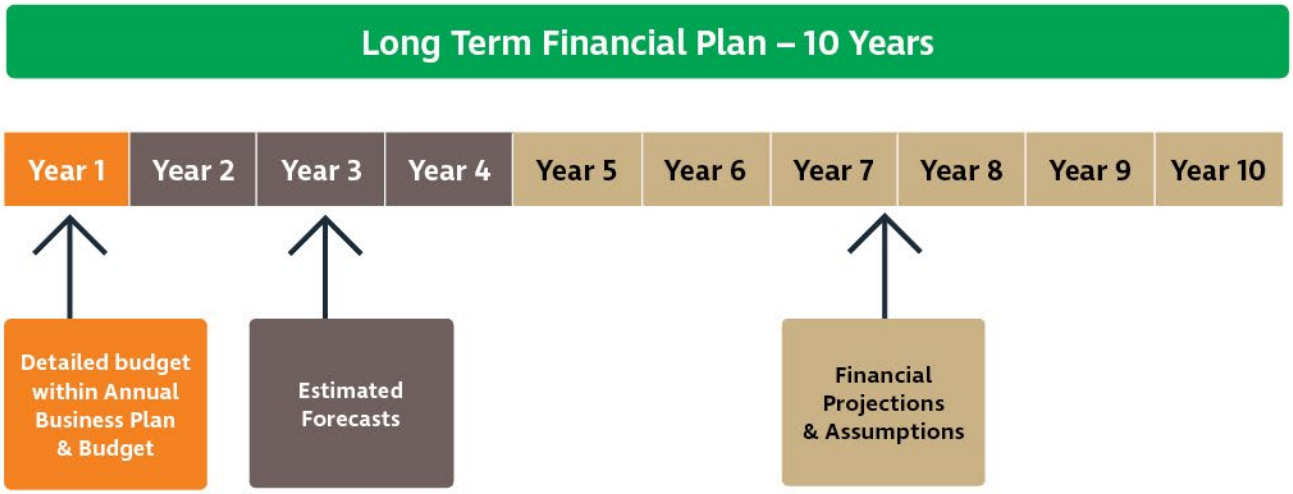
As Adelaide grows, we will need to consider economic vitality, social connectivity and wellbeing, distinctive precincts, environmental and financial sustainability, asset management and service delivery. To ensure we maintain our liveability and to support growth, these principles will underpin everything we do:

- Exceptional Amenity – Be bold and courageous in our pursuit of excellence for our city
- Quality Housing – Strive for liveability and affordability to attract and retain residents
- Community Connection – Strengthen connection, accessibility, diversity and inclusivity by putting people first
- Unique Experiences – Create interesting experiences for our residents, workers and visitors
- Climate Resilience – Embed climate resilience in all that we do
- Economic Growth – Encourage innovation, investment and development in current and emerging sectors
- Budget Repair – Provide quality services and ensure long-term financial sustainability

The Strategic Plan is supported by a suite of long and short-term strategies and action plans as well as a Resource Plan. The Resource Plan provides a four-year view of new and upgrade projects, resources, and budget requirements to deliver our Strategic Plan aspirations and objectives.

Integrated Delivery Planning ensures that prudent and efficient decisions are made, with line-of-sight between Council's Strategic Plan objectives and the major infrastructure projects we deliver. While this Asset Management Plan does not identify financial forecasts associated with new and upgrade projects, it does ensure required asset renewals are aligned (where practical) with key new and upgrade projects specified within the Resource Plan.

Each year our annual business plan and budget formalises funding allocations to continue providing services and progress new projects. It enables existing projects to move from one delivery stage to the next (eg progress concept design to detailed design and detailed design to construction) as well as consider emerging risks and opportunities that may result from Council decisions, community requests or other external factors.

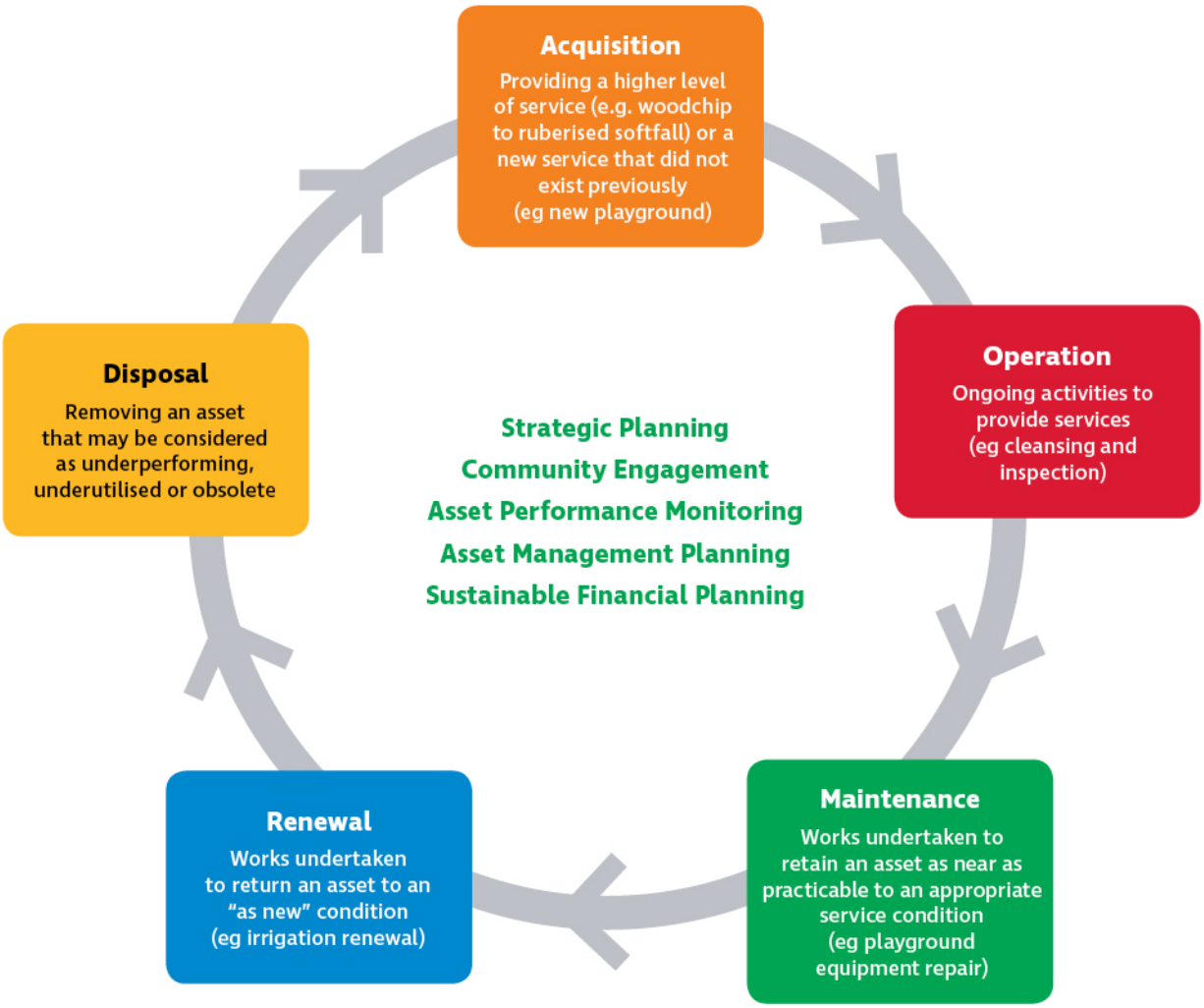


1.6 Lifecycle Management

In order to effectively manage our assets, it is important to understand the relationship between all stages of the asset lifecycle. Effective asset management and sustainable financial planning requires a balance between the maintenance, renewal and disposal of existing assets and the delivery of new and upgraded assets.

Our goal is to provide assets that service the needs of the community, providing the agreed levels of service at the lowest lifecycle cost. To enable this, it is important to understand:

- How our assets are performing
- How our assets should be operated and maintained
- When our assets should be renewed
- When we should consider upgrading existing assets or constructing new assets
- How funding for new and upgraded assets is prioritised
- When we should consider disposing underperforming or underutilised assets



This Asset Management Plan's renewal strategy aims to minimise the number of assets that deteriorate into a poor condition and prohibit assets reaching a very poor condition. This strategy ensures we can continue to provide services in line with the community's expectations, appropriately manage risk and optimise whole-of-life costs. Renewal requirements have been identified through a combination of condition audits, engineering recommendations and predictive modelling.

Operational and Maintenance activities are generally evaluated and prioritised with respect to budget provisions within the Long-Term Financial Plan and Annual Business Plan and Budget. Following the completion of this Asset Management Plan, we will be reviewing operations and maintenance standards for Park Lands and Open Space assets, with a view to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. The associated financial impacts will need to be further considered in future revisions of this Asset Management Plan and the Long-Term Financial Plan.

This Asset Management Plan does not identify financial forecasts associated with asset disposal, however where recommended, significant assets will be identified for decommissioning and disposal through Council Reports, to then be considered within the Long-Term Financial Plan and Business Plan and Budget.

7 Financial Summary

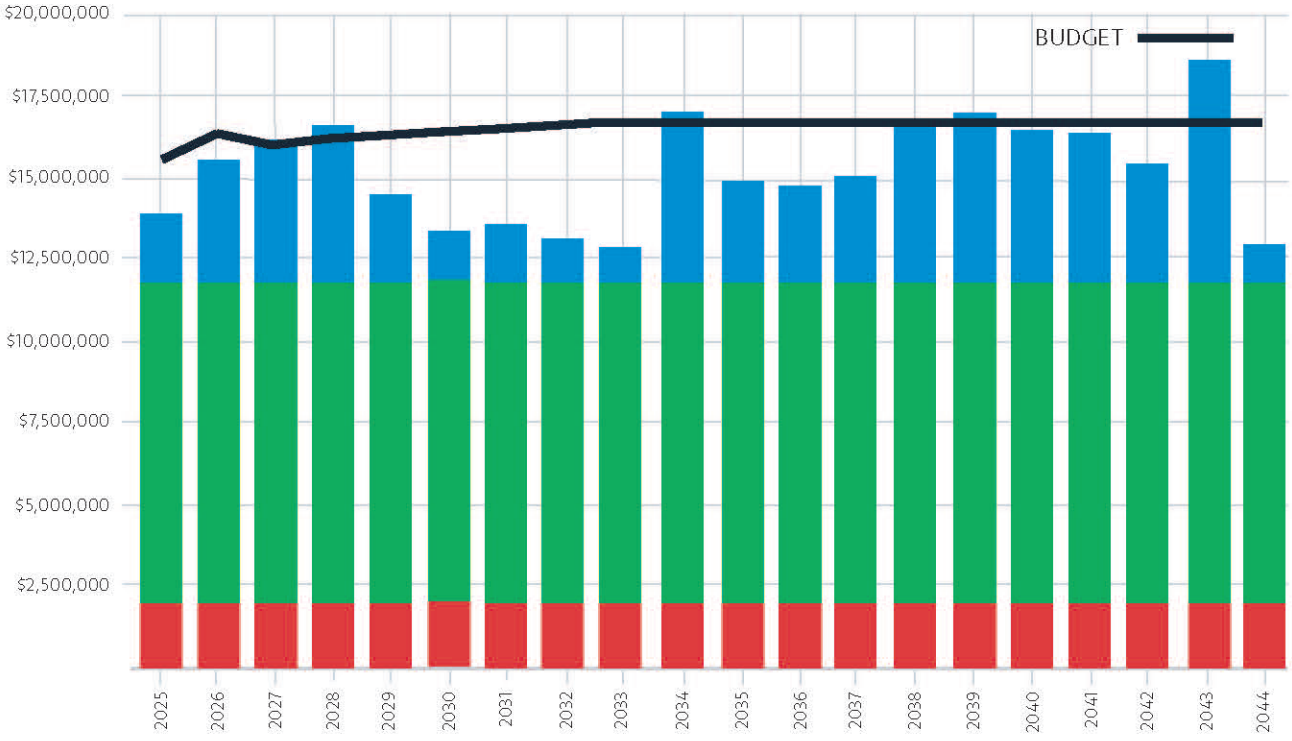
This Asset Management Plan defines the asset management activities and associated funding requirements recommended for inclusion into the Long-Term Financial Plan to achieve our asset performance targets. The lifecycle costs necessary to operate, maintain and renew our assets as outlined within this Asset Management Plan is approximately $14.69 million on average each year across the 10-year planning period. The associated 10-year annual average financial forecasts for renewal, maintenance and operation are presented below for each asset class.

Playgrounds	Sports Fields	Green Infrastructure	Water Feature	Total
$0.89 M Renewal Cost	$0.87 M Renewal Cost	$1.00 M Renewal Cost	$0.09 M Renewal Cost	$2.85 M Renewal Cost
$0.34 M Maintenance Cost	$0.04 M Maintenance Cost	$9.20 M Maintenance Cost	$0.25 M Maintenance Cost	$9.83 M Maintenance Cost
$0.10 M Operation Cost	$0.007 M Renewal Cost	$1.74 M Operation Cost	$0.17 M Operation Cost	$2.01 M Operation Cost
$1.32 M Lifecycle Cost	$0.91 M Lifecycle Cost	$11.94 M Lifecycle Cost	$0.51 M Lifecycle Cost	$14.69 M Lifecycle Cost

Currently, the lifecycle budget allocation within the Long-Term Financial Plan is $16.17 million on average each year. This results in an identified funding surplus of $1.48 million on average each year and means we currently have 110% of the costs (Lifecycle Financial Ratio) to deliver the required activities to sustain current levels
of service.

10-year Lifecycle Financial Ratio
152%

10-year Asset Renewal Funding Ratio
110%



LIFECYCLE SUMMARY
Annual Average first 10 years

Lifecycle Forecast	$14,693,445
Planned Budget	$16,169,006
Surplus	$1,475,561

MAINTENANCE
Annual Average first 10 years

Maintenance Forecast	$9,834,167
Planned Budget	$9,834,167

OPERATION
Annual Average first 10 years

Operation Forecast	$2,011,428
Planned Budget	$2,011,428

RENEWAL
Annual Average first 10 years

Renewal Forecast	$4,323,412
Planned Budget	$2,847,851

Noting that this Asset Management Plan has not forecast any additional operational and maintenance requirements, the identified lifecycle funding surplus is associated with the revised asset renewal forecasting. Park Lands and Open Space asset portfolio as a whole has sufficient funding across the 10-year planning period.

The Asset Renewal Funding Ratio indicates that over the next 10 years our current budgets within the Long-Term Financial Plan account for 152% of the forecast funding required for the optimal renewal of our Park Lands and Open Space assets. This indicates a budget surplus that can be reallocated to other Council priorities.

Contributing factors that have impacted on forecast renewal costs include:

- Undertaking a comprehensive review of the current condition of our assets and re-forecasting asset renewal requirements within this Asset Management Plan.
- Ensuring we accurately recognise asset replacement costs, utilising current unit rates that take into consideration increasing costs associated with inflation and industry escalations (We have experienced significant increases in project unit rates, noting that the Local Government Association (LGA) have indicated that costs and materials have increased up to 25% post pandemic).

For this Asset Management Plan, while the material and project costs have increased, a renewal funding surplus has been identified. This is due to a comprehensive review of the asset lifecycle management approach in conjunction with utilising predictive modelling to better understand asset renewal investment needs to maintain service levels over the short, medium and long term.

Continuing to leverage off external funding opportunities will allow us to maintain and enhance the quality of the services we provide. We will continue to work in partnership with both State and Federal Governments to pursue these opportunities for both renewal and significant new and upgrade projects.

1.8 Potential Service and Risk Impacts

If the forecast activities outlined within this Asset Management Plan (operations, maintenance, renewal) are unable to be accommodated into the Long-Term Financial Plan, there will be potential service consequences for users. These service consequences include:

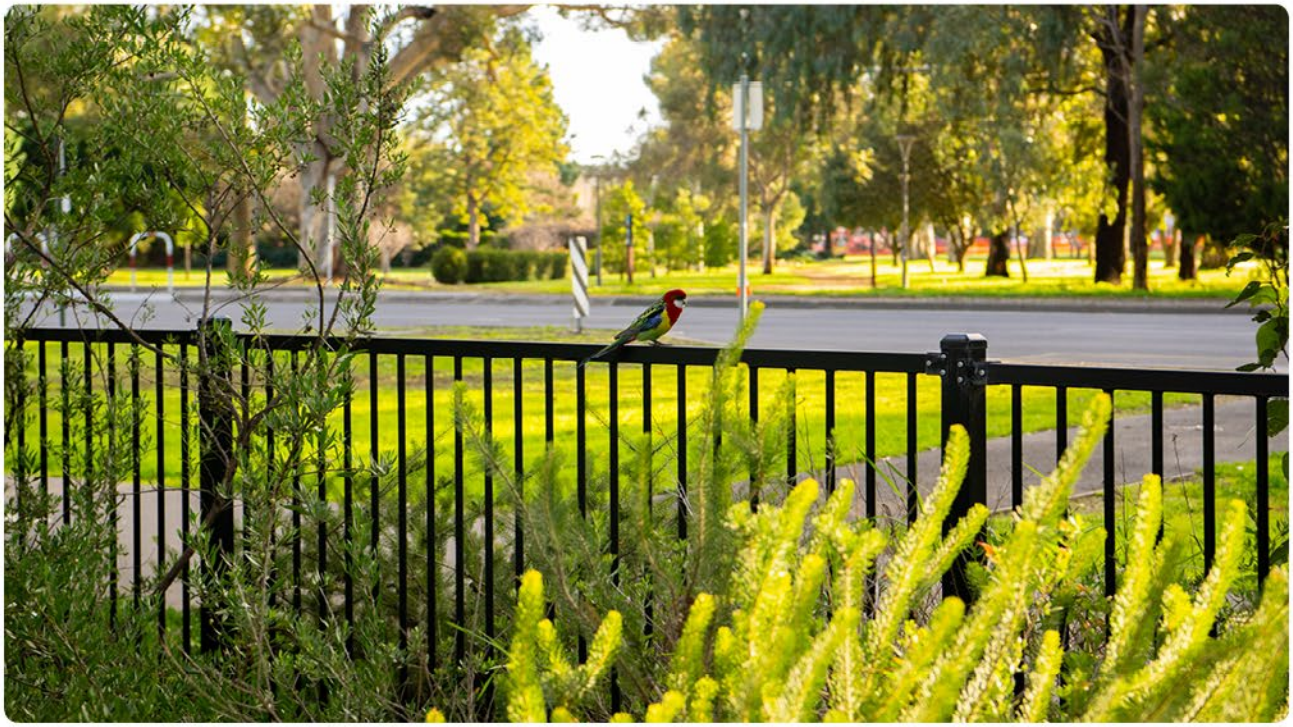
- Reduced levels of service for the Park Lands and Open Space portfolio
- Reduced customer satisfaction levels associated with the management of our existing assets
- Intergenerational inequity (burdening future generations)

These associated risk consequences include:

- Increased safety risks associated with assets deteriorating beyond recommended intervention levels
- Increased reputational risks associated with services not aligning with community expectations
- Increased financial risks associated with additional maintenance requirements that cannot be accommodated within existing budgets
- Increased financial risks associated with higher renewal and/or rehabilitation treatments as asset renewals are not funded at the optimal point in time
- Increased economic risk associated with reduced business activity, events and tourism
- Intergenerational inequity (passing on costs and risk to future generations)

If the forecast activities outlined within this Asset Management Plan are unable to be accommodated into the Long-Term Financial Plan, we will endeavour to manage these risks within available funding by:

- Continuing to undertake regular asset condition and maintenance inspections
- Prioritising all asset renewal and maintenance activities with respect to available budget
- Revising our levels of service to establish an acceptable balance between cost, level of service and risk
- Developing a communication strategy to manage expectations and educate the community around affordable levels of service
- Continuing to seek out external funding opportunities
- Prioritisation of the delivery of key actions from the Improvement Plan



1.9 Monitoring and Improvement Program

The next steps resulting from this Asset Management Plan to improve asset management practices are:

	Improvement Plan Actions
1	Finalise a 4-year Resource Plan to identify key upgrade/new projects to deliver Council's Strategic Plan objectives. Once key projects are recognised within the LTFP, Asset Management Plans will be updated to ensure associated acquisition costs (upgrade/new) and ongoing operational and maintenance costs are appropriately recognised, in conjunction with any scheduling adjustments required for asset renewal programs.
2	Review and update operations and maintenance standards, to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. Include changes into future revisions of this Asset Management Plan and LTFP.
3	Continue to work in partnership with State Government to pursue external funding opportunities and partnerships for Park Lands and Open Space upgrades.
4	Continue to undertake regular condition audits and revaluation for all of our Park Lands and Open Space asset portfolio within the nominated 4-year cycles, including regular review of asset useful lives.
5	Review and standardise asset hierarchies for all asset classes within Streets, Park Lands and Buildings Categories.
6	Review customer service requests codes to better align with Level of Service reporting and operational and maintenance sub-activities.
7	Review community engagement survey questions to better align with specific asset categories and Level of Service measures.
8	Continue to review our technical standards and their application across the city and Park Lands, with respect to climate resilience, performance, whole-of-life cost and amenity.
9	Continue to monitor forecast climate change impacts to ensure we remain resilient through proactively implementing appropriate mitigation and adaptation controls.
10	Improve the capture of carbon emission data for technical standards and project procurement to support lower carbon decision making.
11	Review of corporate performance measure targets for customer satisfaction, to assist with performance gap analysis.
12	Further develop processes to ensure asset data is updated following the completion of maintenance work and emergency asset replacement resulting from vandalism.

CITY OF ADELAIDE

2.0 INTRODUCTION

2.1 Background

First shaped by the Kaurna People of the Adelaide Plains, then by Colonel William Light, Adelaide is a dynamic, accessible and safe city, that offers an enviable quality of life. The physical layout of the city enhances the attributes that make Adelaide unique. From the Nationally Heritage Listed Park Lands that surround our city, to the compact layout that makes the city walkable and cyclable, to our unique neighbourhoods and precincts, all these factors place Adelaide on the path to being one of the most liveable cities in the world. Despite our small footprint, the City of Adelaide is home to over 26,000 residents, 12,000 businesses and accommodates over 300,000 visitors daily, contributing close to 18% of the State's economic value.

The City of Adelaide's Park Lands and Open Space assets are essential to the health and wellbeing of our community and enhance the utilisation and accessibility of our natural environment. This asset portfolio is valued at approximately $46.3 million and includes playgrounds, sports fields, recreational and active areas, green infrastructure (landscaped areas, trees, irrigation) and water features.

With projected City and metropolitan growth, a changing climate and advancements in technology, it is anticipated that higher demand will be placed on our existing assets and there will be increasing requirements for new and upgraded infrastructure.

With Council's strategic objectives to create a beautiful and diverse City that is welcoming, inclusive and accessible to all, it is critical to ensure that our Park Lands and Open Space assets continue to be appropriately managed, ensuring we provide appropriate services and benefits for both current and future generations.

This Park Lands and Open Space Asset Management Plan communicates the requirements for the sustainable delivery of services through management of assets, compliance with regulatory requirements, and required funding to provide the appropriate levels of service over the planning period.

The infrastructure assets covered by this Asset Management Plan, including their quantities and replacement costs are shown in Table 2.1 below.

Table 2.1: Infrastructure Assets covered by the Park Lands and Open Space Asset Management Plan

Asset Category	Asset Type	Quantity/Dimension	Replacement Value
Playgrounds	Playground Rubberised Softfall	7,845 m^2	$798,656
	Playground Equipment	202 assets	$3,171,538
Sportsfields and Active Areas	Basketball Court	5 assets	$719,809
	BMX Track	4 assets	$1,791,228
	Chess Set	1 asset	$14,755
	Cricket Pitch	6 assets	$112,658
	Golf Greens	57 assets	$2,669,130
	Multipurpose Court	2 assets	$1,278,178
	Netball Court	1 asset	$5,756,152
	Petanque	4 assets	$249,373
	Skatepark	2 assets	$1,836,313
	Sports Equipment	66 assets	$714,364
	Tennis Court	6 assets	$780,089

Green Infrastructure	Street and Park Trees	56,997 assets	n/a *
	Streetscape	94,469 m^2	n/a *
	Park Lands Garden Bed	100,332 m^2	n/a *
	Biodiversity Area	1,012,664 m^2	n/a *
	Turf	2,606,656 m^2	n/a *
	Irrigation System	371 assets	$12,372,154
	Strata cell	39 assets	$3,329,205
Water Features	Water Features	13 assets	$10,752,961
Total			$46,346,562

*Note: trees, streetscapes, garden beds, biodiversity areas and turf are not classified as capital assets, therefore the replacement value is not recognised for these types of assets and the replacement will be funded through operational budgets.

This Asset Management Plan is to be read in conjunction with the Asset Management Policy, Strategic Asset Management Plan and the following key planning documents:

- City of Adelaide Strategic Plan (2024-2028)
- Active City Strategy (2013-2023)
- Adelaide Park Lands Management Strategy (2014-2025)
- Carbon Neutral Strategy (2015-2025)
- Climate Change Risk Adaptation Action Plan (2021-2026)
- Community Land Management Plans
- Cultural Strategy (2017-2023)
- Disability Access and Inclusion Plan (2019-2022)
- Heritage Strategy and Action Plan (2021-2036)
- Park Land and Precinct Master Plans
- Public Art Action Plan (2019-2022)
- Public Health and Wellbeing Plan (2020-2025)
- Smart Move Transport and Movement Strategy (2012-2022)
- The 30-Year Plan for Greater Adelaide (2017) - State Government

As existing planning documents are updated and new planning documents are approved by Council, Asset Management Plans will be reviewed and updated as required.

Infrastructure projects will reference the Adelaide Design Manual for transformational projects supported by upgrade/new funding allocated with the Business Plan and Budget and Long-Term Financial Plan.

2.2 Goals and Objectives of Asset Ownership

Our goal for managing infrastructure assets is to meet the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers.

The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- Linking to a Long-Term Financial Plan which identifies required, affordable forecast costs and how it will be allocated.

Key elements of the planning framework are:

- Levels of service – specifies the services and levels of service to be provided,
- Risk Management,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Lifecycle management – how to manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices – how we manage provision of the services,
- Monitoring – how the plan will be monitored to ensure objectives are met,
- Asset management improvement plan – how we increase asset management maturity.

Other references to the benefits, fundamentals principles and objectives of asset management are:

- International Infrastructure Management Manual 2015 [1]
- ISO 550002 [2]

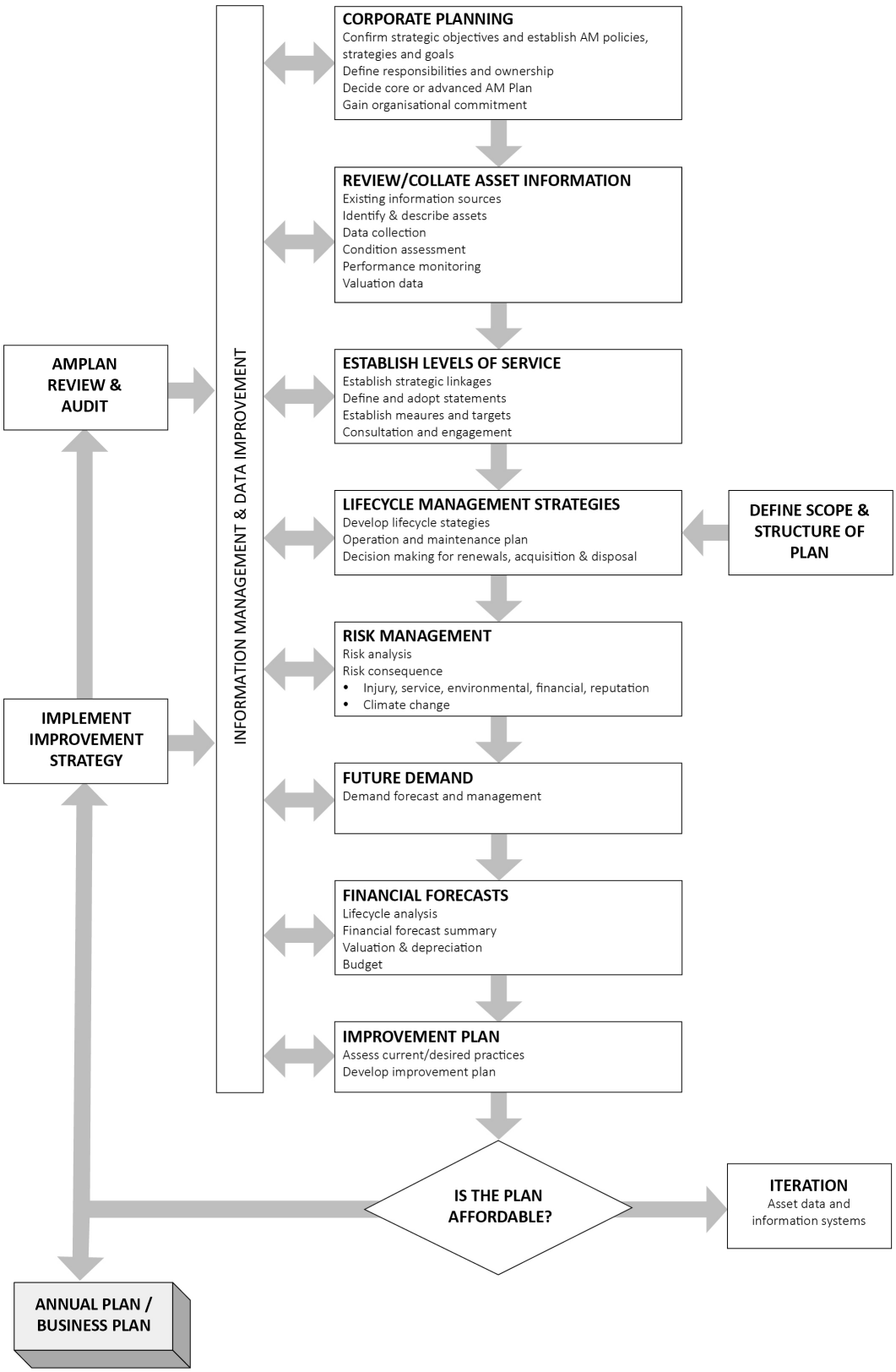
[1] Based on IPWEA 2015 IIMM, Sec 2.1.3, p 2| 13

[2] ISO 55000 Overview, principles and terminology

A road map for preparing an Asset Management Plan is shown below:

Figure 2.2: Road Map for preparing an Asset Management Plan

Source: IPWEA, 2006, IIMM, Fig 1.5.1, p 1.11



2.3 Key Stakeholders & Organisational Responsibilities

Key stakeholders in the preparation and implementation of this Asset Management Plan are shown in Table 2.3

Table 2.3: Key Stakeholders in the Asset Management Plan

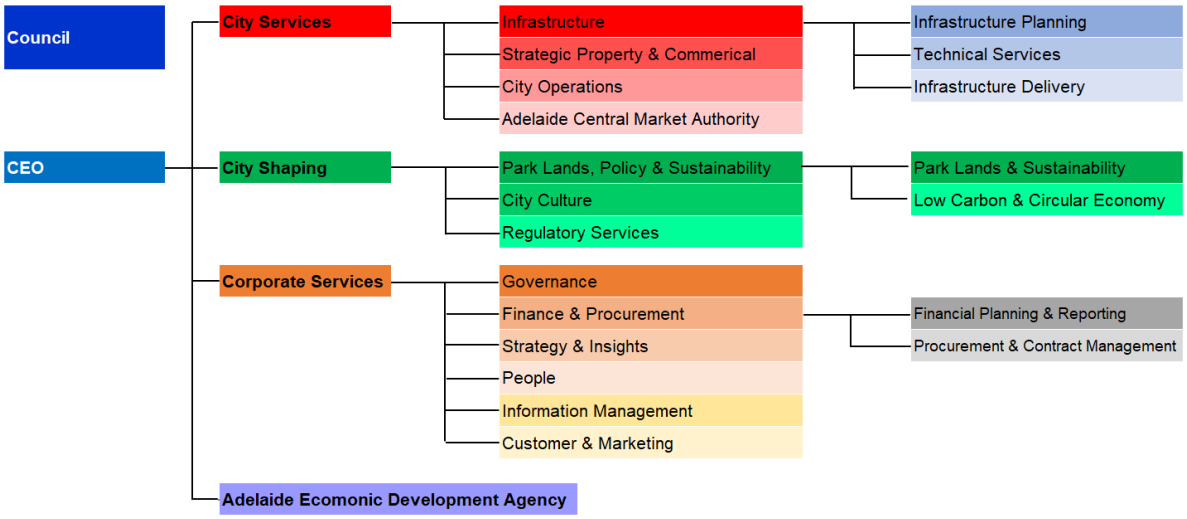
Key Stakeholder	Role in Asset Management Plan
Residents, Ratepayers & Businesses	Provide feedback on current and desired levels of service, which is considered in the development of Asset Management Plans.
Workers, Visitors, Tourists and Students	
Capital City Committee (CCC)	Intergovernmental body established under the City of Adelaide Act (1998) which initiates new projects to enhance and promote the development of the City of Adelaide as the capital city of the state.
Lord Mayor & Elected Members	Represent and advocate for the needs of the community and set high level direction through the development of asset management principles in the Strategic Plan. Approve the Asset Management Plan and Long-Term Financial Plan, to ensure the organisation maintains financial sustainability over the short, medium, and long terms, with consideration of community needs/expectations and corporate risk management requirements.
Chief Executive Officer & Executive Leadership Team	Responsible for the allocation of resources and development of sound asset management practice across the organisation as well as ensuring that all asset management activities are consistent with the objectives of Council's Strategic Plan, the Business Plan and Budget process and the Long-Term Financial Plan. Responsible for ensuring the financial projections in the adopted Asset Management Plans are reflected in the Long-Term Financial Planning and include sustainable maintenance, operations, renewal, and upgrade costs of current and future assets.
Associate Director Infrastructure	Responsible for providing leadership and direction for Council's Asset Management Framework and Project Delivery.
Infrastructure Planning	Responsible for the lifecycle management of Council's Infrastructure Assets and the development of Asset Management Plans, ensuring alignment with the Strategic Management Framework and principles and objectives outlined in the Strategic Plan and other relevant corporate planning documents.
Park Lands & Sustainability	Responsible for developing the Adelaide Park Lands Management Strategy, Park Lands and Square Master Plans and initiating priority Park Lands & Open Space upgrade/new project initiatives. Responsible for facilitating the identification of climate change risks and potential impacts to infrastructure assets.

Key Stakeholder	Role in Asset Management Plan
Low Carbon & Circular Economy	Responsible for facilitating the identification of opportunities to improve environmental and circular economy outcomes within infrastructure standards and specifications.
Strategy & Insights	Responsible for the Strategic Management Framework, including the development of the Strategic Plan in consultation with the Executive Leadership Team, Elected Members, and key strategic stakeholders.
Technical Services	Responsible for technical design documentation to facilitate construction of infrastructure projects, review, and update infrastructure technical standards to ensure they are fit-for-purpose as well as the provision of general engineering and technical advice.
Infrastructure Delivery	Responsible for delivering Capital Works Projects identified in the Asset Management Plan and Annual Business Plan and Budget.
City Lifestyle	Responsible for the management of commercial and community leased and licensed facilities within the Adelaide Park Lands, development, implementation and evaluation of sport and recreation initiatives and projects that increase opportunities for formal and informal physical activity within the Park Lands.
Commercial Property	Responsible for the day-to-day operation and management of Council's commercial businesses including Golf Links.
Financial Planning & Reporting	Responsible for the development and currency of the Asset Accounting Policy, Fixed Asset Guideline, as well as the preparation of asset sustainability and financial reports, which incorporate depreciation and asset revaluations in compliance with Australian accounting standards.
Procurement & Contract Management	Responsible for ensuring appropriate procedures are in place to enable efficient and effective procurement and contract management that demonstrates value for money and ensure public money is appropriately spent in accordance with the Local Government Act.
City Operations	Responsible for delivering day-to-day maintenance and operational activities, ensuring works are prioritised, planned and delivered consistently with operational and maintenance plans.
Regulatory Services	Responsible for issuing permits with conditions to enable external parties to undertake works on Council Infrastructure as well as enforcing rectification for works that are not compliant with CoA construction standards.
Department of Infrastructure and Transport (DIT)	Collaborative partner for major projects.

Key Stakeholder	Role in Asset Management Plan
Service Authorities (e.g. SA Water, South Australian Power Networks)	Service authorities will continue to be consulted to coordinate any works planned by either Council or the service authority, so asset investment is not compromised.

Our organisational structure for service delivery associated with infrastructure assets is shown in Figure 2.3.

Figure 2.3: Organisational Structure



3.0 LEVELS OF SERVICE

3.1 Customer Research and Expectations

In November 2021, the City of Adelaide undertook an engagement process with City residents and visitors to better understand and measure levels of customer satisfaction for users who utilise the services provided by our Park Lands and Open Space assets. The engagement was advertised on signage in City Streets as well as through the City of Adelaide's social media platforms.

The insights from the Survey are intended to be used to identify where current levels of service are not meeting the community's expectation. This will enable recommendations to be made to Council regarding future resourcing requirements for specific services.

The engagement process was primarily undertaken through questionnaire surveys (113 total respondents), where information was collected online using the YourSay platform (61 respondents), as well as through on street intercepts at various locations across the City (52 respondents). Additional information and feedback relating to CoA's infrastructure assets was also collected through the 2021 Resident Survey (318 comments) and engagement with the Disability Access and Inclusion Panel (44 comments).

The demographic distribution of respondents who provided feedback is presented across Figures 3.1-1 to 3.1-3 There were significantly more survey responses received from City visitors compared to residents and an even balance across genders.

Figure 3.1-1 - Respondent Distribution

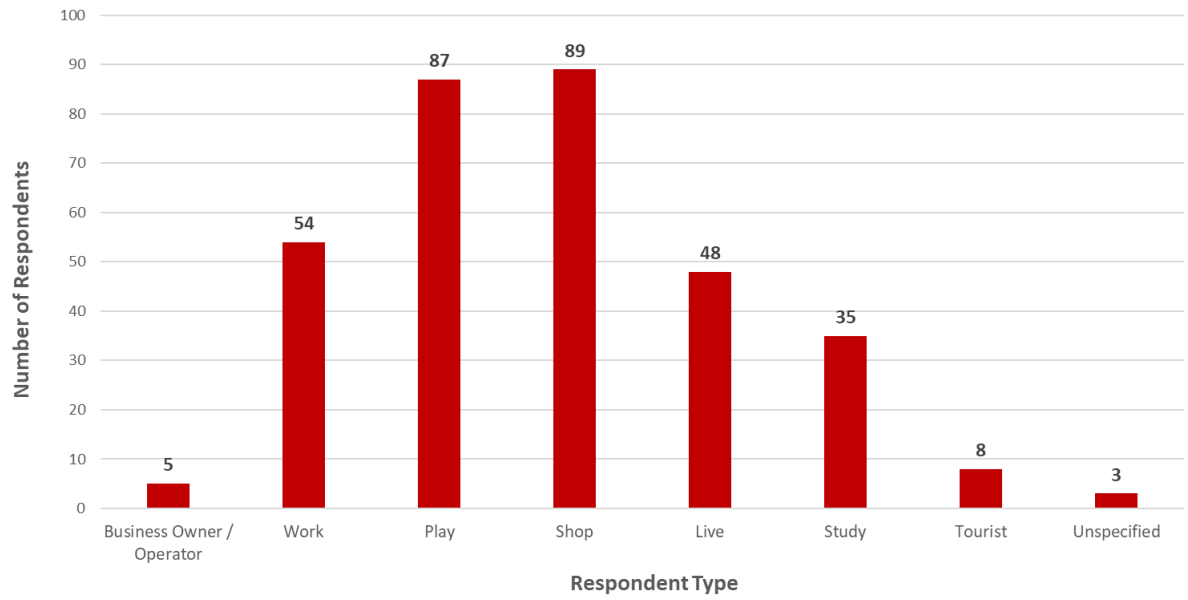


Figure 3.1-2 - Respondent Distribution (Residents v Visitors)

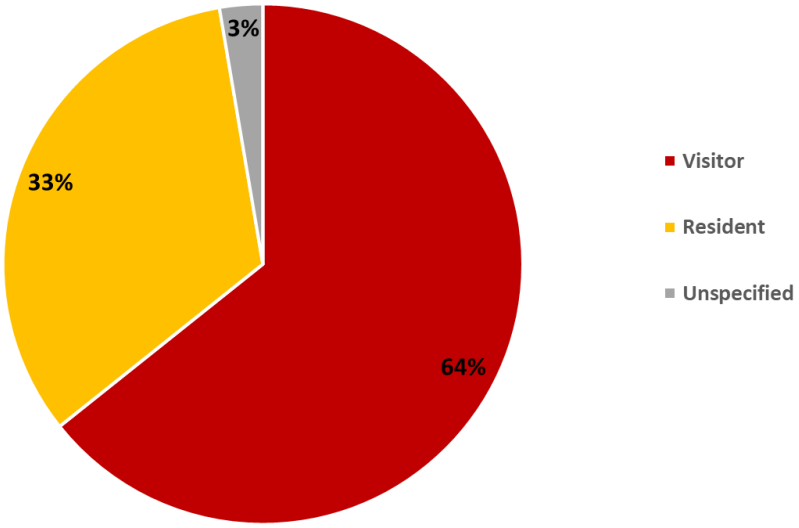
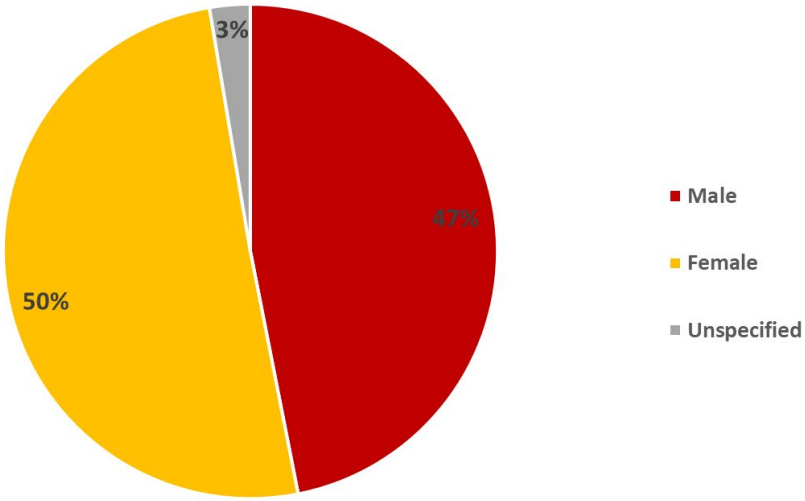


Figure 3.1-3 - Respondent Distribution (Gender)



To ensure that data was collected to enable a clear line of sight for decision making purposes, the questionnaire was structured to differentiate responses relating to the City's streets and the Park Lands.

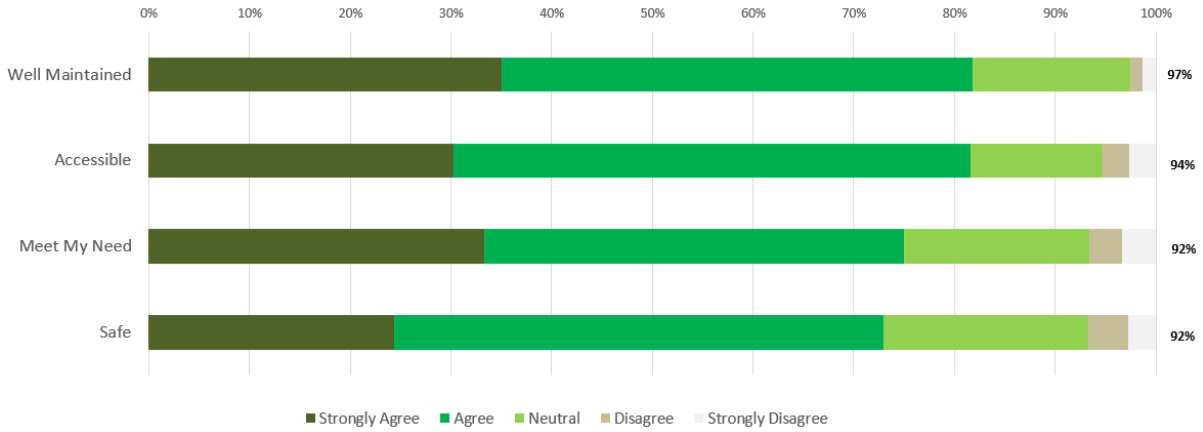
For each performance measure question, a customer satisfaction indicator was calculated which represents the percentage of respondents who were satisfied with the service (neutral responses were omitted from the calculation). These figures can then be compared against CoA's organisation scorecard target of 70% satisfaction to identify where our services are not being delivered in line with community expectations.

The results for Park Lands and Open Space assets are presented and discussed below.

Playgrounds, Sportsfields and Active Areas

Survey respondents were very satisfied with the overall performance of our playgrounds, sportsfields and active areas, where each of the performance measures had satisfaction indicators exceeding CoA's 70% target, as shown in Figure 3.1-4 below.

Figure 3.1-4 – Playgrounds, Sportsfields and Active Areas



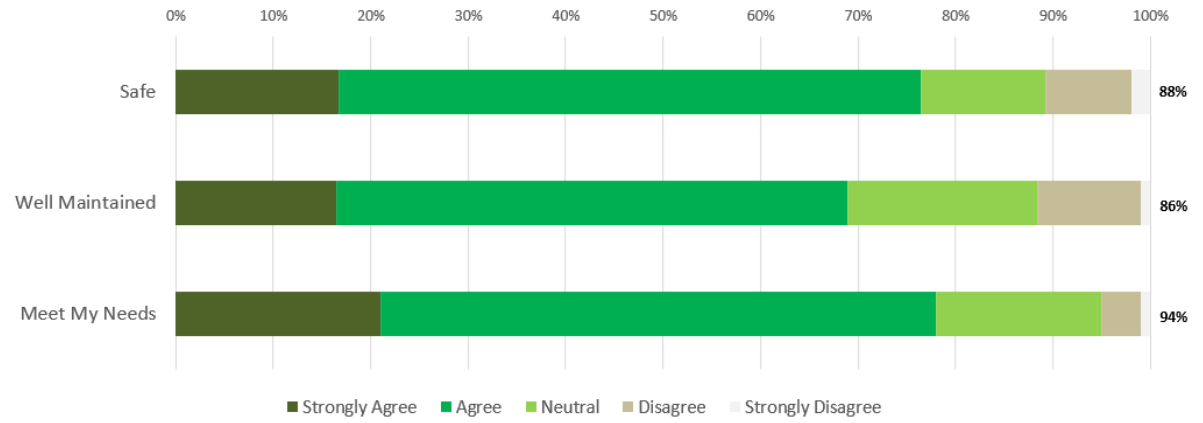
Where respondents stated that they were not satisfied, general themes of the written feedback received are summarised below:

- Desire for more diverse playground equipment that suitable for children of different age groups
- Desire for more playgrounds generally

Water Features

Survey respondents were very satisfied with the overall performance of our water feature assets, where each of the performance measures had satisfaction indicators exceeding CoA's 70% target, as shown in Figure 3.1-5 below.

Figure 3.1-5 –Water Features



Where respondents stated that they were not satisfied, general themes of the written feedback received are summarised below:

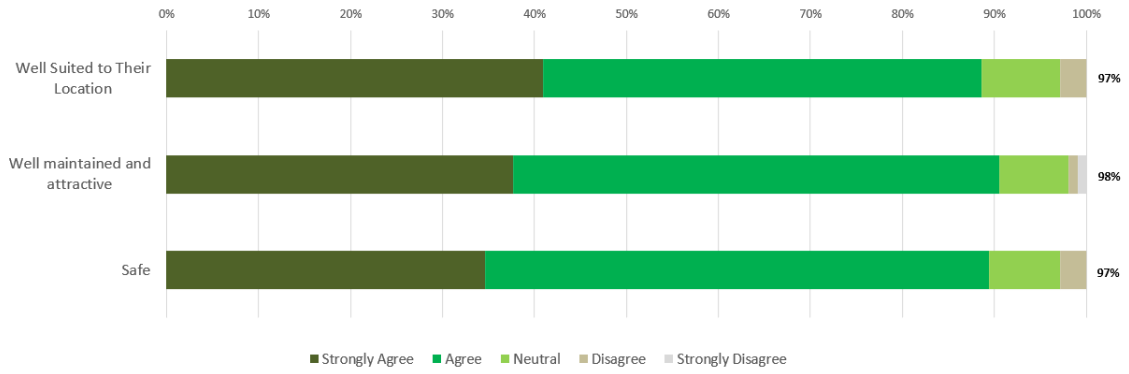
- Desire for more frequent cleaning
- Desire for wildlife protection
- Desire for improvement of water quality

Green Infrastructure (Trees and Landscaping)

To ensure that data was collected to enable a clear line of sight for decision making purposes, the questionnaire was structured to differentiate responses relating to trees and landscaped areas in the City's streets and the Park Lands.

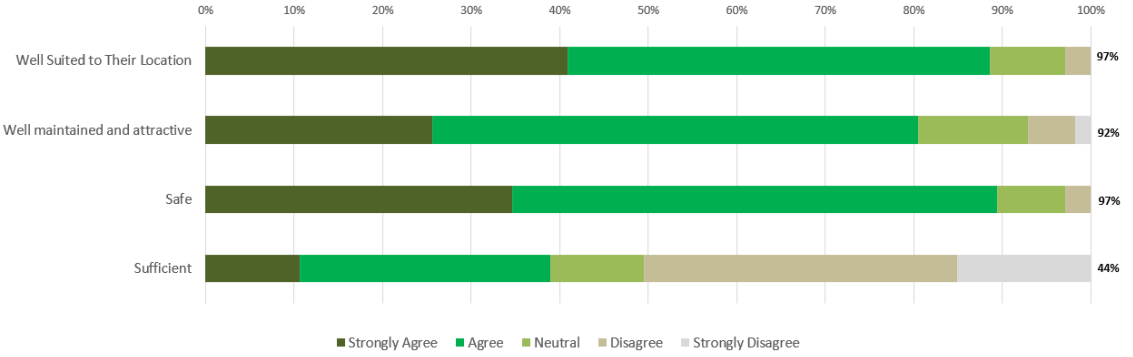
Survey respondents were very satisfied with the overall performance of our trees and landscaped areas located in the Park Lands, where each of the performance measures had satisfaction indicators exceeding CoA's 70% target, as shown in Figure 3.1-6 below.

Figure 3.1-6 – Trees and Landscaping in the Park Lands



For City Streets, while survey respondents were very satisfied with the current performance of our existing street trees and landscaping assets (i.e. health and attractiveness) survey results clearly indicated a community desire to see more street trees and landscaped areas, with a 44% satisfaction index for sufficiency, as shown in Figure 3.1-7 below.

Figure 3.1-7 – Trees and Landscaping in City Streets



It is anticipated that the completion of the Urban Greening Strategy (currently under development in the 2023/24 Financial Year) and the subsequent initiation, funding and delivery of key upgrade/new green infrastructure projects will over time incrementally bridge the gap between customer expectations and service provisions.

Summary

The individual satisfaction indicators calculated for City Streets and Park Lands have been grouped, averaged and presented in Table 3.1 below to provide a high-level summary of the community's feedback with respect to our Park Lands and Open Space assets.

Table 3.1: Consultation Summary Table

Category	Average Score	Very Poor (<40%)	Poor (40-54%)	Average (55-69%)	Good (70-85%)	Excellent (>85%)
Playgrounds, Sportsfields and Active Areas	94%					●
Water Features	89%					●
Green Infrastructure (Trees and Landscaping)	89%					●

The overall feedback confirmed appropriate levels of customer satisfaction for all Park Lands and Open Space assets.

A Recommended Levels of Service Report was presented to Council, with the recommendations approved in November 2023. This report noted the community consultation undertaken and the associated benchmarking of current user satisfaction. Additionally, Council also approved the development of the Park Lands and Open Space Asset Management Plan based on the planning principles and recommended management strategies presented within the report and its attachments.

3.2 Strategic Planning

Under the Local Government Act (SA) 1999, we are legislatively required to establish a suite of Strategic Management Plans, which guide Council's future planning, asset management and financial sustainability. An overview of these strategic management plans are shown below in Table 3.2-1:

Table 3.2-1: Strategic Management Documents

Strategic Plan Community	Long term with a four year delivery focus. Planning for the vision and aspirations of the Adelaide Capital City.
Long-Term Financial Plan Financial	Ten year Plan, revised annually to ensure a ten year view is maintained. Planning for the long-term financial sustainability of the City of Adelaide.
Asset Management Plans Infrastructure	Suite of ten year Plans. Planning for the sustainable renewal and maintenance of Council assets.
City Plan Development / Built Form	Ten year Spatial Plan. Planning for the future land uses and built form of the Adelaide Capital City.

Through the City of Adelaide Strategic Plan 2024-2028, Council's vision is:

Our Adelaide. Bold. Aspirational. Innovative.

Achieving our vision for the future will be guided by our long term aspirations:

Our Community: Vibrant, connected and inclusive
Our Environment: Resilient, protected and sustainable
Our Economy: Growing, innovative and responsive
Our Places: Interesting, purposeful and safe
Our Corporation: High performing, customer-centric and bold

As Adelaide grows, we will need to consider economic vitality, social connectivity and wellbeing, distinctive precincts, environmental and financial sustainability, asset management and service delivery. To ensure we maintain our liveability and to support growth, these principles will underpin everything we do:

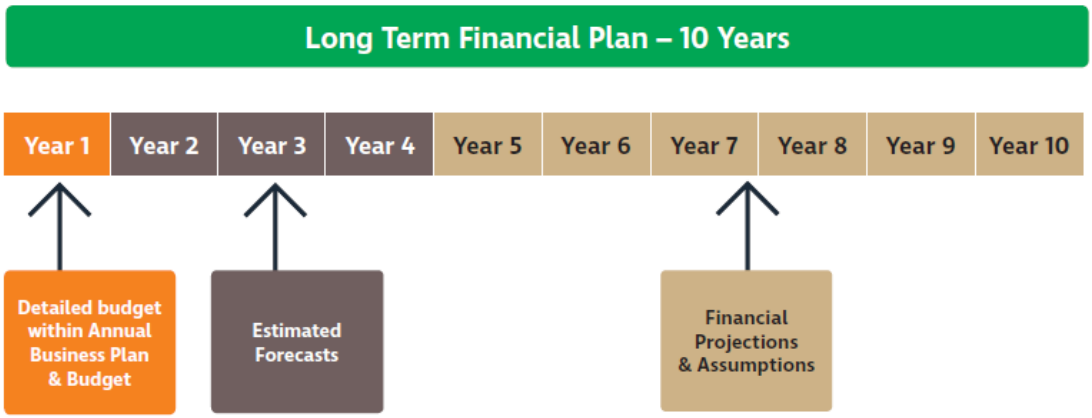
- Exceptional Amenity - Be bold and courageous in our pursuit of excellence for our city.
- Quality Housing - Strive for liveability and affordability to attract and retain residents.
- Community Connection - Strengthen connection, accessibility, diversity and inclusivity by putting people first.
- Unique Experiences - Create interesting experiences for our residents, workers and visitors.
- Climate Resilience - Embed climate resilience in all that we do.
- Economic Growth - Encourage innovation, investment and development in current and emerging sectors.
- Budget Repair - Provide quality services and ensure long-term financial sustainability

The Strategic Plan is supported by a suite of long and short-term strategies and action plans as well as a Resource Plan. The Resource Plan will provide a 4-year view of the projects, resources, and budgets required to deliver our Strategic Plan objectives. It informs the Long-Term Financial Plan (as shown in Figure 3.2) and acts as the key link between the Strategic Plan and Annual Business Plan & Budget, providing transparency between our vision and the key projects we deliver.

Integrated Delivery Planning ensures that prudent and efficient decisions are made, with line-of-sight between Council's Strategic Plan objectives and the major infrastructure projects we deliver. While this Asset Management Plan does not identify financial forecasts associated with new and upgrade projects, it does ensure required asset renewals are aligned (where practical) with key new and upgrade projects specified within the Resource Plan. Infrastructure projects will reference the Adelaide Design Manual for transformational projects supported by upgrade/new funding allocated with the Resource Plan and Long-Term Financial Plan.

Each year our annual business plan and budget formalises funding allocations to continue providing services and progress new projects. It enables existing projects to move from one delivery stage to the next (e.g. progress concept design to detailed design and detailed design to construction) as well as consider emerging risks and opportunities that may result from Council decisions, community requests or other external factors.

Figure 3.2: Long-Term Financial Plan



The relevant aspirations and objectives of the City of Adelaide 2024-2028 Strategic Plan and how they are considered within this Asset Management Plan are summarised in Table 3.2-2.

Table 3.2-2: Strategic aspirations, objectives and outcomes and how these are considered in this Plan

Aspirations	Objectives	Outcomes	Asset Management Alignment
Our Communities *Vibrant, connected and inclusive*	Support our communities thrive Create fun, lively and interesting experiences Celebrate and honour community and cultures	Drive affordable, safe and quality housing outcomes that attract and retain residents in our city An interesting and engaging place to live, learn and visit An inclusive, equitable and welcoming community where people feel a sense of belonging	• Create welcoming civic infrastructure that enables City growth and fosters community connections through the adoption of universal and sustainable design principles • Create enabling infrastructure to support world class events, festivals and activation • Support the development of new cultural and civic infrastructure • Improve recreational and active spaces with a view to increase patronage and community participation in active leisure, recreation and sport • Deliver key infrastructure projects and programs outlined within the Disability Access and Inclusion Plan • Deliver asset renewal and asset maintenance programs to ensure our assets are safe for people of all ages and abilities
Our Environment *Resilient, protected and sustainable*	Protect, enhance, and activate our Park Lands and open space Be climate conscious and resilient Prioritise sustainability in our decisions for the future	Lead as a Low Carbon Emissions City A sustainable city where climate resilience is embedded in all that we do The status, attributes and character of our green spaces and the Park Lands are protected and strengthened	• Increase the use of recycled or sustainable materials • Implement sustainable, renewable and green systems, infrastructure, practices and materials in our projects and services • Adapt to climate change and enhancing our climate resilience through upgrading our existing assets and creating new assets • Ensure all asset investment (design, construct and maintenance) considers and embeds appropriate climate resilience measures • Enhance the environmental value, productivity, quality and biodiversity of the Park Lands, squares, open space and streetscapes • Protect and restore native habitat in our city • Increase in tree canopy cover and green spaces
Our Economy *Growing, innovative and responsive*	Continue to grow our economy in alignment with the Community Support existing businesses to be agile and responsive to change Create strong skilled workforces	Adelaide's unique experiences and opportunities attract visitors to our city Achieve a critical mass of jobs and investment and attract and retain businesses by growing a dynamic, holistic economy Council is driving development opportunities for our community via diverse commercial activities	• Deliver infrastructure upgrade projects to attract increased visitation into the City and promote business development and economic growth • Explore project partnership opportunities with State Government, developers and other third-parties
Our Places *Interesting, purposeful and safe*	Manage assets to meet the needs of our community Encourage bold, interesting and purposeful development Facilitate and activate our places in a safe and accessible way for our community	Community assets are adaptable and responsibly maintained Encourage bold, interesting and purposeful development that supports the changing needs of our community and city Create safe, inclusive and healthy places for our community	• Deliver asset renewal and asset maintenance programs to ensure our assets are safe for people of all ages and abilities • Ongoing review of asset management strategies and technical standards to optimise whole-of-life costs • Continue to undertake regular condition audits and revaluation for all our transportation assets within the nominated 4-year cycles, including regular review of asset useful lives • Deliver quality street and laneway upgrades, main streets, precincts and neighbourhood revitalisation and improvements that make Adelaide well-designed, safe and unique • Support the creation of multi-use green spaces such as open space, community gardens and pocket parks that enable shared use and community connection • Deliver Park Land and Streetscape improvements to cater for emerging community needs • Improve accessibility and connectivity for pedestrians, cyclists, and public transport users through delivering key projects from the integrated transport strategy (under development) • Preserve and promote heritage assets • Maintain and improve disability access and inclusion

3.3 Legislative Requirements

There are many legislative requirements relating to the management of infrastructure assets including Australian Legislation, State Legislation and State Regulations. Legislative requirements relevant to the Park Lands and Open Space Asset Management Plan are outlined in Table 3.3.

Table 3.3: Legislative Requirements

Legislation	Requirement
Aboriginal Heritage Act 1988	An Act to provide for the protection and preservation of the Aboriginal heritage
Adelaide Park Lands Act 2005	An Act and Framework that promotes the special status, attributes, and character of the Adelaide Park Lands; to provide for the protection of those Park Lands and their management as a world class asset to be preserved as an urban park for the benefit of present and future generations
Australian Accounting Standards	Standards that set out the financial reporting standards relating to the revaluation and depreciation of assets
Australian Standards	All of Council's infrastructure projects are undertaken in accordance with Australian Standards, or in the absence of, best practice techniques.
Australian Road Rules 1999	The Australian Road Rules have been made into regulations under the Road Traffic Act (South Australia) and came into operation throughout Australia on 1 December 1999
City of Adelaide Act 1998	An Act to establish mechanisms to enhance the role of the city of Adelaide as the capital city of South Australia; to make special provision in relation to the local governance of the city of Adelaide; and for other purposes
Civil Liability Act 1936	An Act to outline liability of road authorities under Section 42
Development Act 1993	An Act to provide for planning and regulate development in the state; to regulate the use of management of land and building; and for other purposes
Disability Discrimination Act 1992	An Act to provide protection for everyone in Australia against discrimination based on disability. It encourages everyone to be involved in implementing the Act and to share in the overall benefits to the community and the economy that flow from participation by the widest range of people
Environmental Protection Act 1993	An Act to provide for the protection of the environment: to establish the Environmental Protection Authority and define functions and powers and for other purposes
Linear Parks Act 2006	An Act to provide the protection of the River Torrens Linear Park, as world-class assets to be preserved as public parks for the benefit of present and future generations

Local Government Act 1999	An Act to set out the role, purpose, responsibilities, and powers of local governments including the preparation of a Long Term Financial Plan supported by asset management plans for sustainable service delivery
State Records Act 1997	An Act to ensure Local Government's record and store all relevant information as set out by the State Government of South Australia
Work Health and Safety Act 2012	Provides minimum standards for health and safety of individuals performing works

3.4 Customer Levels of Service

Customer Levels of Service measure how the community receives a service and whether the organisation is providing community value. Levels of service are monitored and adjusted from the public consultation process, customer satisfaction surveys and customer service centre feedback.

The Customer Levels of Service are considered in terms of:

Quality How good is the service … what is the condition or quality of the service?

Function Is it suitable for its intended purpose …. Is it the right service?

Capacity Is the service over or under used … do we need more or less of these assets?

In Tables 3.4, under each of the service measures types (Quality, Function, Capacity) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

These are measures of fact related to the service delivery outcome (e.g. number of occasions when service is not available or proportion of replacement value by condition %'s) to provide a balance in comparison to the customer perception that may be more subjective.

Table 3.4.1: Customer Level of Service Measures (Playgrounds and Sportsfields)

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Current Budget
Quality	Condition – Playgrounds, Sportsfields and Active Areas are well maintained and in an appropriate condition	Customer service requests relating to reported hazards and maintenance requirements of playgrounds and sportsfields	2022 - 40 requests Past 4 years – 43 average /year	Customer service requests are expected to increase as playgrounds assets deteriorate Customer service requests are expected to stay the same for sportsfields assets
		Customer satisfaction survey results relating to playground and sportsfield maintenance	97%	Customer service requests are expected to increase as playgrounds assets deteriorate Customer service requests are expected to stay the same for sportsfields assets
	Confidence levels		**High**	**Medium**
	Amenity - Playgrounds, Sportsfields and Active Areas are accessible	Customer satisfaction survey results relating to the accessibility of playgrounds and sportsfields	94%	Customer satisfaction ratings are expected to stay the same
	Confidence levels		***High***	***Medium***
Function	Fit for Purpose - playgrounds and sportsfields meet the needs of the community	Customer satisfaction surveys results relating to playgrounds and sportsfields meeting community needs	92%	Subject to Council adoption of upgrade/new projects through Business Plan and Budget
	Confidence levels		***High***	***Medium***
Capacity	Capacity – There are an appropriate number of playgrounds and sportsfields to meet demand	Customer service requests relating to new playground and sportsfields	Not currently measured Measures to be established in the future as recognised in the Improvement Plan	Subject to Council adoption of upgrade/new projects through Business Plan and Budget
	Confidence levels		**Low**	**Medium**

Table 3.4.2: Customer Level of Service Measures (Green Infrastructure)

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Current Budget
Quality	Condition – Trees, landscaped areas and irrigation are free from hazards and in a condition appropriate for use	Customer service requests relating to reported hazards and maintenance requirements for green infrastructure	2022 - 1306 requests Irrigation: 326 Streetscapes and Garden Beds: 357 Trees: 623 Past 4 years – 1127 average /year Irrigation: 264 average /year Streetscapes and Garden Beds: 284 average /year Trees: 553 average /year	Customer service requests are expected to stay the same
		Customer satisfaction survey results relating to green infrastructure maintenance	City Streets - 92% Park Lands - 98%	Customer service requests are expected to stay the same
	Confidence Level		***High***	***Medium***
	Amenity – Landscaped areas are clean and free of debris	Customer service requests relating to the cleanliness of green infrastructure	2022 – 54 requests Past 4 years – 47 average /year	Customer service requests are expected to stay the same
		Customer satisfaction survey results relating to the cleanliness and attractiveness of green infrastructure	City Streets - 92% Park Lands - 98%	Customer satisfaction ratings are expected to stay the same
	Confidence Level		***Medium***	***Medium***
Function	Fit for Purpose – Trees and landscaped areas are well suited to their location	Customer satisfaction surveys results relating to Green infrastructure being suited to its location	City Streets – 97% Park Lands – 97%	Customer satisfaction ratings are expected to stay the same
	Confidence Level		***High***	***Medium***
Capacity	Capacity – There are an appropriate number of trees and landscaped areas to meet demand	Customer satisfaction surveys results relating to the sufficiency of green infrastructure	City Streets – 44% Park Lands –Measures to be established in the future as recognised in the Improvement Plan	Subject to Council adoption of upgrade/new projects through Business Plan and Budget
	Confidence Level		***Medium***	***Medium***

Table 3.4.3: Customer Level of Service Measures (Water Feature)

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Current Budget
Quality	Condition – Water features are free from hazards and are in a condition appropriate for use	Customer service requests relating to reported hazards and maintenance requirements for water features	2022 – 3 requests Past 4 years – 3 average /year	Customer service requests are expected to stay the same
		Customer satisfaction survey results relating to water feature maintenance	86%	Customer service requests are expected to stay the same
	Confidence Level		***Medium***	***Medium***
	Amenity – Water features are clean and free of debris and rubbish	Customer service requests relating to the cleanliness of water features	2022 – 3 requests Past 4 years – 3 average /year	Customer service requests are expected to stay the same
		Customer satisfaction survey results relating to the cleanliness of water features	Not currently measured Measures to be established in the future as recognised in the Improvement Plan	Customer satisfaction ratings are expected to stay the same
	Confidence Level		***Low***	***Medium***
Function	Fit for Purpose – Water features meet community needs	Customer satisfaction surveys results relating to water features meeting community needs	94%	Subject to Council adoption of upgrade/new projects through Business Plan and Budget
	Confidence Level		***High***	***Medium***
Capacity	Capacity - Appropriate number of water feature to meet demand	Customer service requests relating to new water features	Not currently measured Measures to be established in the future as recognised in the Improvement Plan	Subject to Council adoption of upgrade/new projects through Business Plan and Budget
	Confidence Level		***Low***	***Medium***

3.5 Technical Levels of Service

To deliver the customer values, and impact the achieved Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

Technical service measures are linked to the activities and annual budgets covering:

- **Acquisition** – the activities to provide a higher level of service (e.g. widening a road, sealing an unsealed road, replacing a stormwater pipe with a larger size) or a new service that did not exist previously (e.g. a new library)
- **Operation** – the regular activities to provide services (e.g. opening hours, cleansing, mowing grass, energy, inspections, etc
- **Maintenance** – the activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life (e.g. road patching, unsealed road grading, building and structure repairs)
- **Renewal** – the activities that return the service capability of an asset up to that which it had originally provided (e.g. road resurfacing and pavement reconstruction, stormwater pipe replacement and building component replacement)
- **Disposal** – the activities to remove and/or dispose of an asset that may be considered as underperforming, underutilised or obsolete

Service and asset managers plan, implement and control technical service levels to influence the service outcomes.[3]

Tables 3.5.1 to 3.5.3 show the activities expected to be provided under the current 10 year Planned Budget allocation, and the Forecast activity requirements being recommended in this Asset Management Plan.

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

[3] IPWEA, 2015, IIMM, p 2|28.

Table 3.5.1: Technical Levels of Service (Playgrounds and Sportsfields)

Lifecycle Category	Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance	Recommended Performance
Acquisition (upgrade/new)	Upgrade / New Projects	To create new playgrounds to meet the needs of the community	Delivery of key upgrade/new projects	Upgrade/new projects aligned to Strategic Plan objectives are initiated through the Business Plan and Budget process on an annual basis, where projects are evaluated and prioritised based on strategic alignment and financial capacity.	Upgrade/new projects aligned to Strategic Plan objectives are informed by City Plan, with financial requirements accommodated into the Long Term Financial Plan. Initiatives are confirmed to proceed annually through the Business Plan and Budget.
			Budget	As adopted annually in BP&B	To be developed
Operation	Condition Audits	To collect asset condition data to inform capital renewal planning and asset revaluation	Condition audit frequency	Playground: Annual Condition Audit Sportsfields: Every 4 years	Playground: Annual Condition Audit Sportsfields: Every 4 years
	Cleansing	To ensure playgrounds and sportsfields are clean and free of graffiti	Cleansing frequency	Litter is collected during daily inspections and playground equipment is cleaned as required	To be reviewed with planned updates to operations and maintenance standards
	Water Supply	To supply water to play equipment	Utility costs	As often and as much as required	Expected to remain the same
			Budget	Condition Audits: $20,000 (annually for playgrounds) $50,000 (every 4 years for sportsfields) Cleansing: $68,438 per year Utility Costs: $54,958 per year	To be reviewed with planned updates to operations and maintenance standards
Maintenance	Maintenance Audits	To ensure defects are proactively identified and prioritised	Frequency of asset maintenance audits	Playground Level 1 Inspection: Daily Playground Level 2 Inspection: Monthly Playground Level 3 Inspection: Annually Sportsfields Inspection: every 6 months	To be reviewed with planned updates to operations and maintenance standards
	Maintenance Activities	To ensure assets are maintained in an appropriate condition free of hazards	Completion of planned and reactive maintenance	Maintenance works are delivered based on priority (location and severity) with consideration of available budget	To be reviewed with planned updates to operations and maintenance standards
			Budget	Maintenance - $376,117	To be reviewed with planned updates to operations and maintenance standards
Renewal	Renewal Projects	To ensure assets are renewed, providing service in line with community expectations at lowest lifecycle costs	% of assets in condition 4 & 5	Playgrounds: Condition 4 - 12%, Condition 5 - 0% Sportsfields: Condition 4 - 10%, Condition 5 - 0%	Playgrounds: Condition 4 – 0%, Condition 5 – 0% Sportsfields: Condition 4 < 5%, Condition 5 – 0%
			Asset renewal funding ratio	90% (existing Asset Management Plan)	100%
			Budget	Playgrounds: $260,395 Sportsfields: $765,336	Playgrounds: $852,186 (10 Year Average) Sportsfields: $773,171 (10 Year Average)
Disposal	Disposal Projects	To ensure that assets that may be underperforming, underutilised or obsolete are removed from service	Disposal of assets	Major assets are recommended for disposal through Council decision, with financial requirements identified and incorporated through the Business Plan and Budget Process.	Assets are recommended for disposal through Council decision, with financial requirements identified and incorporated through the Business Plan and Budget Process.
			Budget	As adopted annually in BP&B	As adopted annually in BP&B

Table 3.5.2: Technical Levels of Service (Green Infrastructure)

Lifecycle Category	Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance	Recommended Performance
Acquisition (upgrade/new)	Upgrade / New Projects	To provide new or upgraded green infrastructure to meet the needs of the community	Delivery of key upgrade/new projects	Upgrade/new projects aligned to Strategic Plan objectives are initiated through the Business Plan and Budget process on an annual basis, where projects are evaluated and prioritised based on strategic alignment and financial capacity.	Upgrade/new projects aligned to Strategic Plan objectives are informed by City Plan, with financial requirements accommodated into the Long Term Financial Plan. Initiatives are confirmed to proceed annually through the Business Plan and Budget.
			Budget	As adopted annually in BP&B	To be developed
Operation	Condition Audits	To collect asset condition data to inform capital renewal planning and asset revaluation	Condition audit frequency	Irrigation system: Every 4 years	Every 4 years
			Budget	Condition Audits – $300,000 every 4 years	Condition Audits – $300,000 every 4 years
	Cleaning	To ensure landscaped areas are free of debris and rubbish	Cleaning Frequency	Litter pickup during inspection	To be reviewed with planned updates to operations and maintenance standards
			Budget	Litter Collection: $615,939	To be reviewed with planned updates to operations and maintenance standards
	Water Supply	To ensure landscaped areas are healthy and well presented	Water supply/utility costs	Based on seasonal and plant growth requirement	To be reviewed with planned updates to operations and maintenance standards
			Budget	Streetscape irrigation: $199,668/year (3yr average) Park Lands irrigation: $1,185,214/year (3yr average)	To be reviewed with planned updates to operations and maintenance standards
Maintenance	Maintenance Audits	To ensure defects are proactively identified and prioritised	Frequency of asset maintenance audits	Trees: 9 months to 3 years based on priority/risk Park Lands garden beds, irrigation and turf: fortnightly Streetscapes and irrigation: fortnightly to 2 months Biodiversity Area: every 2 months	To be reviewed with planned updates to operations and maintenance standards
	Maintenance Activities	To ensure assets are maintained in an appropriate condition	Completion of planned and reactive maintenance	Maintenance works are delivered based on priority (location and severity) with consideration of available budget	To be reviewed with planned updates to operations and maintenance standards
			Budget	Streetscapes and garden beds: $3,059,199/year Trees: $1,995,779/year Irrigation: $2,008,517/year Biodiversity Areas: $374,418/year Turf: $1,765,302/year	To be reviewed with planned updates to operations and maintenance standards

Lifecycle Category	Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance	Recommended Performance
Renewal	Renewal Projects	To ensure assets are renewed, providing service in line with community expectations at lowest lifecycle costs	% of irrigation assets in condition 4 & 5	Condition 4 - 11% Condition 5 – 2 %	Condition 4 – less than 5% Condition 5 – 0%
			Asset renewal funding ratio	90% (existing Asset Management Plan)	100% (assuming budget is adopted)
			Budget	Irrigation: $934,132/year	Irrigation: $999,500/year (10 Year Average)
Disposal	Disposals Projects	To ensure that assets that may be underperforming, underutilised or obsolete are removed from service.	Disposal of assets	Major assets are recommended for disposal through Council decision, with financial requirements identified and incorporated through the Business Plan and Budget	Major assets are recommended for disposal through Council decision, with financial requirements identified and incorporated through the Business Plan and Budget
			Budget	As adopted annually in BP&B	As adopted annually in BP&B

Table 3.5.3 Technical Levels of Service (Water Features)

Lifecycle Category	Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance	Recommended Performance
Acquisition (upgrade/new)	Upgrade / New Projects	To provide new or upgraded water feature to ensure assets are safe, fit for purpose and service the needs of the community	Delivery of key upgrade/new projects	Upgrade/new projects aligned to Strategic Plan objectives are initiated through the Business Plan and Budget process on an annual basis, where projects are evaluated and prioritised based on strategic alignment and financial capacity.	Upgrade/new projects aligned to Strategic Plan objectives are informed by City Plan, with financial requirements accommodated into the Long Term Financial Plan. Initiatives are confirmed to proceed annually through the Business Plan and budget process
			Budget	As adopted annually in BP&B	To be developed
Operation	Condition Audits	To collect asset condition data to inform capital renewal planning and asset revaluation	Condition audit frequency of water feature assets	Every 4 years	Every 4 years
			Budget	Condition Audits - $30,000 every 4 years	Condition Audits - $30,000 every 4 years
	Water Supply	To ensure water features are functioning	Utilities cost to provide water to the water features	As often and as much as required	Expect to remain the same
			Budget	$181,141/year (3yr average)	To be reviewed with planned updates to operations and maintenance standards
	Cleaning	To ensure structures are clean and free of debris	Cleaning Frequency	Every three months	To be reviewed with planned updates to operations and maintenance standards
			Budget	$13,412/year	To be reviewed with planned updates to operations and maintenance standards
Maintenance	Maintenance Audits	To ensure defects are proactively identified and prioritised	Frequency of asset maintenance audits	Inspected every 6 months	To be reviewed with planned updates to operations and maintenance standards
	Maintenance Activities	To ensure assets are maintained in an appropriate condition free of hazards	Completion of planned and reactive maintenance	Maintenance works are delivered based on priority (location and severity) with consideration of available budget	To be reviewed with planned updates to operations and maintenance standards
			Budget	$254,836/year	To be reviewed with planned updates to operations and maintenance standards
Renewal	Renewal Projects	To ensure assets are renewed, providing service in line with community expectations at lowest lifecycle costs	% of assets in condition 4 & 5	Condition 4 - 0% Condition 5 - 0%	Condition 4 – less than 5% Condition 5 – 0%
			Asset renewal funding ratio	90% (existing Asset Management Plan)	100% (assuming budget is adopted)
			Budget	$214,137/year	$81,941/year (10 Year Average)
Disposal	Disposals Projects	To ensure that assets that may be underperforming, underutilised or obsolete are removed from service.	Disposal of assets	Major assets are recommended for disposal through Council decision, with financial requirements identified and incorporated through the Business Plan and Budget	Major assets are recommended for disposal through Council decision, with financial requirements identified and incorporated through the Business Plan and Budget

Lifecycle Category	Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance	Recommended Performance
			Budget	As adopted annually in BP&B	As adopted annually in BP&B

4.0 FUTURE DEMAND

4.1 Demand Drivers

The drivers affecting demand on assets include population change, regulations, changes in demographics, seasonal factors, vehicle ownership rates, consumer preferences and expectations, technological changes, economic factors, and environmental impacts.

4.2 Demand Forecasts

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented.

4.3 Demand Impact and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.3.

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can also include non-asset solutions with a focus on providing the required service without the need for the organisation to invest in new or upgraded infrastructure. Management actions could include reducing the demand for the service or educating users around alternative options. It is important to ensure that these strategies consider the associated risks and consequences.

Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this Asset Management Plan.

Table 4.3: Demand Management Plan

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
City Growth	2021 Statistics: Residents - 25,551 Businesses – 11,519 Daily Visitors – 321,500	2041 Forecast: 46,000 residents 2036 Target: 50,000 residents Anticipated ongoing business growth in line with residential city growth and South Australian State growth projections Anticipated daily visitor growth in line with South Australian State growth projections	City growth will place higher demands on our Park Lands and Open Space, with increasing level of service expectations and will result in the need to create additional assets to service community needs.	Delivery of prioritised upgrade/new projects identified in the Strategic Plan and key Corporate planning documents (referenced in Section 2.1) to enhance the Park Lands and Open Space portfolio and accommodate city growth through upgrading existing assets and creating new assets to align service provision with the evolving needs of the community. This Asset Management Plan will ensure asset renewals will be consider and align where practical with these key upgrade/new initiatives.
Changing Demographic	2021 Statistics 0 to 11 Years 1,246 (5%) 12 to 17 Years 587 (2%) 18 to 34 Years 12,117 (51%) 35 to 49 Years 4,409 (19%) 50 to 59 Years 2,281 (10%) 60 to 69 Years 2,233 (10%) 70 Years & Above 2,633 (3%)	2041 Forecast 0 to 11 Years 2,633 (6%) 12 to 17 Years 1,501 (3%) 18 to 34 Years 21,771 (47%) 35 to 49 Years 8,933 (19%) 50 to 59 Years 4,272 (9%) 60 to 69 Years 3,274 (7%) 70 Years & Above 4,175 (9%)	Changing expectations from a culturally and demographically diverse customer base will result in our Park Lands and Open Space being subject to new demands.	Ongoing engagement with city users through annual City User Profile surveys, and ensuring that Strategic Documents are updated on a cyclic basis to reflect changes with community expectations. Delivery of prioritised upgrade/new projects identified in the Strategic Plan and key Corporate planning documents (referenced in Section 2.1) to align service provision with the evolving needs of the community. This Asset Management Plan will ensure asset renewals will be consider and align where practical with these key upgrade/new initiatives.
Tourism & Event Growth	A key objective in Council's 2023-24 Business Plan and Budget was to provide 'year round' events that attract people to visit the City. Investment in public infrastructure has also been identified as part of the South Australian Tourism Plan (2020) and the SA Visitor Economy Sector Plan 2030. In 2020 annual tourism expenditure in Adelaide was estimated to be approximately $3.9 billion	Cultural and event infrastructure will be an ongoing and increasing priority for both the City of Adelaide and South Australian State Government. It is projected that annual tourism expenditure will continue to grow and it is estimated to be $7.7 billion/year by 2030.	Increasing demands on our Park Lands and Open Space to facilitate tourism and event growth by supporting new cultural, civic and event infrastructure in the City and connecting city users to place through curated city experiences.	Delivery of prioritised upgrade/new projects identified in the Strategic Plan and key Corporate planning documents (referenced in Section 2.1) to support tourism and event growth. This Asset Management Plan will ensure asset renewals will be consider and align where practical with these key upgrade/new initiatives.

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Environmental Sustainability & Carbon Neutrality	Changes to the global climate (climate change) are clear. There are documented increases in the average air and ocean temperature, widespread melting of snow and ice, and rising average sea levels. City of Adelaide's 2020-2024 Strategic Plan has an objective to become one of the world's first carbon neutral cities by 2025. Additionally, a Climate Action Plan (2022-2025) has been developed to ensure we continue to drive down our carbon footprint and mitigate climate impacts for our residents and visitors. Currently City of Adelaide utilise recycled and natural materials in Park Lands and Open Space assets, where there is demonstrated environmental benefits that also consider cost and performance.	Inaction to climate change and climate risk will result in negative health impacts to our community and potentially impact to our businesses and economy. Reduced water availability and increasing heat will result in increased stress and resources required for maintaining and operating our assets. To effectively manage climate change and climate risk Council will need to continue to respond through substantial reductions in greenhouse gases (mitigation controls) and helping to prepare for and respond to the changing climate (adaptation controls).	There will be an increased demand for additional trees and other types of green infrastructure to support city cooling and community health and wellbeing. It is anticipated that additional irrigation infrastructure will be required to support the implementation of additional greening and ensure the health and growth of plants and trees. There will be an increased demand to ensure we utilise more environmentally sustainable materials and construction technique for Park Lands and Open Space assets, with lower carbon footprint and improved circular economy outcomes. With increasing temperatures and more intense heatwaves, there will be an increased demand for shade structures to support our playgrounds and open space areas.	Our Strategic Planning, Asset Management and Project Delivery (including design and procurement) will continue to focus on ensuring that climate risk mitigation and adaption is a key focus. Ongoing reviews and updates to our design standards and technical specifications to ensure our assets transition towards having a lower carbon footprint with improved circular economy outcomes, as well as ensure they are more resilient to withstand extreme weather events. Delivery of prioritised upgrade/new projects identified in the Strategic Plan and key corporate planning documents (referenced in Section 2.1), which support environmental sustainability and climate risk mitigation and adaptation. This Asset Management Plan will ensure asset renewals will consider and align where practical with these key upgrade/new initiatives.
Emerging Technology	Asset construction techniques and associated materials are currently undertaken in line with industry standards	Alternative construction techniques and materials with durability and sustainability benefits will continue to become more readily available and standardised.	Improvements in construction techniques and materials could result in improved comfort, asset durability, increased asset lifespans, reduced whole-of-life costs and improved environmental outcomes.	Continue to partner with industry, to monitor and evaluate new and emerging technologies, with trials of new materials, approaches and methodologies to inform appropriate changes to standards and practices.
	Asset management systems and condition audit methodologies are in line with industry standards and best practice	Asset management systems and technology will continue to evolve over time, particularly with respect to the collection of condition data and monitoring of asset deterioration over time.	Improved asset information and systems will enable improved decision making and efficiencies with respect to optimising whole-of-life-costs and managing asset risks.	
Legislation & Regulation	Legislation exists which outlines requirements for how Council must manage infrastructure assets.	There is potential for future changes to legislation will influence how Council's infrastructure is managed	New legislation may impose or require changes to asset management planning principles and activities. They may include requirements that have a financial and/or service level impact that must be met.	Continue to monitor changes to legislation and ensure appropriate adaptation into asset management practices. Any material impacts would be considered as part of the Annual Business Plan and Budget process and included in the next revision of the Asset Management Plan.

4.4 Asset Programs to meet Demand

The new assets required to meet demand will be acquired, donated or constructed. Additional assets are discussed in Section 5.5.

Acquiring new assets will commit City of Adelaide to ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs.

All upgrade/new projects responding to demand will involve developing business cases, cost estimates and facilitating decision making to integrate upgrade/new project initiatives with operational asset management planning and the Long-Term Financial Plan. This process will be facilitated with Council and the Community through the Annual Business Plan & Budget Process.

4.5 Climate Change Adaptation

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. In the context of the Asset Management Planning process climate change can be considered as both a future demand and a risk.

How climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which we respond and manage those impacts. As a minimum we consider how to manage our existing assets given potential climate change impacts for our region.

Risk and opportunities identified to date are shown in Table 4.5.

Table 4.5. Managing the Impact of Climate Change on Park Lands and Open Space Assets and Services

Climate Change Description	Projected Change	Potential Impact on Assets and Services	Management
Increasing temperatures and more frequent, long-running and intense heatwaves	The number of days over 40°C to double by 2050 Average temperatures to increase across all seasons by between 1.5°C and 2°C by 2050	Increased heat and UV related damage to assets Reduced lifespan of Park Lands and Open Space assets Increased costs to provide the same level of service Premature obsolescence as functionality is not met	Strategic Planning, Asset Management and Project Delivery (including design and procurement) will continue to focus on ensuring that climate risk mitigation and adaption is a key focus. Mitigation and adaptation measures will include: • Ongoing reviews and updates to our design standards and technical specifications to ensure our assets transition towards having a lower carbon footprint with improved circular economy outcomes as well as ensure they are more resilient to withstand extreme heat events • Proactively reviewing our asset management strategies with respect to the impacts of climate change, to ensure we continue to provide the agreed level of service at the lowest lifecycle cost • Reducing the impacts of heat through increasing canopy cover and providing additional rest and refuge areas for the community
Less rain overall but more intense storms and flooding	Average annual rainfall to decrease by 7% by 2050 Intensity of heavy rainfall events to increase by at least 10% by 2050	Increased stormwater related damage to assets including earth, rubble and concrete erosion resulting in a loss of structural integrity/strength Reduced lifespan of Park Lands and Open Space assets Increased costs to provide the same level of service Premature obsolescence as functionality is not met (e.g. assets being inundated by stormwater)	Strategic Planning, Asset Management and Project Delivery (including design and procurement) will continue to focus on ensuring that climate risk mitigation and adaption is a key focus. Mitigation and adaptation measures will consider: • Ongoing reviews and updates to our design standards and technical specifications to ensure our assets transition towards having a lower carbon footprint with improved circular economy outcomes as well as ensure they are more resilient to increased flood risk and inundation • Proactively reviewing our asset management strategies with respect to the impacts of climate change, to ensure we continue to provide the agreed level of service at the lowest lifecycle cost

The impact of climate change on assets is a new and complex discussion and further impacts and management strategies will considered and developed in future revisions of this Asset Management Plan. It is recommended to continue monitoring the impacts of climate conditions and associated cost implications as further investigation is undertaken and more data becomes available. This is included as a key action within this Asset Management Plans Improvement Plan.

5.0 LIFECYCLE MANAGEMENT PLAN

5.1Lifecycle Management Overview

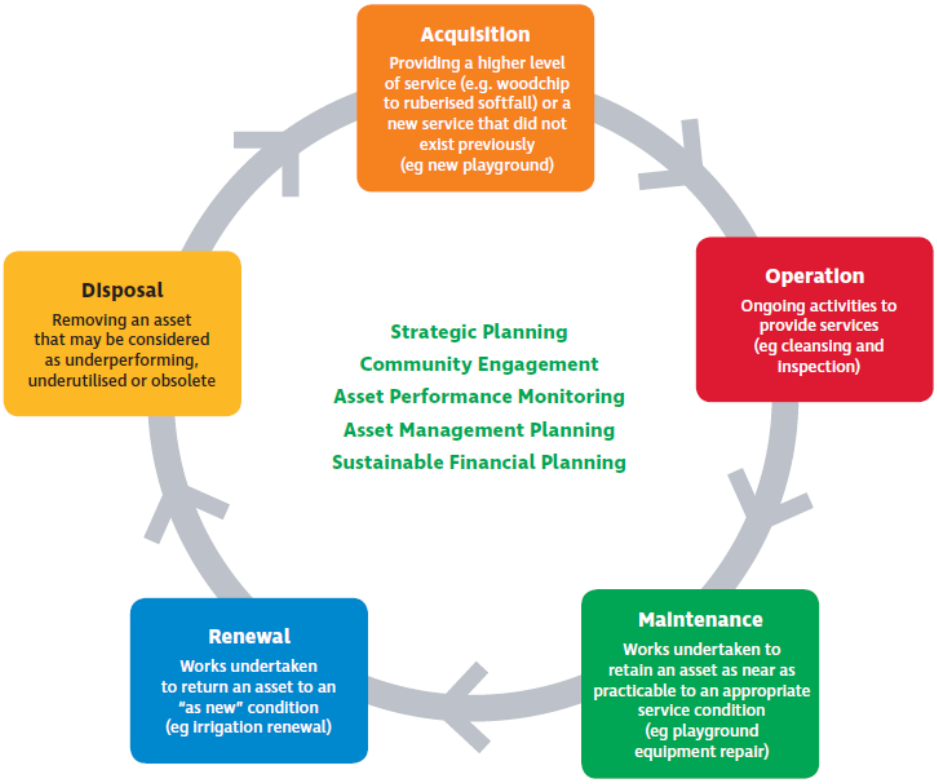
In order to effectively manage our assets, it is important to understand the relationship between all stages of the asset lifecycle. Effective asset management and financial sustainability requires a balance between the maintenance, renewal and disposal of existing assets and the delivery of new and upgraded assets.

Our goal is to provide assets that service the needs of the community, providing the agreed levels of service at the lowest lifecycle cost. To enable this, it is important to understand:

- How our assets are performing
- How our assets should be operated and maintained
- When our assets should be renewed
- When we should consider upgrading existing assets or constructing new assets
- How funding for new and upgraded assets is prioritised
- When we should consider disposing underperforming or underutilised assets

An overview of the asset lifecycle is shown in Figure 5.1 below:

Figure 5.1: Asset Lifecycle Overview



The lifecycle management plan details how CoA plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) while managing life cycle costs.

5.2 Background Data

5.2.1 Physical parameters

The assets covered by this Asset Management Plan are shown in Table 5.2.1 and all figure values are shown in current day dollars.

Table 5.2.1: Assets covered by this Plan

Asset Category	Asset Type	Quantity/Dimension	Replacement Value
Playgrounds	Playground Softfall	7,845 m^2	$798,656
	Playground Equipment	202 assets	$3,171,538
Sportsfields and Active Areas	Basketball Court	5 assets	$719,809
	BMX Track	4 assets	$1,791,228
	Chess Set	1 asset	$14,755
	Cricket Pitch	6 assets	$112,658
	Golf Greens	57 assets	$2,669,130
	Multipurpose Court	2 assets	$1,278,178
	Netball Court	1 asset	$5,756,152
	Petanque	4 assets	$249,373
	Skatepark	2 assets	$1,836,313
	Sports Equipment	66 assets	$714,364
	Tennis Court	6 assets	$780,089
Green Infrastructure	Street and Park Trees	56,997 assets	n/a *
	Streetscape	94,469 m^2	n/a *
	Park Lands Garden Bed	100,332 m^2	n/a *
	Biodiversity Area	1,012,664 m^2	n/a *
	Turf	2,606,656 m^2	n/a *
	Irrigation System	371 assets	$12,372,154
	Strata cell	39 assets	$3,329,205
Water Features	Water Features	13 assets	$10,752,961
Total			$46,346,562

*Note: trees, streetscapes, garden beds, biodiversity areas and turf are not classified as capital assets, therefore the replacement value is not recognised for these types of assets and the replacement will be funded through operational budgets.

5.2.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available. However, there is insufficient resources to address all known deficiencies. Locations where deficiencies in service performance are known are detailed in Table 5.2.2.

Table 5.2.2: Known Service Performance Deficiencies

Asset/Location	Service Deficiency
Street Trees and Streetscapes	Community engagement has identified a strong desire for additional street trees and green infrastructure within the City, to increase canopy cover and urban cooling. This aligns with Council's strategic plan objectives to increase our climate resilience and green infrastructure. Currently, greening opportunities are investigated and considered as part of the annual Business Plan and Budget process. It is anticipated that the completion of the Urban Greening Strategy (2024) will further assist the prioritisation and implementation of priority greening initiatives over the medium-term planning period.
Playgrounds	Community engagement has identified demand for a more modern standard of playgrounds, with designs that are climate resilient, inclusive, active, engaging, entertaining, and cater to a broader range of ages, regardless of ability. Some of our playgrounds, whilst still in acceptable condition, have been in service for a number of years and have gradually become outdated with respect to modern playground standards. The planning principles within this Asset Management Plan, ensure playground renewal considers both asset condition and service duration, to ensure playground designs can be reviewed against community needs and refreshed as required every 20 years.

5.2.3 Asset condition

Condition is measured using a 1 – 5 grading system[4] as detailed in Table 5.1.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the Asset Management plan results are translated to a 1 – 5 grading scale for ease of communication.

Table 5.2.3: Condition Grading System

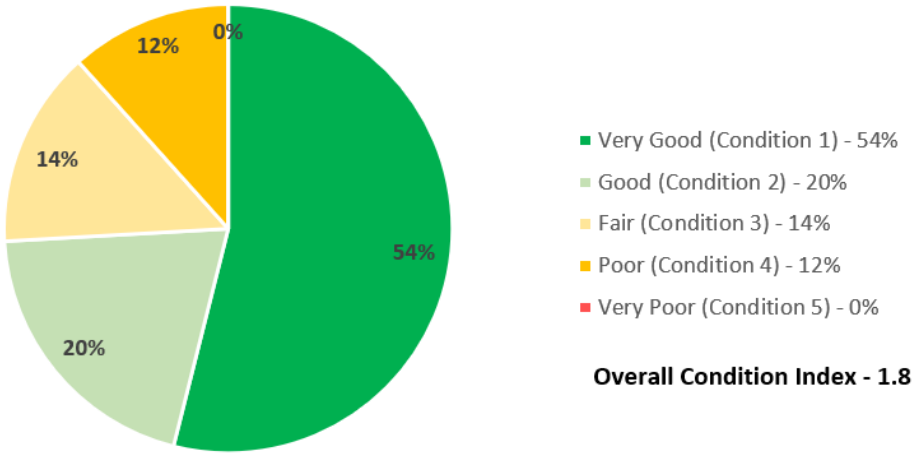
Condition Grading	Description of Condition
1	**Very Good**: free of defects, only planned and/or routine maintenance required
2	**Good**: minor defects, increasing maintenance required plus planned maintenance
3	**Fair**: defects requiring regular and/or significant maintenance to reinstate service
4	**Poor**: significant defects, higher order cost intervention likely
5	**Very Poor**: physically unsound and/or beyond rehabilitation, immediate action required

[4] IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

Playgrounds

Playgrounds are condition audited annually, with the most recent audit undertaken in 2023. Figure 5.2.3a presents the predicted playgrounds condition distribution as of September 2023. Overall, the majority of our playground equipment and softfall assets are rated in a very good to fair condition (88%), with a small proportion of assets rated in poor (12%) and no assets in very poor condition (0%). Ongoing investment will be required to renew and refurbish assets to ensure levels of service are maintained in conjunction with minimising whole-of-life costs (i.e. prevent increased maintenance and renewal costs from not renewing assets at the appropriate time).

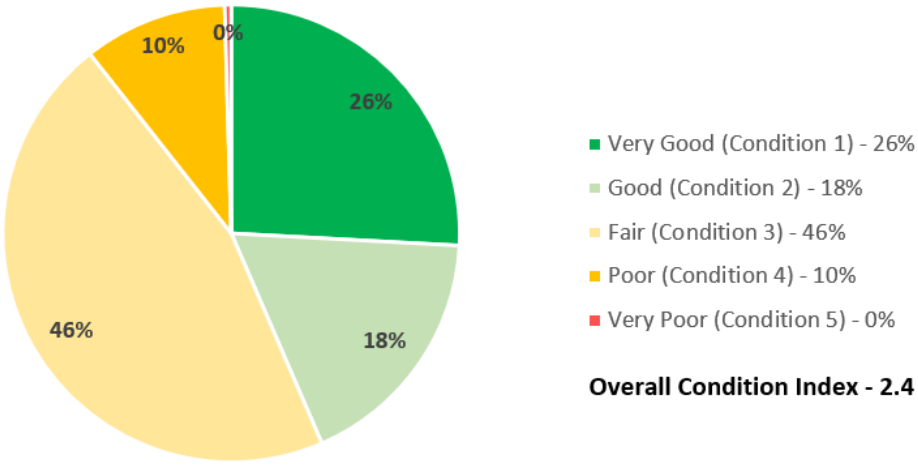
Figure 5.2.3a: Asset Condition Profile (Playgrounds)



Sportsfields

Sportsfield assets are typically condition audited every 4 years, with the most recent audit undertaken in 2023. Figure 5.2.3b presents the predicted sportsfield condition distribution as of September 2023. Overall, the majority of our sportsfields assets are in a very good to fair condition (90%), with a small proportion of assets rated in poor and very poor condition (10%). Ongoing investment will be required to renew and replace assets to ensure levels of service are maintained in conjunction with minimising whole-of-life costs (i.e. prevent increased maintenance costs and renewal costs from not renewing assets at the appropriate time).

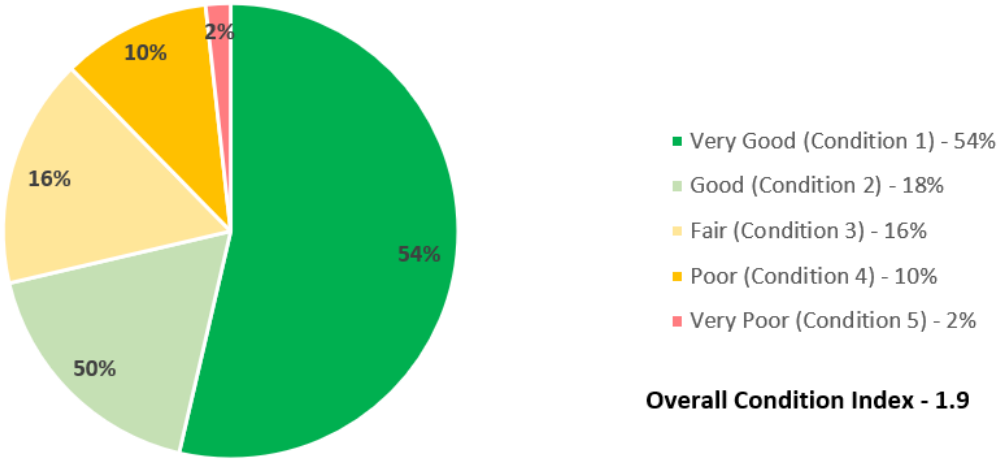
Figure 5.2.3b: Asset Condition Profile (Sportsfields)



Green Infrastructure (Irrigation)

Irrigation assets are typically condition audited every 4 years, with the most recent audit undertaken in 2021. Figure 5.2.3c presents the predicted structure condition distribution as of September 2023. Overall, the majority of our irrigation assets are rated in a very good to fair condition (88%), with a small proportion of assets rated in poor and very poor condition (12%). Ongoing investment will be required to renew irrigation assets to ensure levels of service are maintained in conjunction with minimising whole-of-life costs (i.e. prevent increased maintenance costs and renewal costs from not renewing assets at the appropriate time).

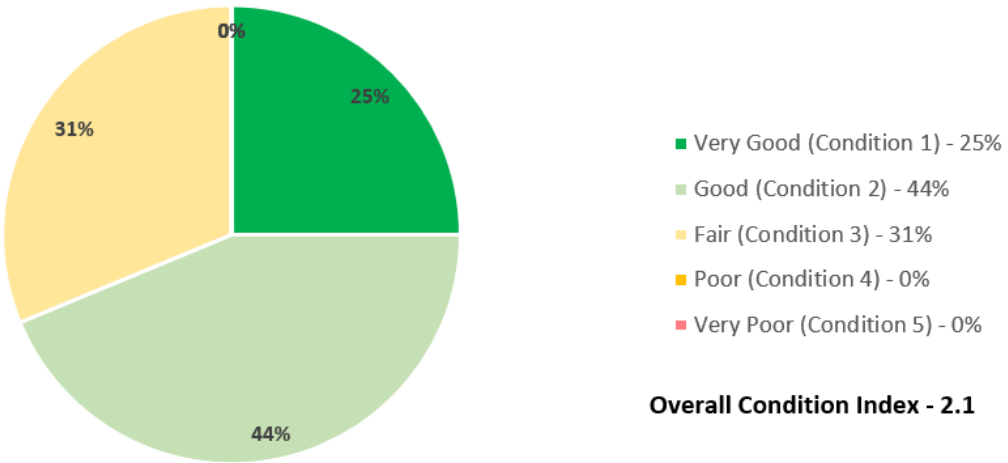
Figure 5.2.3c: Asset Condition Profile (Irrigation)



Water Features

Water features are typically condition audited every 4 years, with the most recent audit undertaken in 2023. Figure 5.2.3d presents the predicted structure condition distribution as of September 2023. Overall, all of our water features are rated in a very good to fair condition (100%), with no asset rated in poor and very poor condition (0%). Future investment will be required to renew and refurbish our water features to ensure levels of service are maintained in conjunction with minimising whole-of-life costs (i.e. prevent increased maintenance costs and renewal costs from not renewing assets at the appropriate time).

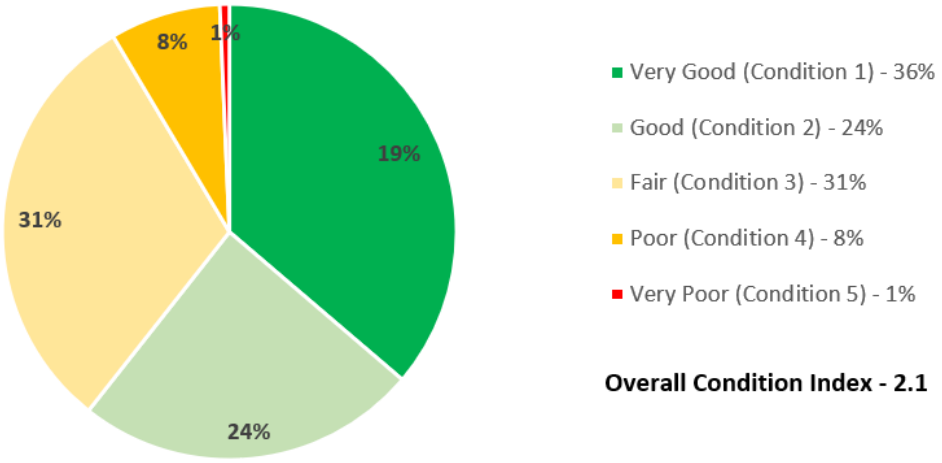
Figure 5.2.3d: Asset Condition Profile (Water Features)



Summary

Overall, the current condition of our Park Lands and Open Space asset portfolio is rated in a good to fair condition, with a combined overall condition index rating of 2.1. 91% of assets are rated in a very good to fair condition and 9% of assets are rated in poor or very poor condition, which will form the general basis of our renewal program priorities.

Figure 5.2.3e: Park Lands and Open Space Portfolio Condition Profile



5.3 Operations and Maintenance Plan

Operations include regular activities to provide services. Examples of typical operational activities include cleaning, asset inspection, and utility costs.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include minor repairs, mowing, weeding, pruning and etc. Requirements are informed by both customer service requests and proactive maintenance inspections.

General maintenance activities are evaluated and prioritised with respect to annual budgets. This process is undertaken by experienced staff, where risk-based assessment and resource allocation considers the criticality of the defect. Any critical maintenance requirements that cannot be accommodated within existing budgets are assessed and considered through regular budget reviews to ensure resources are appropriately re-allocated.

Following the completion of this Asset Management Plan, we will be reviewing operations and maintenance standards for Park Lands and Open Space Assets, with a view to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk and customer expectations. This activity has been recognised as an action within the Improvement Plan of this Asset Management Plan (Section 8.2), where the associated financial impacts will need to be further considered in future revisions of this Asset Management Plan and the Long-Term Financial Plan.

Updated standards will document both maintenance intervention levels and response times. Intervention levels will document the criteria for actioning maintenance defects and response times will set targets that we aim to work within to repair defects. Typically, both of these elements will vary depending on the severity of the defect as well as its position/location within the asset hierarchy.

Monitoring whether maintenance activities are being delivered in accordance with the specified intervention levels and response times, will enable us to understand whether resourcing levels are sufficient. Where resourcing levels are identified as insufficient, additional budget requirements can be considered through the business plan and budget process, or intervention levels and response times can be adjusted with respect to budget constraints.

5.3.1 Maintenance Budget Trends

The trend in maintenance budgets for all Park Lands and Open Space assets over the past 4 years is shown in Table 5.3.1.

Table 5.3.1: Operation and Maintenance Budget Trends

Year	Playgrounds	Sportsfields	Green Infrastructure	Water Feature
2020/21	$314,544	$27,103	$10,490,147	$288,891
2021/22	$373,339	$34,922	$12,138,010	$348,706
2022/23	$386,697	$39,053	$10,473,093	$502,654
2023/24	$435,315	$44,455	$10,937,282	$428,542

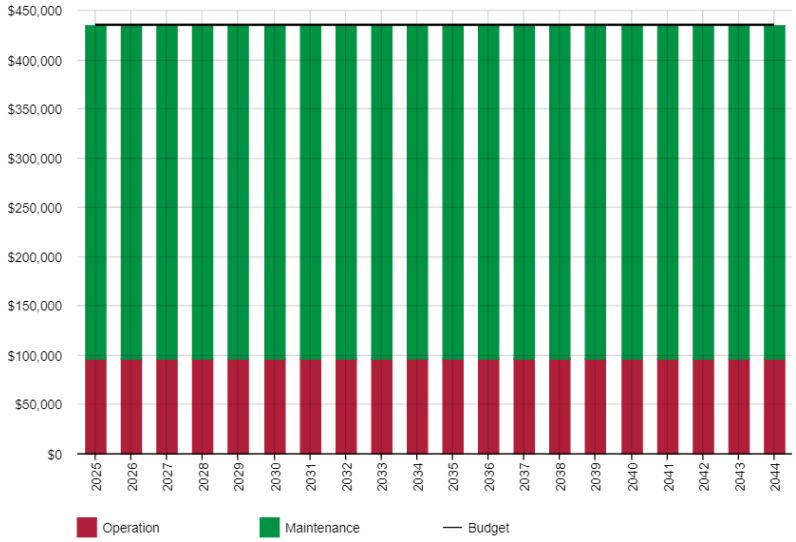
5.3.2 Summary of future operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease.

Playgrounds

The forecast operations and maintenance costs for Playgrounds, relative to the proposed operations and maintenance budgets are shown in Figure 5.3.2a. Future revisions of this Asset Management Plan will further review forecast requirements based on updated operations and maintenance standards. All values are shown in current day dollars.

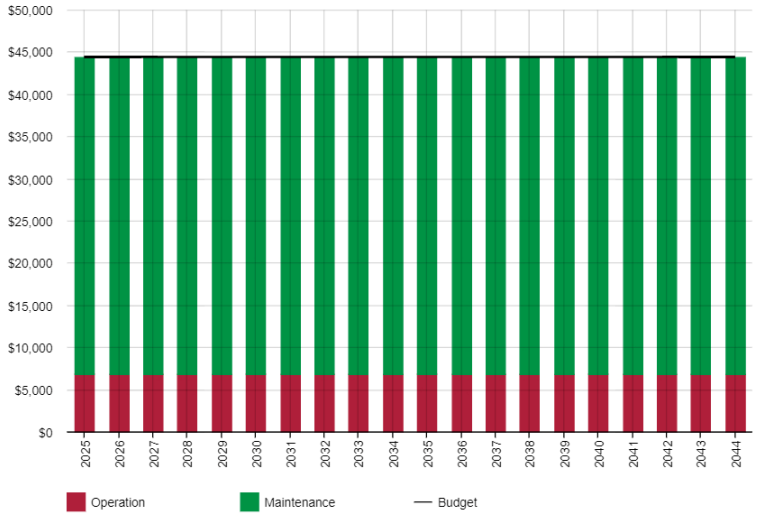
Figure 5.3.2a: Operations and Maintenance Summary (Playgrounds)



Sportsfields

The forecast operations and maintenance costs for sportsfields, relative to the proposed operations and maintenance budgets are shown in Figure 5.3.2b. Future revisions of this Asset Management Plan will further review forecast requirements based on updated operations and maintenance standards. All values are shown in current day dollars.

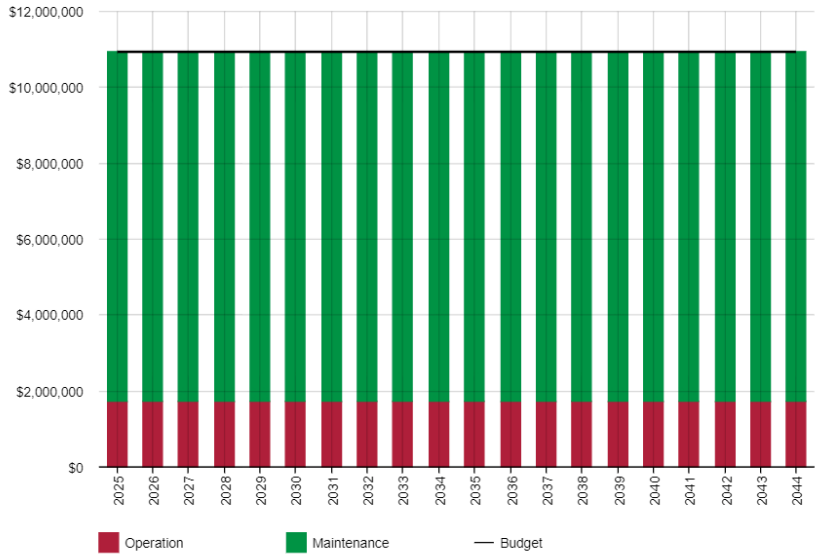
Figure 5.3.2b: Operations and Maintenance Summary (Sportsfields)



Green Infrastructure

The forecast operations and maintenance costs for green infrastructure, relative to the proposed operations and maintenance budgets are shown in Figure 5.3.2c. Future revisions of this Asset Management Plan will further review forecast requirements based on updated operations and maintenance standards. All values are shown in current day dollars.

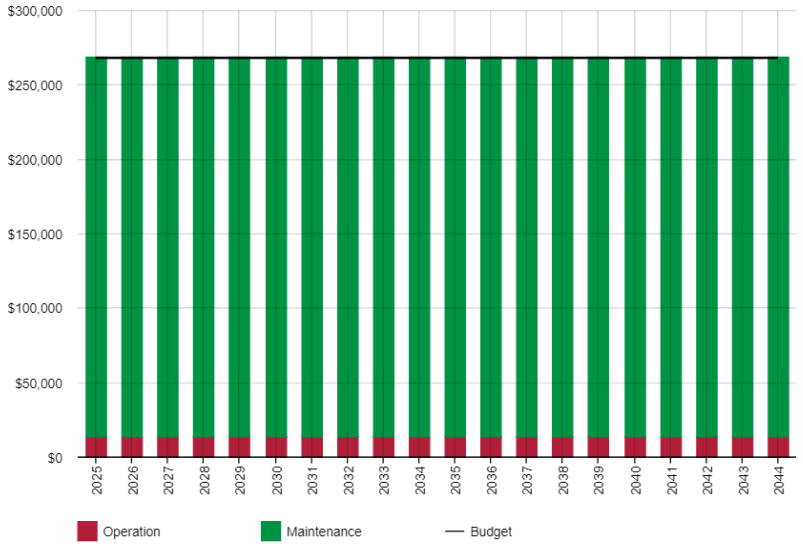
Figure 5.3.2c: Operations and Maintenance Summary (Green Infrastructure)



Water Features

The forecast operations and maintenance costs for water features, relative to the proposed operations and maintenance budgets are shown in Figure 5.3.2d. Future revisions of this Asset Management Plan will further review forecast requirements based on updated operations and maintenance standards. All values are shown in current day dollars.

Figure 5.3.2d: Operations and Maintenance Summary (Water Features)



5.4 Renewal Plan

Renewal is major capital work which does not significantly alter the original service provided by the asset, but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is considered to be an acquisition (new/upgrade) resulting in additional future operations and maintenance costs.

Asset renewal is typically undertaken to:

- Ensure ongoing reliability of existing infrastructure to deliver the service it was constructed to facilitate
- Ensure infrastructure is of sufficient quality to meet the service requirements
- Optimise whole-of-life costs, when maintenance activities are no longer economical

Within this Asset Management Plan, asset renewal requirements have been identified by utilising replacement costs and remaining useful life estimates that have been derived through a combination of condition audits, engineering recommendations and predictive modelling.

Predictive modelling provides a basis for evidence-based decision making, where the financial requirements for different level of service scenarios can be estimated across the short, medium and long-term. Additionally, it allows us to understand the relationship between cost, level of service and risk and can effectively demonstrate the consequences of not appropriately funding asset renewal. An overview of the predictive modelling utilised in this Asset Management Plan is shown in Figure 5.4.1 and is discussed further for each asset class in Section 5.4.1.

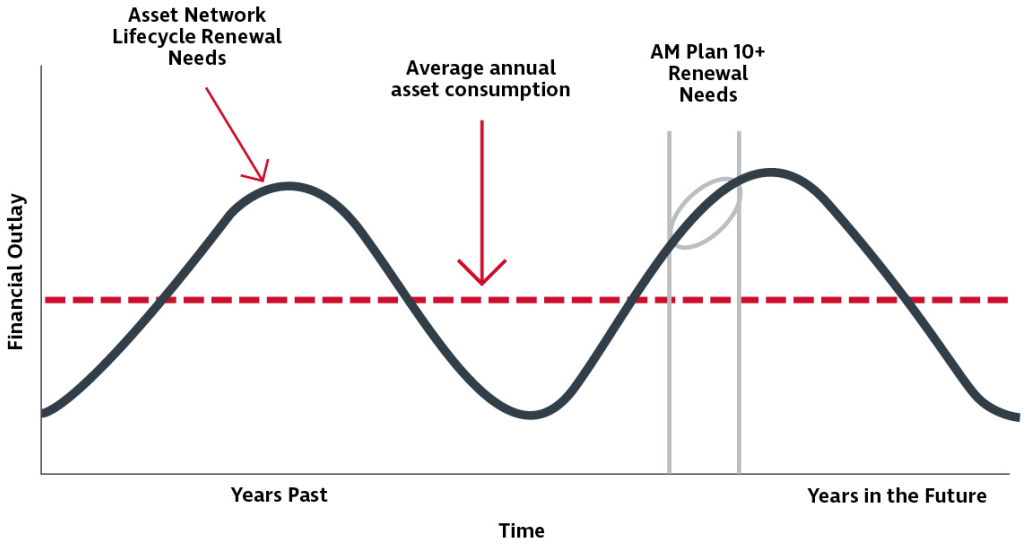
Figure 5.4.1: Predictive Modelling Overview

This Asset Management Plan's renewal strategy aims to minimise the number of assets that deteriorate into a poor condition and prohibit assets reaching a very poor condition. Assets can generally be cost effectively maintained and provide appropriate levels of service up to a fair condition, however assets in poor and very poor condition have higher risk profiles and maintenance treatments are generally not economical. This strategy ensures we can continue to provide services in line with the community's expectations, appropriately manage risk and optimise whole-of-life costs.

Asset renewal planning is undertaken with a holistic and integrated approach, to ensure consideration is given to asset functionality, adjacent assets and Council's higher-level strategic objectives (e.g. new and upgrade requirements). This allows capital works programming to be optimised through the development of logical works packages, that provide value to the community and minimise disruption.

It is important to understand that infrastructure networks are comprised of assets with varying age profiles and different useful lives and replacement costs. This results in having to replace more assets in some periods when compared with others and means that it's very unlikely that asset renewal needs will be consistent over time. Figure 5.4.2 highlights a typical scenario of varying asset renewal expenditure requirements over the asset lifecycle.

Figure 5.4.2: Asset Network Lifecycle Renewal Needs



To account for fluctuations in asset lifecycle renewal needs and enable efficient resourcing planning, often there will be a need to smooth out expenditure requirements over multiple years through a combination of deferring renewal (where appropriate) and bringing scheduled works forward.

At times, this may result in a small number of assets exceeding prescribed renewal intervention criteria, requiring projects to be prioritised with respect to available budget. It is possible to prioritise renewals by identifying assets or asset groups that:

- Have a higher consequence of failure
- Have higher usage and the subsequent impact on users would be more significant
- Have higher than expected operational and maintenance costs

Prioritisation criteria used to inform the renewal forecasts within this Asset Management Plan include:

- Compliance with current legislative requirements
- Asset condition
- Asset hierarchy and criticality
- Cost effectiveness of maintenance investment
- Alignment with Strategic Plan objectives and corporate strategies
- Financial capacity and sustainable financial management principles
- Council decisions
- Asset functionality deficiencies
- Community interest

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 5.4. Asset useful lives were last reviewed in 2023.

Table 5.4: Useful Lives of Assets

Asset Category	Asset Type	Condition Rating for Intervention	Useful life (years) *
Playground	Playground Softfall	3.5	10
	Playground Equipment	3.5	10-15
Sportsfield and Active Area	Basketball Court	4	10-50
	BMX Track	4	40
	Chess Set	4	50
	Cricket Pitch	4	50
	Golf Greens	3	40
	Multipurpose Court	4	10-50
	Netball Court	4	10-50
	Pétanque	4	30
	Skatepark	4	50
	Sports Equipment	4	5-15
	Tennis Court	4	10-50
Irrigation	Controller	4	15
	Valve	4	15
	Mainline	4	30
	Laterals	4	20
	Backflow	4	15
	Emitters	4	30
	Control Wire	4	15
Water Feature	Fountain	4	60
	Creek	4	80
	Pond	4	20-80
	Water Play	4	60

*Where a range is provided for asset useful life, it is reflective of the short life (e.g. surface) and long life (e.g. rubble base) components of the asset

5.4.1 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figures 5.4.1a to 5.4.1d. A detailed summary of the forecast renewal costs is shown in Appendix C.

Playgrounds

Predictive modelling identified that the existing budget allocations within the Long-Term Financial Plan were insufficient to maintain current service levels, resulting in the health of the playground assets declining to poor condition in certain years. Various renewal strategies were considered for the playground assets utilising predictive scenario modelling, which are presented and further discussed in Appendix F.

The recommended asset renewal strategy aims to prohibit individual pieces of playground equipment and softfall deteriorating into condition 4 and condition 5 (target 0%) given the higher safety standards associated with playground assets. Additionally, to ensure playgrounds are fit-for-purpose and meet with the evolving needs of the community, playgrounds are reviewed holistically and renewed at the expiration of a recommended 20-year design life.

To enable this, our general playground equipment and softfall assets require:

- $0.3 million / year – on average between years 1 and 10
- $0.4 million / year – on average between years 11 and 20

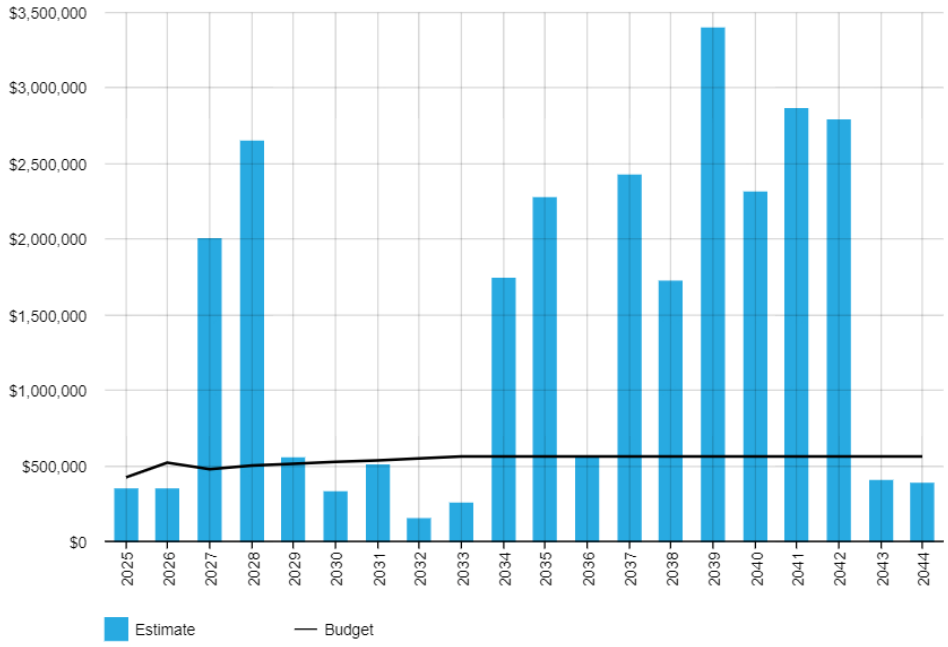
Additionally, over the next 10-years there will be full playground renewal requirements for when assets reach the end of their 20-year design life. Key renewal forecasts for the next 10 years include:

- Park 2 – Bush Magic Playground: $1.6million in year 3
- Park 20 – Glover Playground: $2.6 million in year 4
- Park 23 – West Terrace G S Kingston Park Playground: $1.0 million in year 10

The projected 20-year renewal forecast compared against the current Long-Term Financial Plan budget allocation for playground assets is shown in Figure 5.4.1a below (note: all figure values are shown in current day dollars). When comparing the forecast renewal costs against the existing budget allocation (black line), it is evident that there is a funding shortfall in specific years within the first 10 years and a consistent funding shortfall between years 10 and 20 where a number of playgrounds reach the end of their 20-year design life.

Additional funding is required to maintain service levels. Not funding the shortfall will result in playgrounds becoming outdated with respect to modern standards and it is anticipated they will not align with community expectations.

Figure 5.4.1a: Forecast Renewal Costs (Playgrounds)



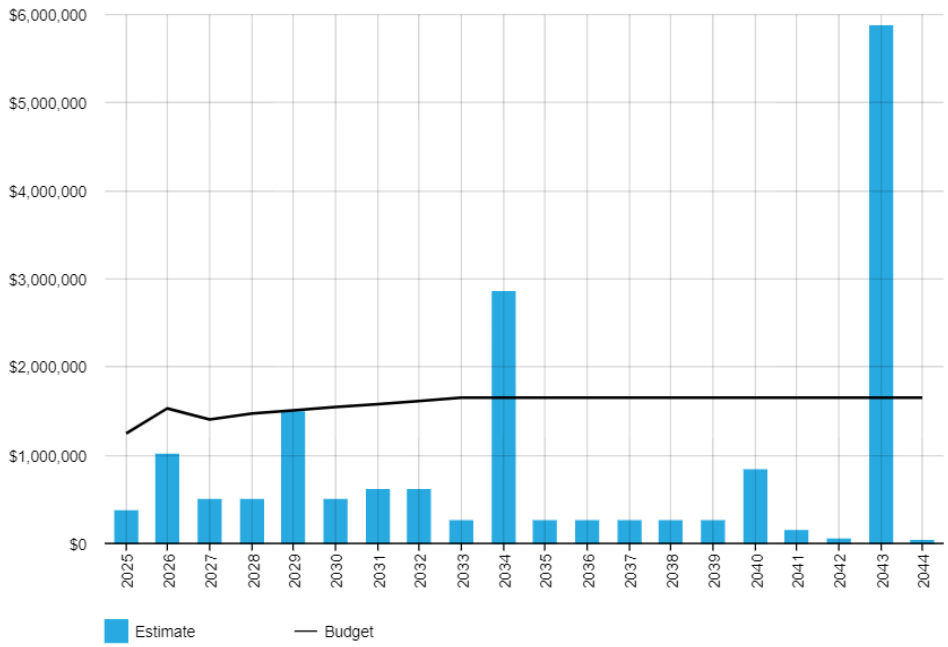
Sportsfields

Predictive modelling identified that the existing budget allocations within the Long-Term Financial Plan were generally sufficient to maintain current service levels, and surplus budget could be re-distributed to other renewal programs. Various renewal strategies were considered for the sportsfields assets utilising predictive scenario modelling, which are presented and further discussed in Appendix F.

The recommended asset renewal strategy aims to reduce the number of assets that deteriorate into condition 4 (target < 5%) and prohibit assets reaching condition 5 (target 0%). To enable this, the renewal funding of $840,000 is required on average each year across the 20 year planning period, with investment spikes in year 5, 10 and 19, which are associated with forecast renewal works for the Park 22 netball court.

The projected 20-year renewal forecast compared against the current Long-Term Financial Plan budget allocation for Structures is shown in Figure 5.4.1b below (note: all figure values are shown in current day dollars). When comparing the forecast renewal costs against the existing budget allocation (black line), it is shown that funding is generally sufficient to maintain service levels in most years apart from year 10 and year 19.

Figure 5.4.1b: Forecast Renewal Costs (Sportsfields)



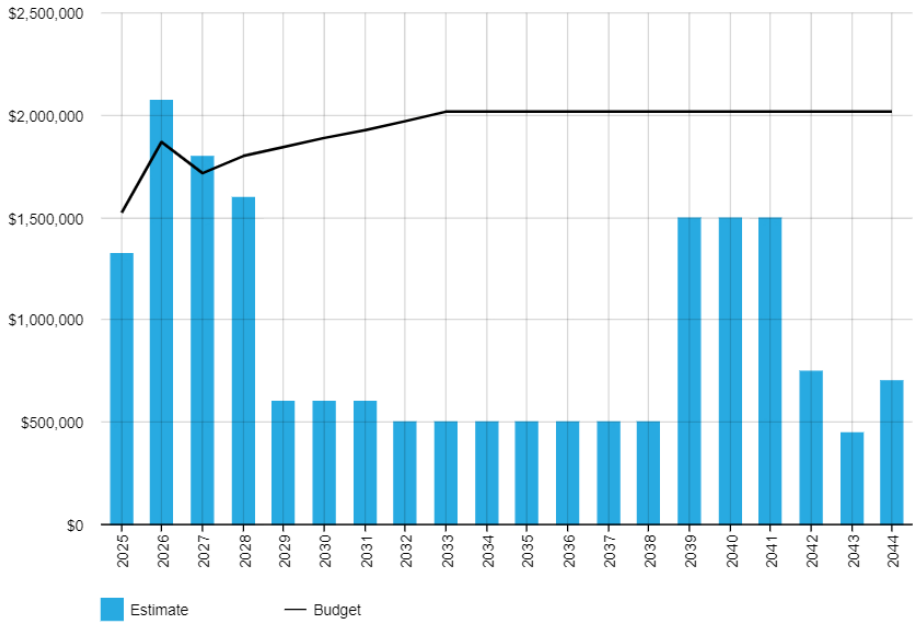
Green Infrastructure (Irrigation)

Predictive modelling identified that the existing budget allocations within the Long-Term Financial Plan were generally sufficient to maintain current service levels. Various renewal strategies were considered for our irrigation network utilising predictive scenario modelling, which are presented and further discussed in Appendix F.

The recommended asset renewal strategy aims to reduce the number of assets that deteriorate into condition 4 (target < 5%) and prohibit assets reaching condition 5 (target 0%). To enable this, increased renewal funding of $1.3m, $2.1m, $1.8m and $1.6m is required over the first four years. From years 5 to year 14, renewal funding requirements reduce to between $0.5-$0.6m each year to maintain service levels. From years 15 to 17 investment requirements slighting increase to $1.5m each year, before reducing to $0.6m between years 18 and 20.

The projected 20-year renewal forecast compared against the current Long-Term Financial Plan budget allocation for irrigation systems is shown in Figure 5.4.1c below (note: all figure values are shown in current day dollars). When comparing the forecast renewal costs against the existing budget allocation (black line), it is evident that funding is generally sufficient to maintain service levels in most years (with significant funding surplus), with the exception of the first 3 years.

Figure 5.4.1c: Forecast Renewal Costs (Irrigation)



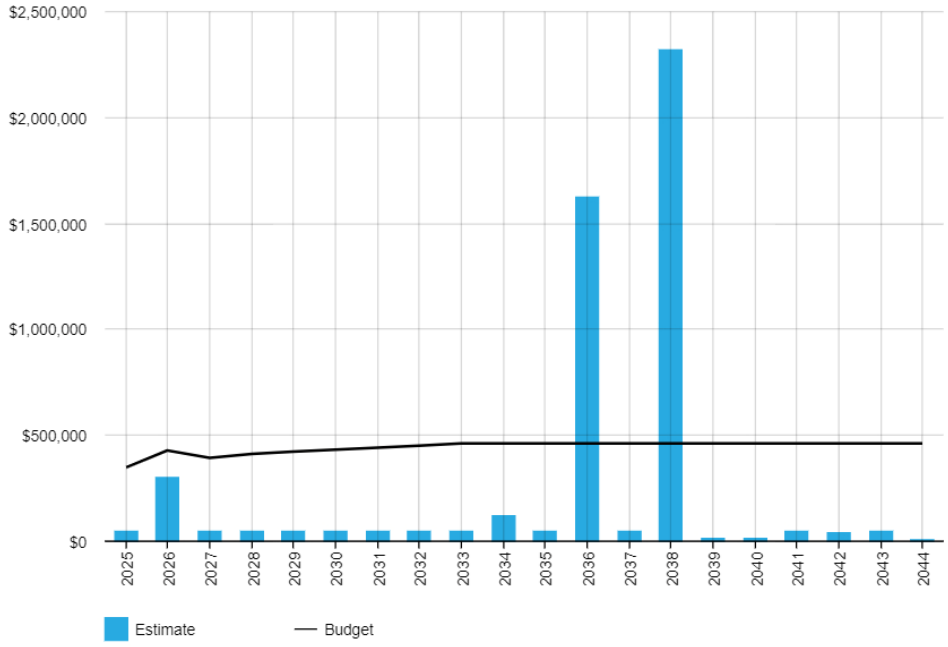
Water Features

Predictive modelling identified that the existing budget allocations within the Long-Term Financial Plan were generally sufficient to maintain current service levels. Various renewal strategies were considered for our irrigation systems utilising predictive scenario modelling, which are presented and further discussed in Appendix F.

The recommended asset renewal strategy aims to reduce the number of assets that deteriorate into condition 4 (target < 5%) and prohibit assets reaching condition 5 (target 0%). To enable this, the renewal funding of $250,000 is required on average each year, with forecast renewal spikes in year 12 and 14 which are associated with the renewal of Veale Garden's ornamental creek and the Bonython Park ornamental pond.

The projected 20-year renewal forecast compared against the current Long-Term Financial Plan budget allocation for water features is shown in Figure 5.4.1d below (note: all figure values are shown in current day dollars). When comparing the forecast renewal costs against the existing budget allocation (black line), it is evident that funding is generally sufficient to maintain service levels in most years (with funding surplus), with the exception of years 12 and 14.

Figure 5.4.1d: Forecast Renewal Costs (Water Features)



5.5 Acquisition of Assets (New & Upgrade)

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, demand, social or environmental needs. Assets may also be donated to the City of Adelaide.

Opportunities for acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, initiatives identified within strategic plans and corporate strategies as well as partnerships with third parties (e.g. State Government and Developers).

Potential new and upgrade works should be reviewed to verify that they are essential to City of Adelaide's needs and include analysis to understand ongoing operations, maintenance and renewal requirements to ensure that the services are sustainable over the longer term.

While this Asset Management Plan does not identify financial forecasts associated with new and upgrade projects, it does ensure required renewal scheduling is aligned (where practical) with key new and upgrade initiatives linked to our Strategic Plan through Integrated Delivery Planning.

Prioritisation and scheduling of new and upgrade works is currently undertaken on an annual basis through the business plan and budget process, where key prioritisation criteria include:

- Alignment with Strategic Plan objectives and corporate strategies
- Financial capacity and sustainable financial management principles
- Council decisions
- Asset functionality deficiencies
- Asset condition
- Compliance with current legislative requirements
- Community interest

The Resource Plan will provide a 4-year view of new and upgrade projects, resources, and budgets required to deliver our Strategic Plan objectives. It will inform the Long-Term Financial Plan and act as the key link between the Strategic Plan and Annual Business Plan & Budget.

Transformational new and upgrade projects will reference the Adelaide Design Manual that have allocated funding within the Resource Plan and Long-Term Financial Plan.

5.6 Disposal of Assets

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Disposal can be considered when an asset has been identified as underperforming, underutilised, or obsolete and does not provide value to the community.

This Asset Management Plan does not identify financial forecasts associated with asset disposal, however where recommended, significant assets will be identified for decommissioning and disposal through Council Reports. To enable informed decision making, reports will include any anticipated impacts to service provision as well as financial impacts including disposal costs, revenue gained and estimated reductions in annual operations and maintenance expenditure that will be included into the Business Plan and Budget and Long-Term Financial Plan.

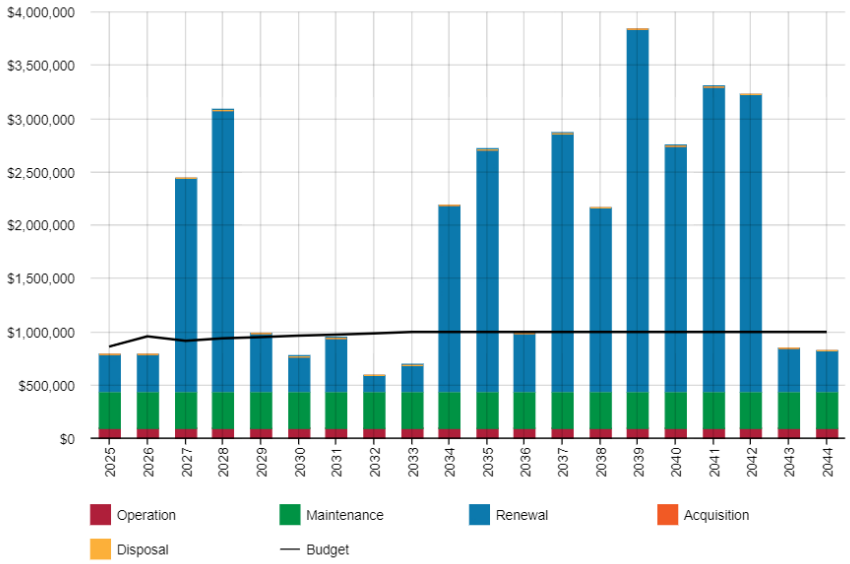
5.7 Summary of Asset Forecast Costs

The total financial projections from this Asset Management Plan are shown in Figures 5.7a to 5.7d below for each asset category. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimise the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is discussed in detail within sections 5.3 and 5.4.

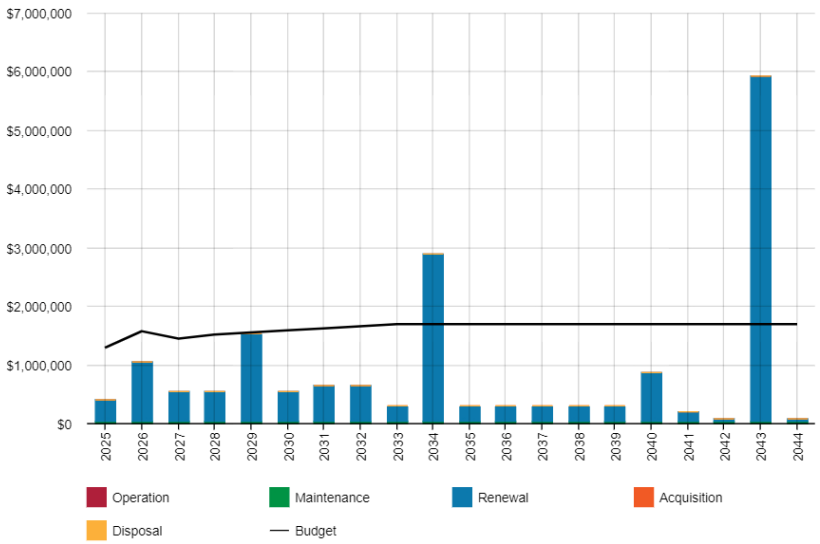
Playgrounds

Figure 5.7a: Lifecycle Summary (Playgrounds)



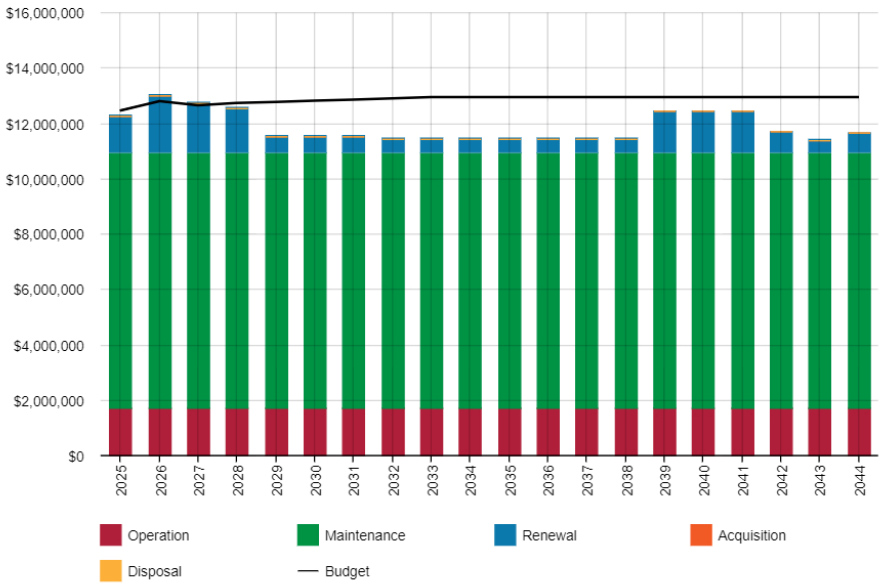
Sportsfields

Figure 5.7b: Lifecycle Summary (Sportsfields)



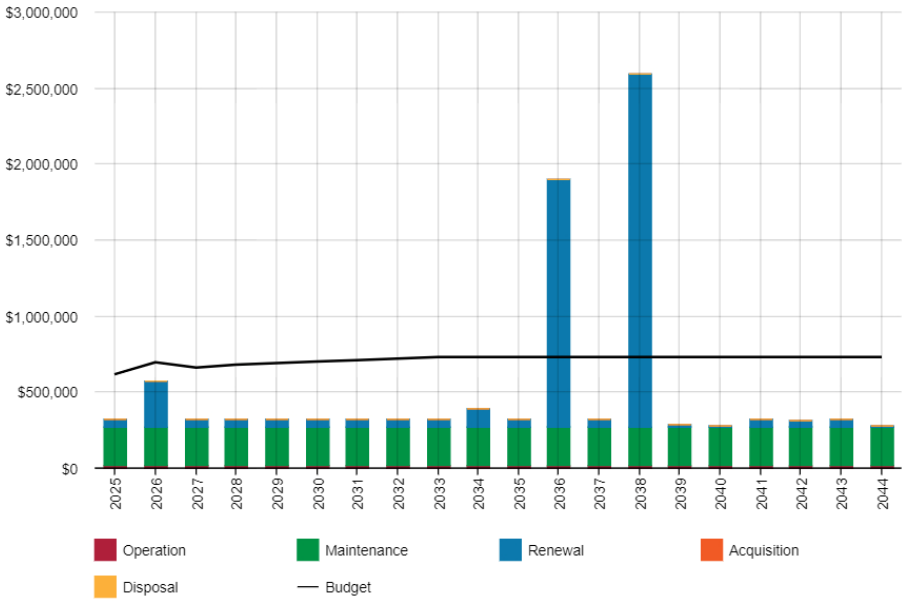
Green Infrastructure

Figure 5.7c: Lifecycle Summary (Green Infrastructure)



Water Features

Figure 5.7d: Lifecycle Summary (Water Features)



6.0 RISK MANAGEMENT PLANNING

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'[5].

An assessment of risks[6] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarised in Table 6.1. Failure modes may include physical failure, collapse or essential service interruption.

Table 6.1 Critical Assets

Asset Category	Critical Asset(s)	Failure Mode	Impact
Playgrounds	Playground equipment and softfall	Structural failure of play equipment Softfall non-compliance	Public safety risks associated with collapse of playground equipment
Sportsfields and Active Areas	Sports equipment	Structural failure of sports equipment	Public safety risks associated with failure of sports equipment
Green Infrastructure	Trees	Structural failure associated with poor tree health	Public safety risks associated with collapse of tree

By identifying critical assets and failure modes an organisation can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

[5] ISO 31000:2009, p 2

[6] REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

6.2 Risk Assessment

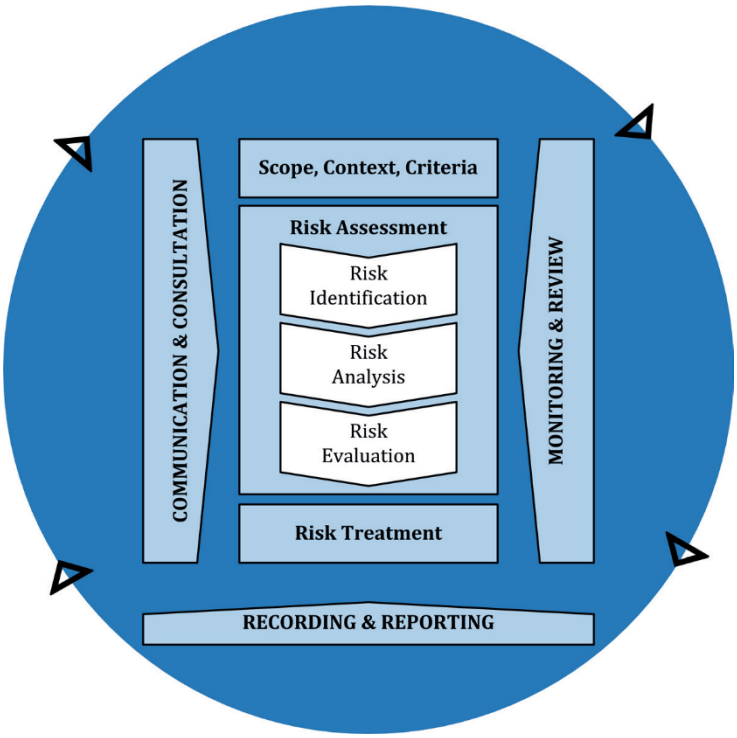
The risk management process used is shown in Figure 6.2 below.

It is an analysis and problem-solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

The process is based on the fundamentals of International Standard ISO 31000:2018.

Fig 6.2 Risk Management Process – Abridged

Source: ISO 31000:2018, Figure 1, p9



The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks[7] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2. It is essential that these critical risks and costs are reported to management and the Strategic Risk and Internal Audit Group (SRIA).

[7] REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

Table 6.2: Risks and Treatment Plans

Asset at Risk	What can Happen	Risk Rating	Risk Treatment Plan	Residual Risk	Treatment Costs
All Park Lands and Open Space Assets	Renewal, maintenance and operational budgets are not adopted as recommended in Asset Management Plan, resulting in increased asset risk, reduced levels of service and increased whole of life costs	High	Reduce levels of service, to better align asset management activities with financial constraints. This will result in renewal and maintenance activities being prioritised, with respect to available budgets.	Medium	Within existing resources / budgets
	CoA do not have the financial capacity to undertake all recommended upgrades to address functionality deficiencies and strategic objectives.	High	Upgrade opportunities are discussed with Council on an annual basis through the Business Plan and Budget Process. Prior to allocating resources to detailed design and construction activities, concept design options are developed with cost estimates and presented to CoA's Senior Leadership Team, to confirm project priority in conjunction with the recommended scope and timing of works.	Medium	Upgrade/new projects are considered as part of the Annual Business Plan & Budget
	Compromised decision making caused by insufficient asset information	High	Continue to regularly collect and update asset condition and financial information in our asset management system, to inform sound decision making. Undertake predictive scenario modelling to effectively communicate the relationship between cost, level of service and risk to inform asset management strategies.	Medium	Within existing resources / budgets
	Accelerated asset deterioration and technical obsolescence, resulting in assets requiring renewal earlier than scheduled within Asset Management Plan.	High	Undertake regular condition audits and routine maintenance inspections to understand asset deterioration trends, in conjunction with technology trends that will influence asset operations and replacement. Review emerging renewal priorities on a regular basis and update the 4-year renewal plan through the business plan and budget process on an annual basis as required.	Medium	Within existing resources / budgets
	Increasing operational and maintenance requirements and costs	High	Undertake routine maintenance inspections and maintenance planning to proactively identify financial risks associated with maintenance requirements to provide the agreed level of service. Review and update maintenance standards, intervention levels and response times following adoption of Asset Management Plan. Utilise established processes through the annual business plan and budget to submit a business case to re-forecast additional operational and maintenance costs.	Medium	Within existing resources / budgets As identified through Business Plan and Budget

Asset at Risk	What can Happen	Risk Rating	Risk Treatment Plan	Residual Risk	Treatment Costs
All Park Lands and Open Space Assets	Gifted assets associated with State Government Projects and external development are not constructed in accordance with CoA standards, resulting in potential hazards to public and/or premature asset failure and reduced useful life.	High	All third-party works require City Works Permits or Memorandum of Understandings, to ensure works are delivered in accordance with City Works Guidelines and CoA standards. Additionally, where appropriate, infrastructure agreements are established with third parties to ensure proposed works are designed and constructed in accordance with CoA standards. Defects and omission inspections are undertaken following the completion of works to ensure compliance with CoA standards and/or infrastructure agreement. Where defects are identified the third-party is instructed to undertake required rectifications works.	Medium	Within existing resources / budgets
Playground Equipment	Structural failure of playground equipment as a result of lifecycle deterioration, resulting in a public safety risk.	High	Daily maintenance inspections are undertaken in conjunction with comprehensive annual structural inspections, where identified deficiencies are addressed through maintenance and renewal programs.	Low	Within existing resources / budgets
	Softfall is not compliant with Australian Standards, resulting in a public safety risk.	High	Ensuring all new equipment and softfall installations comply with Australian Standards through certification prior to opening. Ensuring all existing equipment and softfall installations are assessed and verified by an independent auditor on an annual basis.	Low	Within existing resources / budgets
Trees	Collapse of trees as a result of poor tree health, causing a public safety risk.	High	Regular proactive maintenance inspections and condition audits for trees in high risk areas to identify risks and deficiencies that need to be addressed through maintenance and operational programs.	Medium	Within existing resources / budgets
Water Features	Public illness associated with outbreak of waterborne disease	High	Daily inspections of fountains and sanitation procedures are undertaken within SA Health guidelines	Low	Within existing resources / budgets

6.3 Infrastructure Resilience Approach

The resilience of our infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions we need to understand our capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service.

Our current measure of resilience is shown in Table 6.3 which includes the type of threats and hazards and the current measures that the organisation takes to ensure service delivery resilience.

Ensuring we remain resilient to the impacts of projected future climate will require ongoing investigation, monitoring and adaption within future revisions of this Asset Management Plan. This has been recognised as a key action within the Improvement Plan (Chapter 8).

Table 6.3: Resilience Assessment

Threat / Hazard	Assessment Method	Current Resilience Approach
Increasing temperatures and more frequent, long-running and intense heatwaves	Data SA Climate Projections for South Australia Climate change modelling scenarios based on weather station data	Implementation key actions from the Climate Change Risk Adaptation Action Plan, which include: ■ Continuing to work with industry to identify new/superior products (or new applications) for application in CoA ■ Developing an Urban Greening Strategy to guide future investment for improved canopy cover and natural cooling
Less rain overall but more intense storms and flooding	Data SA Climate Projections for South Australia Climate change modelling scenarios based on weather station data	Implementation of key actions from the Climate Change Risk Adaptation Action Plan, which include: ■ Undertaking a full underground audit of our stormwater network and developing a Stormwater Management Plan to understand current and future upgrade priorities to manage flood risk ■ Development of flexible spatial flood modelling layers in GIS

6.4 Service and Risk Trade-Offs

The decisions made in adopting this Asset Management Plan are based on the objective to achieve the optimum benefits from the available resources.

6.4.1 What we cannot do

Based on our current Long-Term Financial Plan budgets, there are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years.

Maintenance & Operations

Currently, maintenance activities are evaluated and prioritised with respect to available budgets. While make-safe treatments are always undertaken as soon practical (generally within 24 hours), we are currently unable to undertake all permanent repairs within the timeframes aligned with community expectations. Following the completion of this Asset Management Plan, we will be updating maintenance standards to formalise maintenance intervention levels and response times, with the objective of establishing an acceptable balance between cost, risk and customer expectations.

This activity has been recognised as an action within the Improvement Plan of this Asset Management Plan (Chapter 8), where the associated financial impacts will need to be further considered in future revisions of this Asset Management Plan and the Long-Term Financial Plan.

Renewal

All forecast Park Lands and Open Space renewals can be accommodated within our existing Long-Term Financial Plan budget allocations. There is an estimated $1.48 million renewal funding surplus on average per year over the next 10 years, to continue to provide services in line with community expectations and reduce whole-of-life costs. This is further summarised for each Park Lands and Open Space asset category in Table 6.4.1 below.

Table 6.4.1: Renewal funding shortfall

Asset Category	Forecast renewal costs over next 10 years (annual average)	Current budget allocation over next 10 years (annual average)	Renewal funding shortfall/surplus over next 10 years (annual average)
Playgrounds	$887,183	$517,844	-$369,339
Sportsfields	$869,227	$1,522,016	$652,789
Green Infrastructure	$1,009,500	$1,857,699	$848,199
Water Features	$81,941	$425,851	$343,910
Total	$2,847,851	$4,323,412	$1,475,561

Acquisition (New & Upgrade)

It will not be possible to deliver all new and upgrade initiatives identified within corporate strategies and action plans within the 10 year planning period. New and upgrade initiatives will be prioritised and assessed against key criteria (see section 5.5) and considered with respect to available budgets. This process will be undertaken in consultation with the community through the business plan and budget process and the development of the Resource Plan.

6.4.2 Service trade-off

If there is forecast work (operations, maintenance, renewal, acquisition or disposal) that cannot be undertaken due to available resources, then this will result in service consequences for users. These service consequences include:

- Reduced levels of service for the Park Lands and Open Space portfolio (maintenance and renewal backlog)
- Reduced customer satisfaction levels associated with the management of our existing assets
- Intergenerational inequity (burdening future generations)

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Increased public safety risks associated with assets deteriorating beyond recommended intervention levels
- Increased reputational risks associated with service provisions not aligning with community expectations
- Increased financial risks associated with surplus maintenance requirements that cannot be accommodated within existing budgets
- Increased financial risks associated with higher renewal and/or rehabilitation treatments as asset renewals are not funded at the optimal point in time
- Increased economic risk associated with reduced business activity, events and tourism
- Intergenerational inequity (burdening future generations)

7.0 FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this Asset Management Plan. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

7.1 Financial Sustainability and Projections

7.1.1 Sustainability of service delivery

There are two key indicators of sustainable service delivery that are considered in the Asset Management Plan for this service area. The two indicators are the:

- asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years)
- medium term forecast costs/proposed budget (over 10 years of the planning period)

Asset Renewal Funding Ratio

The forecast renewal costs along with the proposed renewal budget, and the cumulative shortfall, is detailed in Appendix C and summarised in Table 7.1.1-1 with an overall Asset Renewal Funding Ratio[8] of 152%.

Table 7.1.1-1: Asset Renewal Funding Ratio

Playgrounds	Sportsfields	Green Infrastructure (Irrigation)	Water Feature	Total
58%	175%	184%	520%	152%

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have 152% of the funds required for the optimal renewal of assets (i.e. surplus funding).

The forecast renewal work along with the proposed renewal budget, and the cumulative shortfall/surplus, is illustrated in Appendix D.

Medium term – 10 year financial planning period

This Asset Management Plan identifies the forecast operations, maintenance and renewal costs required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner. This forecast work can be compared to the proposed budget over the first 10 years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs for the Park Lands and Open Space assets over the 10 year planning period is $14.69 million on average per year.

The current (budgeted) operations, maintenance and renewal funding is $16.17 million on average per year giving a 10 year funding surplus of $1.48 million on average per year.

This indicates that 110% of the forecast costs needed to provide the services documented in this Asset Management Plan are accommodated in the proposed budget. Note, these calculations exclude acquired assets.

This information is presented in further detail for each asset class in Table 7.1.1-2 below.

[8] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

Table 7.1.1-2: 10-Year Financial Indicator

Asset Class	Forecast operations, maintenance and renewal costs (10-year average)	Current operations, maintenance and renewal funding (10-year average)	Funding Shortfall/ Surplus (10-year average)	10 Year Financial Indicator
Playgrounds	$1,322,498	$953,160	-$369,339	72%
Sportsfields	$913,682	$1,566,472	$652,789	171%
Green Infrastructure	$11,946,782	$12,794,981	$848,199	107%
Water Features	$510,483	$854,394	$343,910	167%
Total	$14,693,446	$16,169,007	$1,475,561	110%

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately 1.0 for the first years of the Asset Management Plan and ideally over the 10 year life of the Long-Term Financial Plan.

7.1.2 Forecast Costs (outlays) for the Long-Term Financial Plan

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the Long-Term Financial Plan.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the Asset Management Plan or revising the Long-Term Financial Plan.

The forecast costs (outlays) required for consideration in the 10 year Long-Term Financial Plan are provided in Appendix F. These costs include renewal, maintenance and operations of our existing assets. For the next revision of this Asset Management Plan, it is recommended to include the acquisition costs (upgrade/new) that are specified within the Resource Plan and are accommodated within the Long-Term Financial Plan. This has been recognised as an action within the Improvement Plan (Chapter 8). Costs associated with asset disposal, will continue to be identified through Council Reports and accommodated within the annual Business Plan and Budget and Long-Term Financial Plan as required.

7.2 Funding Strategy

The proposed funding for assets is outlined in the City of Adelaide Annual Business Plan and Budget and Long-Term Financial Plan.

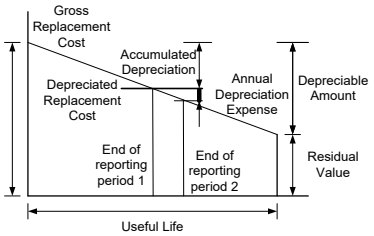
The financial strategy of the entity determines how funding will be provided, whereas the Asset Management Plan communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

7.3 Valuation Forecasts

7.3.1 Asset valuations

The best available estimate of the value of assets included in this Asset Management Plan are shown below. The assets are valued at fair value cost to replace service capacity in accordance with Australian Account Standards.

Gross Replacement Cost	$46,436,562
Depreciable Amount	$46,436,562
Depreciated Replacement Cost[9]	$25,171,255
Depreciation	$1,785,962



A more comprehensive breakdown for each asset class is shown in Table 7.3.1.

Table 7.3.1: Asset Valuations

Financial Figure	Playgrounds	Sportsfields	Green Infrastructure (Irrigation)	Water Feature	Total
Gross Replacement Cost	$3,970,194	$15,922,048	$15,701,359	$10,752,961	$46,346,562
Depreciable Amount	$3,970,194	$15,922,048	$15,701,359	$10,752,961	$46,346,562
Depreciated Replacement Cost[10]	$2,546,219	$8,495,651	$10,131,861	$3,997,525	$25,171,255
Annual Depreciation	$201,371	$610,435	$810,463	$163,692	$1,785,962

7.3.2 Valuation forecast

Asset values are forecast to increase as additional assets are added to the network.

Additional assets will generally add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts.

Increases to in asset valuation are formally recognised through asset revaluations in conjunction with updates to Asset Management Plans, which are both typically undertaken every 4 years.

[9] Also reported as Written Down Value, Carrying or Net Book Value.
[10] Also reported as Written Down Value, Carrying or Net Book Value.

7.4 Key Assumptions Made in Financial Forecasts

In compiling this Asset Management Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this Asset Management plan and provides readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this Asset Management Plan are:

- All current assets will remain within the organisation's ownership throughout the planning period
- Renewal forecasts are based on costs associated with like for like or modern equivalent replacement and are based off current design standards and any legislated requirements. They do not account for additional costs to upgrade assets or install new ancillary assets
- Renewal forecast for individual assets have been derived from treatment rates established from quantity surveyor estimates or contract rates, applied to asset dimensions recognised within the Asset Management System
- Forecasts for playground renewals when they reach the end of their 20-year design life, have been derived from treatment rates established from quantity surveyor estimates or actual costs incurred from recent projects of equivalent size and quality standards. These rates account for all required works associated works within the playground area (e.g. paths, equipment, urban elements and earthworks) and are applied to the footprint area of the playground.
- Renewal forecasts have been escalated into FY24/25 dollars (based on historic and forecast inflation)
- Renewal forecasts account for external design requirements, where costs are allocated within each FY of the Asset Management Plan as a "Design Program" where applicable
- Renewal forecasts consider asset condition, asset functionality and integrated planning principles
- Renewal forecasts have been aligned where appropriate with upgrade projects approved by Council and recognised in the Long-Term Financial Plan
- Renewal forecasts do not account for internal staff resourcing. These resources are to be allocated through a capital resource overhead and accommodated into the Long-Term Financial Plan separately
- Asset useful lives align with current levels of service and are based on the judgment and experience of internal staff
- Asset remaining useful life estimates are based off asset condition data and technical asset deterioration profiles which are based on the judgement and experience of internal staff
- Asset useful life and remaining useful life estimates assume existing maintenance resourcing levels are continued
- Acquisition (upgrade/new) costs are not recognised within this Asset Management Plan. These costs will be recognised in the Resource Plan and incorporated into Long-Term Financial Plan separately
- Operations and maintenance forecasts are prioritised and delivered with respect to existing budget (standards to be reviewed and associated cost impacts to be incorporated into a future revision of this Asset Management Plan)
- Operations and maintenance forecasts do not currently account for the future acquisition of new assets through upgrade/new projects or gifted assets (to be incorporated into a future revision of this Asset Management Plan)
- The Long-Term Financial Plan will appropriately escalate financial outlays communicated within this Asset Management Plan

7.5 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this Asset Management Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is classified on a A - E level scale[11] in accordance with Table 7.5-1.

Table 7.5-1: Data Confidence Grading System

Confidence Grade	Description
A. Very High	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment. Dataset is complete and estimated to be accurate ± 2%
B. High	Data 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 ± 10%
C. Medium	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated ± 25%
D. Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy ± 40%
E. Very Low	None or very little data held.

The estimated confidence level for and reliability of data used in this Asset Management Plan is shown in Table 7.5-2. This Asset Management Plan's Improvement Plan (Chapter 8) outlines further steps recommended to be undertaken to continue to increase the maturity and confidence in asset management and financial forecasts.

Table 7.5-2: Data Confidence Assessment for Data used in Asset Management Plan

Playgrounds	Sportsfields	Green Infrastructure	Water Feature
High	Medium - High	Medium	Medium - High

Further information to support this assessment at a more granular level is provided in Appendix G.

[11] IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

8.0 PLAN IMPROVEMENT AND MONITORING

8.1 Status of Asset Management Practices[12]

8.1.1 Accounting and financial data sources

This Asset Management Plan utilises accounting and financial data. The source of the data is from the accounting module of CoA's Asset Management System (Assetic).

8.1.2 Asset management data sources

This Asset Management Plan also utilises asset management data. The source of the data is from CoA's Asset Management System (Assetic).

8.2 Improvement Plan

It is important that an entity recognise areas of their Asset Management Plan and planning process that require future improvements to ensure effective asset management and informed decision making. The improvement plan generated from this Asset Management Plan is shown in Table 8.2.

Table 8.2: Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
1	Finalise a 4-year Resource Plan to identify key upgrade/new projects to deliver Council's Strategic Plan objectives. Once key projects are recognised within the LTFP, Asset Management Plans will be updated to ensure associated acquisition costs (upgrade/new) and ongoing operational and maintenance costs are appropriately recognised, in conjunction with any scheduling adjustments required for asset renewal programs.	Strategy, Insights & Performance, with organisational support Infrastructure Planning	Within existing resource allocations	2024-25
2	Review and update operations and maintenance standards, to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. Include changes into future revisions of this Asset Management Plan and LTFP.	Infrastructure Planning, City Operations	Within existing resource allocations	2024-25
3	Continue to work in partnership with State Government to pursue external funding opportunities and partnerships for Park Lands and Open Space upgrades.	City Services Executive	Within existing resource allocations	Ongoing
4	Continue to undertake regular condition audits and revaluation for all of our Park Lands and Open Space asset portfolio within the nominated 4-year cycles, including regular review of asset useful lives.	Infrastructure Planning	Within existing resource allocations	Ongoing
5	Review and standardise asset hierarchies for all asset classes within Streets, Park Lands and Buildings Categories.	Infrastructure Planning, City Operations	Within existing resource allocations	2024-25

[12] ISO 55000 Refers to this as the Asset Management System

6	Review customer service requests codes to better align with Level of Service reporting and operational and maintenance sub-activities.	Infrastructure Planning, City Operations, Customer Centre	Within existing resource allocations	2024-25
7	Review of corporate performance measure targets for customer satisfaction, to assist with performance gap analysis	Strategy, Insights & Performance, Infrastructure Planning	Within existing resource allocations	2024-25
8	Continue to review our technical standards and their application across the City and Park Lands, with respect to climate resilience, performance, whole-of-life cost and amenity.	Infrastructure Planning, Technical Services	Within existing resource allocations	Ongoing
9	Continue to monitor forecast climate change impacts to ensure we remain resilient through proactively implementing appropriate mitigation and adaptation controls.	Sustainability, Infrastructure Planning	Within existing resource allocations	Ongoing
10	Improve the capture of carbon emission data for technical standards to support lower carbon decision making	Low Carbon & Circular Economy, Infrastructure Planning, Technical Services	Led by existing resources, with external support identified through the Business Plan and Budget	Ongoing
11	Improve the capture of carbon emission data for project procurement to support lower carbon decision making	Low Carbon & Circular Economy, Procurement, Infrastructure Delivery	Led by existing resources, with external support identified through the Business Plan and Budget	Ongoing
12	Review of corporate performance measure targets for customer satisfaction, to assist with performance gap analysis	Strategy, Insights & Performance, Infrastructure Planning	Within existing resource allocations	2024-25
13	Further develop processes to ensure asset data is updated following the completion of maintenance work and emergency asset replacement resulting from vandalism	Infrastructure Planning, City Operations,	Within existing resource allocations	2024-25

8.3 Monitoring and Review Procedures

This Asset Management Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The Asset Management Plan will be reviewed and updated annually to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budgets will be incorporated into the Long-Term Financial Plan once completed.

The Asset Management Plan has a maximum life of 4 years and is due for complete revision and updating within two years of a general Council election, pursuant to section 122 of the Local Government Act 1999 (SA).

8.4 Performance Measures

The effectiveness of this Asset Management Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this Asset Management Plan are incorporated into the Long-Term Financial Plan,
- The degree to which the 1-5 year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the Asset Management Plan,
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans,
- The Asset Renewal Funding Ratio achieving the Organisational target (90-110%)
- Achieving Technical Level of Service objectives
- Reviewing changes to customer service request numbers and customer satisfactory surveys
- Progressing with the implementation of Improvement Actions identified in Table 8.2
- Reviewing and update of the Plan at minimum every four years

9.0 REFERENCES

- IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
- IPWEA, 2015, 3rd edn., 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
- IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/namsplus.
- IPWEA, 2015, 2nd edn., 'Australian Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/AIFMM.
- IPWEA, 2020 'International Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney
- IPWEA, 2018, Practice Note 12.1, 'Climate Change Impacts on the Useful Life of Assets', Institute of Public Works Engineering Australasia, Sydney
- IPWEA, 2012, Practice Note 6 Long-Term Financial Planning, Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn6
- IPWEA, 2014, Practice Note 8 – Levels of Service & Community Engagement, Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn8
- ISO, 2014, ISO 55000:2014, Overview, principles and terminology
- ISO, 2018, ISO 31000:2018, Risk management – Guidelines
- City of Adelaide 2020-2024 Strategic Plan, https://www.cityofadelaide.com.au/about-council/plans-reporting/strategic-planning/
- City of Adelaide 2024-2028 Strategic Plan, Strategic planning | City of Adelaide

10.0 APPENDICES

Appendix A Operation Forecast

The forecast operational costs for the Park Lands and Open Space portfolio are shown below. Future revisions of this Asset Management Plan will further review forecast requirements based on updated operations and maintenance standards. All values are shown in current day dollars.

Table A1 - Operation Forecast Summary (Playgrounds)

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2025	$96,810	$0	$96,810
2026	$96,810	$0	$96,810
2027	$96,810	$0	$96,810
2028	$96,810	$0	$96,810
2029	$96,810	$0	$96,810
2030	$96,810	$0	$96,810
2031	$96,810	$0	$96,810
2032	$96,810	$0	$96,810
2033	$96,810	$0	$96,810
2034	$96,810	$0	$96,810

Table A2 - Operation Forecast Summary (Sportsfields)

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2025	$6,844	$0	$6,844
2026	$6,844	$0	$6,844
2027	$6,844	$0	$6,844
2028	$6,844	$0	$6,844
2029	$6,844	$0	$6,844
2030	$6,844	$0	$6,844
2031	$6,844	$0	$6,844
2032	$6,844	$0	$6,844
2033	$6,844	$0	$6,844
2034	$6,844	$0	$6,844

Table A3 - Operation Forecast Summary (Green Infrastructure)

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2025	$1,734,067	$0	$1,734,067
2026	$1,734,067	$0	$1,734,067
2027	$1,734,067	$0	$1,734,067
2028	$1,734,067	$0	$1,734,067
2029	$1,734,067	$0	$1,734,067
2030	$1,734,067	$0	$1,734,067
2031	$1,734,067	$0	$1,734,067
2032	$1,734,067	$0	$1,734,067
2033	$1,734,067	$0	$1,734,067
2034	$1,734,067	$0	$1,734,067

Table A4 - Operation Forecast Summary (Water Features)

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2025	$173,706	$0	$173,706
2026	$173,706	$0	$173,706
2027	$173,706	$0	$173,706
2028	$173,706	$0	$173,706
2029	$173,706	$0	$173,706
2030	$173,706	$0	$173,706
2031	$173,706	$0	$173,706
2032	$173,706	$0	$173,706
2033	$173,706	$0	$173,706
2034	$173,706	$0	$173,706

Appendix B Maintenance Forecast

The forecast maintenance costs for the Park Lands and Open Space portfolio are shown below. Future revisions of this Asset Management Plan will further review forecast requirements based on updated operations and maintenance standards. All values are shown in current day dollars.

Playgrounds

Table B1 - Maintenance Forecast Summary (Playgrounds)

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2025	$338,505	$0	$338,505
2026	$338,505	$0	$338,505
2027	$338,505	$0	$338,505
2028	$338,505	$0	$338,505
2029	$338,505	$0	$338,505
2030	$338,505	$0	$338,505
2031	$338,505	$0	$338,505
2032	$338,505	$0	$338,505
2033	$338,505	$0	$338,505
2034	$338,505	$0	$338,505

Sportsfields

Table B2 - Maintenance Forecast Summary (Sportsfields)

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2025	$37,612	$0	$37,612
2026	$37,612	$0	$37,612
2027	$37,612	$0	$37,612
2028	$37,612	$0	$37,612
2029	$37,612	$0	$37,612
2030	$37,612	$0	$37,612
2031	$37,612	$0	$37,612
2032	$37,612	$0	$37,612
2033	$37,612	$0	$37,612
2034	$37,612	$0	$37,612

Green Infrastructure

Table B3 - Maintenance Forecast Summary (Green Infrastructure)

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2025	$9,203,215	$0	$9,203,215
2026	$9,203,215	$0	$9,203,215
2027	$9,203,215	$0	$9,203,215
2028	$9,203,215	$0	$9,203,215
2029	$9,203,215	$0	$9,203,215
2030	$9,203,215	$0	$9,203,215
2031	$9,203,215	$0	$9,203,215
2032	$9,203,215	$0	$9,203,215
2033	$9,203,215	$0	$9,203,215
2034	$9,203,215	$0	$9,203,215

Water Features

Table B4 - Maintenance Forecast Summary (Water Features)

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2025	$254,836	$0	$254,836
2026	$254,836	$0	$254,836
2027	$254,836	$0	$254,836
2028	$254,836	$0	$254,836
2029	$254,836	$0	$254,836
2030	$254,836	$0	$254,836
2031	$254,836	$0	$254,836
2032	$254,836	$0	$254,836
2033	$254,836	$0	$254,836
2034	$254,836	$0	$254,836

Appendix C Renewal Forecast Summary

The forecast renewal costs for the Park Lands and Open Space portfolio, relative to current renewal budgets are shown below, in conjunction with the annual renewal budget shortfall/surplus and the cumulative budget shortfall/surplus over the 10-year planning period. All Forecast costs are shown in 2024-25 dollar values.

Table C1 - Renewal Forecast Summary (Playgrounds)

Year	Renewal Forecast	Renewal Budget	Annual Budget Shortfall	Cumulative Budget Shortfall/Surplus
2025	$350,000	$424,893	$74,893	$74,893
2026	$350,000	$521,028	$171,028	$245,921
2027	$2,000,000	$478,538	-$1,521,462	-$1,275,541
2028	$2,643,850	$502,097	-$2,141,753	-$3,417,293
2029	$548,435	$514,080	-$34,355	-$3,451,649
2030	$332,256	$526,600	$194,344	-$3,257,305
2031	$503,120	$537,144	$34,024	-$3,223,281
2032	$150,000	$549,350	$399,350	-$2,823,931
2033	$250,000	$562,357	$312,357	-$2,511,574
2034	$1,744,168	$562,357	-$1,181,811	-$3,693,385

Across the 10-year planning period, the forecast renewal costs are $8.9 million, with a current budget allocation of $5.2 million, resulting in a cumulative budget shortfall of $3.7 million. This equates to an asset renewal funding ratio of 58%.

Table C2 - Renewal Forecast Summary (Sportsfields)

Year	Renewal Forecast	Renewal Budget	Annual Budget Shortfall	Cumulative Budget Shortfall/Surplus
2025	$370,000	$1,248,820	$878,820	$878,820
2026	$1,015,276	$1,531,373	$516,097	$1,394,917
2027	$500,000	$1,406,491	$906,491	$2,301,408
2028	$500,000	$1,475,733	$975,733	$3,277,141
2029	$1,486,636	$1,510,951	$24,315	$3,301,457
2030	$500,000	$1,547,749	$1,047,749	$4,349,206
2031	$609,347	$1,578,741	$969,395	$5,318,601
2032	$605,459	$1,614,615	$1,009,157	$6,327,757
2033	$252,797	$1,652,845	$1,400,047	$7,727,804
2034	$2,852,755	$1,652,845	-$1,199,910	$6,527,894

The 10-year planning period, the forecast renewal costs are $8.7 million, with a current budget allocation of $15.2 million, resulting in a cumulative budget surplus of $6.5 million. This equates to an asset renewal funding ratio of 175%.

Table C3 - Renewal Forecast Summary (Green Infrastructure Irrigation)

Year	Renewal Forecast	Renewal Budget	Annual Budget Shortfall	Cumulative Budget Shortfall/Surplus
2025	$2,225,000	$1,524,249	-$700,751	-$700,751
2026	$2,070,000	$1,869,119	-$200,881	-$901,631
2027	$1,800,000	$1,716,695	-$83,305	-$984,937
2028	$600,000	$1,801,209	$1,201,209	$216,272
2029	$600,000	$1,844,194	$1,244,194	$1,460,466
2030	$600,000	$1,889,107	$1,289,107	$2,749,573
2031	$600,000	$1,926,935	$1,326,935	$4,076,509
2032	$500,000	$1,970,722	$1,470,722	$5,547,230
2033	$500,000	$2,017,382	$1,517,382	$7,064,613
2034	$500,000	$2,017,382	$1,517,382	$8,581,995

The 10-year planning period, the forecast renewal costs are $10.0 million, with a current budget allocation of $18.6 million, resulting in a cumulative budget surplus of $8.6 million. This equates to an asset renewal funding ratio of 186%.

Table C4 - Renewal Forecast Summary (Water Features)

Year	Renewal Forecast	Renewal Budget	Annual Budget Shortfall	Cumulative Budget Shortfall/Surplus
2025	$50,000	$349,413	$299,413	$299,413
2026	$300,000	$428,469	$128,469	$427,882
2027	$50,000	$393,528	$343,528	$771,410
2028	$50,000	$412,902	$362,902	$1,134,311
2029	$50,000	$422,755	$372,755	$1,507,067
2030	$50,000	$433,051	$383,051	$1,890,118
2031	$50,000	$441,723	$391,723	$2,281,841
2032	$50,000	$451,760	$401,760	$2,683,601
2033	$50,000	$462,456	$412,456	$3,096,057
2034	$119,409	$462,456	$343,048	$3,439,105

The 10-year planning period, the forecast renewal costs are $0.8 million, with a current budget allocation of $4.2 million, resulting in a cumulative budget surplus of $3.4 million. This equates to an asset renewal funding ratio of 520%.

Appendix D Budget Summary by Lifecycle Activity

The forecast costs (outlays) required for consideration in the 10 year Long-Term Financial Plan are provided in shown below. These costs include renewal, maintenance, and operations of our existing assets. For the next revision of this Asset Management Plan, it is recommended to include the acquisition costs (upgrade/new) that are specified within the Resource Plan and are accommodated within the Long-Term Financial Plan. This has been recognised as an action within the Improvement Plan (Chapter 8). Costs associated with asset disposal, will continue to be identified through Council Reports and accommodated within the annual Business Plan and Budget and Long-Term Financial Plan as required. All forecast renewal costs are shown in 2024/25 dollar values and operations/maintenance costs are shown in 2023/24 dollar values.

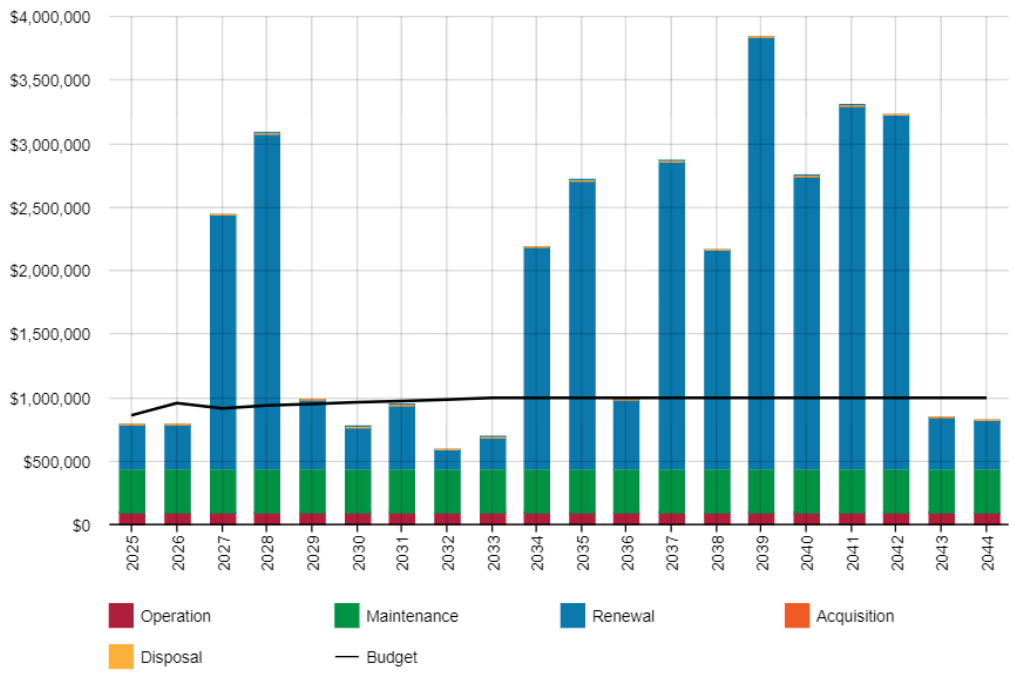
Playgrounds

Table D1 – Budget Summary by Lifecycle Activity (Playgrounds)

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2024/25	$0	$96,810	$338,505	$424,893	$0
2025/26	$0	$96,810	$338,505	$521,028	$0
2026/27	$0	$96,810	$338,505	$478,538	$0
2027/28	$0	$96,810	$338,505	$502,097	$0
2028/29	$0	$96,810	$338,505	$514,080	$0
2029/30	$0	$96,810	$338,505	$526,600	$0
2030/31	$0	$96,810	$338,505	$537,144	$0
2031/32	$0	$96,810	$338,505	$549,350	$0
2032/33	$0	$96,810	$338,505	$562,357	$0
2033/34	$0	$96,810	$338,505	$562,357	$0

*Costs accounted for within the Resource Plan and incorporated into Long-Term Financial Plan separately (i.e. not through the Asset Management Plan)

Figure D1 – Budget Summary by Lifecycle Activity (Playgrounds)



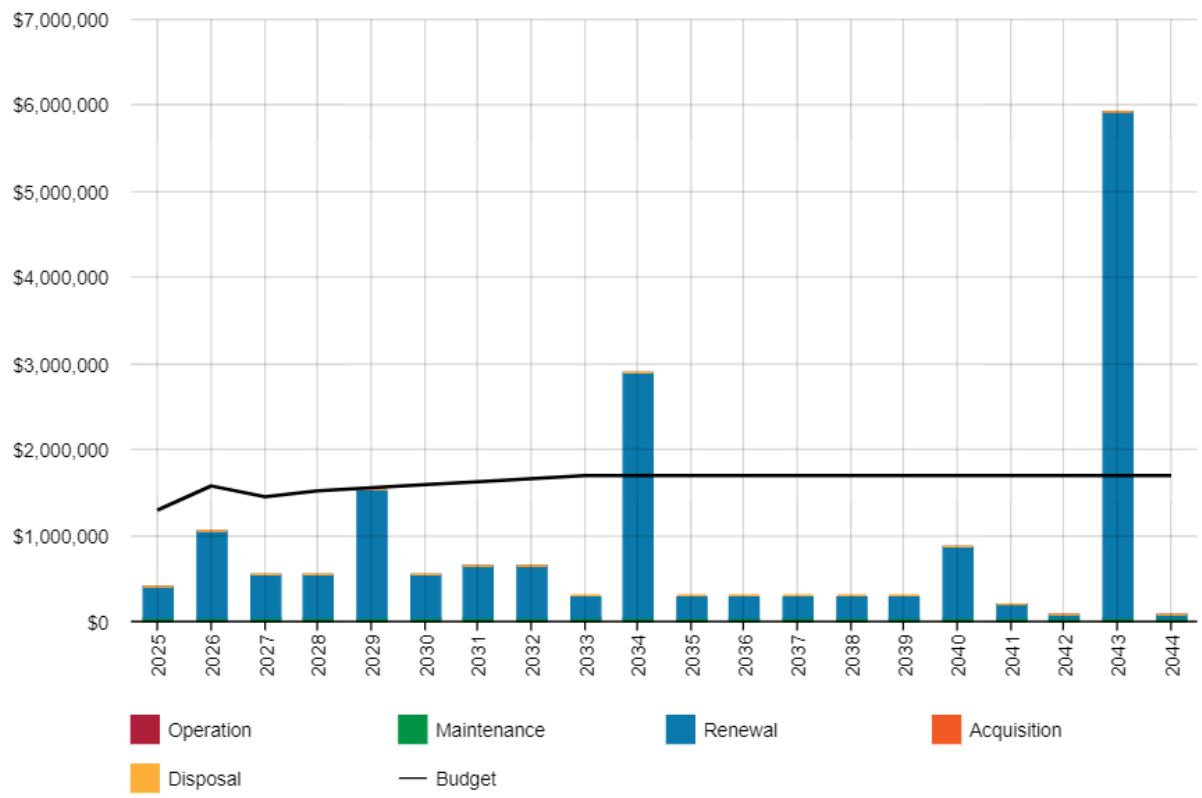
Sportsfields

Table D2 – Budget Summary by Lifecycle Activity (Sportsfields)

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2024/25	$0	$6,844	$37,612	$1,248,820	$0
2025/26	$0	$6,844	$37,612	$1,531,373	$0
2026/27	$0	$6,844	$37,612	$1,406,491	$0
2027/28	$0	$6,844	$37,612	$1,475,733	$0
2028/29	$0	$6,844	$37,612	$1,510,951	$0
2029/30	$0	$6,844	$37,612	$1,547,749	$0
2030/31	$0	$6,844	$37,612	$1,578,741	$0
2031/32	$0	$6,844	$37,612	$1,614,615	$0
2032/33	$0	$6,844	$37,612	$1,652,845	$0
2033/34	$0	$6,844	$37,612	$1,652,845	$0

*Costs accounted for within the Resource Plan and incorporated into Long-Term Financial Plan separately (i.e. not through the Asset Management Plan)

Figure D2 – Budget Summary by Lifecycle Activity (Sportsfields)



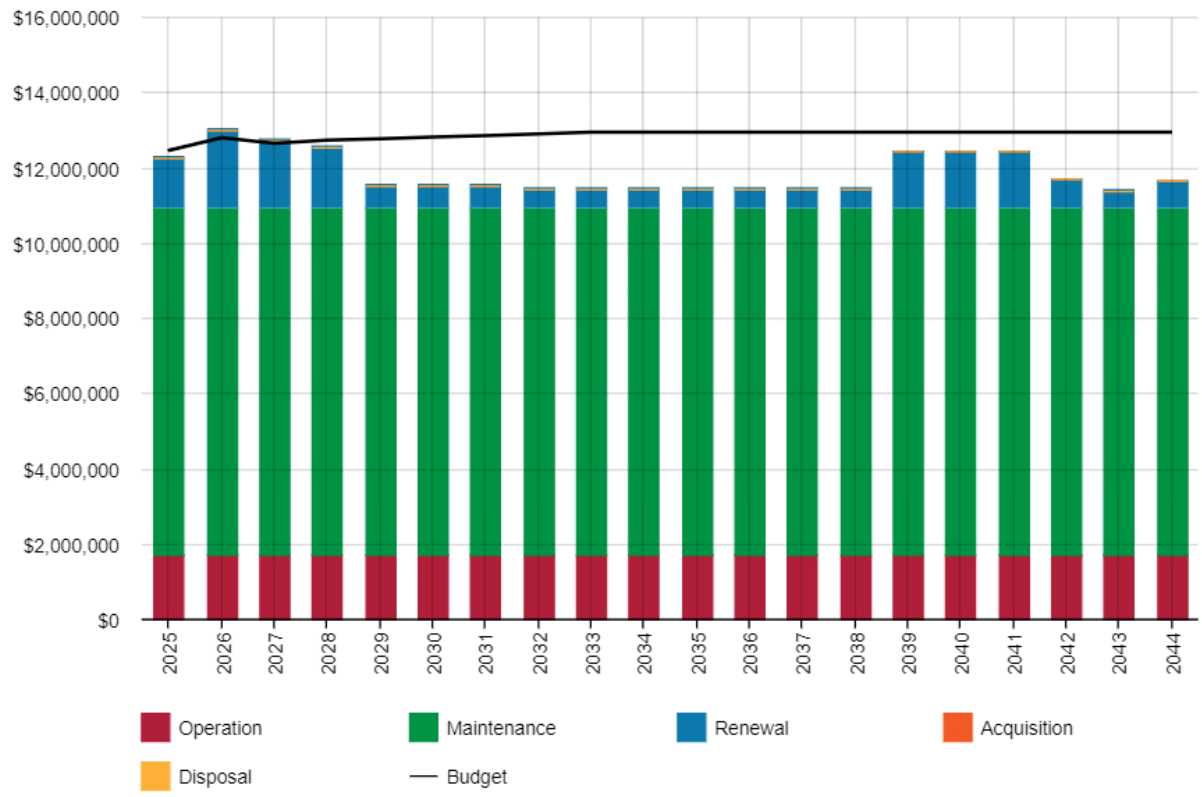
Green Infrastructure

Table D3 – Budget Summary by Lifecycle Activity (Green Infrastructure)

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2024/25	$0	$1,734,067	$9,203,215	$1,524,249	$0
2025/26	$0	$1,734,067	$9,203,215	$1,869,119	$0
2026/27	$0	$1,734,067	$9,203,215	$1,716,695	$0
2027/28	$0	$1,734,067	$9,203,215	$1,801,209	$0
2028/29	$0	$1,734,067	$9,203,215	$1,844,194	$0
2029/30	$0	$1,734,067	$9,203,215	$1,889,107	$0
2030/31	$0	$1,734,067	$9,203,215	$1,926,935	$0
2031/32	$0	$1,734,067	$9,203,215	$1,970,722	$0
2032/33	$0	$1,734,067	$9,203,215	$2,017,382	$0
2033/34	$0	$1,734,067	$9,203,215	$2,017,382	$0

*Costs accounted for within the Resource Plan and incorporated into Long-Term Financial Plan separately (i.e. not through the Asset Management Plan)

Figure D3 – Budget Summary by Lifecycle Activity (Green Infrastructure)



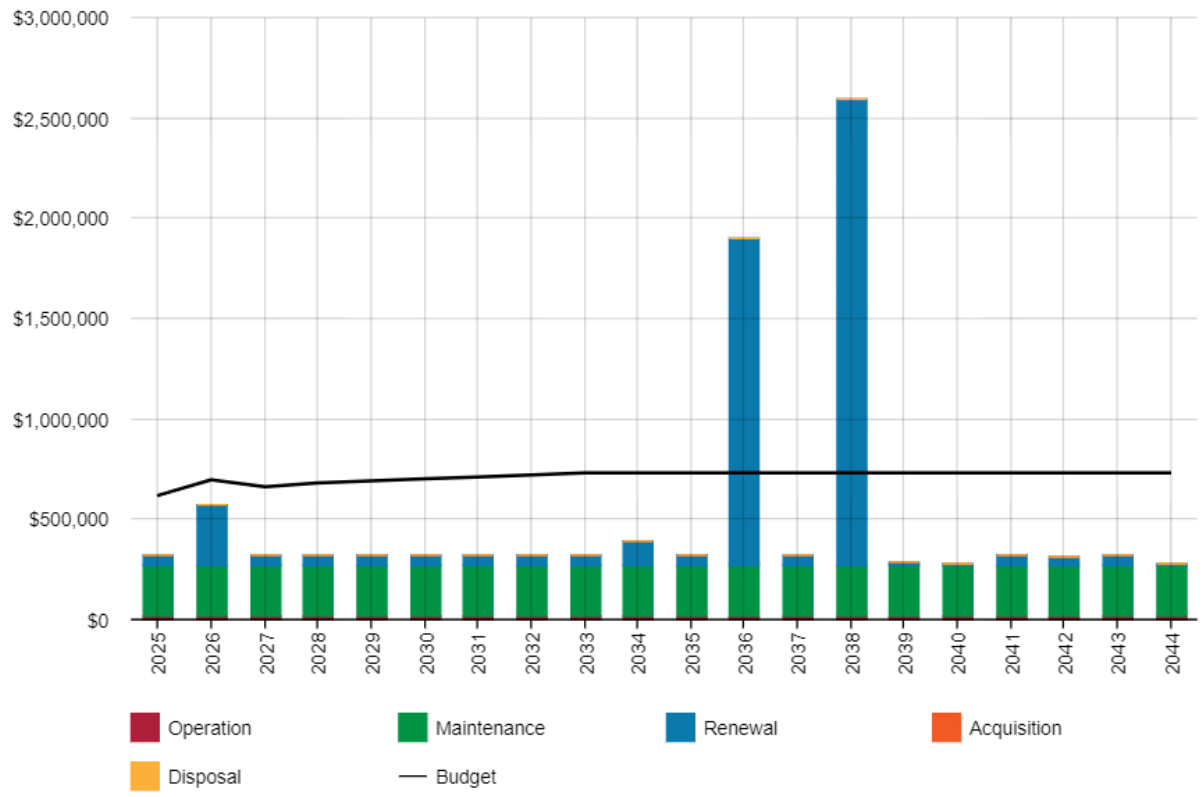
Water Features

Table D4 – Budget Summary by Lifecycle Activity (Water Features)

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2024/25	$0	$173,706	$254,836	$349,413	$0
2025/26	$0	$173,706	$254,836	$428,469	$0
2026/27	$0	$173,706	$254,836	$393,528	$0
2027/28	$0	$173,706	$254,836	$412,902	$0
2028/29	$0	$173,706	$254,836	$422,755	$0
2029/30	$0	$173,706	$254,836	$433,051	$0
2030/31	$0	$173,706	$254,836	$441,723	$0
2031/32	$0	$173,706	$254,836	$451,760	$0
2032/33	$0	$173,706	$254,836	$462,456	$0
2033/34	$0	$173,706	$254,836	$462,456	$0

*Costs accounted for within the Resource Plan and incorporated into Long-Term Financial Plan separately (i.e. not through the Asset Management Plan)

Figure D4 – Budget Summary by Lifecycle Activity (Water Features)



Appendix E Renewal Intervention Levels

Asset Category	Asset Type	Intervention Level	Useful life (years) *
Playground	Playground Softfall	3.5	10
	Playground Equipment	3.5	10-15
Sportsfield and Active Area	Basketball Court	4	10-50
	BMX Track	4	40
	Chess Set	4	50
	Cricket Pitch	4	50
	Golf Greens	3	40
	Multipurpose Court	4	10-50
	Netball Court	4	10-50
	Pétanque	4	30
	Skatepark	4	50
	Sports Equipment	4	5-15
	Tennis Court	4	10-50
Irrigation	Controller	4	15
	Valve	4	15
	Mainline	4	30
	Laterals	4	20
	Backflow	4	15
	Emitters	4	30
	Control Wire	4	15
Water Feature	Fountain	4	60
	Creek	4	80
	Pond	4	20-80
	Water Play	4	60

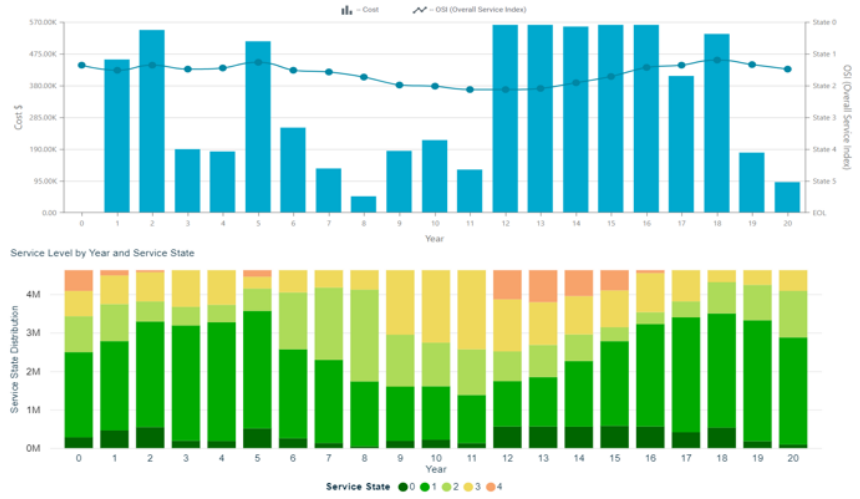
*Where a range is provided for asset useful life, it is reflective of the short life (e.g. surface) and long life (e.g. rubble base) components of the asset or useful life variation depending on asset hierarchy

Note: Street and Park Lands Trees, Streetscapes and Garden Beds are all managed through operational and maintenance budgets (i.e. not capital renewal), with replacement interventions as prescribed in Operations and Maintenance Standards.

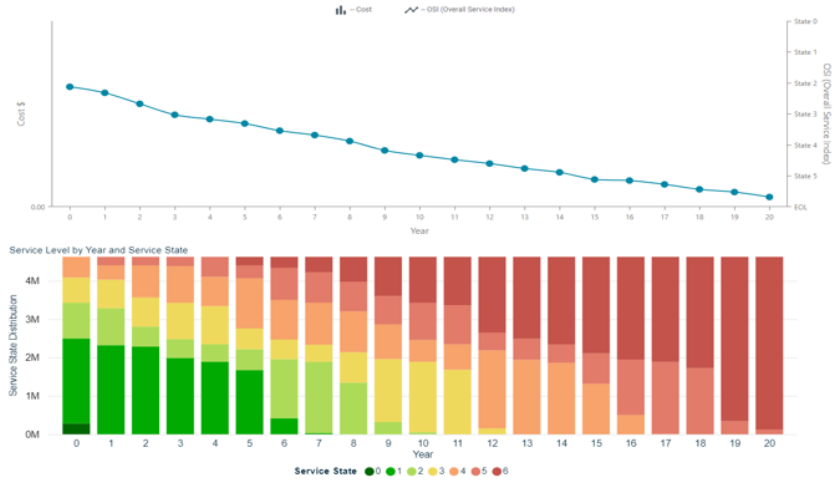
Appendix F Asset Renewal Scenario Modelling

Playgrounds– Predictive Scenario Modelling

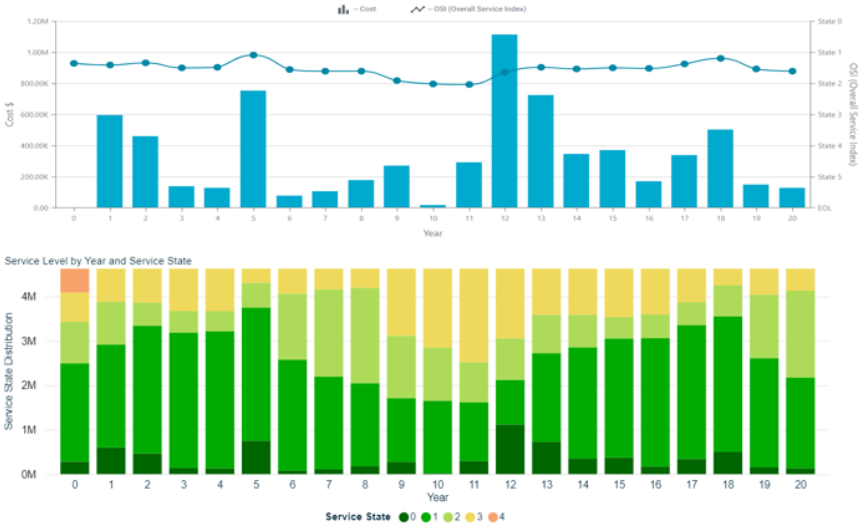
LTFP Budget



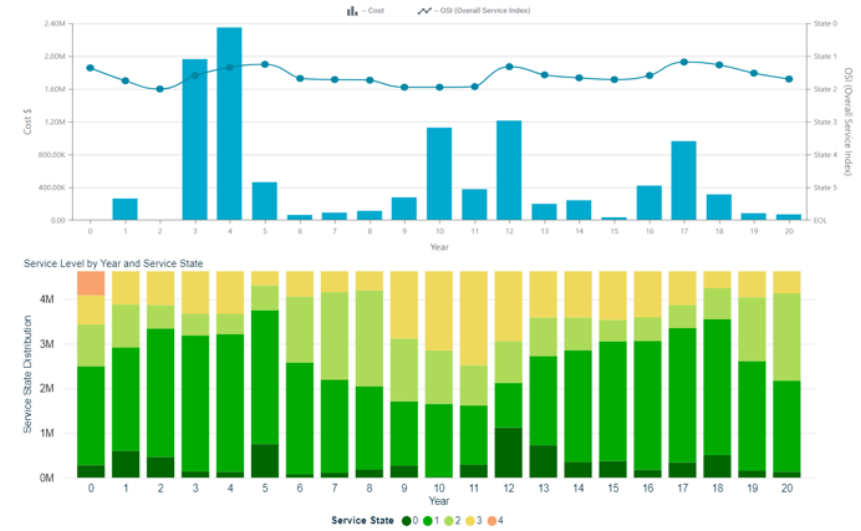
Zero Budget



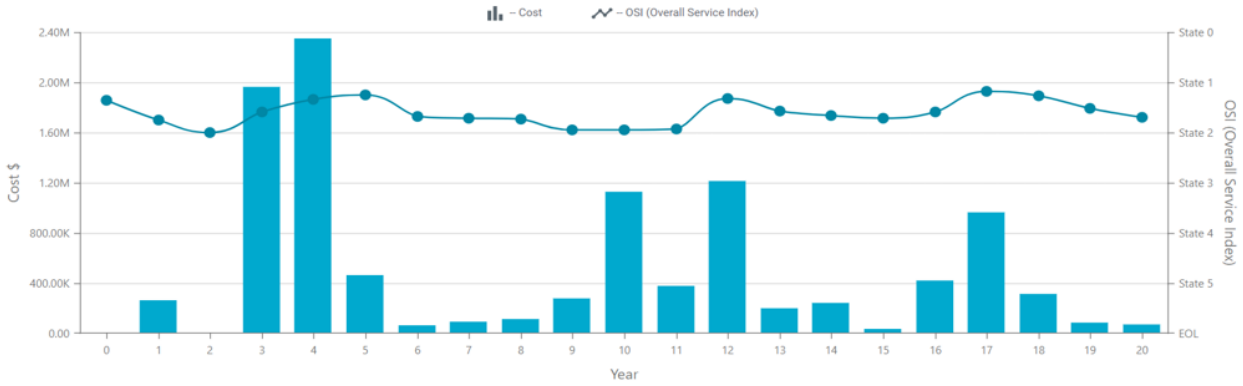
Unconstrained Budget

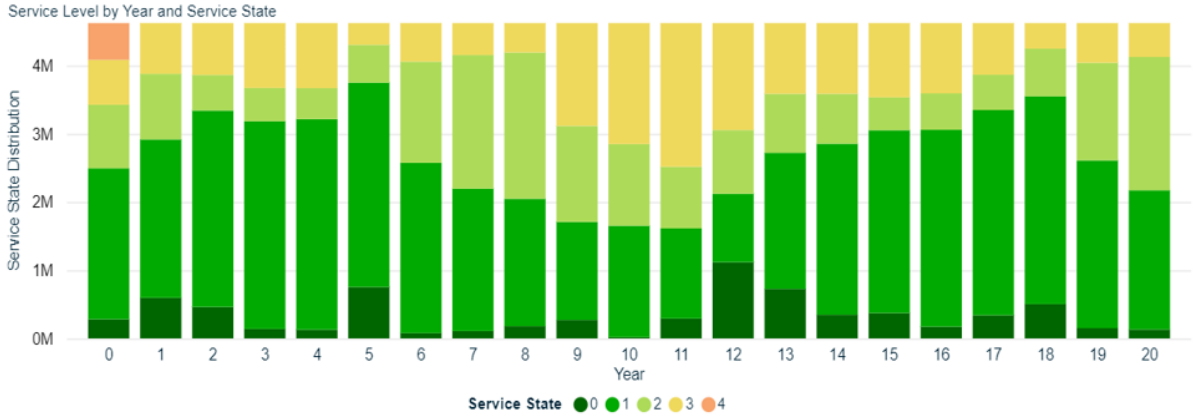


Recommended Strategy & Budget



Playgrounds- Recommended Strategy

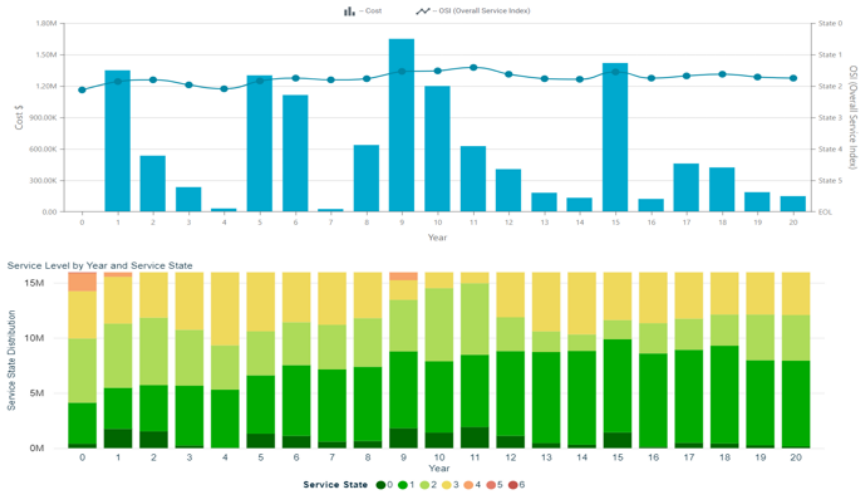




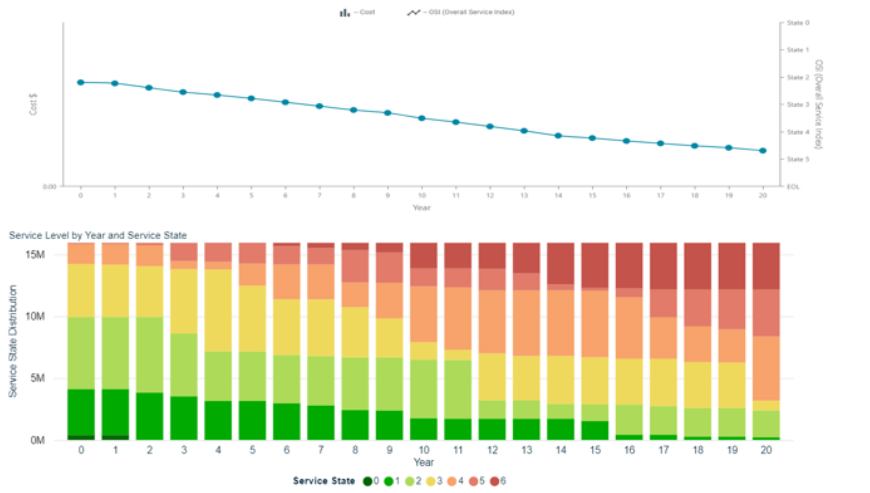
- The LTFP budget would see asset condition slowly deteriorate over the 20-year projection
- The recommended strategy is a more balanced approach than the unconstrained budget whilst addressing the shortfalls of the LTFP budget.
- The unconstrained budget outlines the required budget to prevent any assets falling into condition 4, which requires significant spikes of investment in specific years
- Overall service state of the network is maintained around condition state 1.7 by the recommended strategy
- Minimal assets fall into condition 4 and condition 5. The long-term projection is no assets deteriorates into condition 4 and condition 5
- Considered acceptable from a risk management perspective noting that isolated service deficiencies can be managed through maintenance programs.
- Conclusion – recommended this strategy is adopted

Sportsfields – Predictive Scenario Modelling

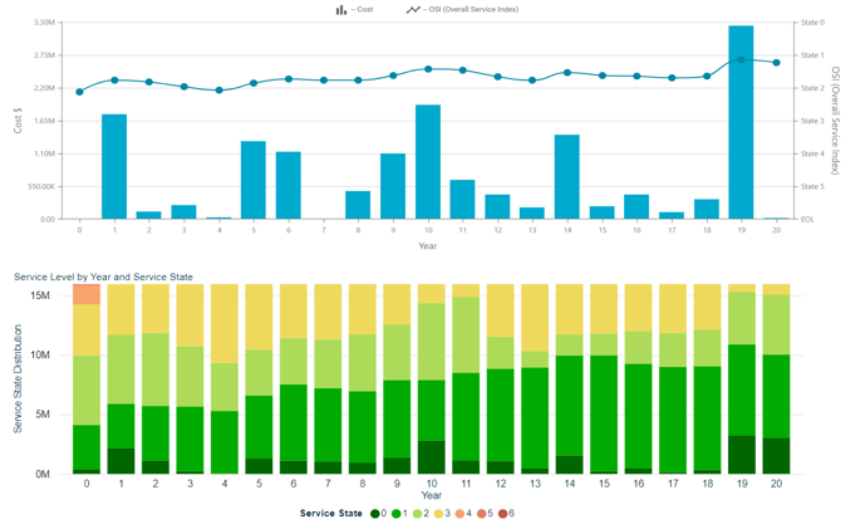
LTFP Budget



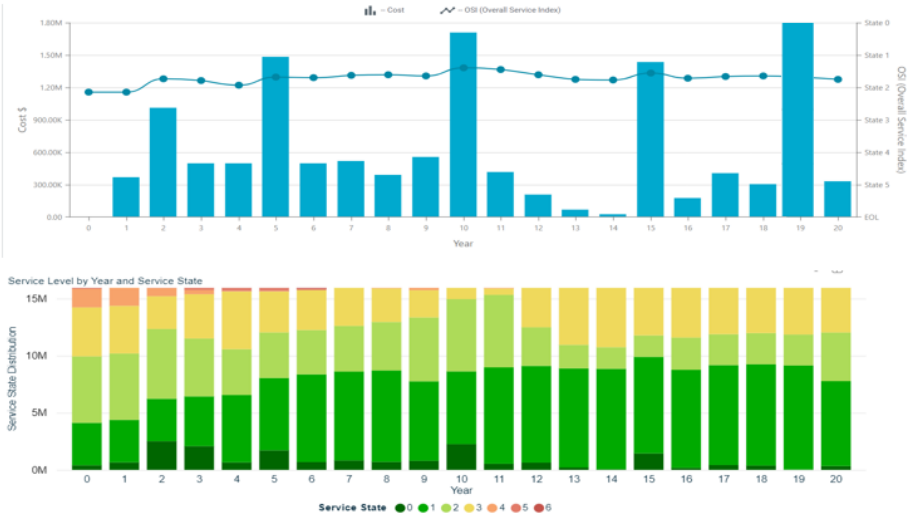
Zero Budget



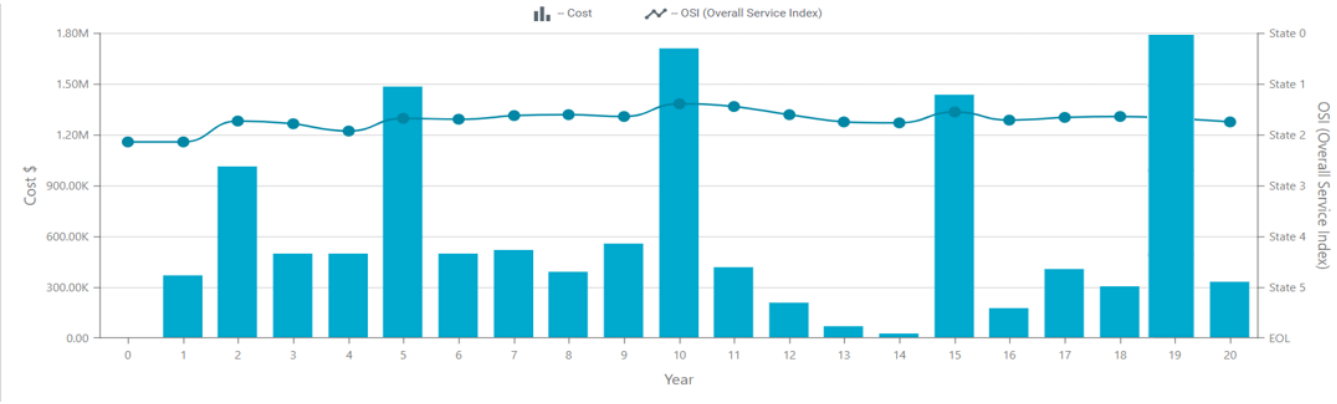
Unconstrained Budget

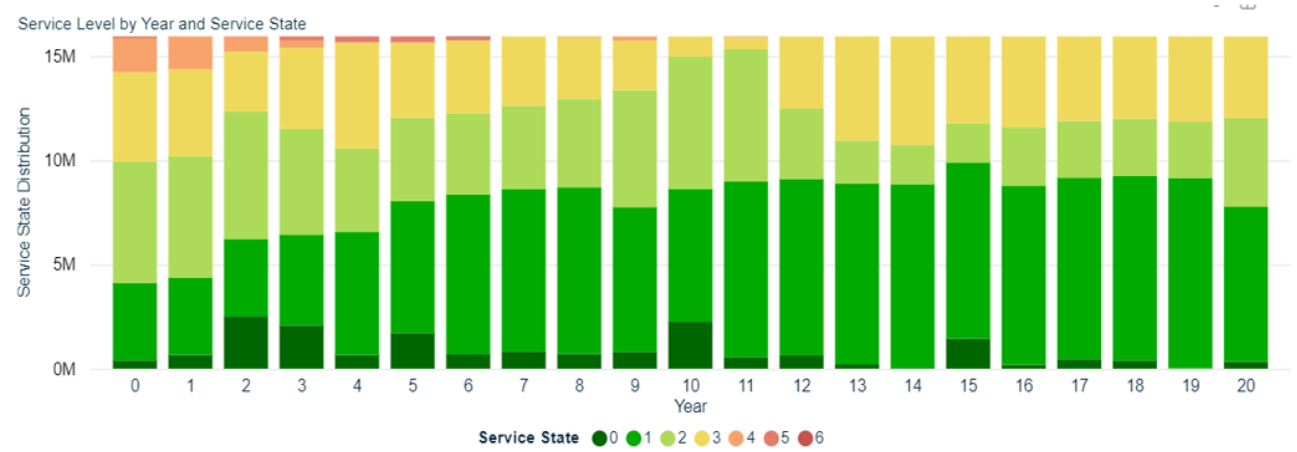


Recommended Strategy & Budget



Sportsfields – Recommended Strategy

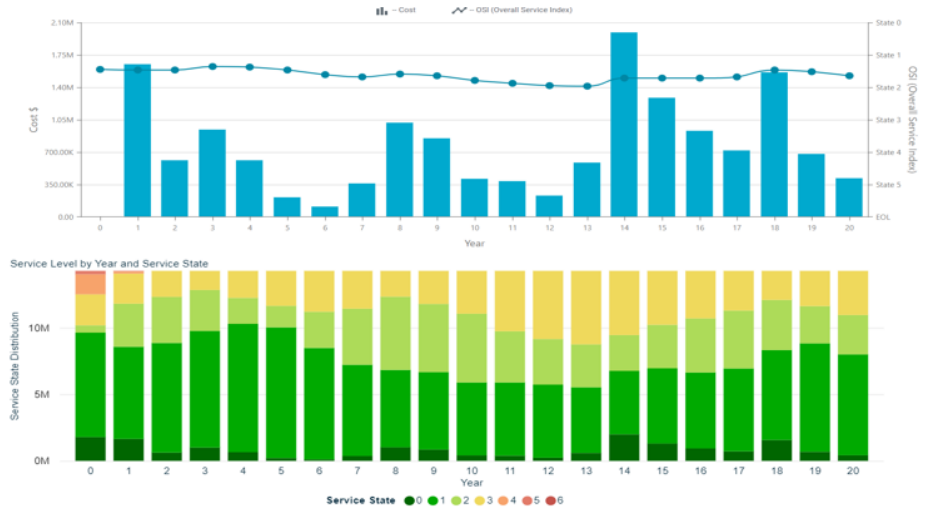




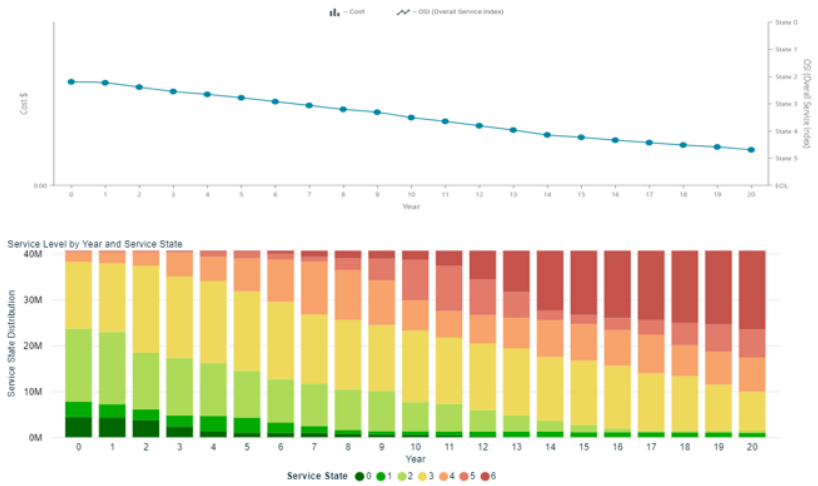
- The LTFP budget is generally sufficient to maintain current service levels
- The recommended strategy is a more balanced approach than the unconstrained budget
- The unconstrained budget outlines the required budget to prevent any assets falling into condition 4, which requires significant spikes of investment in specific years.
- Overall service state of the network is maintained around condition state 1.7 by the recommended strategy
- Small quantity of assets fall in condition 4 (<5%) and minimal assets fall into condition 5 (<0%). The long-term projection is less than 5% of assets falling into condition 4.
- Considered acceptable from a risk management perspective noting that isolated service deficiencies can be managed through maintenance programs.
- Conclusion – recommended this strategy is adopted

Irrigation– Predictive Scenario Modelling

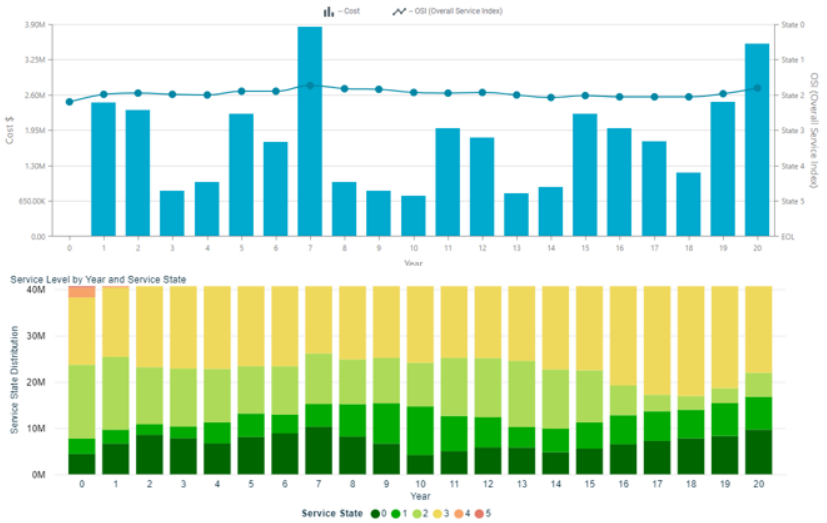
LTFP Budget



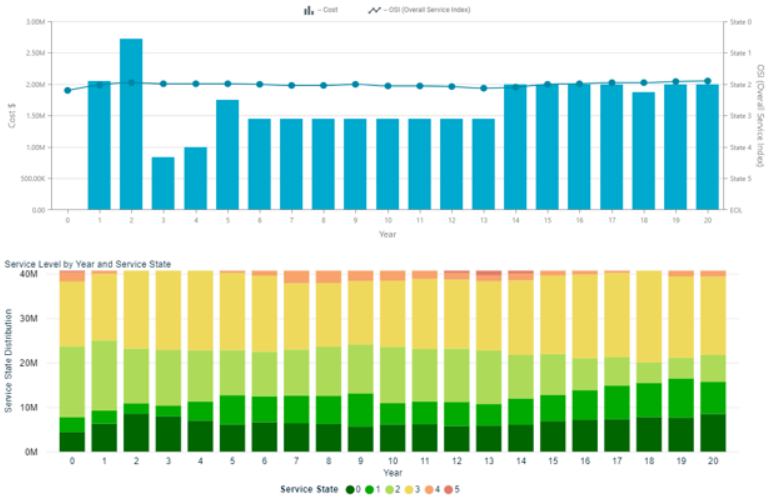
Zero Budget



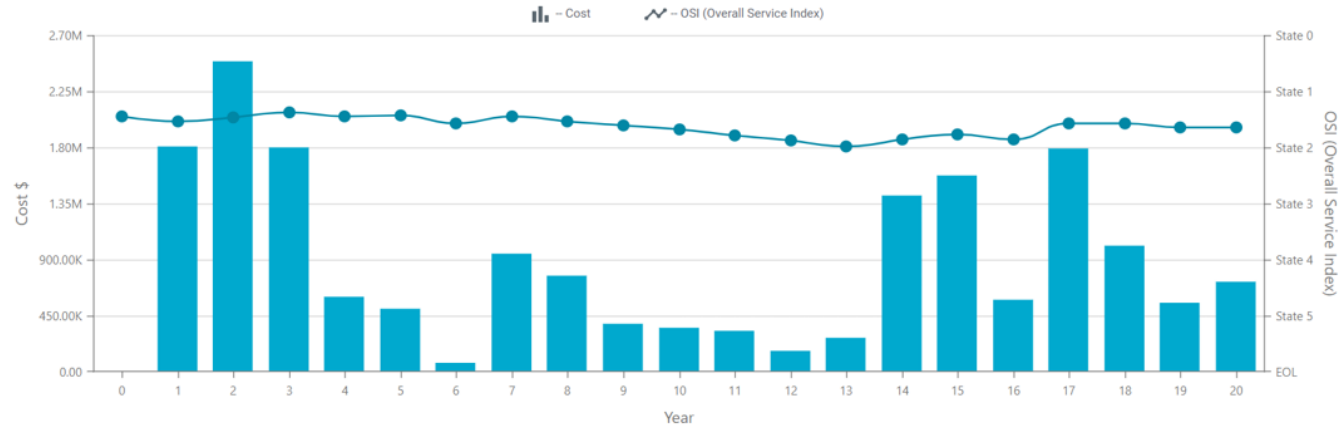
Unconstrained Budget

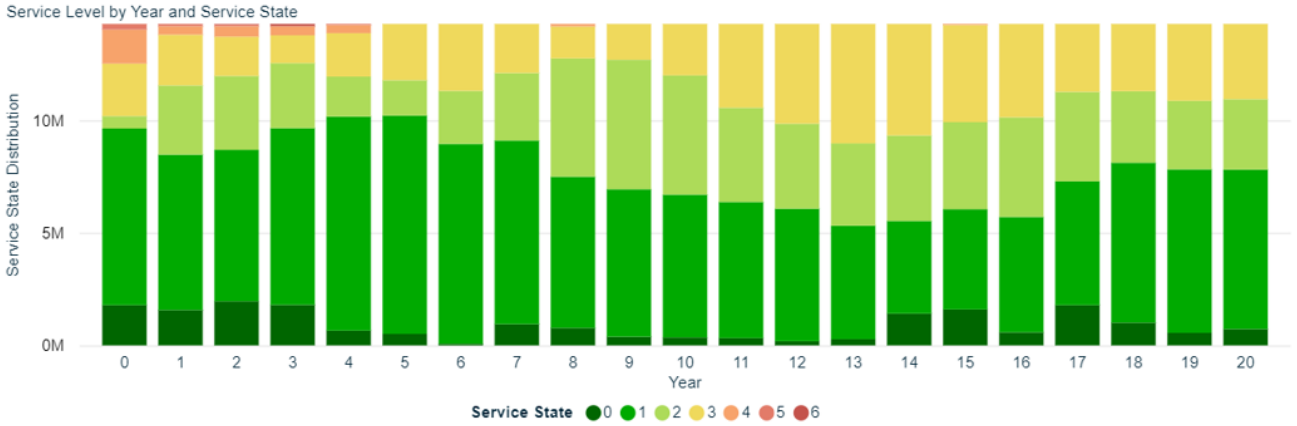


Recommended Strategy & Budget



Irrigation – Recommended Strategy

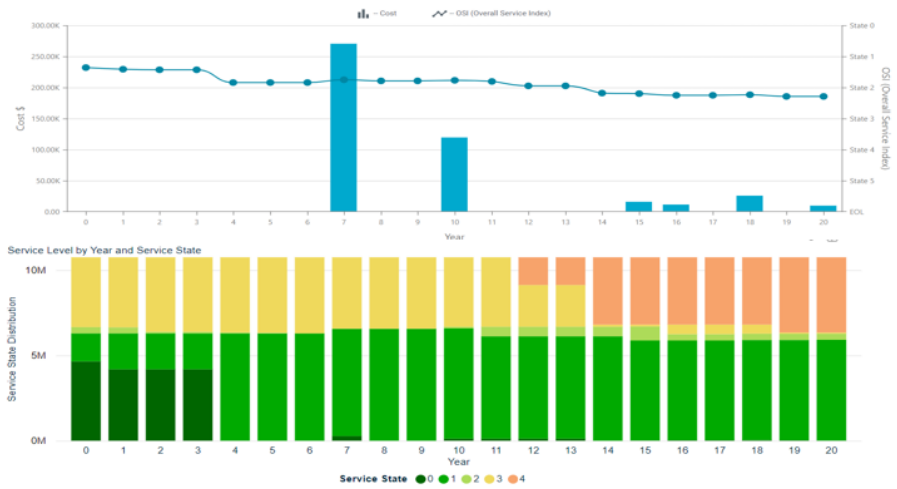




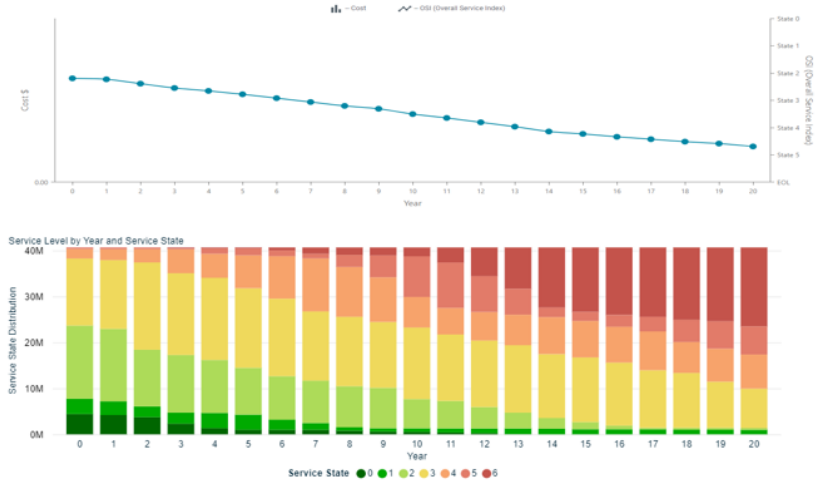
- The LTFP budget is generally sufficient to maintain current service levels
- The recommended strategy is a more balanced approach than the unconstrained budget
- Overall service state of the network is maintained around condition state 1.7 by the recommended strategy
- Small quantity of assets fall in condition 4 (<5%) and minimal assets fall into condition 5 (<0%). The long-term projection is less than 5% of assets falling into condition 4.
- Considered acceptable from a risk management perspective noting that isolated service deficiencies can be managed through maintenance programs.
- Conclusion – recommended this strategy is adopted

Water Features – Predictive Scenario Modelling

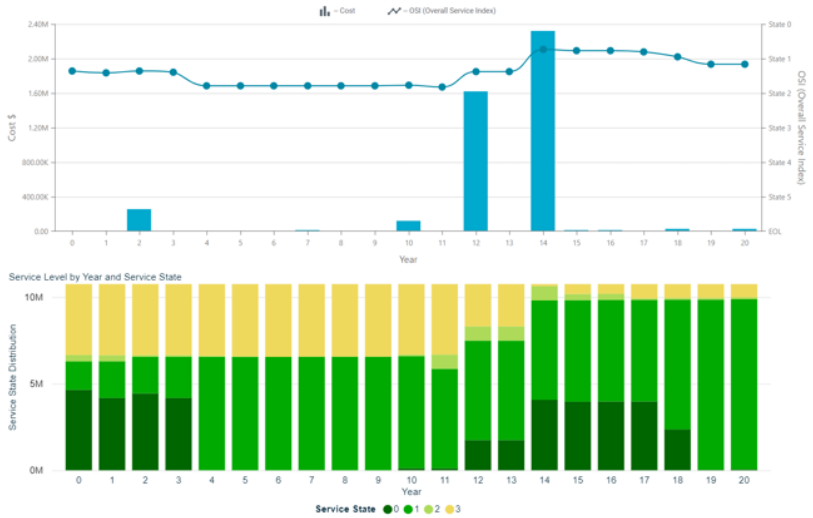
LTFP Budget



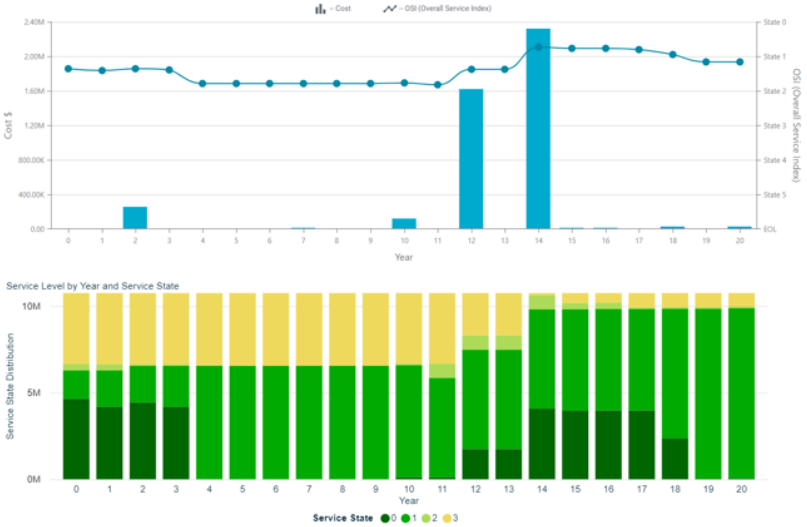
Zero Budget



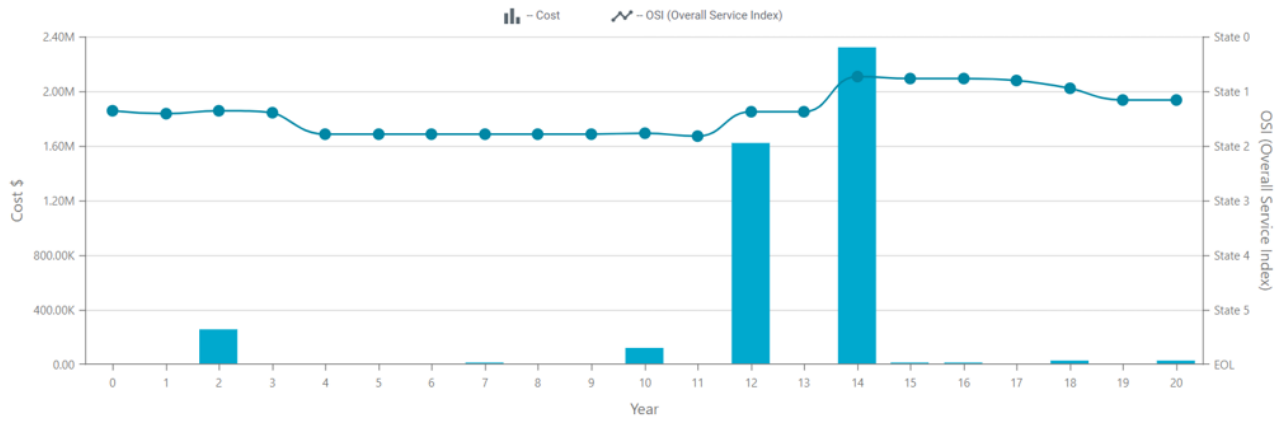
Unconstrained Budget

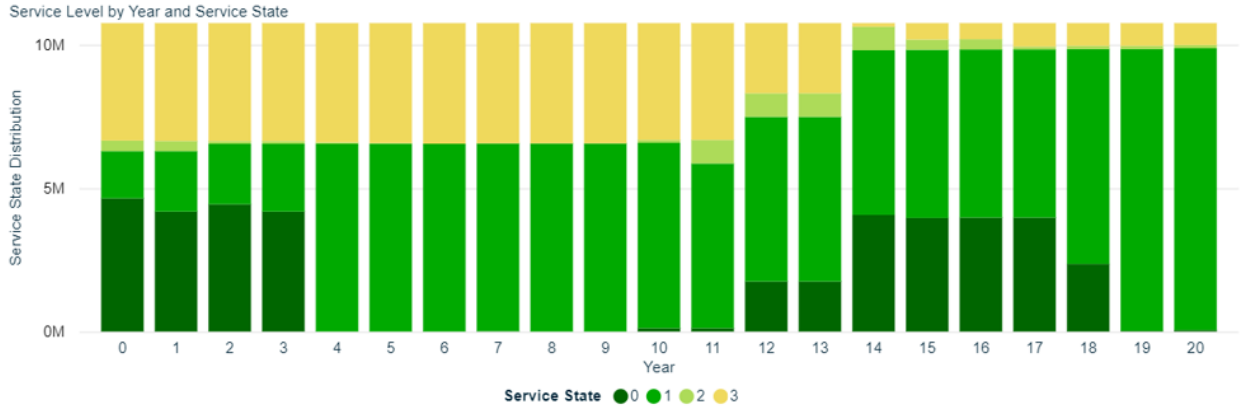


Recommended Strategy & Budget



Water Features – Recommended Strategy





- The LTFP budget would see asset condition slowly deteriorate over the 20-year projection
- The recommended strategy is a more balanced approach whilst addressing the shortfalls of the LTFP budget.
- Overall service state of the network is maintained around condition state 1.2 by the recommended strategy
- Water features are generally long life assets, with the recommended strategy no water feature will deteriorate to condition 4 within the planned 20 years
- Considered acceptable from a risk management perspective noting that isolated service deficiencies can be managed through maintenance programs.
- Conclusion – recommended this strategy is adopted

Appendix G Data Confidence Assessment for Data Used in Asset Management Plan

The estimated confidence level for and reliability of data used in this Asset Management Plan is shown in the tables below.

Table G1: Data Confidence Assessment for Data used in Asset Management Plan (Playgrounds)

Data	Confidence Assessment	Comment
Demand drivers	High	Based off corporate planning documents and strategies
Growth projections	High	Based off State government projections and industry research and analysis
Acquisition forecast	Low	Not accommodated within this Asset Management Plan
Operation forecast	Medium	Based off known requirements and known costs for condition audits
Maintenance forecast	Low	Maintenance requirements are not forecasted, currently just aligned to existing budget allocations
Asset values	High	Asset valuations have been inflated for 24/25 period
Asset useful lives	High	In line with industry standards with regular review
Condition modelling & Treatment Cost	High	Playground condition audit was undertaken annually and has been validated by internal staff to be of reliable quality. Predictive modelling was undertaken with Brightly's Predictor software package to estimate remaining useful life of assets
Disposal forecast	Low	Not accommodated within this Asset Management Plan

Table G2: Data Confidence Assessment for Data used in Asset Management Plan (Sportsfields)

Data	Confidence Assessment	Comment
Demand drivers	High	Based off corporate planning documents and strategies
Growth projections	High	Based off State government projections and industry research and analysis
Acquisition forecast	Low	Not accommodated within this Asset Management Plan
Operation forecast	Medium	Based off known requirements and known costs for condition audits
Maintenance forecast	Low	Maintenance requirements are not forecasted, currently just aligned to existing budget allocations
Asset values	High	Asset valuations have been inflated for 24/25 period
Asset useful lives	High	In line with industry standards with regular review
Condition modelling & Treatment Cost	High	Sportsfields condition audit was undertaken in 2023 and has been validated by internal staff to be of reliable quality. Predictive modelling was undertaken with Brightly's Predictor software package to estimate remaining useful life of assets
Disposal forecast	Low	Not accommodated within this Asset Management Plan

Table G3: Data Confidence Assessment for Data used in Asset Management Plan (Green Infrastructure)

Data	Confidence Assessment	Comment
Demand drivers	High	Based off corporate planning documents and strategies
Growth projections	High	Based off State government projections and industry research and analysis
Acquisition forecast	Low	Not accommodated within this Asset Management Plan
Operation forecast	Medium	Based off known requirements and known costs for condition audits
Maintenance forecast	Low	Maintenance requirements are not forecasted, currently just aligned to existing budget allocations
Asset values	High	Asset valuations have been inflated for 24/25 period
Asset useful lives	High	In line with industry standards with regular review
Condition modelling	Medium	Irrigation high level condition audit was undertaken in 2022 and has been validated by internal staff to be of relatively reliable quality. Predictive modelling was undertaken for irrigation assets with Brightly's Predictor software package to estimate remaining useful life of assets. Other green assets e.g. trees, streetscape, garden bed and etc has not been included in the condition modelling process.
Disposal forecast	Low	Not accommodated within this Asset Management Plan

Table G4: Data Confidence Assessment for Data used in Asset Management Plan (Water Features)

Data	Confidence Assessment	Comment
Demand drivers	High	Based off corporate planning documents and strategies
Growth projections	High	Based off State government projections and industry research and analysis
Acquisition forecast	Low	Not accommodated within this Asset Management Plan
Operation forecast	Medium	Based off known requirements and known costs for condition audits
Maintenance forecast	Low	Maintenance requirements are not forecasted, currently just aligned to existing budget allocations
Asset values	High	Asset valuations have been inflated for 24/25 period
Asset useful lives	High	In line with industry standards with regular review
Condition modelling	High	Water features condition audit was undertaken in 2023 and has been validated by internal staff to be of reliable quality. Predictive modelling was undertaken with Brightly's Predictor software package to estimate remaining useful life of assets
Disposal forecast	Low	Not accommodated within this Asset Management Plan

Asset Management Plan - Water Infrastructure - Approval for Consultation

Tuesday, 19 March 2024

Infrastructure and Public Works Committee

Strategic Alignment - Our Environment

Program Contact:
Mark Goudge, Associate Director Infrastructure

Public

Approving Officer:
Tom McCready, Director City Services

EXECUTIVE SUMMARY

Asset Management is a key business function undertaken by Councils to ensure their infrastructure portfolio is managed responsibly and effectively. Under the *Local Government Act 1999 (SA)*, Councils are legislatively required to establish a suite of Strategic Management Plans, which guide future planning, asset management and financial sustainability. Included in this suite are six Asset Management Plans (AM Plans), which are currently in the process of being reviewed and updated. Each AM Plan will require Council adoption prior to 30 June 2024 to enable review by the Essential Services Commission of South Australia (ESCOSA).

The draft Water Infrastructure AM Plan has been informed by a community engagement process to understand current levels of community satisfaction and has been developed consistently with the Recommended Levels of Service report approved by Council in November 2023. The AM Plan has been prepared on the basis of documenting the asset management activities and funding requirements (operations, maintenance and renewal) recommended for inclusion into the Long-Term Financial Plan (LTFP) to achieve our asset performance targets (levels of service).

Work is currently underway to significantly improve the spatial data, asset condition information and asset attribute information utilised within this Water Infrastructure Asset Management Plan. These activities align with good asset management practices and will provide more granular information to enable robust analysis to inform future decision making. The outcome of this work, which is anticipated to be complete by June 2025, will enable a more mature Water Infrastructure Asset Management Plan with a higher degree of confidence for the future requirements of the asset class. Therefore, due to the current maturity level of the asset data, this Water Infrastructure Asset Management Plan will be considered an interim document, which will be updated following the completion of the spatial data improvements, condition audit, and subsequent modelling and analysis.

The draft AM Plan's renewal strategy aims to minimise the number of assets that deteriorate into a poor condition and prohibit assets reaching a very poor condition. In addition to condition-based renewal interventions, this asset management plan also forecasts service /capacity-based renewal interventions to address known performance deficiencies (i.e. where pipe sizes and side entry pit inlet capacity are not sufficient to manage stormwater runoff) at strategic locations where streetscape upgrades are being undertaken (e.g. Main Street Revitalisation Projects) as well as significant road renewal projects. This ensures we continue to provide services in line with the community's expectations, appropriately manage risk and optimise whole-of-life costs. The forecast renewal costs are approximately $12.60 million on average each year across the ten-year planning period (including a significant $40 million renewal allocation for the Torrens Weir over years 5 and 6). The current LTFP accommodates renewal funding of $9.49 million on average each year (75% of the forecast costs). This means that additional funding of $3.11 million on average each year will need to be considered to deliver the recommendations of the AM Plan.

While this AM Plan does not identify forecast costs associated with new and upgrade projects, ongoing integrated planning will ensure asset renewals are aligned (where practical) with key new and upgrade projects required to deliver our Strategic Plan objectives, identified within the Resource Plan and Business Plan and Budget.

The purpose of this report is to seek Council endorsement to undertake community consultation for a six-week period, ahead of the future adoption of the Water Infrastructure AM Plan scheduled for June 2024. The consultation will include a YourSay engagement page in conjunction with a drop-in session proposed for the City and North Adelaide, with physical and electronic promotion through City of Adelaide (CoA) platforms (e.g. community centres, social media).

RECOMMENDATION

The following recommendation will be presented to Council on 26 March 2024 for consideration

THAT THE INFRASTRUCTURE AND PUBLIC WORKS COMMITTEE RECOMMENDS TO COUNCIL

THAT COUNCIL

1. Notes the draft Water Infrastructure Asset Management Plan as per Attachments A and B to Item 7.6 on the Agenda for the meeting of the Infrastructure and Public Works Committee held on 19 March 2024.
2. Endorses the draft Water Infrastructure Asset Management Plan as per Attachments A and B to Item 7.6 on the Agenda for the meeting of the Infrastructure and Public Works Committee held on 19 March, for the purposes of public consultation.

IMPLICATIONS AND FINANCIALS

City of Adelaide 2024-2028 Strategic Plan	Strategic Alignment – Our Places
Policy	Asset Management Policy Strategic Asset Management Plan Public Communication and Consultation Policy
Consultation	Consultation on the draft Water Infrastructure AM Plan will be open for a six-week period from Tuesday 2 April 2024 to Friday 10 May 2024. The results of the consultation feedback and analysis will be reported to Council in June 2024.
Resource	Consultation will be conducted using existing resources. There are no additional resources required as a result of this report.
Risk / Legal / Legislative	The review and update of Asset Management Plans, including levels of service, is required every four years or within two years of a general Council election pursuant to Section 122 of the *Local Government Act 1999 (SA)*.
Opportunities	Not as a result of this report
23/24 Budget Allocation	Not as a result of this report
Proposed 24/25 Budget Allocation	2024/25 budgets will be set by Council through the Annual Business Plan and Budget process (noting Asset Renewal Funding Ratio targets of between 90-110%). Asset renewal is generally funded through operational revenue, which includes rates, commercial revenue and grant allocations.
Life of Project, Service, Initiative or (Expectancy of) Asset	Not as a result of this report
23/24 Budget Reconsideration (if applicable)	Not as a result of this report
Ongoing Costs (eg maintenance cost)	As documented within AM Plan (no change)
Other Funding Sources	External funding opportunities will continually be pursued to offset costs, bring forward works, or provide for additional enhancements.

DISCUSSION

1. The purpose of this report is to present the draft Water Infrastructure AM Plan and seek Council endorsement to release the summary and comprehensive versions of the Plan (as presented in **Attachments A and B**) to community consultation for a six-week period, ahead of the future adoption of the Water Infrastructure AM Plan currently scheduled for June 2024.

Background

2. Under the *Local Government Act 1999 (SA)*, we are required to develop AM Plans for a period of at least 10 years, which includes information about the operation, maintenance, renewal, acquisition, expansion, upgrade and disposal for each infrastructure asset class under our care and control.

3. The City of Adelaide has six AM Plans, which include Transportation, Park Lands & Open Space, Buildings, Water Infrastructure, Public Lighting & Electrical Infrastructure and Urban Elements.

4. The City of Adelaide's Water Infrastructure portfolio is valued at approximately $282.1 million and provides critical services which protect the community from heavy rainfall and flood events, conserve the ecological health of our waterways and provide recreational facilities and natural amenity within our Park Lands. These assets include the underground stormwater drainage network, stormwater management devices (e.g. detention basins, gross pollutant traps), Karrawirra Pari/River Torrens (including Weirs and retaining structures), Park Lands watercourses, potable and non-potable water distribution systems and sewer infrastructure.

5. The Water Infrastructure AM Plan has been developed with alignment to the City of Adelaide Strategic Plan 2024-2028

6. The Water Infrastructure AM Plan has been informed by a community engagement process to understand current levels of community satisfaction and has been developed consistently with the Recommended Levels of Service report approved by Council in November 2023.

7. AM Plans are technical documents, which are prepared in accordance with industry standard templates developed by the Institute of Public Works and Engineering Australasia (IPWEA) to ensure alignment with best practice and ISO 55000.

8. Due to the length of the Water Infrastructure AM Plan, a concise standalone summary document has also been prepared (Water Infrastructure Asset Management Plan Summary) to improve community engagement and understanding.

9. Work is currently underway to significantly improve the spatial data, asset condition information and asset attribute information utilised within Water Infrastructure Asset Management Plan. These activities align with good asset management practices and will provide more granular information to enable robust analysis to inform future decision making. The outcome of this work, which is due for completion by June 2025, will enable a more mature Water Infrastructure Asset Management Plan with a higher degree of confidence for the future requirements of the asset class.

10. Therefore, due to the current maturity level of the asset data, this Water Infrastructure Asset Management Plan will be considered an interim document, which will be updated following the completion of the spatial data improvements, condition audit, and subsequent modelling and analysis.

Lifecycle Management Summary

11. The Water Infrastructure AM Plan defines the current state / condition of our $282.1 million asset portfolio, as well as the asset management activities and associated funding requirements recommended for inclusion into the LTFP to achieve our asset performance targets (levels of service).

12. This AM Plan's renewal strategy aims to minimise the number of assets that deteriorate into a poor condition and prohibit assets reaching a very poor condition. In addition to condition-based renewal interventions, this asset management plan also forecasts service /capacity-based renewal interventions to address known performance deficiencies (i.e. where pipe sizes and side entry pit inlet capacity are not sufficient to manage stormwater runoff) at strategic locations where streetscape upgrades are being undertaken (e.g. Main Street Revitalisation Projects) as well as significant road renewal projects. Renewal forecasts within the Water Infrastructure AM Plan are presented in 2024/25 dollars.

13. Asset renewal requirements have been forecast for years 1-4 utilising replacement cost and remaining useful life estimates identified through a combination of condition audits and engineering recommendations for both condition-based interventions and service-based interventions. For years 5-20, the AM Plan forecasts the renewal of the Torrens Weir (years 5 and 6), as well as provides a forecast average renewal funding provision of $6 million/year based on the condition of assets, and a forecast funding provision for capacity-based renewals for anticipated future stormwater works required to be delivered in conjunction with streetscape upgrades of $4 million/year.

14. This AM Plan recognises that the Torrens Weir is approaching the end of its useful life. A lifecycle study is currently underway that includes an options analysis that will guide the future management strategy of the asset and refine costings and timing of a preferred rehabilitation or replacement option. The Improvement Plan has explicitly referenced actions to refine the scope/costs/timing of works through the options analysis as well as investigate external funding opportunities.

15. This AM Plan does not identify forecast costs associated with new and upgrade projects, however ongoing integrated planning will ensure asset renewals are aligned (where practical) with key new and upgrade projects required to deliver our Strategic Plan objectives, identified within the Resource Plan and Business Plan and Budget.

16. This AM Plan does not identify financial forecasts associated with asset disposal, however where recommended, significant assets will be identified for decommissioning and disposal through Council Reports, to then be considered within the LTFP and Business Plan and Budget

17. This AM Plan does not propose any forecast increases for operational and maintenance activities. Following the completion of this Asset Management Plan, operations and maintenance standards will be reviewed for Water Infrastructure assets, to formalise intervention levels and response times for general maintenance and establish an acceptable balance between cost, risk, and customer expectations. The associated financial impacts will need to be further considered in future revisions of this Asset Management Plan and the Long-Term Financial Plan.

18. Current operations and maintenance budgets accommodate maintenance inspections for critical assets and which inform legislative maintenance and general maintenance programs. Currently, not all general maintenance activities can be accommodated within existing budget allocations, resulting in works being prioritised with respect to budget provisions within the Long-Term Financial Plan and Annual Business Plan and Budget. Where there are any critical maintenance requirements that cannot be accommodated within existing budgets, these are assessed through regular budget reviews to ensure resources are appropriately re-allocated.

Financial Summary and Implications

19. The development of the draft Water Infrastructure AM Plan has identified additional funding requirements, when compared against the adopted LTFP to enable the optimal renewal of our assets and continue providing current levels of service, which aim to provide services in line with community expectations, whilst optimising whole-of-life costs and appropriately managing asset risk.

20. The draft Water Infrastructure AM Plan forecasts renewal costs of approximately $12.60 million (un-escalated) on average each year across the ten-year planning period, which sets the base for measuring the ARFR. That is, if $12.60 million is fully expended, this would reflect an Asset Renewal Funding Ratio (ARFR) of 100%.

21. Currently, the renewal funding allocation for Water Infrastructure within the LTFP is $9.49 million (un-escalated) on average each year, which represents 75% of the funding required to deliver the recommended asset renewals outlined in the draft AM Plan.

22. It is important to recognise that the renewal/rehabilitation of Torrens Weir is a generational project. If the asset did not fall due for renewal within the 10-year planning period of this AM Plan, the resultant renewal forecast would reduce to approximately $8.59 million (un-escalated) on average each year across the ten-year planning period.

23. Contributing factors for the gap between the forecast renewal costs and current budgets within the LTFP include:

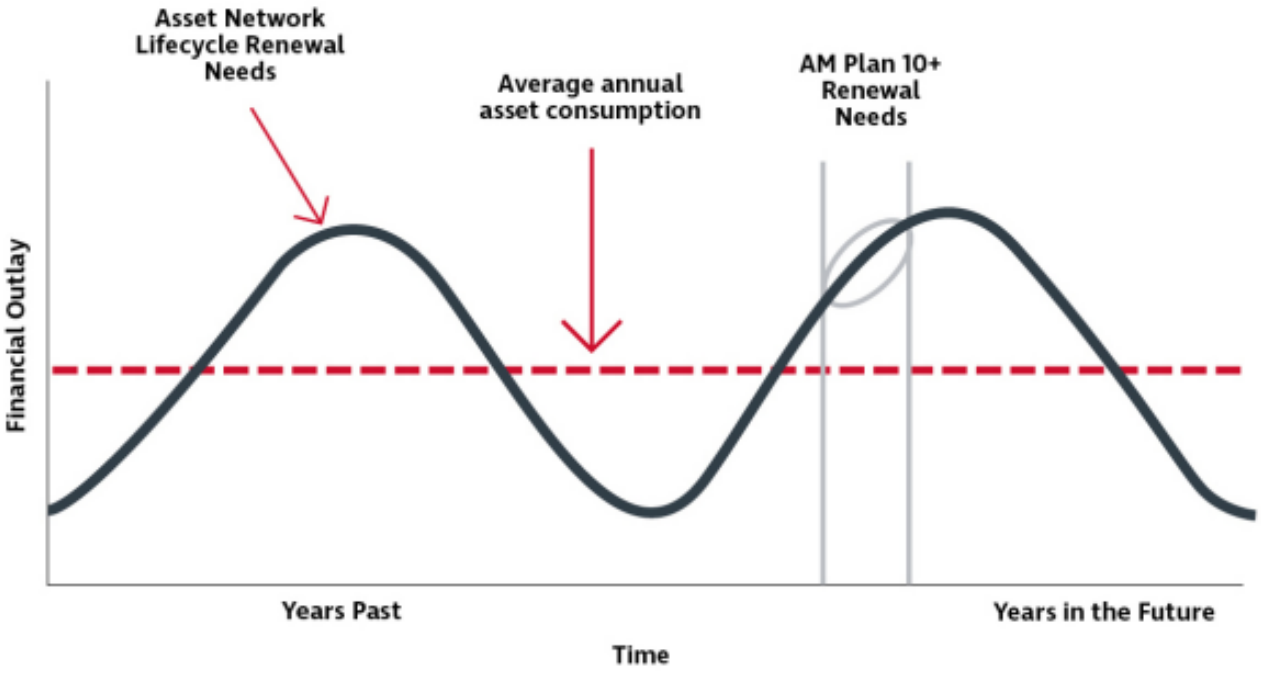
    23.1. Not achieving our ARFR targets over the past 4 financial years as a result of COVID-19 resourcing impacts and project delays associated with post-pandemic market saturation.

    23.2. Comprehensively reviewing our stormwater management planning principles, to appropriately recognise service-based renewal interventions aligned with key streetscape upgrade projects, with a requirement for increased pipe sizes and catchpit arrangements

    23.3. Undertaking a comprehensive review of existing funding allocations and appropriately re-forecasting asset renewal requirements within this Asset Management Plan (noting the last comprehensive update was undertaken in 2015, with a desktop update made to financial forecasts and LTFP in 2021).

    23.4. Ensuring we accurately recognise asset replacement costs, utilising current construction costs and unit rates that take into consideration increasing costs associated with inflation and industry escalations. (We have experienced significant increases in project unit rates, noting that the Local Government Association (LGA) have indicated that costs and materials have increased up to 25% post pandemic).

24. It is important to understand that infrastructure networks are comprised of assets with varying age profiles and different useful lives and replacement costs. This results in AM Plans often identifying the need to replace more assets in some periods when compared with others and means that it is very unlikely that asset renewal needs will be consistent over time. The figure below highlights a typical scenario of varying asset renewal expenditure requirements over the asset lifecycle.



25. The financial strategy associated with funding the AM Plans is proposed to be consistent with the 2023/24 to 2032/33 LTFP, ensuring we continue to deliver upon our current suite of services and asset maintenance requirements, where asset renewals are prioritised based on audit condition and risk.

26. Funding requirements will need to be considered in the development of the 2024/25 Business Plan and Budget. Council will need to consider financial levers available in order to ensure sufficient funding of both operational and renewal funding requirements.

Improvement Plan

27. Through the development of this AM Plan, a number of improvement actions and next steps have been identified to promote continuous improvement and improved overall asset management maturity. These are identified in Section 9 of the Water Infrastructure Asset Management Plan Summary (**Attachment A**).

Community Consultation

28. In accordance with section 122(6) of the *Local Government Act 1999 (SA)*, Council will follow the relevant steps in our public consultation policy to facilitate community feedback on the draft Water Infrastructure AM Plan.

29. The consultation process will seek feedback from the community including our residents, ratepayers, businesses, and other key stakeholders.

30. Consultation will open on Tuesday 2 April 2024 and close on Friday 10 May 2024 (6-week duration in line with our Public Consultation Policy, noting the minimum legislative requirement is 21 days).

31. Notification of public consultation will be provided through the following avenues:

    31.1. A Public Notice in the Government Gazette and an advertisement in The Advertiser.

    31.2. Information published on the City of Adelaide website.

    31.3. Promotional advertisements on all Customer Service points including the Digital screens that Council operates, our Libraries and Community Centres

31.4. Social Media campaign via City of Adelaide social media channels.

32. ‘Your Say Adelaide’ - the community will be encouraged to engage and make written submissions on the draft Public Lighting and Electrical Infrastructure AM Plan through City of Adelaide’s website, linking to detailed information on the ‘Your Say Adelaide’ platform.

33. Two drop-in sessions will also be scheduled at community centre locations in the City and North Adelaide.

34. Submissions and feedback will also be able to be sent in writing or through e-mail.

35. Hard copy submission forms will be available inside Consultation Packs from the City of Adelaide’s Customer Service Centre, libraries and community centres.

36. The community will have the opportunity to have their questions answered by City of Adelaide project staff over the phone or by booking an appointment to chat to staff in person.

Next Steps

37. Subject to Council endorsement, the draft Water Infrastructure AM Plan will be released for public consultation, with community engagement scheduled to occur from Tuesday 2 April 2024 to Friday 10 May 2024.

38. Following the six-week public consultation period, engagement feedback will be reviewed and findings will be presented to Council in conjunction with the finalised Water Infrastructure AM Plan in June 2024 for adoption.

39. Following Council adoption of the Water Infrastructure AM Plan, the LTFP will be updated.

40. Adoption of renewal budgets will be considered by Council on an annual basis through the Business Plan and Budget process.

ATTACHMENTS

Attachment A - Draft Water Infrastructure Asset Management Plan Summary

Attachment B - Draft Water Infrastructure Asset Management Plan (Comprehensive)

- END OF REPORT -

Water Infrastructure Draft Asset Management Plan

Summary

CITY OF ADELAIDE

Contents

1	PURPOSE OF THE PLAN	4
2	OUR WATER INFRASTRUCTURE ASSETS	5
3	COMMUNITY ENGAGEMENT & CUSTOMER SATISFACTION	6
4	CURRENT AND FUTURE DEMANDS	7
5	STRATEGIC PLANNING	8
6	LIFECYCLE MANAGEMENT	10
7	FINANCIAL SUMMARY	12
8	POTENTIAL SERVICE AND RISK IMPACTS	14
9	MONITORING AND IMPROVEMENT PROGRAM	15

EXECUTIVE SUMMARY

1 The Purpose of the Plan

The City of Adelaide is responsible for an extensive and diverse asset portfolio valued at more than $2 billion, which represents a significant investment made over multiple generations. These assets play a vital role in providing essential services to our community and it is critical to ensure these assets continue to be effectively managed to enable ongoing service provision and benefits for both current and future generations.

Under South Australia's *Local Government Act 1999*, we are required to develop Asset Management Plans for a period of at least 10 years, which includes information about the operation, maintenance, renewal, acquisition, expansion, upgrade and disposal for each infrastructure assets class under our care and control.

The City of Adelaide has six Asset Management Plans, which includes Water Infrastructure, Transportation, Park Lands & Open Space, Buildings, Public Lighting and Electrical and Urban Elements. The fundamental purpose of this Water Infrastructure Asset Management Plan is to outline the Council's high-level asset management priorities for the operation, maintenance and renewal of our assets over the next 10 years. Additionally, it aims to improve the long-term strategic management of our Water Infrastructure assets, to cater for the community's required levels of service both now and into the future.

Work is currently underway to significantly improve the spatial data, asset condition information and asset attribute information utilised within this Water Infrastructure Asset Management Plan. These activities align with good asset management practices and will provide more granular information to enable robust analysis to inform future decision making. The outcome of this work, which is due for completion by June 2025, will enable a more mature Water Asset Management Plan with a higher degree of confidence for the future requirements of the asset class.

Therefore, due to the current maturity level of the asset data, this Water Infrastructure Asset Management Plan will be considered an interim document, which will be updated following the completion of the condition audit, and subsequent modelling and analysis.

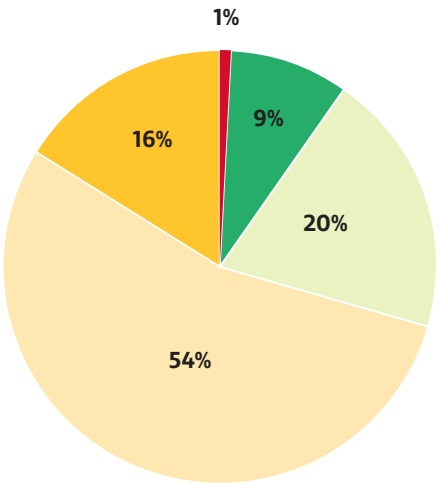
This interim plan defines the current state of our $282.1 million Water Infrastructure asset portfolio, as well as the asset management activities and associated funding requirements recommended for inclusion into the Long-Term Financial Plan and to achieve our asset performance targets.

2 Our Water Infrastructure Assets

The City of Adelaide's Water Infrastructure portfolio is valued at approximately $282.1 million and provides critical services which protect the community from heavy rainfall and flood events, conserve the ecological health of our waterways and provide recreational facilities and natural amenity within our Park Lands. These assets include the underground stormwater drainage network, stormwater management devices (e.g. detention basins, gross pollutant traps), Karrawirra Pari/River Torrens, Park Lands watercourses, potable and non-potable water distribution systems and sewer infrastructure.

A small proportion of our Water Infrastructure assets have shared management responsibilities with other government agencies. These include the Karrawirra Pari/River Torrens as well as specific Brown Hill Keswick Creek stormwater management devices located within Pakapakanthi/Park 16 and Kurangga/Park 20. The Torrens Lake, upstream of the Torrens Weir extending to Albert Bridge, is the sole responsibility of the City of Adelaide, with the remaining sections of the River outside of this area having shared management responsibilities. Stormwater infrastructure located within our Park Lands associated with the Brown Hill Keswick Creek catchment falls under the responsibility of the Brown Hill Keswick Creek Board, where financial contributions are made annually by subsidiaries in accordance with a funding deed.

To monitor the performance of our Water Infrastructure assets, we undertake condition audits at regular intervals. Asset condition information is analysed with respect to technical intervention criteria to inform our maintenance and renewal programs. The condition of our Water Infrastructure is generally rated in a fair condition, with an overall condition index rating of 2.8. 83% of assets are estimated to be in a very good to fair condition and 17% of assets are estimated to be in a poor or very poor condition, which form the general basis of our future renewal program priorities.



Condition Grading	Description of Condition
1	**Very Good:** free of defects, only planned and/or routine maintenance required
2	**Good:** minor defects, increasing maintenance required plus planned maintenance
3	**Fair:** defects requiring regular and/or significant maintenance to reinstate service
4	**Poor:** significant defects, higher order cost intervention likely
5	**Very Poor:** physically unsound and/or beyond rehabilitation, immediate action required

The Torrens Weir is an aging asset, originally constructed in 1881 with sluice gates added in 1929. Majority of its components are rated in a fair to poor condition and engineering inspections and recommendations have identified the need to undertake an options analysis (currently underway) to guide the future management of the asset as it approaches the end of its useful life.

It is important to note that the condition data for the underground stormwater network is considered to be of low reliability. Network wide condition data is not available and age data has been utilised to forecast the estimated condition rating where no condition data is available. A comprehensive network wide condition audit is currently underway for the underground stormwater network, which will provide improved asset data for renewal modelling and analysis for the next revision of this Asset Management Plan.

3 Community Engagement and Customer Satisfaction

In November 2021, we undertook an engagement process with city residents and visitors to better understand and measure levels of customer satisfaction for the services provided by our Water Infrastructure assets. A summary of the responses is shown below.

Category	Average Score	Very Poor (<40%)	Poor (40-54%)	Average (55-69%)	Good (70-84%)	Excellent (>85%)
Underground Stormwater Drainage Network	93%					●
Karrawirra Pari/River Torrens and Park Lands watercourses	85%				●	

The overall feedback confirmed appropriate levels of customer satisfaction for the maintenance and renewal of our Water Infrastructure assets.

A Recommended Levels of Service Report was presented to Council, with the recommendations approved in November 2023. This report noted the community consultation undertaken and the associated benchmarking of current user satisfaction. Additionally, Council also approved the development of the Water Infrastructure Asset Management Plan based on the planning principles and recommended management strategies presented within the report and its attachments.

4 Current and Future Demands

It is anticipated that City of Adelaide will be subject to considerable change over the next ten years. This will result in our Water Infrastructure being subject to new demands that have the potential to impact future service delivery and the requirements of our existing assets.

Key demand drivers and future challenges will include:

- City growth
- Changing demographic
- Tourism & event growth
- Climate change and carbon neutrality
- Emerging technology
- Legislation & regulation

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets, providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, such as educating the community around alternative options, which facilitates service provision without the need to invest in new or upgraded infrastructure.

Demand management will include:

- Continuing to engage with our community through annual City User Profile surveys
- Developing a Stormwater Management Plan (SMP) to understand the existing performance of the stormwater drainage network and to provide solutions to mitigate flood risk and improve water quality
- Completion of the Adelaide Park Lands Strategic Water Resources Study to identify key initiatives to enable sustainable water resource planning for current and future demands
- Completion of the Water Sensitive Urban Design (WSUD) Priority Investment Study to identify key upgrade projects that will improve the quality of stormwater runoff
- Delivering priority upgrade/new projects identified within the Strategic Plan and Strategic Documents
- Ensuring stormwater assets are renewed to accommodate current and forecasted future storm events
- Ensuring climate risk mitigation and adaptation is a key focus for strategic planning, asset management and project delivery
- Continuing to review and update design standards and technical specifications to ensure our assets transition towards having a lower carbon footprint with improved circular economy outcomes through increased usage of recycled materials
- Continuing to partner with industry, to monitor and evaluate new and emerging technologies, with trials of new materials, approaches, and methodologies
- Continuing to monitor changes to legislation and ensure appropriate adaptation into asset management practices

5 Strategic Planning

Under the *Local Government Act (SA) 1999*, we are legislatively required to establish a suite of Strategic Management Plans, which guide Council's future planning, asset management and financial sustainability. An overview of these strategic management plans are shown below:

Strategic Plan ***Community***	Long term with a four year delivery focus. *Planning for the vision and aspirations of the Adelaide Capital City.*
Long-Term Financial Plan ***Financial***	Ten year Plan, revised annually to ensure a ten year view is maintained. *Planning for the long-term financial sustainability of the City of Adelaide.*
Asset Management Plans ***Infrastructure***	Suite of ten year Plans. *Planning for the sustainable renewal and maintenance of Council assets.*
City Plan ***Development / Built Form***	Ten year Spatial Plan. *Planning for the future land uses and built form of the Adelaide Capital City.*

Through the City of Adelaide Strategic Plan 2024 – 2028, Council's vision is:

Our Adelaide. Bold. Aspirational. Innovative.

Achieving our vision for the future will be guided by our long term aspirations:

Our Community: Vibrant, connected and inclusive
Our Environment: Resilient, protected and sustainable
Our Economy: Growing, innovative and responsive
Our Places: Interesting, purposeful and safe
Our Corporation: High performing, customer-centric and bold

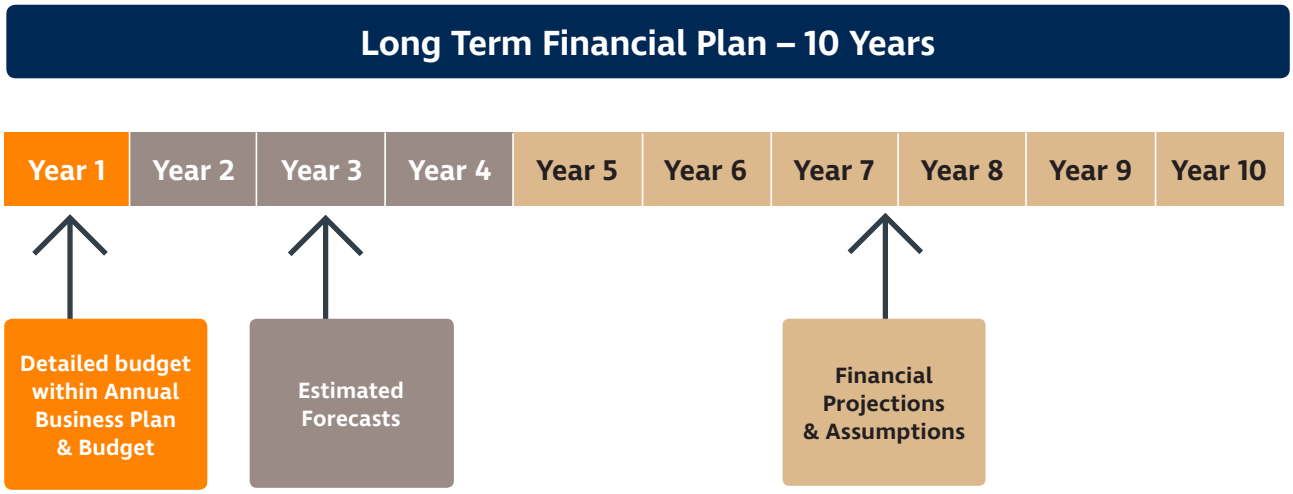
As Adelaide grows, we will need to consider economic vitality, social connectivity and wellbeing, distinctive precincts, environmental and financial sustainability, asset management and service delivery. To ensure we maintain our liveability and to support growth, these principles will underpin everything we do:

- Exceptional Amenity – Be bold and courageous in our pursuit of excellence for our city
- Quality Housing – Strive for liveability and affordability to attract and retain residents
- Community Connection – Strengthen connection, accessibility, diversity and inclusivity by putting people first
- Unique Experiences – Create interesting experiences for our residents, workers and visitors
- Climate Resilience – Embed climate resilience in all that we do
- Economic Growth – Encourage innovation, investment and development in current and emerging sectors
- Budget Repair – Provide quality services and ensure long-term financial sustainability

The Strategic Plan is supported by a suite of long and short-term strategies and action plans as well as a Resource Plan. The Resource Plan provides a four-year view of new and upgrade projects, resources, and budget requirements to deliver our Strategic Plan aspirations and objectives.

Integrated Delivery Planning ensures that prudent and efficient decisions are made, with line-of-sight between Council's Strategic Plan objectives and the major infrastructure projects we deliver. While this Asset Management Plan does not identify financial forecasts associated with new and upgrade projects, it does ensure required asset renewals are aligned (where practical) with key new and upgrade projects specified within the Resource Plan.

Each year our annual business plan and budget formalises funding allocations to continue providing services and progress new projects. It enables existing projects to move from one delivery stage to the next (e.g. progress concept design to detailed design and detailed design to construction) as well as consider emerging risks and opportunities that may result from Council decisions, community requests or other external factors.



6 Lifecycle Management

In order to effectively manage our assets, it is important to understand the relationship between all stages of the asset lifecycle. Effective asset management and sustainable financial planning requires a balance between the maintenance, renewal and disposal of existing assets and the delivery of new and upgraded assets.

Our goal is to provide assets that service the needs of the community, providing the agreed levels of service at the lowest lifecycle cost. To enable this, it is important to understand:

- How our assets are performing
- How our assets should be operated and maintained
- When our assets should be renewed
- When we should consider upgrading existing assets or constructing new assets
- How funding for new and upgraded assets is prioritised
- When we should consider disposing underperforming or underutilised assets

This Asset Management Plan's renewal strategy aims to minimise the number of assets that deteriorate into a poor condition and prohibit assets reaching a very poor condition. This strategy ensures we can continue to provide services in line with the community's expectations, appropriately manage risk and optimise whole-of-life costs. Renewal requirements have been identified through a combination of workshops with key infrastructure and maintenance staff and available condition audit information.

In addition to condition based renewal interventions, this asset management plan also forecasts service/capacity based renewal interventions to address known performance deficiencies (i.e. where pipe sizes and side entry pit inlet capacity is not sufficient to manage stormwater runoff) at strategic locations where streetscape upgrades are being undertaken (eg. Main Street Revitalisation Projects) as well as significant road renewal projects.

While we have proactive maintenance programs associated with legislative requirements for water quality testing, general operational and maintenance activities are typically evaluated and prioritised with respect to budget provisions within the Long-Term Financial Plan and Annual Business Plan and Budget. Following the completion of this Asset Management Plan, we will be reviewing operations and maintenance standards for Water Infrastructure assets, with a view to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. The associated financial impacts will need to be further considered in future revisions of this Asset Management Plan and the Long-Term Financial Plan.

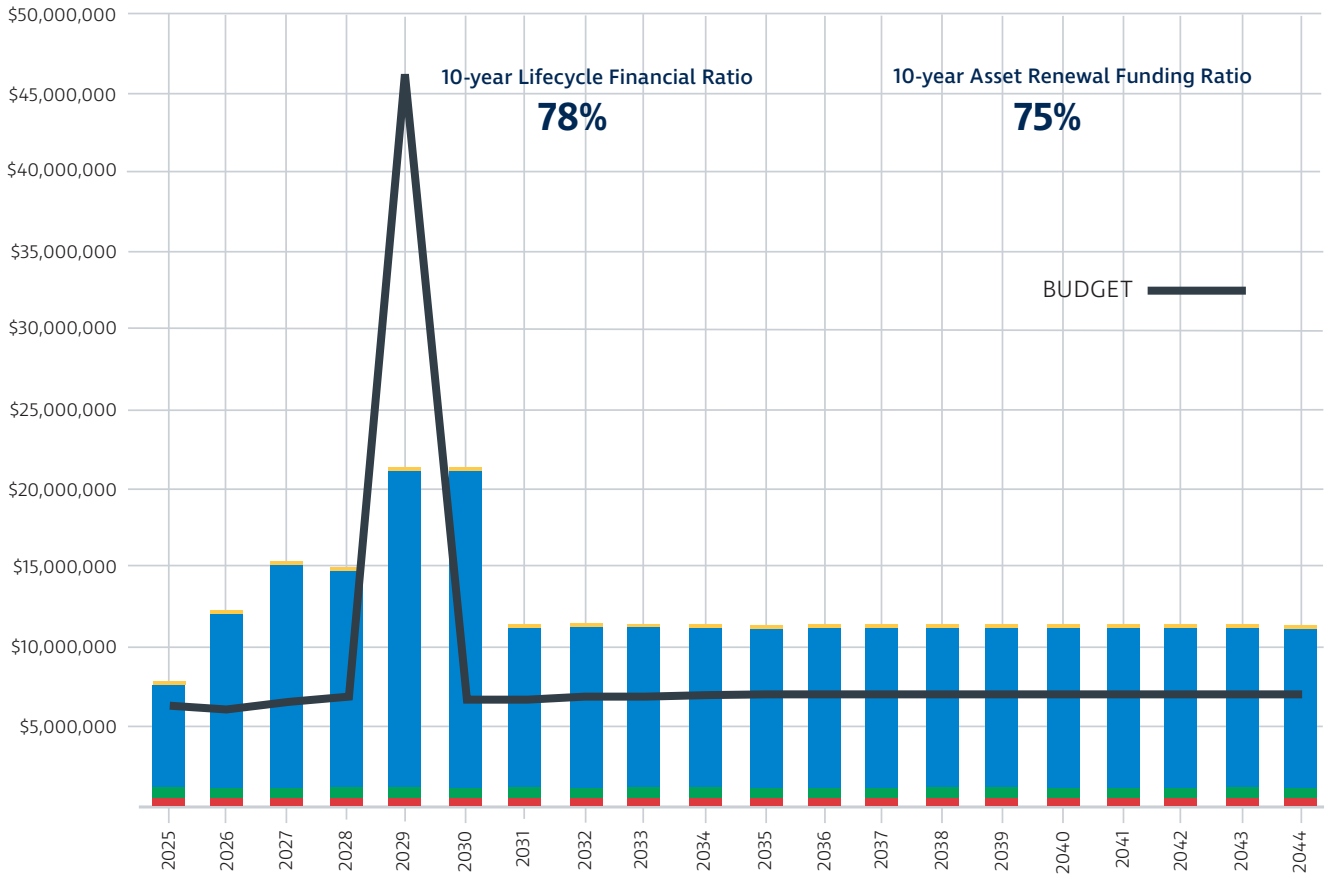
This Asset Management Plan does not identify financial forecasts associated with asset disposal, however where recommended, significant assets will be identified for decommissioning and disposal through Council Reports, to then be considered within the Long-Term Financial Plan and Business Plan and Budget.

7 Financial Summary

This Asset Management Plan defines the asset management activities and associated funding requirements recommended for inclusion into the Long-Term Financial Plan to achieve our asset performance targets. The lifecycle costs necessary to operate, maintain and renew our assets as outlined within this Asset Management Plan is approximately $13.95 million on average each year across the 10-year planning period. The associated 10-year annual average financial forecasts for renewal, maintenance and operation are presented below for Water Infrastructure assets.

Lifecycle Category	10-Year Annual Average Forecast
Renewal	**$12.60 M**
Maintenance	**$0.73 M**
Operation Cost	**$0.62 M**
Lifecycle Cost	**$13.95 M**

Currently, the lifecycle budget allocation within the Long-Term Financial Plan is only $10.84 million on average each year. This leaves a funding shortfall of $3.11 million on average each year and means we currently only have 78% of the costs (Lifecycle Financial Ratio) to deliver the required activities to sustain current levels of service.



LIFECYCLE SUMMARY

Annual Average first 10 years

Lifecycle Forecast	$13,952,439
Planned Budget	$10,842,650
Shortfall	-$3,109,789

MAINTENANCE

Annual Average first 10 years

Planned Budget	$734,502
Lifestyle Forecast	$734,502

OPERATION

Annual Average first 10 years

Planned Budget	$620,937
Lifestyle Forecast	$620,937

RENEWAL

Annual Average first 10 years

Planned Budget	$9,487,211
Lifestyle Forecast	$12,597,000

Noting that this Asset Management Plan has not forecast any additional operational and maintenance requirements, the identified lifecycle funding shortfall is associated with the revised asset renewal forecasting. The Water Infrastructure asset class generally requires additional renewal funding across the 10-year planning period to maintain existing levels of service.

The Asset Renewal Funding Ratio indicates that over the next 10 years our current budgets within the Long-Term Financial Plan account for 75% of the forecast funding required for the optimal renewal of our Water Infrastructure Assets. Contributing factors for the gap between the forecast renewal costs and current budgets within the Long-Term Financial Plan include:

- Not achieving our Asset Renewal Funding Ratio targets over the past 3 years (a result of covid-19 resourcing impacts and project delays associated with market saturation)
- Comprehensively reviewing our stormwater management planning principles, to appropriate recognise service-based renewal interventions aligned with key streetscape upgrade projects, with a requirement for increased pipe sizes and catchpit arrangements
- Ensuring we accurately recognise asset replacement costs, utilising current unit rates that take into consideration increasing costs associated with inflation and industry escalations. (We have experienced significant increases in project unit rates, noting that the Local Government Association (LGA) have indicated that costs and materials have increased up to 25% post pandemic).

Only what is funded in the Long-Term Financial Plan and approved through the Annual Business Plan and Budget can be delivered. Should the Long-Term Financial Plan be unable to accommodate the revised asset renewal forecasts recommended within this Asset Management Plan, there will be associated service and risk impacts.

Continuing to leverage off external funding opportunities will allow us to maintain and enhance the quality of the service we provide, while reducing financial pressures through the efficiencies in an increased revenue. We will continue to work in partnership with both the State and Federal Governments to pursue these opportunities for both renewal and significant new and upgrade projects.

8 Potential Service and Risk Impacts

If the forecast activities outlined within this Asset Management Plan (operations, maintenance, renewal) are unable to be accommodated into the Long-Term Financial Plan, there will be potential service consequences for users. These service consequences include:

- Reduced levels of service for Water Infrastructure
- Reduced customer satisfaction levels associated with the management of our existing assets
- Intergenerational inequity (burdening future generations)

These associated risk consequences include:

- Increased safety and property damage risks from stormwater flooding
- Increased safety risks associated with assets deteriorating beyond recommended intervention levels
- Increased environmental risks and associated reduction in amenity due to insufficient management of the Karrawirra Pari/River Torrens and Park Lands water courses including adjacent assets
- Increased reputational risks associated with services not aligning with community expectations
- Increased financial risks associated with additional maintenance requirements that cannot be accommodated within existing budgets
- Increased financial risks associated with higher renewal and/or rehabilitation treatments as asset renewals are not funded at the optimal point in time
- Increased economic risk associated with reduced business activity, events and tourism
- Intergenerational inequity (passing on costs and risk to future generations)

If the forecast activities outlined within this Asset Management Plan are unable to be accommodated into the Long-Term Financial Plan, we will endeavour to manage these risks within available funding by:

- Continuing to undertake regular asset condition and maintenance inspections
- Prioritising all asset renewal and maintenance activities with respect to available budget
- Revising our levels of service to establish an acceptable balance between cost, level of service and risk
- Developing a communication strategy to manage expectations and educate the community around affordable levels of service
- Continuing to seek out external funding opportunities
- Prioritisation of the delivery of key actions from the Improvement Plan

9 Monitoring and Improvement Program

The next steps resulting from this Asset Management Plan to improve asset management practices are:

	Improvement Plan Actions
1	Comprehensive update of this Asset Management Plan following the completion of spatial data improvements, asset condition audit and asset revaluation.
2	Finalise the Stormwater Management Plan to identify key priority upgrade projects that will improve the city's overall flood resiliency as well as improve water quality for the Karrawirra Pari/River Torrens and Park Lands watercourses.
3	Finalise the Adelaide Park Lands Strategic Water Resources Study to identify key initiatives to enable sustainable water resource planning for current and future demands.
4	Finalise the Water Sensitive Urban Design (WSUD) Priority Investment Study to identify key priority upgrade projects that will improve the quality of stormwater runoff that is discharged into natural water courses.
5	Finalise a 4-year Resource Plan to identify key upgrade/new projects to deliver Council's Strategic Plan objectives. Once key projects are recognised within the Long Term Financial Plan, Asset Management Plans will be updated to ensure associated acquisition costs (upgrade/new) and ongoing operational and maintenance costs are appropriately recognised, in conjunction with any scheduling adjustments required for asset renewal programs.
6	Revise asset renewal forecasts for the Torrens Weir following the completion of the Lifecycle Study and Options Analysis.
7	Continue to work in partnership with both the State and Federal Governments to pursue external funding opportunities for both renewal and significant upgrade/new water infrastructure projects.
8	Review and update operations and maintenance standards, to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. Include changes into future revisions of this Asset Management Plan and Long Term Financial Plan.
9	Continue to undertake regular condition audits and revaluation for all our water infrastructure assets within the nominated 4-year cycles, including regular review of asset useful lives.
10	Continue to review our technical standards for water infrastructure with respect to climate resilience, circular economy, recycled materials, durability and performance, whole-of-life cost, amenity, and heritage requirements.
11	Continue to monitor forecast climate change impacts to ensure we remain resilient through proactively implementing appropriate mitigation and adaptation controls.
12	Improve the capture of carbon emission data for technical standards and project procurement to support lower carbon decision making.
13	Review of corporate performance measure targets for customer satisfaction, to assist with performance gap analysis.
14	Review and standardise asset hierarchies for all asset categories within Water Infrastructure.
15	Review customer service requests codes to better align with Level of Service reporting and operational and maintenance sub-activities.

CITY OF ADELAIDE

Water Infrastructure Draft Asset Management Plan

CITY OF ADELAIDE

Contents

1	EXECUTIVE SUMMARY	4
2	INTRODUCTION	17
3	LEVELS OF SERVICE	24
4	FUTURE DEMAND	37
5	LIFECYCLE MANAGEMENT PLAN	43
6	RISK MANAGEMENT PLANNING	58
7	FINANCIAL SUMMARY	68
8	PLAN IMPROVEMENT AND MONITORING	74
9	REFERENCES	77
10	APPENDICES	78

1.0 EXECUTIVE SUMMARY

1.1 The Purpose of the Plan

The City of Adelaide is responsible for an extensive and diverse asset portfolio valued at more than $2 billion, which represents a significant investment made over multiple generations. These assets play a vital role in providing essential services to our community and it is critical to ensure these assets continue to be effectively managed to enable ongoing service provision and benefits for both current and future generations.

Under South Australia's *Local Government Act 1999*, we are required to develop Asset Management Plans for a period of at least 10 years, which includes information about the operation, maintenance, renewal, acquisition, expansion, upgrade and disposal for each infrastructure assets class under our care and control.

The City of Adelaide has six Asset Management Plans, which includes Water Infrastructure, Transportation, Park Lands & Open Space, Buildings, Public Lighting and Electrical and Urban Elements. The fundamental purpose of this Water Infrastructure Asset Management Plan is to outline the Council's high-level asset management priorities for the operation, maintenance and renewal of our assets over the next 10 years. Additionally, it aims to improve the long-term strategic management of our Water Infrastructure assets, to cater for the community's required levels of service both now and into the future.

Work is currently underway to significantly improve the spatial data, asset condition information and asset attribute information utilised within this Water Infrastructure Asset Management Plan. These activities align with good asset management practices and will provide more granular information to enable robust analysis to inform future decision making. The outcome of this work, which is due for completion by June 2025, will enable a more mature Water Asset Management Plan with a higher degree of confidence for the future requirements of the asset class.

Therefore, due to the current maturity level of the asset data, this Water Infrastructure Asset Management Plan will be considered an interim document, which will be updated following the completion of the condition audit, and subsequent modelling and analysis.

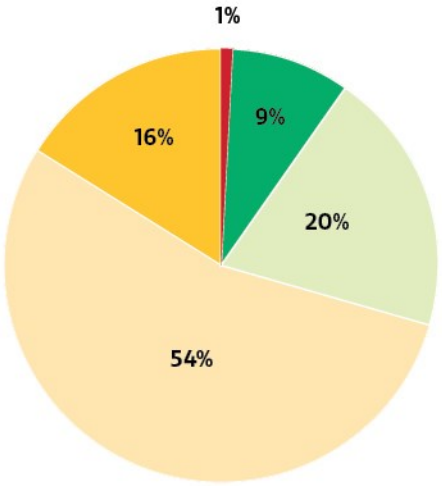
This interim plan defines the current state of our $282.1 million Water Infrastructure asset portfolio, as well as the asset management activities and associated funding requirements recommended for inclusion into the Long-Term Financial Plan and to achieve our asset performance targets.

1.2 Our Water Infrastructure Assets

The City of Adelaide's Water Infrastructure portfolio is valued at approximately $282.1 million and provides critical services which protect the community from heavy rainfall and flood events, conserve the ecological health of our waterways and provide recreational facilities and natural amenity within our Park Lands. These assets include the underground stormwater drainage network, stormwater management devices (e.g. detention basins, gross pollutant traps), Karrawirra Pari/River Torrens, Park Lands watercourses, potable and non-potable water distribution systems and sewer infrastructure.

A small proportion of our Water Infrastructure assets have shared management responsibilities with other government agencies. These include the Karrawirra Pari/River Torrens as well as specific Brown Hill Keswick Creek stormwater management devices located within Pakapakanthi/Park 16 and Kurangga/Park 20. The Torrens Lake, upstream of the Torrens Weir extending to Albert Bridge, is the sole responsibility of the City of Adelaide, with the remaining sections of the River outside of this area having shared management responsibilities. Stormwater infrastructure located within our Park Lands associated with the Brown Hill Keswick Creek catchment falls under the responsibility of the Brown Hill Keswick Creek Board, where financial contributions are made annually by subsidiaries in accordance with a funding deed.

To monitor the performance of our Water Infrastructure assets, we undertake condition audits at regular intervals. Asset condition information is analysed with respect to technical intervention criteria to inform our maintenance and renewal programs. The condition of our Water Infrastructure is generally rated in a fair condition, with an overall condition index rating of 2.8. 83% of assets are estimated to be in a very good to fair condition and 17% of assets are estimated to be in a poor or very poor condition, which form the general basis of our future renewal program priorities.



Condition Grading	Description of Condition
1	**Very Good:** free of defects, only planned and/ or routine maintenance required
2	**Good:** minor defects, increasing maintenance required plus planned maintenance
3	**Fair:** defects requiring regular and/or significant maintenance to reinstate service
4	**Poor:** significant defects, higher order cost intervention likely
5	**Very Poor:** physically unsound and/or beyond rehabilitation, immediate action required

The Torrens Weir is an aging asset, originally constructed in 1881 with sluice gates added in 1929. Majority of its components are rated in a fair to poor condition and engineering inspections and recommendations have identified the need to undertake an options analysis (currently underway) to guide the future management of the asset as it approaches the end of its useful life.

It is important to note that the condition data for the underground stormwater network is considered to be of low reliability. Network wide condition data is not available and age data has been utilised to forecast the estimated condition rating where no condition data is available. A comprehensive network wide condition audit is currently underway for the underground stormwater network, which will provide improved asset data for renewal modelling and analysis for the next revision of this Asset Management Plan.

1.3 Community Engagement and Customer Satisfaction

In November 2021, we undertook an engagement process with city residents and visitors to better understand and measure levels of customer satisfaction for the services provided by our Water Infrastructure assets. A summary of the responses is shown below.

Category	Average Score	Very Poor (<40%)	Poor (40-54%)	Average (55-69%)	Good (70-84%)	Excellent (>85%)
Underground Stormwater Drainage Network	93%					●
Karrawirra Pari/River Torrens and Park Lands watercourses	85%				●	

The overall feedback confirmed appropriate levels of customer satisfaction for the maintenance and renewal of our Water Infrastructure assets.

A Recommended Levels of Service Report was presented to Council, with the recommendations approved in November 2023. This report noted the community consultation undertaken and the associated benchmarking of current user satisfaction. Additionally, Council also approved the development of the Water Infrastructure Asset Management Plan based on the planning principles and recommended management strategies presented within the report and its attachments.

1.4 Current and Future Demands

It is anticipated that City of Adelaide will be subject to considerable change over the next ten years. This will result in our Water Infrastructure being subject to new demands that have the potential to impact future service delivery and the requirements of our existing assets.

Key demand drivers and future challenges will include:

- City growth
- Changing demographic
- Tourism & event growth
- Climate change and carbon neutrality
- Emerging technology
- Legislation & regulation

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets, providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, such as educating the community around alternative options, which facilitates service provision without the need to invest in new or upgraded infrastructure.

Demand management will include:

- Continuing to engage with our community through annual City User Profile surveys
- Developing a Stormwater Management Plan (SMP) to understand the existing performance of the stormwater drainage network and to provide solutions to mitigate flood risk and improve water quality
- Completion of the Adelaide Park Lands Strategic Water Resources Study to identify key initiatives to enable sustainable water resource planning for current and future demands
- Completion of the Water Sensitive Urban Design (WSUD) Priority Investment Study to identify key upgrade projects that will improve the quality of stormwater runoff
- Delivering priority upgrade/new projects identified within the Strategic Plan and Strategic Documents
- Ensuring stormwater assets are renewed to accommodate current and forecasted future storm events
- Ensuring climate risk mitigation and adaptation is a key focus for strategic planning, asset management and project delivery
- Continuing to review and update design standards and technical specifications to ensure our assets transition towards having a lower carbon footprint with improved circular economy outcomes through increased usage of recycled materials
- Continuing to partner with industry, to monitor and evaluate new and emerging technologies, with trials of new materials, approaches, and methodologies
- Continuing to monitor changes to legislation and ensure appropriate adaptation into asset management practices

1.5 Strategic Planning

Under the *Local Government Act (SA) 1999*, we are legislatively required to establish a suite of Strategic Management Plans, which guide Council's future planning, asset management and financial sustainability. An overview of these strategic management plans are shown below:

Strategic Plan ***Community***	Long term with a four year delivery focus. *Planning for the vision and aspirations of the Adelaide Capital City.*
Long-Term Financial Plan ***Financial***	Ten year Plan, revised annually to ensure a ten year view is maintained. *Planning for the long-term financial sustainability of the City of Adelaide.*
Asset Management Plans ***Infrastructure***	Suite of ten year Plans. *Planning for the sustainable renewal and maintenance of Council assets.*
City Plan ***Development / Built Form***	Ten year Spatial Plan. *Planning for the future land uses and built form of the Adelaide Capital City.*

Through the City of Adelaide Strategic Plan 2024 – 2028, Council's vision is:

Our Adelaide. Bold. Aspirational. Innovative.

Achieving our vision for the future will be guided by our long term aspirations:

Our Community: Vibrant, connected and inclusive
Our Environment: Resilient, protected and sustainable
Our Economy: Growing, innovative and responsive
Our Places: Interesting, purposeful and safe
Our Corporation: High performing, customer-centric and bold

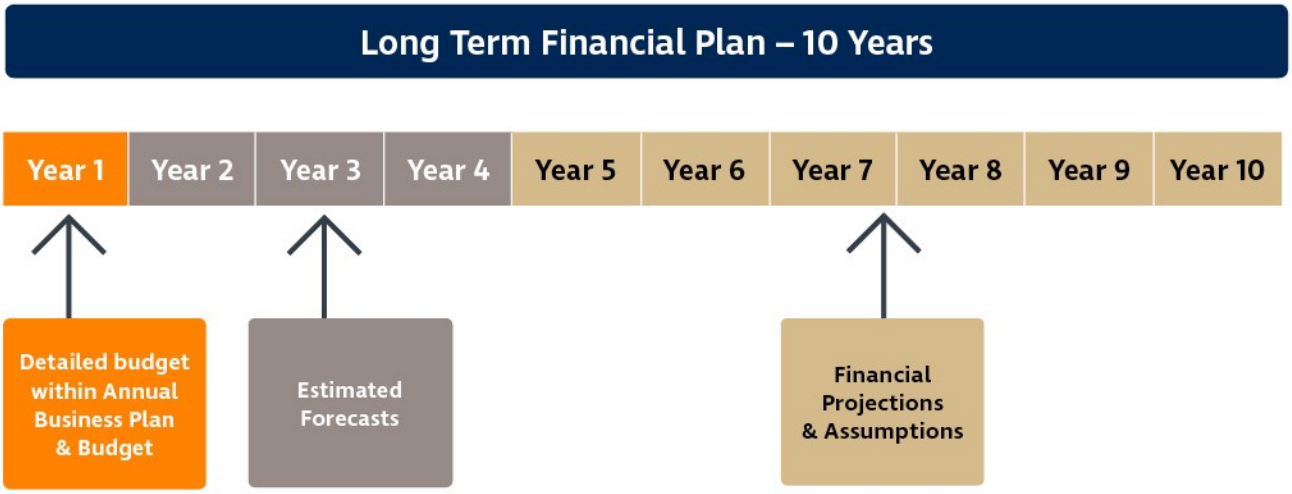
As Adelaide grows, we will need to consider economic vitality, social connectivity and wellbeing, distinctive precincts, environmental and financial sustainability, asset management and service delivery. To ensure we maintain our liveability and to support growth, these principles will underpin everything we do:

- Exceptional Amenity – Be bold and courageous in our pursuit of excellence for our city
- Quality Housing – Strive for liveability and affordability to attract and retain residents
- Community Connection – Strengthen connection, accessibility, diversity and inclusivity by putting people first
- Unique Experiences – Create interesting experiences for our residents, workers and visitors
- Climate Resilience – Embed climate resilience in all that we do
- Economic Growth – Encourage innovation, investment and development in current and emerging sectors
- Budget Repair – Provide quality services and ensure long-term financial sustainability

The Strategic Plan is supported by a suite of long and short-term strategies and action plans as well as a Resource Plan. The Resource Plan provides a four-year view of new and upgrade projects, resources, and budget requirements to deliver our Strategic Plan aspirations and objectives.

Integrated Delivery Planning ensures that prudent and efficient decisions are made, with line-of-sight between Council's Strategic Plan objectives and the major infrastructure projects we deliver. While this Asset Management Plan does not identify financial forecasts associated with new and upgrade projects, it does ensure required asset renewals are aligned (where practical) with key new and upgrade projects specified within the Resource Plan.

Each year our annual business plan and budget formalises funding allocations to continue providing services and progress new projects. It enables existing projects to move from one delivery stage to the next (e.g. progress concept design to detailed design and detailed design to construction) as well as consider emerging risks and opportunities that may result from Council decisions, community requests or other external factors.



1.6 Lifecycle Management

In order to effectively manage our assets, it is important to understand the relationship between all stages of the asset lifecycle. Effective asset management and sustainable financial planning requires a balance between the maintenance, renewal and disposal of existing assets and the delivery of new and upgraded assets.

Our goal is to provide assets that service the needs of the community, providing the agreed levels of service at the lowest lifecycle cost. To enable this, it is important to understand:

- How our assets are performing
- How our assets should be operated and maintained
- When our assets should be renewed
- When we should consider upgrading existing assets or constructing new assets
- How funding for new and upgraded assets is prioritised
- When we should consider disposing underperforming or underutilised assets

This Asset Management Plan's renewal strategy aims to minimise the number of assets that deteriorate into a poor condition and prohibit assets reaching a very poor condition. This strategy ensures we can continue to provide services in line with the community's expectations, appropriately manage risk and optimise whole-of-life costs. Renewal requirements have been identified through a combination of workshops with key infrastructure and maintenance staff and available condition audit information.

In addition to condition based renewal interventions, this asset management plan also forecasts service/ capacity based renewal interventions to address known performance deficiencies (i.e. where pipe sizes and side entry pit inlet capacity is not sufficient to manage stormwater runoff) at strategic locations where streetscape upgrades are being undertaken (eg. Main Street Revitalisation Projects) as well as significant road renewal projects.

While we have proactive maintenance programs associated with legislative requirements for water quality testing, general operational and maintenance activities are typically evaluated and prioritised with respect to budget provisions within the Long-Term Financial Plan and Annual Business Plan and Budget. Following the completion of this Asset Management Plan, we will be reviewing operations and maintenance standards for Water Infrastructure assets, with a view to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. The associated financial impacts will need to be further considered in future revisions of this Asset Management Plan and the Long-Term Financial Plan.

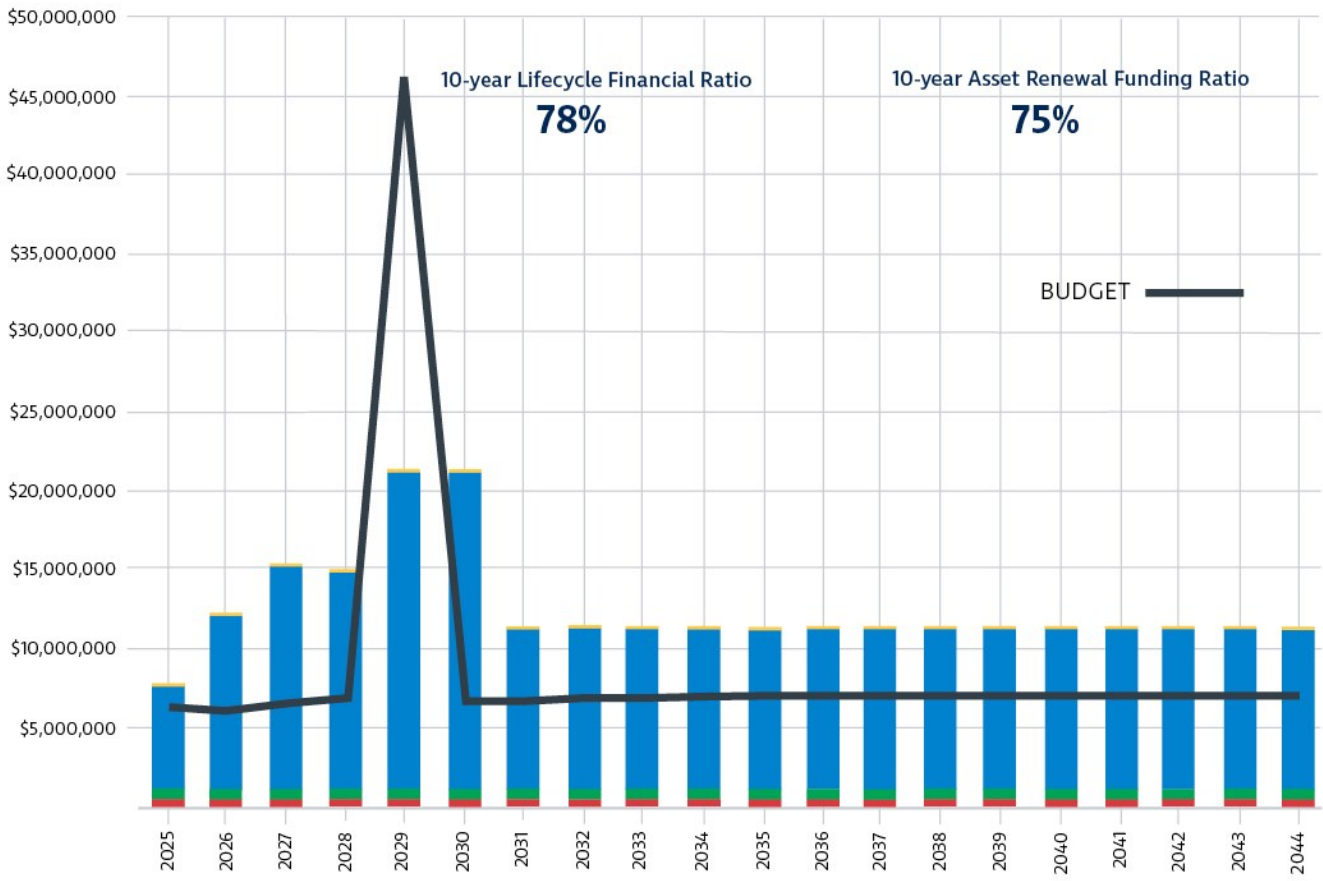
This Asset Management Plan does not identify financial forecasts associated with asset disposal, however where recommended, significant assets will be identified for decommissioning and disposal through Council Reports, to then be considered within the Long-Term Financial Plan and Business Plan and Budget.

1.7 Financial Summary

This Asset Management Plan defines the asset management activities and associated funding requirements recommended for inclusion into the Long-Term Financial Plan to achieve our asset performance targets. The lifecycle costs necessary to operate, maintain and renew our assets as outlined within this Asset Management Plan is approximately $13.95 million on average each year across the 10-year planning period. The associated 10-year annual average financial forecasts for renewal, maintenance and operation are presented below for Water Infrastructure assets.

Lifecycle Category	10-Year Annual Average Forecast
Renewal	$12.60 M
Maintenance	$0.73 M
Operation Cost	$0.62 M
Lifecycle Cost	$13.95 M

Currently, the lifecycle budget allocation within the Long-Term Financial Plan is only $10.84 million on average each year. This leaves a funding shortfall of $3.11 million on average each year and means we currently only have 78% of the costs (Lifecycle Financial Ratio) to deliver the required activities to sustain current levels of service.



LIFECYCLE SUMMARY

Annual Average first 10 years

Lifecycle Forecast	$13,952,439
Planned Budget	$10,842,650
Shortfall	-$3,109,789

MAINTENANCE

Annual Average first 10 years

Planned Budget	$734,502
Lifestyle Forecast	$734,502

OPERATION

Annual Average first 10 years

Planned Budget	$620,937
Lifestyle Forecast	$620,937

RENEWAL

Annual Average first 10 years

Planned Budget	$9,487,211
Lifestyle Forecast	$12,597,000

Noting that this Asset Management Plan has not forecast any additional operational and maintenance requirements, the identified lifecycle funding shortfall is associated with the revised asset renewal forecasting. The Water Infrastructure asset class generally requires additional renewal funding across the 10-year planning period to maintain existing levels of service.

The Asset Renewal Funding Ratio indicates that over the next 10 years our current budgets within the Long-Term Financial Plan account for 75% of the forecast funding required for the optimal renewal of our Water Infrastructure Assets. Contributing factors for the gap between the forecast renewal costs and current budgets within the Long-Term Financial Plan include:

- Not achieving our Asset Renewal Funding Ratio targets over the past 3 years (a result of covid-19 resourcing impacts and project delays associated with market saturation)
- Comprehensively reviewing our stormwater management planning principles, to appropriate recognise service-based renewal interventions aligned with key streetscape upgrade projects, with a requirement for increased pipe sizes and catchpit arrangements
- Ensuring we accurately recognise asset replacement costs, utilising current unit rates that take into consideration increasing costs associated with inflation and industry escalations. (We have experienced significant increases in project unit rates, noting that the Local Government Association (LGA) have indicated that costs and materials have increased up to 25% post pandemic).

Only what is funded in the Long-Term Financial Plan and approved through the Annual Business Plan and Budget can be delivered. Should the Long-Term Financial Plan be unable to accommodate the revised asset renewal forecasts recommended within this Asset Management Plan, there will be associated service and risk impacts.

Continuing to leverage off external funding opportunities will allow us to maintain and enhance the quality of the service we provide, while reducing financial pressures through the efficiencies in an increased revenue. We will continue to work in partnership with both the State and Federal Governments to pursue these opportunities for both renewal and significant new and upgrade projects.

1.8 Potential Service and Risk Impacts

If the forecast activities outlined within this Asset Management Plan (operations, maintenance, renewal) are unable to be accommodated into the Long-Term Financial Plan, there will be potential service consequences for users. These service consequences include:

- Reduced levels of service for Water Infrastructure
- Reduced customer satisfaction levels associated with the management of our existing assets
- Intergenerational inequity (burdening future generations)

These associated risk consequences include:

- Increased safety and property damage risks from stormwater flooding
- Increased safety risks associated with assets deteriorating beyond recommended intervention levels
- Increased environmental risks and associated reduction in amenity due to insufficient management of the Karrawirra Pari/River Torrens and Park Lands water courses including adjacent assets
- Increased reputational risks associated with services not aligning with community expectations
- Increased financial risks associated with additional maintenance requirements that cannot be accommodated within existing budgets
- Increased financial risks associated with higher renewal and/or rehabilitation treatments as asset renewals are not funded at the optimal point in time
- Increased economic risk associated with reduced business activity, events and tourism
- Intergenerational inequity (passing on costs and risk to future generations)

If the forecast activities outlined within this Asset Management Plan are unable to be accommodated into the Long-Term Financial Plan, we will endeavour to manage these risks within available funding by:

- Continuing to undertake regular asset condition and maintenance inspections
- Prioritising all asset renewal and maintenance activities with respect to available budget
- Revising our levels of service to establish an acceptable balance between cost, level of service and risk
- Developing a communication strategy to manage expectations and educate the community around affordable levels of service
- Continuing to seek out external funding opportunities
- Prioritisation of the delivery of key actions from the Improvement Plan

1.9 Monitoring and Improvement Program

The next steps resulting from this Asset Management Plan to improve asset management practices are:

	Improvement Plan Actions
1	Comprehensive update of this Asset Management Plan following the completion of spatial data improvements, asset condition audit and asset revaluation.
2	Finalise the Stormwater Management Plan to identify key priority upgrade projects that will improve the city's overall flood resiliency as well as improve water quality for the Karrawirra Pari/River Torrens and Park Lands watercourses.
3	Finalise the Adelaide Park Lands Strategic Water Resources Study to identify key initiatives to enable sustainable water resource planning for current and future demands.
4	Finalise the Water Sensitive Urban Design (WSUD) Priority Investment Study to identify key priority upgrade projects that will improve the quality of stormwater runoff that is discharged into natural water courses.
5	Finalise a 4-year Resource Plan to identify key upgrade/new projects to deliver Council's Strategic Plan objectives. Once key projects are recognised within the Long Term Financial Plan, Asset Management Plans will be updated to ensure associated acquisition costs (upgrade/new) and ongoing operational and maintenance costs are appropriately recognised, in conjunction with any scheduling adjustments required for asset renewal programs.
6	Revise asset renewal forecasts for the Torrens Weir following the completion of the Lifecycle Study and Options Analysis.
7	Continue to work in partnership with both the State and Federal Governments to pursue external funding opportunities for both renewal and significant upgrade/new water infrastructure projects.
8	Review and update operations and maintenance standards, to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. Include changes into future revisions of this Asset Management Plan and Long Term Financial Plan.
9	Continue to undertake regular condition audits and revaluation for all our water infrastructure assets within the nominated 4-year cycles, including regular review of asset useful lives.
10	Continue to review our technical standards for water infrastructure with respect to climate resilience, circular economy, recycled materials, durability and performance, whole-of-life cost, amenity, and heritage requirements.
11	Continue to monitor forecast climate change impacts to ensure we remain resilient through proactively implementing appropriate mitigation and adaptation controls.
12	Improve the capture of carbon emission data for technical standards and project procurement to support lower carbon decision making.
13	Review of corporate performance measure targets for customer satisfaction, to assist with performance gap analysis.
14	Review and standardise asset hierarchies for all asset categories within Water Infrastructure.
15	Review customer service requests codes to better align with Level of Service reporting and operational and maintenance sub-activities.

2.0 INTRODUCTION

2.1 Background

First shaped by the Kaurna People of the Adelaide Plains, then by Colonel William Light, Adelaide is a dynamic, accessible and safe city, that offers an enviable quality of life. The physical layout of the city enhances the attributes that make Adelaide unique. From the Nationally Heritage Listed Park Lands that surround our city, to the compact layout that makes the city walkable and cyclable, to our unique neighbourhoods and precincts, all these factors place Adelaide on the path to being one of the most liveable cities in the world. Despite our small footprint, the City of Adelaide is home to over 26,000 residents, 12,000 businesses and accommodates over 300,000 visitors daily, contributing close to 18% of the State's economic value.

The City of Adelaide's Water Infrastructure network is essential to the health, wellbeing and safety of our community. It provides critical services which protect the community from heavy rainfall and flood events, conserve the ecological health of our waterways and provide recreational facilities and natural amenity within our Park Lands.

This asset portfolio is valued at approximately $282.1 million and includes the underground stormwater drainage network, stormwater management devices (e.g. detention basins, gross pollutant traps), Karrawirra Pari/River Torrens, Park Lands water courses, potable and non-potable water distribution systems and sewer infrastructure.

A small proportion of our Water Infrastructure assets have shared management responsibilities with other government agencies. These include the Karrawirra Pari/River Torrens as well as specific Brown Hill Keswick Creek stormwater management devices located within Pakapakanthi/Park 16 and Kurangga/Park 20. The Torrens Lake, upstream of the Torrens Weir extending to Albert Bridge, is the sole responsibility of the City of Adelaide, with the remaining sections of the River outside of this area having shared management responsibilities. Stormwater infrastructure located within our Park Lands associated with the Brown Hill Keswick Creek catchment falls under the responsibility of the Brown Hill Keswick Creek Board, where financial contributions are made annually by subsidiaries in accordance with a funding deed.

With projected City and metropolitan growth, a changing climate, and advancements in technology, it is anticipated that higher demand will be placed on our existing assets and there will be increasing requirements for new and upgraded infrastructure.

With Council's strategic objectives to create a City that is welcoming, inclusive, and accessible to all, it is critical to ensure that our water infrastructure network continues to be appropriately managed, ensuring we provide appropriate services and benefits for both current and future generations.

Work is currently underway to significantly improve the spatial data, asset condition information and asset attribute information utilised within this Water Infrastructure Asset Management Plan. These activities align with good asset management practices and will provide more granular information to enable robust analysis to inform future decision making. The outcome of this work, which is due for completion by June 2025, will enable a more mature Water Asset Management Plan with a higher degree of confidence for the future requirements of the asset class. Therefore, due to the current maturity level of the asset data, this Water Infrastructure Asset Management Plan will be considered an interim document, which will be updated following the completion of the condition audit, and subsequent modelling and analysis.

This interim Water Infrastructure Asset Management Plan communicates the requirements for the sustainable delivery of services through management of assets, compliance with regulatory requirements, and required funding to provide the appropriate levels of service over the planning period. The infrastructure assets covered by this Asset Management Plan, including their quantities and replacement costs are shown in Table 2.1 below.

Table 2.1: Infrastructure Assets covered by Water Infrastructure Asset Management Plan

Asset Category	Asset Type	Quantity/Dimension	Replacement Value
Underground Stormwater Drainage Network	Stormwater Pits	3927 assets	$26.56 million
	Stormwater Junction Boxes	1800 assets	$17.22 million
	Stormwater Pipes	137.7 km	$144.05 million
	Stormwater Culverts	217 assets	$4.52 million
Stormwater Management Devices	Detention basins	16 assets	$6.80 million
	Bio-retention basins	1 asset	$0.18 million
	Gross Pollutant Trap	17 assets	$4.05 million
River Torrens and Park Lands Water Courses	Earth retaining structures	48 assets	$31.72 million
	Open channels and creeks	7.8 km	$9.59 million
	Weirs	3 assets	$35.12 million
Potable and Non Potable Water Distribution	Potable Water Distribution	3 locations	$0.77 million
	Non Potable Water Distribution	1 location	$0.36 million
Sewer	Sewer	3 locations	$1.17 million
Total			$282.11 million

This Asset Management Plan is to be read in conjunction with the Asset Management Policy, Strategic Asset Management Plan and the following key Corporate planning documents:

- City of Adelaide Strategic Plan (2024-2028)
- Active City Strategy (2013-2023)
- Adelaide Park Lands Management Strategy (2014-2025)
- Carbon Neutral Strategy (2015-2025)
- Climate Change Risk Adaptation Action Plan (2021-2026)
- Community Land Management Plans
- Disability Access and Inclusion Plan (2019-2022)
- Heritage Strategy and Action Plan (2021-2036)
- Integrated Biodiversity Management Plan 2018-2023
- Park Land and Precinct Master Plans
- Public Health and Wellbeing Plan (2020-2025)
- Smart Move Transport and Movement Strategy (2012-2022)
- The 30-Year Plan for Greater Adelaide (2017) - State Government
- Integrated Transport and Land Use Plan for Greater Adelaide - State Government
- South Australian Walking Strategy (2022-2032) – State Government
- South Australia's Road Safety Strategy (to 2031) – State Government
- Water Sensitive Action Plan 2021-2025

As existing planning documents are updated and new planning documents are approved by Council, Asset Management Plans will be reviewed and updated as required.

Infrastructure projects will reference the Adelaide Design Manual for transformational projects supported by upgrade/new funding allocated with the Business Plan and Budget and Long-Term Financial Plan.

2.2 Goals and Objectives of Asset Ownership

Our goal for managing infrastructure assets is to meet the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers.

The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing, and appropriately controlling risks, and
- Linking to a Long-Term Financial Plan which identifies required, affordable forecast costs and how it will be allocated.

Key elements of the planning framework are:

- Levels of service – specifies the services and levels of service to be provided,
- Risk Management,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Lifecycle management – how to manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices – how we manage provision of the services,
- Monitoring – how the plan will be monitored to ensure objectives are met,
- Asset management improvement plan – how we increase asset management maturity.

Other references to the benefits, fundamentals principles and objectives of asset management are:

- International Infrastructure Management Manual 2015 [1]
- ISO 550002

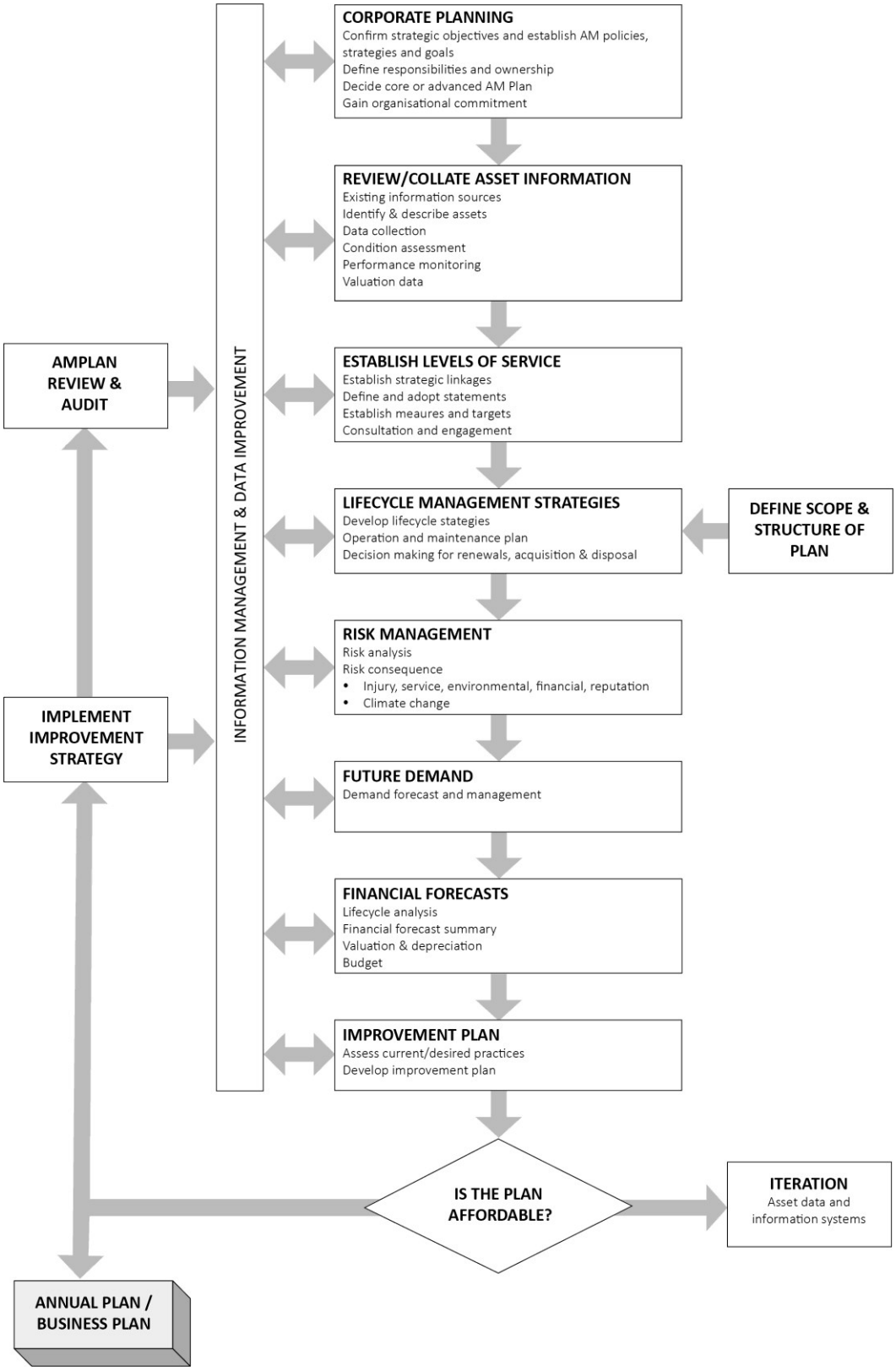
[1] Based on IPWEA 2015 IIMM, Sec 2.1.3, p 2| 13

[2] ISO 55000 Overview, principles and terminology

A road map for preparing an Asset Management Plan is shown below:

Figure 2.2: Road Map for preparing an Asset Management Plan

Source: IPWEA, 2006, IIMM, Fig 1.5.1, p 1.11



2.3 Key Stakeholders & Organisational Responsibilities

Key stakeholders in the preparation and implementation of this Asset Management Plan are shown in Table 2.3.

Table 2.3: Key Stakeholders in the Asset Management Plan

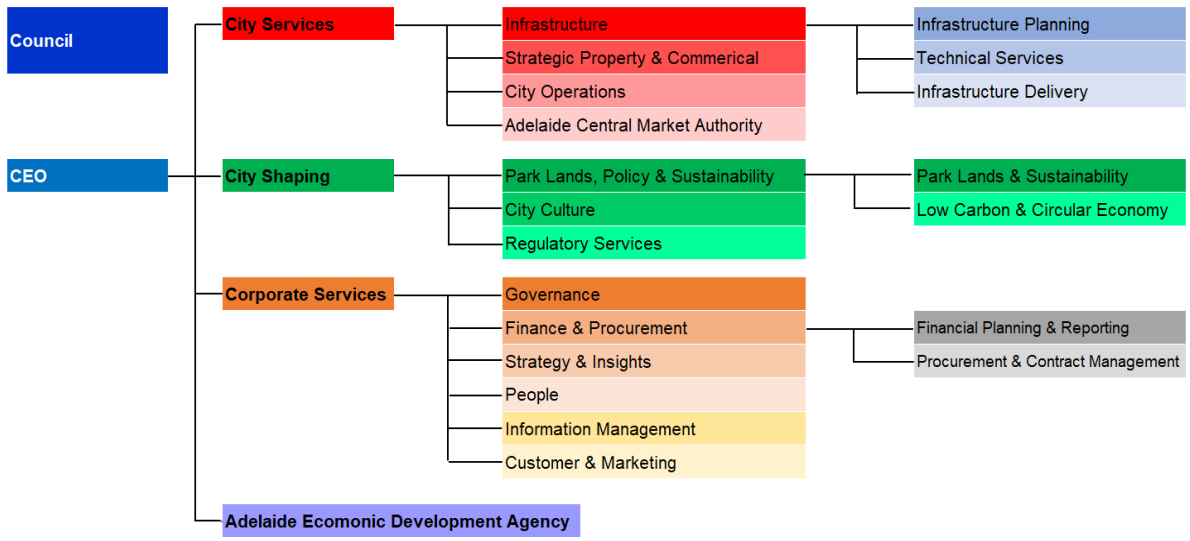
Key Stakeholder	Role in Asset Management Plan
Residents, Ratepayers & Businesses	Provide feedback on current and desired levels of service, which is considered in the development of Asset Management Plans.
Workers, Visitors, Tourists and Students	
Capital City Committee (CCC)	Intergovernmental body established under the City of Adelaide Act (1998) which initiates new projects to enhance and promote the development of the City of Adelaide as the capital city of the state.
Lord Mayor & Elected Members	Represent and advocate for the needs of the community and set high level direction through the development of asset management principles in the Strategic Plan. Approve the Asset Management Plan and Long-Term Financial Plan, to ensure the organisation maintains financial sustainability over the short, medium, and long terms, with consideration of community needs/expectations and corporate risk management requirements.
Chief Executive Officer & Executive Leadership Team	Responsible for the allocation of resources and development of sound asset management practice across the organisation as well as ensuring that all asset management activities are consistent with the objectives of Council's Strategic Plan, the Business Plan and Budget process and the Long-Term Financial Plan. Responsible for ensuring the financial projections in the adopted Asset Management Plans are reflected in the Long-Term Financial Planning and include sustainable maintenance, operations, renewal, and upgrade costs of current and future assets.
Associate Director Infrastructure	Responsible for providing leadership and direction for Council's Asset Management Framework and Project Delivery.
Infrastructure Planning	Responsible for the lifecycle management of Council's Infrastructure Assets and the development of Asset Management Plans, ensuring alignment with the Strategic Management Framework and principles and objectives outlined in the Strategic Plan and other relevant corporate planning documents.
Park Lands & Sustainability	Responsible for developing the Adelaide Park Lands Management Strategy, Park Lands and Square Master Plans and initiating priority Park Lands & Open Space upgrade/new project initiatives. Responsible for facilitating the identification of climate change risks and potential impacts to infrastructure assets.

Key Stakeholder	Role in Asset Management Plan
Low Carbon & Circular Economy	Responsible for facilitating the identification of opportunities to improve circular economy outcomes within infrastructure standards and specifications.
Traffic & Transport	Responsible for developing the Integrated Transport Strategy, Corridor Planning Studies and initiating priority Transportation upgrade/new project initiatives as well as providing technical traffic advice for capital works projects and operational issues.
Strategy & Insights	Responsible for the Strategic Management Framework, including the development of the Strategic Plan in consultation with the Executive Leadership Team, Elected Members, and key strategic stakeholders.
Technical Services	Responsible for technical design documentation to facilitate construction of infrastructure projects, review, and update infrastructure technical standards to ensure they are fit-for-purpose as well as the provision of general engineering and technical advice.
Infrastructure Delivery	Responsible for delivering Capital Works Projects identified in the Asset Management Plan and Annual Business Plan and Budget.
Financial Planning & Reporting	Responsible for the development and currency of the Asset Accounting Policy, Fixed Asset Guideline, as well as the preparation of asset sustainability and financial reports, which incorporate depreciation and asset revaluations in compliance with Australian accounting standards.
Procurement & Contract Management	Responsible for ensuring appropriate procedures are in place to enable efficient and effective procurement and contract management that demonstrates value for money and ensure public money is appropriately spent in accordance with the Local Government Act.
City Operations	Responsible for delivering day-to-day maintenance and operational activities, ensuring works are prioritised, planned and delivered consistently with operational and maintenance plans.
Regulatory Services	Responsible for issuing permits with conditions to enable external parties to undertake works on Council Infrastructure as well as enforcing rectification for works that are not compliant with CoA construction standards.
Stormwater Management Authority (SMA)	The SMA acts as a stormwater planning and prioritisation body for South Australia. It promotes the development of Stormwater Management Plans (SMPs) by local government. The SMA administers the Stormwater Management Fund (SMF) which was established to primarily work with Local Government to assist with meeting the costs of stormwater management planning and stormwater infrastructure.

Key Stakeholder	Role in Asset Management Plan
Adjacent Councils	Project partners in the development stormwater management plans impacting water catchments in the Adelaide Metropolitan Area.
Green Adelaide	Statutory board established by the SA Government, to create a cooler, greener, wilder and climate resilient Adelaide. Green Adelaide provides grant funding opportunities to local government to deliver greening outcomes, incorporating water sensitive urban design (WSUD) or biodiversity sensitive urban design (BSUD) principles.
Department of Infrastructure and Transport (DIT)	Collaborative partner for major projects.
SA Water	Shared management responsibility for sections of Karrawirra Pari/River Torrens (below pool level). The Torrens Lake, upstream of the Torrens Weir extending to Albert Bridge, is the sole responsibility of the City of Adelaide, with the remaining sections of the River outside of this area having shared management responsibilities.
Brownhill and Keswick Creeks Stormwater Board	The Brown Hill and Keswick Creeks Stormwater Board is a regional subsidiary responsible for coordinating delivery of a Stormwater Management Plan, which aims to mitigate serious flood risks and help safeguard properties across the catchment.

Our organisational structure for service delivery associated with infrastructure assets is shown in Figure 2.3.

Figure 2.3: Organisational Structure



3.0 LEVELS OF SERVICE

3.1 Customer Research and Expectations

In November 2021, the City of Adelaide undertook an engagement process with City residents and visitors to better understand and measure levels of customer satisfaction for users who utilise the services provided by our Water Infrastructure. The engagement was advertised on signage in City Streets as well as through the City of Adelaide's social media platforms.

The insights from the Survey are intended to be used to identify where current levels of service are not meeting the community's expectation. This will enable recommendations to be made to Council regarding future resourcing requirements for specific services.

The engagement process was primarily undertaken through questionnaire surveys (113 total respondents), where information was collected online using the YourSay platform (61 respondents), as well as through on street intercepts at various locations across the City (52 respondents). Additional information and feedback relating to CoA's infrastructure assets was also collected through the 2021 Resident Survey (318 comments) and engagement with the Disability Access and Inclusion Panel (44 comments).

The demographic distribution of respondents who provided feedback is presented across Figures 3.1-1 to 3.1-3 There were significantly more survey responses received from City visitors compared to residents and an even balance across genders.

Figure 3.1-1: Respondent distribution

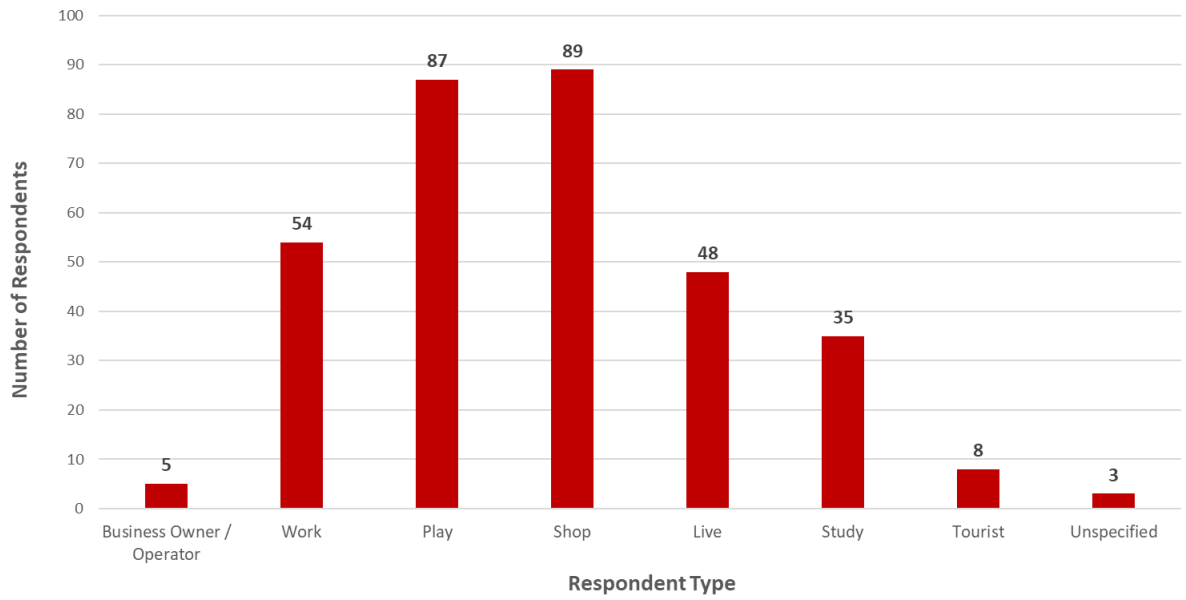


Figure 3.1-2: Respondent Distribution (Residents v Visitors)

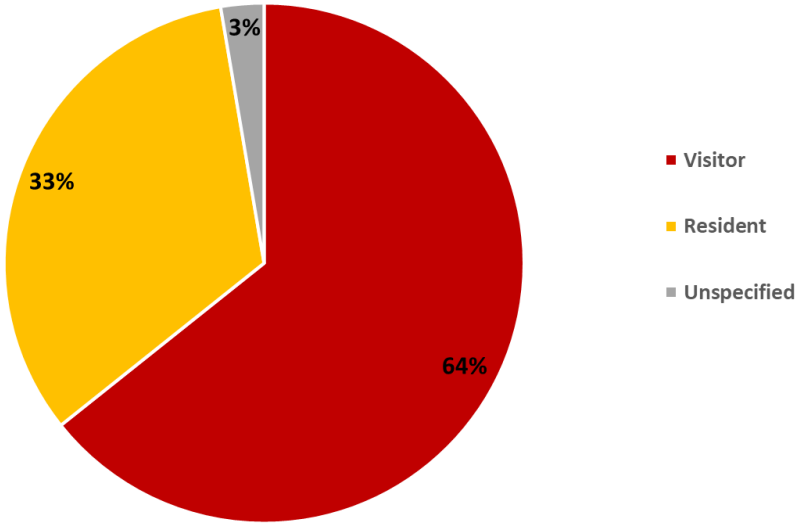
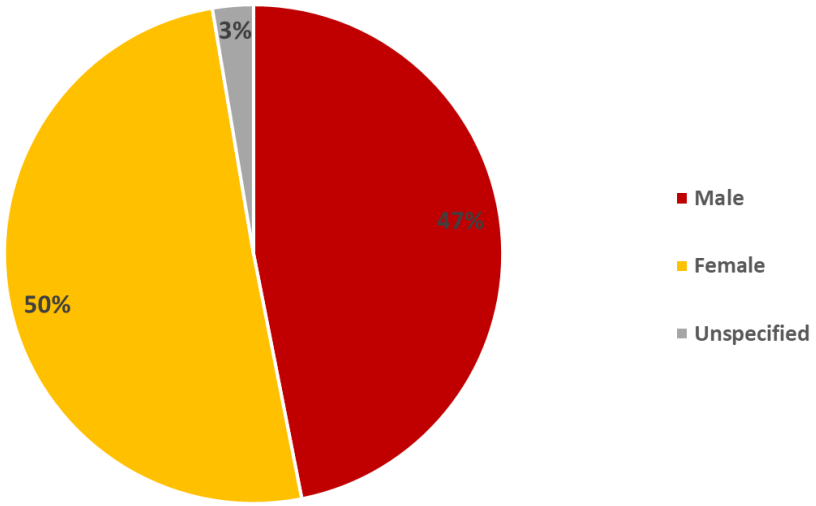


Figure 3.1-3: Respondent Distribution (Gender)



To ensure that data was collected to enable a clear line of sight for decision making purposes, the questionnaire was structured to differentiate responses relating to the City's streets and the Park Lands.

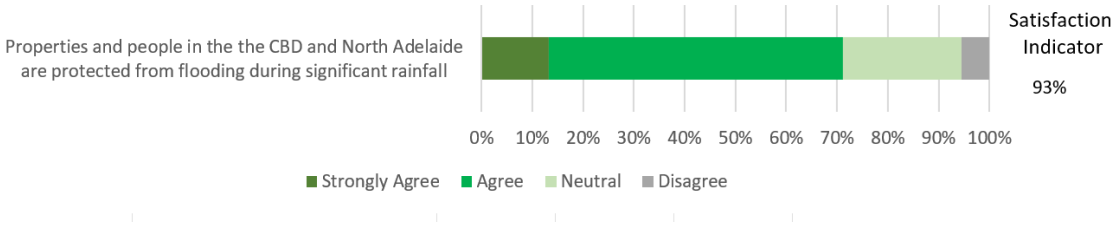
For each performance measure, a customer satisfaction indicator was calculated which represents the percentage of respondents who were satisfied with the service (neutral responses were omitted from the calculation). These figures can then be compared against CoA's organisation scorecard target of 70% satisfaction to identify where our services are not being delivered in line with community expectations.

The results for City Streets and Park Lands Water Infrastructure assets are presented and discussed below.

City Streets

Respondents were very satisfied with the level of flood protection provided by our Water Infrastructure on City Streets, where the performance measure had a satisfaction indicator of 93%, which is well above CoA's 70% target, as shown in Figure 3.1-4 below.

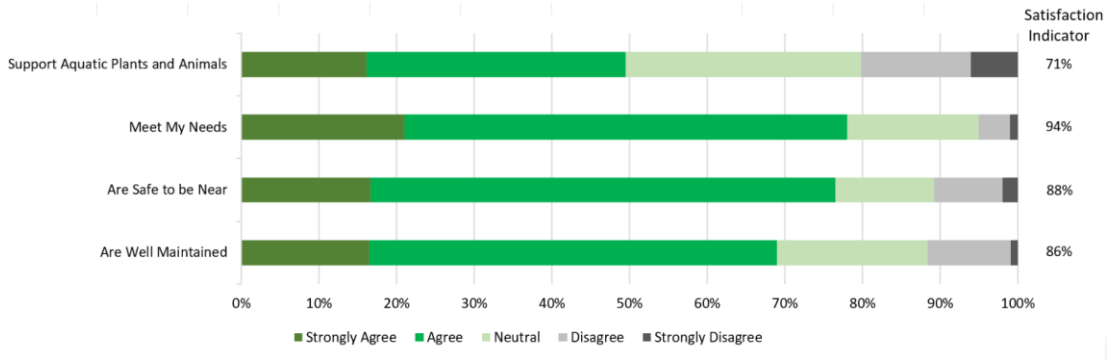
Figure 3.1-4: Properties are safe from flooding following rainfall



Park Lands

Respondents were satisfied with the overall performance of the Karrawirra Pari/River Torrens, creeks and Park Lands water courses, where each of the performance measures had satisfaction indicators exceeding CoA's 70% target, as shown in Figure 3.1-5 below.

Figure 3.1-5: Karrawirra Pari/ River Torrens, creeks and Park Lands water courses



Summary

Table 3.1. below provides a high-level summary of the community's feedback for our water infrastructure.

Table 3.1: Consultation Summary Table

Category	Average Score	Very Poor (<40%)	Poor (40-54%)	Average (55-69%)	Good (70-85%)	Excellent (>85%)
Underground Stormwater Drainage Network	93%					•
Karrawirra Pari/River Torrens and Park Lands watercourses	85%				•	

The overall feedback confirmed appropriate levels of customer satisfaction for all water infrastructure assets.

A Recommended Levels of Service Report was presented to Council, with the recommendations approved in November 2023. This report noted the community consultation undertaken and the associated benchmarking of current user satisfaction. Additionally, Council also approved the development of the Water Infrastructure Asset Management Plan based on the planning principles and recommended management strategies presented within the report and its attachments.

It is critical that future revisions of the Water Infrastructure Asset Management Plan appropriately recognise the strategic direction set by the Stormwater Management Plan (scheduled for completion in 2026). The Stormwater Management Plan will identify key priority projects across the City of Adelaide to improve stormwater drainage capacity and improve water quality for the Karrawirra Pari/River Torrens and Park Lands water courses.

3.2 Strategic Planning

Under the Local Government Act (SA) 1999, we are legislatively required to establish a suite of Strategic Management Plans, which guide Council's future planning, asset management and financial sustainability. An overview of these strategic management plans are shown below in Table 3.2-1:

Table 3.2-1: Strategic Management Documents

Strategic Plan *Community*	Long term with a four year delivery focus. *Planning for the vision and aspirations of the Adelaide Capital City.*
Long-Term Financial Plan *Financial*	Ten year Plan, revised annually to ensure a ten year view is maintained. *Planning for the long-term financial sustainability of the City of Adelaide.*
Asset Management Plans Infrastructure	Suite of ten year Plans. *Planning for the sustainable renewal and maintenance of Council assets.*
City Plan *Development / Built Form*	Ten year Spatial Plan. *Planning for the future land uses and built form of the Adelaide Capital City.*

Through the City of Adelaide Draft Strategic Plan 2024-2028, Council's vision is:

Our Adelaide. Bold. Aspirational. Innovative.

Achieving our vision for the future will be guided by our long term aspirations:

Our Community: Vibrant, connected and inclusive
Our Environment: Resilient, protected and sustainable
Our Economy: Growing, innovative and responsive
Our Places: Interesting, purposeful and safe
Our Corporation: High performing, customer-centric and bold

As Adelaide grows, we will need to consider economic vitality, social connectivity and wellbeing, distinctive precincts, environmental and financial sustainability, asset management and service delivery. To ensure we maintain our liveability and to support growth, these principles will underpin everything we do:

- Exceptional Amenity - Be bold and courageous in our pursuit of excellence for our city.
- Quality Housing - Strive for liveability and affordability to attract and retain residents.
- Community Connection - Strengthen connection, accessibility, diversity and inclusivity by putting people first.
- Unique Experiences - Create interesting experiences for our residents, workers and visitors.
- Climate Resilience - Embed climate resilience in all that we do.
- Economic Growth - Encourage innovation, investment and development in current and emerging sectors.
- Budget Repair - Provide quality services and ensure long-term financial sustainability.

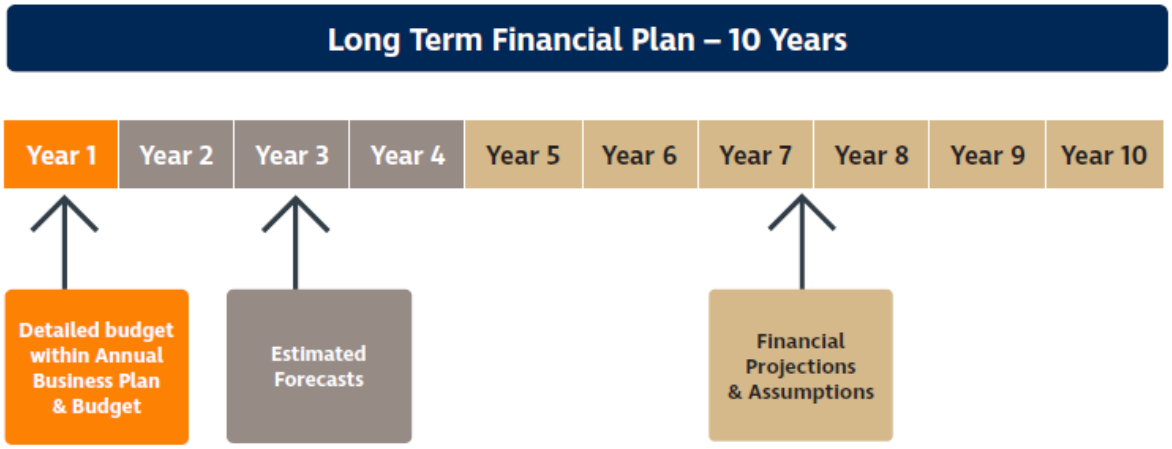
The Strategic Plan is supported by a suite of long and short-term strategies and action plans as well as a Resource Plan. The Resource Plan will provide a 4-year view of the projects, resources, and budgets required to deliver our Strategic Plan objectives. It informs the Long-Term Financial Plan (as shown in Figure 3.2) and acts as the key link between the Strategic Plan and Annual Business Plan & Budget, providing transparency between our vision and the key projects we deliver.

Integrated Delivery Planning ensures that prudent and efficient decisions are made, with line-of-sight between Council's Strategic Plan objectives and the major infrastructure projects we deliver. While this Asset Management Plan does not identify financial forecasts associated with new and upgrade projects, it does ensure required asset renewals are aligned (where practical) with key new and upgrade projects specified within the Resource Plan. Infrastructure projects will reference the Adelaide Design Manual for

transformational projects supported by upgrade/new funding allocated with the Resource Plan and Long-Term Financial Plan.

Each year our annual business plan and budget formalises funding allocations to continue providing services and progress new projects. It enables existing projects to move from one delivery stage to the next (e.g. progress concept design to detailed design and detailed design to construction) as well as consider emerging risks and opportunities that may result from Council decisions, community requests or other external factors.

Figure 3.2: Long-Term Financial Plan



The relevant aspirations and objectives of the City of Adelaide Draft 2024-2028 Strategic Plan and how they are considered within this Asset Management Plan are summarised in Table 3.2-2.

Table 3.2-2: Strategic aspirations, objectives and outcomes and how these are considered in this Plan

Aspirations	Objectives	Outcomes	Asset Management Alignment
Our Communities *Vibrant, connected and inclusive*	Support our communities thrive Create fun, lively and interesting experiences Celebrate and honour community and cultures	Drive affordable, safe and quality housing outcomes that attract and retain residents in our city An interesting and engaging place to live, learn and visit An inclusive, equitable and welcoming community where people feel a sense of belonging	• Create enabling infrastructure to support world class events, festivals and activation • Support the development of new cultural and civic infrastructure • Deliver asset renewal and asset maintenance programs to ensure our assets are safe for people of all ages and abilities
Our Environment *Resilient, protected and sustainable*	Protect, enhance, and activate our Park Lands and open space Be climate conscious and resilient Prioritise sustainability in our decisions for the future	Lead as a Low Carbon Emissions City A sustainable city where climate resilience is embedded in all that we do The status, attributes and character of our green spaces and the Park Lands are protected and strengthened	• Increase the use of recycled or sustainable materials • Implement sustainable, renewable and green systems, infrastructure, practices and materials in our projects and services • Adapt to climate change and enhancing our climate resilience through upgrading our existing assets and creating new assets • Ensure all asset investment (design, construct and maintenance) considers and embeds appropriate climate resilience measures • Enhance the environmental value, productivity, quality and biodiversity of the Park Lands, squares, open space and streetscapes • Protect and restore native habitat in our city • Increase in tree canopy cover and green spaces
Our Economy *Growing, innovative and responsive*	Continue to grow our economy in alignment with the Community Support existing businesses to be agile and responsive to change Create strong skilled workforces	Adelaide's unique experiences and opportunities attract visitors to our city Achieve a critical mass of jobs and investment and attract and retain businesses by growing a dynamic, holistic economy Council is driving development opportunities for our community via diverse commercial activities	• Deliver infrastructure upgrade projects to attract increased visitation into the City and promote business development and economic growth • Explore project partnership opportunities with State Government, developers and other third-parties
Our Places *Interesting, purposeful and safe*	Manage assets to meet the needs of our community Encourage bold, interesting and purposeful development Facilitate and activate our places in a safe and accessible way for our community	Community assets are adaptable and responsibly maintained Encourage bold, interesting and purposeful development that supports the changing needs of our community and city Create safe, inclusive and healthy places for our community	• Deliver asset renewal and asset maintenance programs to ensure our assets are safe for people of all ages and abilities • Ongoing review of asset management strategies and technical standards to optimise whole-of-life costs • Continue to undertake regular condition audits and revaluation for all our Water Infrastructure assets within the nominated 4-year cycles, including regular review of asset useful lives • Deliver quality street and laneway upgrades, main streets, precincts and neighbourhood revitalisation and improvements that make Adelaide well-designed, safe and unique • Support the creation of multi-use green spaces such as open space, community gardens and pocket parks that enable shared use and community connection • Deliver Park Land and Streetscape improvements to cater for emerging community needs • Preserve and promote heritage assets

3.3 Legislative Requirements

There are many legislative requirements relating to the management of infrastructure assets including Australian Legislation, State Legislation and State Regulations. Legislative requirements relevant to the Water Infrastructure Asset Management Plan are outlined in Table 3.3.

Table 3.3: Legislative Requirements

Legislation	Requirement
Aboriginal Heritage Act 1988	An Act to provide for the protection and preservation of the Aboriginal heritage
Adelaide Park Lands Act 2005	An Act and Framework that promotes the special status, attributes, and character of the Adelaide Park Lands; to provide for the protection of those Park Lands and their management as a world class asset to be preserved as an urban park for the benefit of present and future generations
Australian Accounting Standards	Standards that set out the financial reporting standards relating to the revaluation and depreciation of assets
Australian Standards	All of Council's infrastructure projects are undertaken in accordance with Australian Standards, or in the absence of, best practice guidelines
Australian Road Rules 1999	The Australian Road Rules have been made into regulations under the Road Traffic Act (South Australia) and came into operation throughout Australia on 1 December 1999
City of Adelaide Act 1998	An Act to establish mechanisms to enhance the role of the city of Adelaide as the capital city of South Australia; to make special provision in relation to the local governance of the city of Adelaide; and for other purposes
Civil Liability Act 1936	An Act to outline liability of road authorities under Section 42
Development Act 1993	An Act to provide for planning and regulate development in the state; to regulate the use of management of land and building; and for other purposes
Emergency Management Act 2004	An Act to establish an emergency management framework for the State reflecting the collective responsibility of all sectors of the community including both Local and State government and recognising that a co-ordinated approach is required
Environment Protection Act 1993	An Act established to enable the Environment Protection Authority (EPA) to monitor and regulate all relevant environmental matters, including water quality, and pollution and waste control
Environment Protection (Water Quality) Policy 2015	Under the Environmental Protection Act, provides specific and detailed protection of the state's surface, marine and underground water sources

Highways Act 1926	An Act to provide for the appointment of a Commissioner of Highways and to make further and better provisions for the construction and maintenance of roads and works and for other purposes
Linear Parks Act 2006	An Act to provide the protection of the River Torrens Linear Park, as world-class assets to be preserved as public parks for the benefit of present and future generations
Local Government Act 1999	An Act to set out the role, purpose, responsibilities, and powers of local governments including the preparation of a Long-Term Financial Plan supported by asset management plans for sustainable service delivery
National Construction Code 2019	Sets our minimum standards for stormwater management for property developments
Natural Resources Management Act 2004, Water Industry Act & Regulations 2012	An act established to enable the Department of Environment and Water (DEW) to provide of advice to water industry entities, and to develop new water and wastewater legislation in the form under the Water Industry Act 2012.
Roads (Opening and Closing) Act 1991	An Act to provide for the opening and closing of roads and allows for formalisation of roadway status
State Records Act 1997	An Act to ensure Local Government's record and store all relevant information as set out by the State Government of South Australia
Water Industry Act & Regulations 2012	An Act established to enable the Office of the Technical Regulator (OTR) to monitor and regulate the safety and technical standards associated with the water industry, including the related infrastructure and installations extending to associated equipment
Work Health and Safety Act 2012	Provides minimum standards for health and safety of individuals performing works

3.4 Customer Levels of Service

Customer Levels of Service measure how the community receives a service and whether the organisation is providing community value. Levels of service are monitored and adjusted from the public consultation process, customer satisfaction surveys and customer service centre feedback.

The Customer Levels of Service are considered in terms of:

Quality How good is the service … what is the condition or quality of the service?

Function Is it suitable for its intended purpose …. Is it the right service?

Capacity Is the service over or under used … do we need more or less of these assets?

In Tables 3.4 under each of the service measures types (Quality, Function, Capacity) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

These are measures of fact related to the service delivery outcome (e.g. number of occasions when service is not available or proportion of replacement value by condition %'s) to provide a balance in comparison to the customer perception that may be more subjective.

Table 3.4: Customer Level of Service Measures

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Current Budget
Quality	Condition – Water Infrastructure assets are well maintained and in an appropriate condition	Customer service requests relating to reported hazards and maintenance of Water Infrastructure.	2022 – 71 requests Past 4 years average –-54/year	Expected to increase as aging stormwater infrastructure deteriorates
	Confidence levels		**Medium**	**Medium**
	Amenity – Water Infrastructure assets are clean and free from debris	Customer service requests relating to stormwater catchpits being blocked and the water quality of Torrens Lake and Park Lands creeks	2022 – 59 requests Past 4 years average - 47/year	Expected to remain the same
		Customer satisfaction survey results relating to the cleanliness of Karrawirra Pari/River Torrens and Park Lands watercourses	94%	Expected to remain the same
		Customer satisfaction survey results relating to River Torrens, creeks and Park Lands Water Courses water quality supporting aquatic plants and animals	71%	Expected to remain the same
	Confidence levels		**Medium**	**Medium**
Function	Fit for Purpose - Water Infrastructure provides required level of service for the intended purpose and meets community needs	Customer service requests relating to stormwater ponding and flooding	2022 – 28 requests Past 4 years average - 24/year	Expected to decrease as stormwater pipes and catchpits are renewed to required service standards
		Customer satisfaction surveys relating to properties being safe from flooding	93%	Expected to decrease as stormwater pipes and catchpits are renewed to required service standards
Capacity	Capacity – Water Infrastructure network has adequate capacity to meet the expectations of residents	Customer service requests relating to new Water Infrastructure	Not currently measured	Subject to Council adoption of upgrade/new projects through Business Plan and Budget
	Confidence levels		**Medium**	**Medium**

3.5 Technical Levels of Service

To deliver the customer values, and impact the achieved Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

Technical service measures are linked to the activities and annual budgets covering:

- **Acquisition** – the activities to provide a higher level of service (e.g. widening a road, sealing an unsealed road, replacing a stormwater pipe with a larger size) or a new service that did not exist previously (e.g. a new library)
- **Operation** – the regular activities to provide services (e.g. opening hours, cleansing, mowing grass, energy, inspections, etc
- **Maintenance** – the activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life (e.g. road patching, unsealed road grading, building and structure repairs)
- **Renewal** – the activities that return the service capability of an asset up to that which it had originally provided (e.g. road resurfacing and pavement reconstruction, stormwater pipe replacement and building component replacement)
- **Disposal** – the activities to remove and/or dispose of an asset that may be considered as underperforming, underutilised or obsolete

Service and asset managers plan, implement and control technical service levels to influence the service outcomes.[3]

Table 3.5 shows the activities expected to be provided under the current 10 year Planned Budget allocation, and the Forecast activity requirements being recommended in this Asset Management Plan.

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

[3] IPWEA, 2015, IIMM, p 2|28.

Table 3.5: Technical Levels of Service

Lifecycle Category	Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance	Recommended Performance
Acquisition (upgrade/new)	Upgrade / New Projects	To upgrade and further develop the water infrastructure network to ensure it is safe, fit-for-purpose and meets the needs of the community	Delivery of key upgrade/new projects	Upgrade/new projects aligned to Strategic Plan objectives are initiated through the Business Plan and Budget process on an annual basis, where projects are evaluated and prioritised based on strategic alignment and financial capacity.	Upgrade/new projects aligned to Strategic Plan objectives are informed by the Stormwater Management Plan, with financial requirements accommodated into the Long-Term Financial Plan. Initiatives are confirmed to proceed annually through the Business Plan and budget process.
			Budget:	As adopted annually in BP&B	To be developed
Operation	Condition Audits	To collect asset condition data to inform capital renewal planning and revaluation	Condition audit of Water Infrastructure assets	Every 4 years	Every 4 years
	Stormwater Pipe Cleaning	To ensure pits and pipes are clean and free of debris to remain operable	Frequency of stormwater pit and pipe cleaning	As required following customer service requests Seasonal cleaning at critical locations with high leaf fall litter	To be reviewed with planned updates to operations and maintenance standards
	Open Channel Cleaning	To ensure open channels are clean and free of debris	Frequency of open channel cleaning	Inspected annually and cleansed as required	To be reviewed with planned updates to operations and maintenance standards
	Gross Pollutant Trap (GPT) waste removal	To ensure GPT's can continue to perform their function efficiently	Frequency of GPT waste removal	Inspected approximately every 6 months, with waste removed as required.	To be reviewed with planned updates to operations and maintenance standards
	Water Quality Testing for Torrens Lake	To ensure water quality in Torrens Lake meets minimum standards as guided by SA Health to allow management of the Torrens Lake below SA Health threshold triggers for primary or recreational secondary contact To keep track of blue-green algae levels ensuring the correct levels are maintained in the Torrens Lake. Water quality data is shared with relevant authorities to aid in decision making	Frequency of testing	Summer Program – Weekly programme Rest of the year – Monthly programme	To be reviewed with planned updates to operations and maintenance standards
	Non-Potable Water Testing	To ensure infrastructure is operated and managed in accordance with legislative requirements	Frequency of testing	Annual inspections are undertaken by a certified plumber for the backflow device	Annual inspections are undertaken by a certified plumber for the backflow device
			Budget	Condition audits: $140k/average every 4 years Stormwater cleaning: $420k/year Water quality testing: $200k/year	To be reviewed with planned updates to operations and maintenance standards

Lifecycle Category	Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance	Recommended Performance
Maintenance	Maintenance Audits	To ensure Water Infrastructure asset defects are proactively identified prior to faults occurring.	Frequency of maintenance inspections for water infrastructure assets	Water infrastructure maintenance inspections are undertaken following the identification of a deficiency through general parklands and street inspections and customer service requests	To be reviewed with planned updates to operations and maintenance standards
	Maintenance Activities	To ensure water infrastructure is maintained in a serviceable condition to ensure it remains operable and free of hazards	Completion of planned and reactive maintenance	Maintenance works are delivered based on priority (location and severity) with consideration of available budget	To be reviewed with planned updates to operations and maintenance standards
			Budget	Water Infrastructure maintenance: $734,000	To be reviewed with planned updates to operations and maintenance standards
Renewal	Renewal Projects	To ensure assets are renewed, providing service in line with community expectations at lowest lifecycle costs	% of assets in condition 4 & 5	Condition 4 – 16% Condition 5 - 1%	Condition 4 less than 10% Condition 5 0%
			Asset renewal funding ratio	90% (existing Asset Management Plan)	100% (assuming budget is adopted)
			Budget	$5,182,156	*$12,597,000 (10 Year Average)*
Disposal	Disposals Projects	To ensure that assets that may be underperforming, underutilised or obsolete are removed from service	Disposal of assets	Major assets are recommended for disposal through Council decision, with financial requirements identified and incorporated through the Business Plan and Budget	Major assets are recommended for disposal through Council decision, with financial requirements identified and incorporated through the Business Plan and Budget
			Budget	As adopted annually in BP&B	As adopted annually in BP&B

4.0 FUTURE DEMAND

4.1 Demand Drivers

The drivers affecting demand on assets include population change, regulations, changes in demographics, seasonal factors, vehicle ownership rates, consumer preferences and expectations, technological changes, economic factors, and environmental impacts.

4.2 Demand Forecasts

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented.

4.3 Demand Impact and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.3.

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can also include non-asset solutions with a focus on providing the required service without the need for the organisation to invest in new or upgraded infrastructure. Management actions could include reducing the demand for the service or educating users around alternative options. It is important to ensure that these strategies consider the associated risks and consequences.

Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this Asset Management Plan.

Table 4.3: Demand Management Plan

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
City Growth	2021 Statistics: Residents - 25,551 Businesses – 11,519 Daily Visitors – 321,500	2041 Forecast: 46,000 residents 2036 Target: 50,000 residents Anticipated ongoing business growth in line with residential city growth and South Australian State growth projections Anticipated daily visitor growth in line with South Australian State growth projections	City growth will result in an increased urban density and a reduction in pervious areas, placing increasing demands and capacity requirements for our water infrastructure assets.	Delivery of prioritised upgrade/new projects identified in the Strategic Plan and key Corporate planning documents (referenced in Section 2.1) to enhance the water infrastructure and accommodate city growth through upgrading existing assets and creating new assets to align service provision with the evolving needs of the community. This Asset Management Plan will ensure asset renewals will consider and align where practical with these key upgrade/new initiatives. Finalise the Stormwater Management Plan to identify key priority upgrade projects that will improve the City's overall flood resiliency.
Changing Demographic	2021 Statistics 0 to 11 Years 1,246 (5%) 12 to 17 Years 587 (2%) 18 to 34 Years 12,117 (51%) 35 to 49 Years 4,409 (19%) 50 to 59 Years 2,281 (10%) 60 to 69 Years 2,233 (10%) 70 Years & Above 2,633 (3%)	2041 Forecast 0 to 11 Years 2,633 (6%) 12 to 17 Years 1,501 (3%) 18 to 34 Years 21,771 (47%) 35 to 49 Years 8,933 (19%) 50 to 59 Years 4,272 (9%) 60 to 69 Years 3,274 (7%) 70 Years & Above 4,175 (9%)	Changing expectations from a demographically diverse customer base will result in our Water Infrastructure, particularly natural water assets within the Park Lands, being subject to new demands.	Ongoing engagement with city users through annual City User Profile surveys, and ensuring that Strategic Documents are updated on a cyclic basis to reflect changes with community expectations. Delivery of prioritised upgrade/new projects identified in the Strategic Plan and key Corporate planning documents (referenced in Section 2.1) to align service provision with the evolving needs of the community. This Asset Management Plan will ensure asset renewals will consider and align where practical with these key upgrade/new initiatives.
Tourism & Event Growth	A key objective in Council's 2023-24 Business Plan and Budget was to provide 'year round' events that attract people to visit the City. Investment in public infrastructure has also been identified as part of the South Australian Tourism Plan (2020) and the SA Visitor Economy Sector Plan 2030. In 2020 annual tourism expenditure in Adelaide was estimated to be approximately $3.9 billion	Cultural and event infrastructure will be an ongoing and increasing priority for both the City of Adelaide and South Australian State Government. It is projected that annual tourism expenditure will continue to grow and it is estimated to be $7.7 billion/year by 2030.	There will be increasing demands for higher levels of service for water infrastructure to support tourism and event growth. This could include improving the amenity of Torrens Lake as well as additional sewer and water distribution systems to facilitate new permanent event sites.	Delivery of prioritised upgrade/new projects identified in the Strategic Plan and key Corporate planning documents (referenced in Section 2.1) to support tourism and event growth. This Asset Management Plan will ensure asset renewals will be consider and align where practical with these key upgrade/new initiatives.

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Environmental Sustainability & Carbon Neutrality	Changes to the global climate (climate change) are clear. There are documented increases in the average air and ocean temperature, widespread melting of snow and ice, and rising average sea levels. City of Adelaide's 2020-2024 Strategic Plan has an objective to become one of the world's first carbon neutral cities by 2025. Additionally, a Climate Action Plan (2022-2025) has been developed to ensure we continue to drive down our carbon footprint and mitigate climate impacts for our residents and visitors. Currently City of Adelaide include recycled materials in Water Infrastructure projects, where there is demonstrated environmental benefits that also consider cost and performance.	Inaction to climate change and climate risk will result in negative health impacts to our community and potentially impact to our businesses and economy. Reduced water availability and increasing heat will result in increased stress and resources required for maintaining and operating our assets. To effectively manage climate change and climate risk Council will need to continue to respond through substantial reductions in greenhouse gases (mitigation controls) and helping to prepare for and respond to the changing climate (adaptation controls).	There will be an increased demand to ensure we utilise more environmentally sustainable materials and construction techniques for water infrastructure projects, with lower carbon footprint and improved circular economy outcomes. It is anticipated that additional new and upgraded water infrastructure will be required to improve stormwater runoff that is discharged into the River Torrens and Park Lands Open channels.	Our Strategic Planning, Asset Management and Project Delivery (including design and procurement) will continue to focus on ensuring that climate risk mitigation and adaption is a key focus. Ongoing reviews and updates to our design standards and technical specifications to ensure our assets transition towards having a lower carbon footprint with improved circular economy outcomes, as well as ensure they are more resilient to withstand extreme weather events. Finalise the Stormwater Management Plan to identify key priority upgrade projects that will improve water quality for the Karrawirra Pari/River Torrens and Park Lands watercourses. Finalise the Adelaide Park Lands Strategic Water Resources Study to identify key initiatives to enable sustainable water resource planning for current and future demands. Finalise the Water Sensitive Urban Design (WSUD) Priority Investment Study to identify key priority upgrade projects that will improve the quality of stormwater runoff that is discharged into natural water courses. Delivery of prioritised upgrade/new projects identified in the Strategic Plan and key corporate planning documents (referenced in Section 2.1), which support environmental sustainability and climate risk mitigation and adaptation. This Asset Management Plan will ensure asset renewals will consider and align where practical with these key upgrade/new initiatives.
Emerging Technology	Asset construction techniques and associated materials are currently undertaken in line with industry standards	Alternative construction techniques and materials with durability and sustainability benefits will continue to become more readily available and standardised.	Improvements in construction techniques and materials could result in improved asset durability, increased asset lifespans, reduced whole-of-life costs and improved environmental outcomes.	Continue to partner with industry, to monitor and evaluate new and emerging technologies, with trials of new materials, approaches, and methodologies to inform appropriate changes to standards and practices.
	Asset management systems and condition audit methodologies are in line with industry standards and best practice.	Asset management systems and technology will continue to evolve over time, particularly with respect to the collection of condition data and monitoring of asset deterioration over time.	Improved asset information and systems will enable improved decision making and efficiencies with respect to optimising whole-of-life-costs and managing asset risks.	

Legislation & Regulation	Legislation exists which outlines requirements for how Council's must manage infrastructure assets.	There is potential for future changes to legislation will influence how Council's infrastructure is managed.	New legislation may impose or require changes to asset management planning principles and activities. They may include requirements that have a financial and/or service level impact that must be met.	Continue to monitor changes to legislation and ensure appropriate adaptation into asset management practices. Any material impacts would be considered as part of the Annual Business Plan and Budget process and included in the next revision of the Asset Management Plan.

4.4 Asset Programs to meet Demand

The new assets required to meet demand will be acquired, donated or constructed. Additional assets are discussed in Section 5.4.

Acquiring new assets will commit City of Adelaide to ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs.

All upgrade/new projects responding to demand will involve developing business cases, cost estimates and facilitating decision making to integrate upgrade/new project initiatives with operational asset management planning and the Long-Term Financial Plan. This process will be facilitated with Council and the Community through the Annual Business Plan & Budget Process.

4.5 Climate Change Adaptation

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. In the context of the Asset Management Planning process climate change can be considered as both a future demand and a risk.

How climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which we respond and manage those impacts. As a minimum we consider how to manage our existing assets given potential climate change impacts for our region.

Risk and opportunities identified to date are shown in Table 4.5

Table 4.5 Managing the Impact of Climate Change on Water Infrastructure Assets and Services

Climate Change Description	Projected Change	Potential Impact on Assets and Services	Management
Increasing temperatures and more frequent, long-running and intense heatwaves	The number of days over 40°C to double by 2050 Average temperatures to increase across all seasons by between 1.5°C and 2°C by 2050	Increased heat related damage to assets including concrete cracking. Reduced lifespan of water infrastructure assets Increased costs to provide the same level of service Premature obsolescence as functionality is not met	Strategic Planning, Asset Management and Project Delivery (including design and procurement) will continue to focus on ensuring that climate risk mitigation and adaption is a key focus. Mitigation and adaptation measures will include: • Ongoing reviews and updates to our design standards and technical specifications to ensure our assets transition towards having a lower carbon footprint with improved circular economy outcomes as well as ensure they are more resilient to withstand extreme heat events • Proactively reviewing our asset management strategies with respect to the impacts of climate change, to ensure we continue to provide the agreed level of service at the lowest lifecycle cost
Less rain overall but more intense storms and flooding	Average annual rainfall to decrease by 7% by 2050 Intensity of heavy rainfall events to increase by at least 10% by 2050	Increased stormwater related damage to assets including earth, rubble and concrete erosion resulting in a loss of structural integrity/strength Reduced lifespan of water infrastructure assets Increased costs to provide the same level of service Premature obsolescence as functionality is not met (e.g. open channel capacity does not meet demand)	Strategic Planning, Asset Management and Project Delivery (including design and procurement) will continue to focus on ensuring that climate risk mitigation and adaption is a key focus. Mitigation and adaptation measures will consider: • Ongoing reviews and updates to our design standards and technical specifications to ensure our assets transition towards having a lower carbon footprint with improved circular economy outcomes as well as ensure they are more resilient to increased flood risk and inundation • Proactively reviewing our asset management strategies with respect to the impacts of climate change, to ensure we continue to provide the agreed level of service at the lowest lifecycle cost • Developing stormwater management plans to identify assets at risk and priority mitigation controls such as upgrading existing underground assets and creating new assets such as wetlands and detention basins to increase water storage capacity

The impact of climate change on assets is a new and complex discussion and further impacts and management strategies will considered and developed in future revisions of this Asset Management Plan. It is recommended to continue monitoring the impacts of climate conditions and associated cost implications as further investigation is undertaken and more data becomes available. This is included as a key action within this Asset Management Plans Improvement Plan.

5.0 LIFECYCLE MANAGEMENT PLAN

5.1 Lifecycle Management Overview

In order to effectively manage our assets, it is important to understand the relationship between all stages of the asset lifecycle. Effective asset management and sustainable financial planning requires a balance between the maintenance, renewal and disposal of existing assets and the delivery of new and upgraded assets.

Our goal is to provide assets that service the needs of the community, providing the agreed levels of service at the lowest lifecycle cost. To enable this, it is important to understand:

- How our assets are performing
- How our assets should be operated and maintained
- When our assets should be renewed
- When we should consider upgrading existing assets or constructing new assets
- How funding for new and upgraded assets is prioritised
- When we should consider disposing underperforming or underutilised assets

An overview of the asset lifecycle is shown in Figure 5.1 below:

Figure 5.1: Asset Lifecycle Overview

The lifecycle management plan details how CoA plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) while managing life cycle costs.

5.2 Background Data

5.2.1 Physical parameters

The assets covered by this Asset Management Plan are shown in Table 5.2.1 and all figure values are shown in current day dollars.

Table 5.2.1: Assets Covered by this Plan

Asset Category	Asset Type	Quantity/Dimension	Replacement Value
Underground Stormwater Drainage Network	Stormwater Pits	3927 assets	$26.56 million
	Stormwater Junction Boxes	1800 assets	$17.22 million
	Stormwater Pipes	137.7 km	$144.05 million
	Stormwater Culverts	217 assets	$4.52 million
Stormwater Management Devices	Detention basins	16 assets	$6.80 million
	Bio-retention basins	1 asset	$0.18 million
	Gross Pollutant Trap	17 assets	$4.05 million
River Torrens and Park Lands Water Courses	Earth retaining structures	48 assets	$31.72 million
	Open channels and creeks	7.8 km	$9.59 million
	Weirs	3 assets	$35.12 million
Potable and Non Potable Water Distribution	Potable Water Distribution	3 locations	$0.77 million
	Non Potable Water Distribution	1 location	$0.36 million
Sewer	Sewer	3 locations	$1.17 million
Total			$282.11 million

5.2.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available. However, there are insufficient resources to address all known deficiencies. Locations where deficiencies in service performance are known are detailed in Table 5.2.2.

Table 5.2.2: Known Service Performance Deficiencies

Asset / Location	Service Deficiency
Underground Drainage Network	Since our underground drainage network was first constructed, the City has developed significantly resulting in increased impervious areas and increased volumes of stormwater being discharged onto our roads. This has placed higher demands on our underground drainage network to capture this surface runoff and remove it from our streets. A number of our aged stormwater pipes no longer have the required capacity to service these increased demands and will need to be replaced with larger pipes. The Stormwater Management Plan (scheduled for completion 2026) will enable us to better understand the existing performance of the underground drainage network and identify key priority locations to address performance deficiencies.

Torrens Weir	The Torrens Weir is an aging asset, originally constructed in 1881 with sluice gates added in 1929. The asset is approaching the end of its useful life and is planned for renewal/rehabilitation within this Asset Management Plan. A lifecycle study and options analysis is currently underway, which will guide the future management of the asset and inform updates to the forecast timing and costs of required renewal works.
River Torrens	The River Torrens is subject to environmental and biological pollutants including sedimentation deposits, duckweed overgrowth and cyanobacteria (blue-green algae) blooms. Upstream sedimentation loads result in silt deposits which build up over time and impact lake operations. Cyclic dredging is required to remediate these deficiencies. Torrens Lake is at times subject to duckweed overgrowth caused by still and warm weather. While having a significant benefit to water quality and no associated public health risks, excessive levels of aquatic vegetation in the Torrens can impact the activities of licensed users. During the summer months, Torrens Lake can experience cyanobacteria blooms, where in some instances it becomes necessary to close the lake to safeguard the health of rowing and boating activities and restrict human contact. To ensure cyanobacteria blooms do not result in more serious outbreaks, the City of Adelaide and the Torrens Lake Cyanobacteria Advisory Committee (TLCAC) chaired by Green Adelaide, regularly monitor the water quality during the summer period (December to March). While it is challenging to prevent these blooms, currently the most efficient way for managing cyanobacteria blooms below the SA Health threshold is releasing water from the Kangaroo Creek Reservoir, which upon flowing downstream, helps cool, disperse and dilute the cyanobacteria levels in the lake.
Creeks & Open Channels	Some of our Park Lands Creeks and Open Channels have insufficient capacity to meet required stormwater flows, with deep vertical banks at some locations and erosion undermining tree roots in particular locations. Some open channels transport large sediment loads and are prone to blockage by debris from upstream catchments and the Park Lands. The deficiencies at these locations are well understood and are planned to be addressed through this Asset Management Plans renewal program.

5.2.3 Asset condition

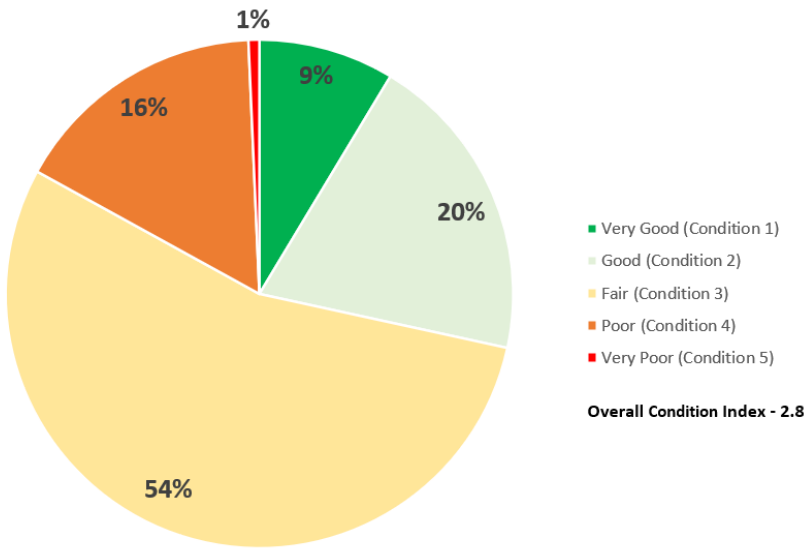
Condition is measured using a 1 - 5 grading system as detailed in Table 5.2.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the Asset Management plan results are translated to a 1 – 5 grading scale for ease of communication.

Table 5.2.3: Condition Grading System

Condition Grading	Description of Condition
1	**Very Good**: free of defects, only planned and/or routine maintenance required
2	**Good**: minor defects, increasing maintenance required plus planned maintenance
3	**Fair**: defects requiring regular and/or significant maintenance to reinstate service
4	**Poor**: significant defects, higher order cost intervention likely
5	**Very Poor**: physically unsound and/or beyond rehabilitation, immediate action required

Water Infrastructure assets are typically condition audited every 4 years, with the most recent condition audit undertaken in 2020. It is important to note that condition audits of underground drainage assets have historically been undertaken through partial network audits as they are considered long-life, low risk assets. Figure 5.2.3 presents the predicted Water Infrastructure condition distribution as of November 2023. Overall, the current condition of our Water Infrastructure assets are rated in a good to fair condition, with a combined overall condition index rating of 2.8. 83% of assets are rated in a very good to fair condition and 17% of assets are rated in poor or very poor condition, which will form the general basis of our renewal program priorities.

Figure 5.2.3: Network Condition Profile



It is important to note that the condition data for the underground stormwater network is considered to be of lower reliability. Network wide condition data is not available for all assets and age data has been utilised to forecast the estimated condition rating where no condition data is available. A comprehensive network wide condition audit is currently underway for the underground stormwater network, facilitated through external grant funding by the Federal Government through the Disaster Ready Fund (DRF), which will provide improved asset data for renewal modelling and analysis for the next revision of this Asset Management Plan. Once this condition audit is complete, with an accompanying asset revaluation, a comprehensive update to this Asset Management Plan will be undertaken.

5.3 Operations and Maintenance Plan

Operations include regular activities to provide services. Examples of typical operational activities include stormwater pipe and pit cleansing, removal of waste from gross pollutant traps, asset inspections and water quality testing.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include stormwater pipe and pit repairs. Requirements are informed by both customer service requests and proactive maintenance inspections.

Currently, maintenance activities are generally evaluated and prioritised with respect to annual budgets. This process is undertaken by experienced staff, where risk-based assessment and resource allocation considers the severity of the defect as well as its location. Any critical maintenance requirements that cannot be accommodated within exiting budgets are assessed through regular budget reviews to ensure resources are appropriately re-allocated.

Following the completion of this Asset Management Plan, we will be reviewing operations and maintenance standards for Water Infrastructure assets, with a view to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. This activity has been recognised as an action within the Improvement Plan of this Asset Management Plan (Chapter 8), where the associated financial impacts will need to be further considered in future revisions of this Asset Management Plan and the Long-Term Financial Plan.

Updated standards will document both maintenance intervention levels and response times. Intervention levels will document the criteria for actioning maintenance defects and response times will set targets that we aim to work within to repair defects. Typically, both of these elements will vary depending on the severity of the defect as well as its position/location within the asset hierarchy.

Monitoring whether maintenance activities are being delivered in accordance with the specified intervention levels and response times, will enable us to understand whether resourcing levels are sufficient. Where resourcing levels are identified as insufficient, additional budget requirements can be considered through the business plan and budget process, or intervention levels and response times can be adjusted with respect to budget constraints.

5.3.1 Maintenance Budget Trends

The trend in maintenance budgets for all water infrastructure assets over the past 4 years is shown in Table 5.3.1.

Table 5.3.1: Maintenance Budget Trends

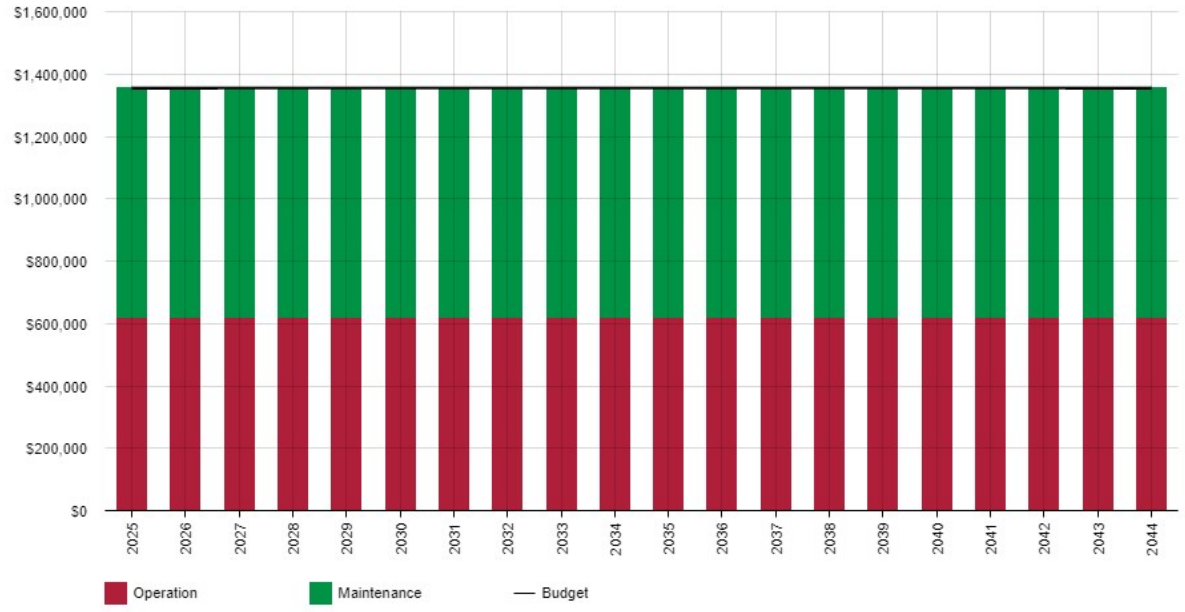
Year	Water Infrastructure
2020-21	$370,004
2021-22	$614,433
2022-23	$612,910
2023-24	$734,502

5.3.2 Summary of future operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease.

The forecast operations and maintenance costs for the water infrastructure assets, relative to the proposed operations and maintenance budgets are shown in Figure 5.3.2. Future revisions of this Asset Management Plan will further review forecast requirements based on updated operations and maintenance standards. All values are shown in current day dollars.

Figure 5.3.2: Operations and Maintenance Summary



5.4 Renewal Plan

Renewal is major capital work which does not significantly alter the original service provided by the asset, but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is considered to be an acquisition (new/upgrade) resulting in additional future operations and maintenance costs.

Asset renewal is typically undertaken to:

- Ensure ongoing reliability of existing infrastructure to deliver the service it was constructed to facilitate
- Ensure infrastructure is of sufficient quality to meet the service requirements
- Optimise whole-of-life costs, when maintenance activities are no longer economical

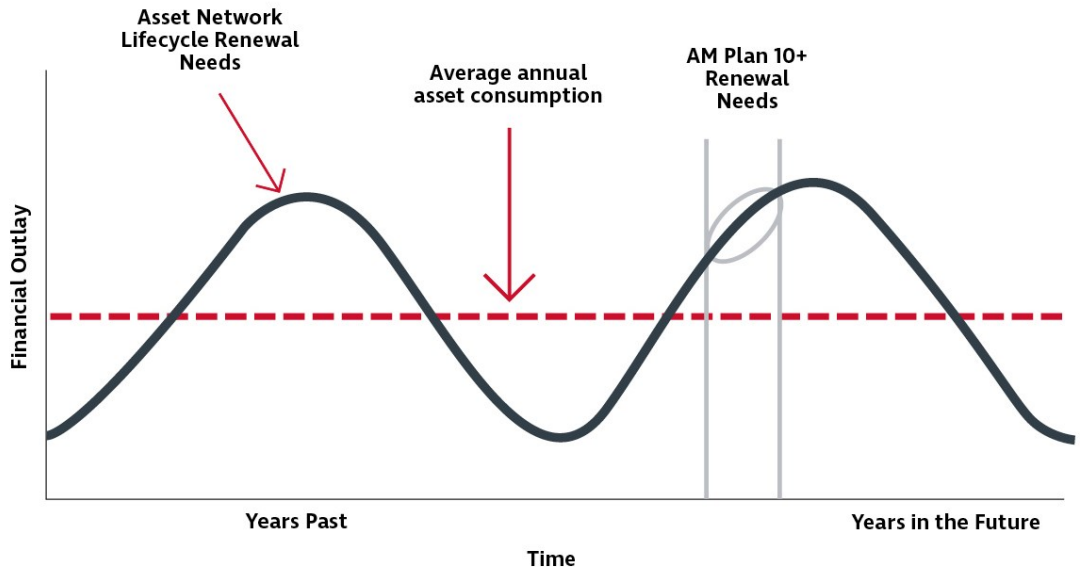
We are currently in the process of transforming the maturity of our Water Infrastructure asset management data. This includes improving the spatial data, asset condition information and asset attribute information utilised within this Water Infrastructure Asset Management Plan. This updated asset data will enable a more mature Water Infrastructure Asset Management Plan with a higher degree of confidence for the future requirements of the asset class. Following the completion of these improvements this Asset Management Plan will be comprehensively updated, utilising predictive deterioration modelling to improve renewal forecasting and overall asset management practices.

This interim AM Plan's renewal strategy aims to minimise the number of assets that deteriorate into a poor condition and prohibit assets reaching a very poor condition. In addition to condition-based renewal interventions, this asset management plan also forecasts service /capacity-based renewal interventions to address known performance deficiencies (i.e. where pipe sizes and side entry pit inlet capacity are not sufficient to manage stormwater runoff) at strategic locations where streetscape upgrades are being undertaken (e.g. Main Street Revitalisation Projects) as well as significant road renewal projects. Assets can generally be cost effectively maintained and provide appropriate levels of service up to a fair condition, however assets in poor and very poor condition have higher risk profiles and maintenance treatments are generally not economical. This strategy ensures we can continue to provide services in line with the community's expectations, appropriately manage risk and optimise whole-of-life costs.

Asset renewal planning is undertaken with a holistic and integrated approach, to ensure consideration is given to asset functionality, adjacent assets and Council's higher-level strategic objectives (e.g. new and upgrade requirements). This allows capital works programming to be optimised through the development of logical works packages, that provide value to the community.

It is important to understand that infrastructure networks are comprised of assets with varying age profiles and different useful lives and replacement costs. This results in having to replace more assets in some periods when compared with others and means that it's very unlikely that asset renewal needs will be consistent over time. Figure 5.4-1 highlights a typical scenario of varying asset renewal expenditure requirements over the asset lifecycle.

Figure 5.4-1: Asset Network Lifecycle Renewal Needs



To account for fluctuations in asset lifecycle renewal needs and enable efficient resourcing planning, often there will be a need to smooth out expenditure requirements over multiple years through a combination of deferring renewal (where appropriate) and bringing scheduled works forward.

At times, this may result in a small number of assets exceeding prescribed renewal intervention criteria~~,~~ requiring projects to be prioritised with respect to available budget. It is possible to prioritise renewals by identifying assets or asset groups that:

- Have a higher consequence of failure
- Have higher usage and the subsequent impact on users would be more significant
- Have higher than expected operational and maintenance costs

Prioritisation criteria used to inform the renewal forecasts within this Asset Management Plan include:

- Compliance with current legislative requirements
- Alignment with Strategic Plan objectives and corporate strategies
- Alignment with Main Streets projects and major road renewal projects to address capacity deficiencies
- Asset condition
- Asset hierarchy and criticality
- Cost effectiveness of maintenance investment
- Financial capacity and sustainable financial management principles
- Council decisions
- Community interest

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 5.4. Asset useful lives were last reviewed in 2023.

Table 5.4: Useful Lives of Assets

Asset Class	Asset Type	Intervention Level	Useful Life (Years)
Underground Stormwater Drainage Network	Stormwater Pits	4.5	125
	Stormwater Junction Boxes	4.5	125
	Stormwater Pipes	4.5	125
	Stormwater Culverts	4.5	125
Stormwater Management Devices	Detention Basins	4	80
	Bioretention Basins	4	80
	Sedimentation basins	4	80
	Gross Pollutant Traps	4	40
River Torrens & Park Lands Water Courses	Torrens Weir Components	4	100*
	Earth retaining structures	4	100
	Concrete Open Channel	4	100
	Natural Open Channel	4	80
Potable Water Distribution	uPVC Pipes	4	50
	Pump Station	4	40
Non Potable Water Distribution	uPVC Pipes	4	50
	Pump Station	4	40
Sewer Infrastructure	Sewer Rising Main	4	50
	uPVC pipes	4	50
	Pump Station	4	40

* Estimated useful life for the whole structure, note there are shorter useful lives for minor components

5.4.1 Summary of Future Renewal Costs

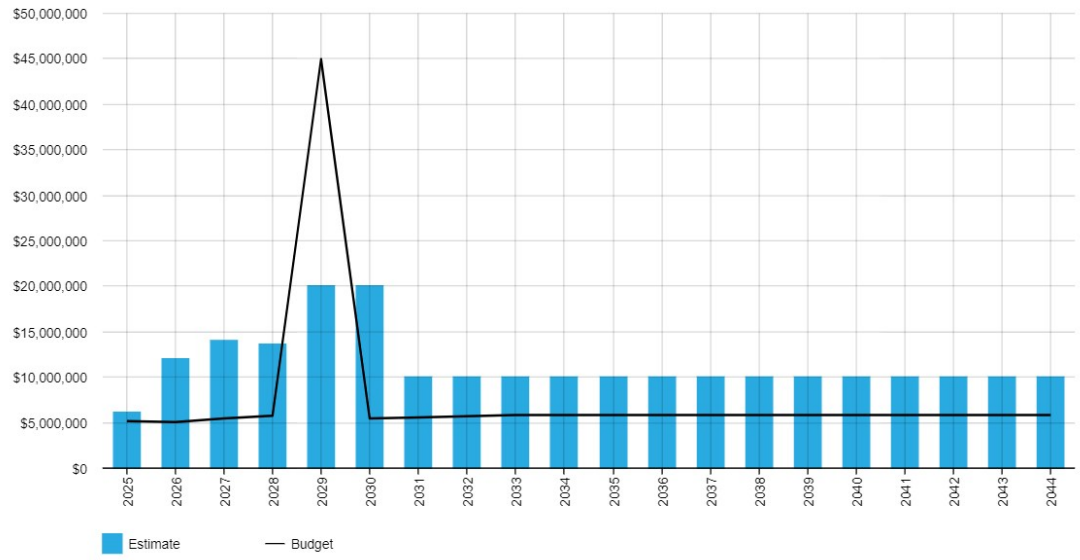
The recommended asset renewal strategy aims to minimise the number of assets that deteriorate into condition 4 (target less than 5%) and prohibit condition 5 (target 0%) based on our current understanding of the condition of the stormwater network. In addition to condition-based renewal interventions, this asset management plan also forecasts service /capacity-based renewal interventions to address known performance deficiencies at strategic locations where streetscape upgrades are being undertaken (e.g. Main Street Revitalisation Projects). To enable this, an increase in renewal funding to $6.2 million, $12.0 million, $14.1 million, $13.7 million, is required over the first four years. For years 5-20, the AM Plan forecasts the renewal of the Torrens Weir (years 5 and 6), as well as provides a forecast average renewal funding provision of $6 million/year based on the condition of assets, and a forecast funding provision for capacity-based renewals for anticipated future stormwater works required to be delivered in conjunction with streetscape upgrades of $4 million/year.

Torrens Weir will be a key priority within this Asset Management Plan, as condition monitoring has identified the aging structure (constructed in 1881) is approaching the end of its useful life. Within the next 10 years significant capital works will be required to either rehabilitate or replace the asset. Through the development of this Asset Management Plan, it has been recognised that it is appropriate to forecast the costs of these major works over two financial years.

For preliminary planning purposes, renewal forecasts have assumed the full replacement of the Torrens Weir, however a lifecycle study and options analysis is currently being undertaken to inform recommendations to finalise the scope, cost and timing of capital works moving forward. The options analysis will consider capital costs, intended lifespan and durability, operational and maintenance costs, heritage retention and current and hydraulic risk. Revision of asset renewal forecasts following the completion of the options analysis has been recognised as a key action within the Improvement Plan (Chapter 8).

The projected 20-year renewal forecast compared against the current Long-Term Financial Plan budget allocation for the Water Infrastructure is shown in Figure 5.4.1 below (note: all figure values are shown in current day dollars). When comparing the forecast renewal costs against the existing budget allocation (black line), it is evident that there is a funding shortfall and additional funding is required to address the renewal backlog and maintain current levels of service.

Figure 5.4.1: Forecast Renewal Costs



Not funding the shortfall will result in the health of the Water Infrastructure to continue steadily decreasing over time, resulting in increased whole-of-life costs, risks of asset failure and service deficiencies that cannot be rectified through maintenance resources.

5.5 Acquisition of Assets (New & Upgrade)

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, demand, social or environmental needs. Assets may also be donated to the City of Adelaide.

Opportunities for acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, initiatives identified within strategic plans and corporate strategies as well as partnerships with third parties (e.g. State Government and Developers).

Potential new and upgrade works should be reviewed to verify that they are essential to City of Adelaide's needs and include analysis to understand ongoing operations, maintenance and renewal requirements to ensure that the services are sustainable over the longer term.

While this Asset Management Plan does not identify financial forecasts associated with new and upgrade projects, it does ensure required renewal scheduling is aligned (where practical) with key new and upgrade initiatives linked to our Strategic Plan through Integrated Delivery Planning.

Prioritisation and scheduling of new and upgrade works is currently undertaken on an annual basis through the business plan and budget process, where key prioritisation criteria include:

- Alignment with Strategic Plan objectives and corporate strategies
- Financial capacity and sustainable financial management principles
- Council decisions
- Asset functionality deficiencies
- Asset condition
- Compliance with current legislative requirements
- Community interest

The Resource Plan will provide a 4-year view of new and upgrade projects, resources, and budgets required to deliver our Strategic Plan objectives. It will inform the Long-Term Financial Plan and act as the key link between the Strategic Plan and Annual Business Plan & Budget.

Transformational new and upgrade projects will reference the Adelaide Design Manual that have allocated funding within the Resource Plan and Long-Term Financial Plan.

5.6 Disposal of Assets

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Disposal can be considered when an asset has been identified as underperforming, underutilised, or obsolete and does not provide value to the community.

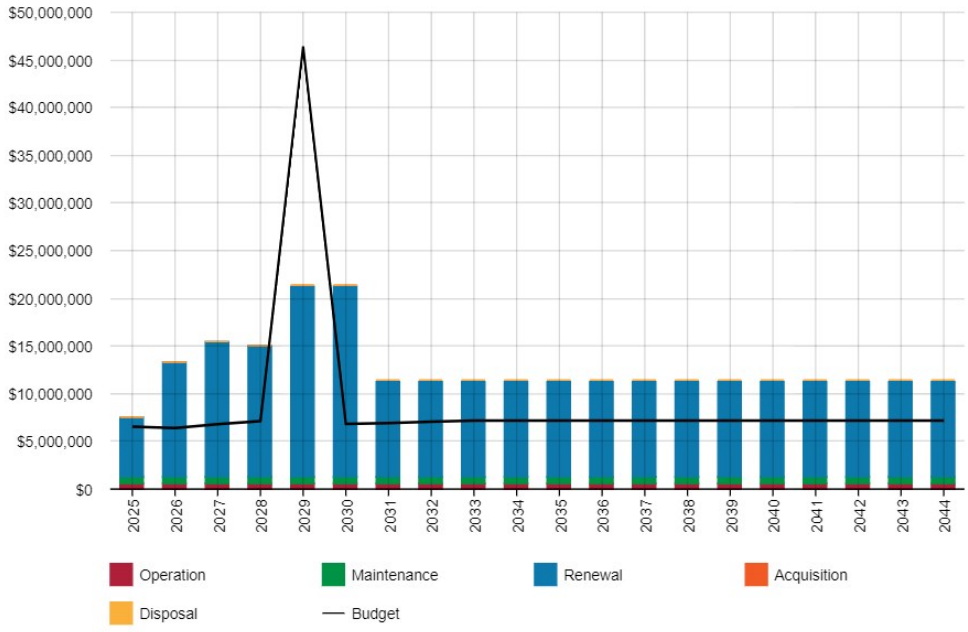
This Asset Management Plan does not identify financial forecasts associated with asset disposal, however where recommended, significant assets will be identified for decommissioning and disposal through Council Reports. To enable informed decision making, reports will include any anticipated impacts to service provision as well as financial impacts including disposal costs, revenue gained and estimated reductions in annual operations and maintenance expenditure that will be included into the Business Plan and Budget and Long-Term Financial Plan.

5.7 Summary of Asset Forecast Costs

The total financial projections from this Asset Management Plan are shown in Figures 5.7 below for each asset class. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimise the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is discussed in detail within sections 5.3 and 5.4.

Figure 5.7: Lifecycle Summary



6.0 RISK MANAGEMENT PLANNING

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'[4].

An assessment of risks[5] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarised in Table 6.1. Failure modes may include physical failure, collapse or essential service interruption.

Table 6.1 Critical Assets

Critical Asset(s)	Failure Mode	Impact
Torrens Weir	Failure of weir control system to maintain water level in the lake or failure of major structural components	Fatality and catastrophic damage to private and public infrastructure downstream as a result of flooding. Loss of amenity and recreational service provision within Torrens Lake. Environmental impacts to the River Torrens, both upstream and downstream of the weir, with detrimental effects to biodiversity
Earth retaining structures along the Karrawirra Pari/River Torrens	Structural failure of earth retaining structure causing bank instability	Public safety risks associated with failure of adjacent infrastructure such as footpath and lighting infrastructure. Restricted access resulting in disruption to the footpath network.
Torrens Lake	During the summer months, Torrens Lake can experience cyanobacteria (blue-green algae) blooms. If not proactively managed these can escalate into cyanobacteria outbreaks.	Contaminated water, subjecting the public to potential health risks. Restricted access to Torrens Lake impacting the activities of licensed users (e.g. Popeye and Rowing Clubs)

[4] ISO 31000:2009, p 2

[5] REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

Critical Asset(s)	Failure Mode	Impact
Torrens Lake	Upstream sedimentation loads resulting in silt deposits which build up over time	Restricted access to Torrens Lake impacting the activities of licensed users (e.g. Popeye and Rowing Clubs)
Stormwater Trunk Drains	Structural failure of trunk drain	Public safety risk for road users. Significant disruption to the road network Trunk drain becomes inoperative, resulting in flood risk to the broader catchment.
Sewer Infrastructure	Failure of pump and pipes	Public health risks associated with discharge of effluent into public areas.
Road Culverts	Structural failure of culvert	Public safety risks to road users Significant disruption to the road network Road culvert becomes inoperative, resulting in flood risk to the broader catchment

By identifying critical assets and failure modes an organisation can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

6.2 Risk Assessment

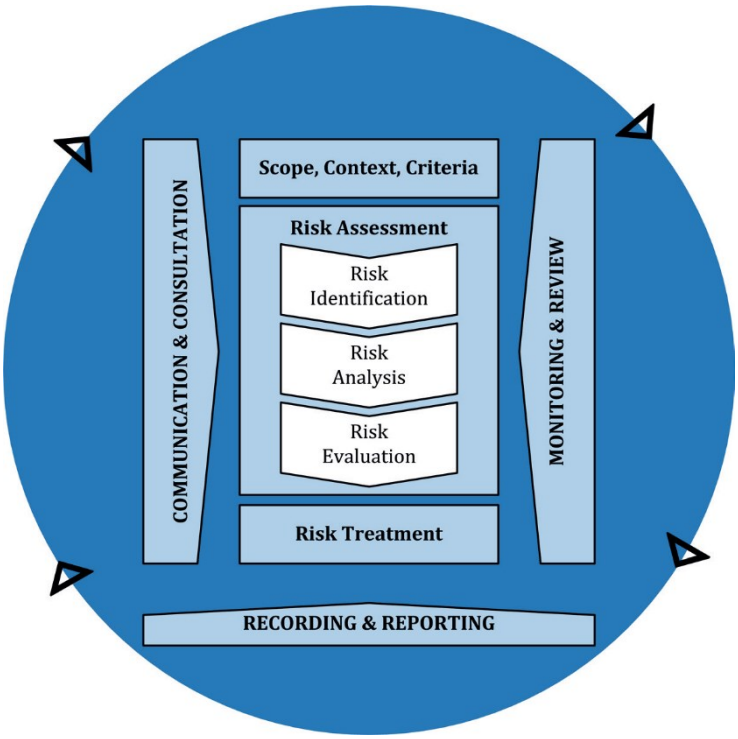
The risk management process used is shown in Figure 6.2 below.

It is an analysis and problem-solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

The process is based on the fundamentals of International Standard ISO 31000:2018.

Fig 6.2 Risk Management Process – Abridged

(Source: ISO 31000:2018, Figure 1, p9)



The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Extreme' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2. It is essential that these critical risks and costs are reported to management and the Strategic Risk and Internal Audit Group (SRIA).

Table 6.2: Risks and Treatment Plans

Asset at Risk	What can Happen	Risk Rating	Risk Treatment Plan	Residual Risk	Treatment Cost
All Water Infrastructure Assets	Renewal, maintenance, and operational budgets are not adopted as recommended in Asset Management Plan, resulting in increased asset risk, reduced levels of service and increased whole of life costs	High	Reduce levels of service, to better align asset management activities with financial constraints. This will result in renewal and maintenance activities being prioritised, with respect to available budgets.	Medium	Within existing resources / budgets
	Increasing demands placed on the water infrastructure network, with growing populations and increased development contributing to increased overall stormwater runoff due to increase in overall impervious areas.	High	Engage with the community and develop a Stormwater Management Plan (SMP) to establish a long-term vision for the Water Infrastructure Network Delivery of prioritised upgrade/new projects identified within the SMP to enhance the water infrastructure network and accommodate city growth through upgrading existing assets and creating new assets to align service provision with the evolving needs of the community.	Medium	Within existing resources / budgets Upgrade/new projects are considered as part of the Annual Business Plan & Budget
	CoA do not have the financial capacity to undertake all recommended upgrades in conjunction with asset renewal projects to address functionality deficiencies and strategic objectives.	High	Upgrade opportunities associated with significant renewal projects are discussed with Council on an annual basis through the Business Plan and Budget Process. Prior to allocating resources to detailed design and construction activities, concept design options are developed with cost estimates and presented to CoA's Senior Leadership Team, to confirm project priority in conjunction with the recommended scope and timing of works.	Medium	Upgrade/new projects are considered as part of the Annual Business Plan & Budget
	Compromised decision making caused by insufficient asset information	High	Continue to regularly collect and update asset condition and financial information in our asset management system, to inform sound decision making. Undertake predictive scenario modelling to effectively communicate the relationship between cost, level of service and risk to inform asset management strategies.	Medium	Within existing resources / budgets
	Accelerated asset deterioration and technical obsolescence, resulting in assets requiring renewal earlier than scheduled within Asset Management Plan.	High	Undertake regular condition audits and routine maintenance inspections to understand asset deterioration trends. Review emerging renewal priorities on a regular basis and update the 4-year renewal plan through the business plan and budget process on an annual basis as required.	Medium	Within existing resources / budgets
	Increasing operational and maintenance requirements and costs	High	Undertake routine maintenance inspections and maintenance planning to proactively identify financial risks associated with maintenance requirements to provide the agreed level of service. Review and update maintenance standards, intervention levels and response times following adoption of Asset Management Plan. Utilise established processes through the annual business plan and budget to submit a business case to re-forecast additional operational and maintenance costs.	Medium	Within existing resources / budgets

Asset at Risk	What can Happen	Risk Rating	Risk Treatment Plan	Residual Risk	Treatment Cost
All Water Infrastructure Assets	Gifted assets associated with developments are not constructed in accordance with CoA standards, resulting in potential hazards to public and/or premature asset failure and reduced useful life.	High	All third-party works require City Works Permits, to ensure works are delivered in accordance with City Works Guidelines and CoA standards. Additionally, where appropriate, infrastructure agreements are established with developers to ensure proposed works are designed and constructed in accordance with CoA standards. Defects and omission inspections are undertaken following the completion of works to ensure compliance with CoA standards and/or infrastructure agreement. Where defects are identified the developer is instructed to undertake required rectifications works.	Medium	Within existing resources / budgets
Torrens Weir	Failure of weir control system and/or major structural components causing flooding downstream, endangering public safety and causing catastrophic damage to properties , infrastructure and biodiversity	Very High	Regular engineering inspections and condition audit of the Weir. Lifecycle study of the weir is currently underway including, structural and stability assessment, assessment of the condition and performance of the mechanical and electrical equipment and operations for the weir control system, hydraulic assessment and a Dam Safety review in accordance with Australian National Committee on Large Dams (ANCOLD) guidelines. Proactive maintenance inspections and maintenance works are undertaken for the electrical and control systems	Medium	Within existing resources / budgets
Torrens Lake Earth Retaining Structures	Structural failure of earth retaining structure resulting in bank instability and public safety risks including footpaths and public lighting.	High	Cyclic condition audits to monitor the condition of assets. Annual reviews of the capital works program	Medium	Within existing resources / budgets
Torrens Lake	During the summer months, Torrens Lake can experience cyanobacteria (blue-green algae) blooms. If not proactively managed these can escalate into cyanobacteria outbreaks, subjecting the public to potential health risks and the requirement to restricted access to Torrens Lake.	High	City of Adelaide and the Torrens Lake Cyanobacteria Advisory Committee (TLCAC) chaired by Green Adelaide, regularly monitor the water quality during the summer period (December to March)	Medium	Within existing resources / budgets
Stormwater Trunk Drain	Structural collapse of stormwater drain resulting in public safety risks, significant disruption to the road network and the asset becoming inoperative causing flood risk to the broader catchment	High	Cyclic condition audits to monitor the condition of stormwater drains. Annual reviews of the capital works program	Medium	Within existing resources / budgets
Sewer Infrastructure	Failure of sewer distribution pipes, pumps and componentry, resulting in public health risks associated with discharge of effluent into public areas.	High	Proactive maintenance inspections and servicing Cyclic condition audits to monitor the condition of sewer infrastructure Annual reviews of the capital works program	Medium	Within existing resources / budgets
Road Culverts	Structural collapse of culvert resulting in public safety risks, significant disruption to the road network and the asset becoming inoperative causing flood risk to the broader catchment	High	Cyclic condition audits to monitor the condition of road culvert assets. Annual reviews of the capital works program	Medium	Within existing resources / budgets

6.3 Infrastructure Resilience Approach

The resilience of our infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions we need to understand our capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service.

Our current measure of resilience is shown in Table 6.3 which includes the type of threats and hazards and the current measures that the organisation takes to ensure service delivery resilience.

Ensuring we remain resilient to the impacts of projected future climate will require ongoing investigation, monitoring and adaption within future revisions of this Asset Management Plan. This has been recognised as a key action within the Improvement Plan (Chapter 8).

Table 6.3: Resilience Assessment

Threat / Hazard	Assessment Method	Current Resilience Approach
Increasing temperatures and more frequent, long-running and intense heatwaves	Data SA Climate Projections for South Australia Climate change modelling scenarios based on weather station data	Implementation key actions from the Climate Change Risk Adaptation Action Plan, which include: • Continuing to work with industry to identify new/superior products (or new applications) for application in CoA
Less rain overall but more intense storms and flooding	Data SA Climate Projections for South Australia Climate change modelling scenarios based on weather station data	Implementation of key actions from the Climate Change Risk Adaptation Action Plan, which include: • Continuing to work with industry to identify new/superior products (or new applications) for application in CoA • Developing a Stormwater Management Plan to understand current and future upgrade priorities to manage flood risk • Finalise the Adelaide Park Lands Strategic Water Resources Study to identify key initiatives to enable sustainable water resource planning for current and future demands

6.4 Service and Risk Trade-Offs

The decisions made in adopting this Asset Management Plan are based on the objective to achieve the optimum benefits from the available resources.

6.4.1 What we cannot do

Based on our current Long-Term Financial Plan budgets, there are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years.

Maintenance & Operations

Currently, maintenance activities are evaluated and prioritised with respect to available budgets. While make-safe treatments are always undertaken as soon practical (generally within 24 hours), we are currently unable to undertake all permanent repairs within the timeframes aligned with community expectations. Following the completion of this Asset Management Plan, we will be updating maintenance standards to formalise maintenance intervention levels and response times, with the objective of establishing an acceptable balance between cost, risk, and customer expectations.

This activity has been recognised as an action within the Improvement Plan of this Asset Management Plan (Chapter 8), where the associated financial impacts will need to be further considered in future revisions of this Asset Management Plan and the Long-Term Financial Plan.

Renewal

There is an estimated $3.11 million renewal funding shortfall on average per year over the next 10 years, to continue to provide services in line with community expectations and reduce whole-of-life costs.

Acquisition (New & Upgrade)

It will not be possible to deliver all new and upgrade initiatives identified within corporate strategies and action plans within the 10-year planning period. New and upgrade initiatives will be prioritised and assessed against key criteria (see section 5.5) and considered with respect to available budgets. This process will be undertaken in consultation with the community through the business plan and budget process and the development of the Resource Plan.

6.4.2 Service trade-off

If there is forecast work (operations, maintenance, renewal, acquisition or disposal) that cannot be undertaken due to available resources, then this will result in service consequences for users. These service consequences include:

- Reduced levels of service for the Water Infrastructure network (maintenance and renewal backlog)
- Reduced customer satisfaction levels associated with the management of our existing assets
- Intergenerational inequity (burdening future generations)

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Increased safety and property damage risks from stormwater flooding
- Increased safety risks associated with assets deteriorating beyond recommended intervention levels
- Increased environmental risks and associated reduction in amenity due to insufficient management of the Karrawirra Pari/River Torrens and Park Lands water courses including adjacent assets
- Increased reputational risks associated with services not aligning with community expectations
- Increased financial risks associated with additional maintenance requirements that cannot be accommodated within existing budgets
- Increased financial risks associated with higher renewal and/or rehabilitation treatments as asset renewals are not funded at the optimal point in time
- Increased economic risk associated with reduced business activity, events and tourism
- Intergenerational inequity (burdening future generations)

7.0 FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this Asset Management Plan. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

7.1 Financial Sustainability and Projections

7.1.1 Sustainability of service delivery

There are two key indicators of sustainable service delivery that are considered in the Asset Management Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years)
- Medium term forecast costs/proposed budget (over 10 years of the planning period)

Asset Renewal Funding Ratio

The Asset Renewal Funding Ratio is 75%. This is an important indicator and illustrates that over the next 10 years we expect to have 75% of the funds required for the optimal renewal of assets. The forecast renewal work along with the proposed renewal budget, and the cumulative shortfall, is illustrated in Appendix C.

Contributing factors for the gap between the forecast renewal costs and current budgets include:

- Not achieving our Asset Renewal Funding Ratio targets over the past 3 financial years as a result of covid-19 resourcing impacts and project delays associated with post-pandemic market saturation.
- Comprehensively reviewing our stormwater management planning principles, to appropriate recognise service-based renewal interventions aligned with key streetscape upgrade projects, with a requirement for increased pipe sizes and catchpit arrangements
- Undertaking a comprehensive review of existing funding allocations and appropriately re-forecasting asset renewal requirements within this Asset Management Plan (noting the last comprehensive update was undertaken in 2015, with a desktop update made to financial forecasts and LTFP in 2021).
- Ensuring we accurately recognise asset replacement costs, utilising current unit rates that take into consideration increasing costs associated with inflation and industry escalations (We have experienced significant increases in project unit rates, noting that the Local Government Association (LGA) have indicated that costs and materials have increased up to 25% post pandemic).

Medium Term – 10 Year Financial Planning Period

This Asset Management Plan identifies the forecast operations, maintenance and renewal costs required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner. This forecast work can be compared to the proposed budget over the first 10 years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs for the Water Infrastructure over the 10 year planning period is approximately $13.95 million on average per year.

The current (budgeted) operations, maintenance and renewal funding is approximately $10.84 million on average per year giving a 10 year funding shortfall of approximately $3.11 million on average per year.

This indicates that approximately 78% of the forecast costs needed to provide the services documented in this Asset Management Plan are accommodated in the proposed budget. Note, these calculations exclude acquired assets.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately 100% for the first years of the Asset Management Plan and ideally over the 10 year life of the Long-Term Financial Plan.

7.1.2 Forecast Costs (outlays) for the Long-Term Financial Plan

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the Long-Term Financial Plan.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the Asset Management Plan or revising the Long-Term Financial Plan.

The forecast costs (outlays) required for consideration in the 10 year Long-Term Financial Plan are shown below in Table 7.1.2, where forecast costs are shown in 2024/25 dollar values

Table 7.1.2: Forecast Costs (Outlays) for the Long-Term Financial Plan

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2024/25	$0	$620,937	$734,502	$6,200,000	$0
2025/26	$0	$620,937	$734,502	$11,970,000	$0
2026/27	$0	$620,937	$734,502	$14,100,000	$0
2027/28	$0	$620,937	$734,502	$13,700,000	$0
2028/29	$0	$620,937	$734,502	$20,000,000	$0
2029/30	$0	$620,937	$734,502	$20,000,000	$0
2030/31	$0	$620,937	$734,502	$10,000,000	$0
2031/32	$0	$620,937	$734,502	$10,000,000	$0
2032/33	$0	$620,937	$734,502	$10,000,000	$0
2033/34	$0	$620,937	$734,502	$10,000,000	$0

For the next revision of this Asset Management Plan, it is recommended to include the acquisition costs (upgrade/new) that are specified within the Resource Plan and are accommodated within the Long-Term Financial Plan. This has been recognised as an action within the Improvement Plan (Chapter 8). Costs associated with asset disposal, will continue to be identified through Council Reports and accommodated within the annual Business Plan and Budget and Long-Term Financial Plan as required.

7.2 Funding Strategy

The proposed funding for assets is outlined in the City of Adelaide Annual Business Plan and Budget and Long-Term Financial Plan.

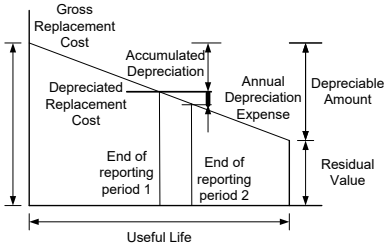
The financial strategy of the entity determines how funding will be provided, whereas the Asset Management Plan communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

7.3 Valuation Forecasts

7.3.1 Asset Valuations

The best available estimate of the value of assets included in this Asset Management Plan are shown below. The assets are valued at fair value cost to replace service capacity in accordance with Australian Accounting Standards.

Gross Replacement Cost	$282.11 million
Depreciable Amount	$282.11 million
Depreciated Replacement Cost[6]	$138.77million
Depreciation	$2.82million



7.3.2 Valuation Forecast

Asset values are forecast to increase as additional assets are added to the network.

Additional assets will generally add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts.

Increases to asset valuation are formally recognised through asset revaluations in conjunction with updates to Asset Management Plans, which are both typically undertaken every 4 years.

[6] Also reported as Written Down Value, Carrying or Net Book Value.

7.4 Key Assumptions Made in Financial Forecasts

In compiling this interim Asset Management Plan, it was necessary to make some assumptions due to incomplete data. This section details the key assumptions made in the development of this Asset Management plan and provides readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this Asset Management Plan are:

- All current assets will remain within the organisation's ownership throughout the planning period
- Renewal forecasts associated with the Torren Weir assume the full replacement of the existing structure. The scope, costs and timing of the recommended capital works will be better understood following the completion of the Options Analysis (currently underway and scheduled for completion in 2024). Outcomes will be revised into this Asset Management Plan and Long Term Financial Plan in the future as soon as practical
- Renewal forecasts are based on modern equivalent replacement (i.e. anticipate increases in pipe size and capacity for underground stormwater infrastructure to ensure it alignment with stormwater management service standards). They do not account for additional costs to create new ancillary assets
- Renewal forecasts have been derived from treatment rates established from quantity surveyor estimates or contract rates, applied to asset dimensions recognised within the Asset Management System
- Renewal forecasts have been escalated into FY24/25 dollars (based on historic and forecast inflation)
- Renewal forecasts account for external design requirements, where costs are allocated within each FY of the Asset Management Plan as a "Design Program" where applicable (typically between 5-10% of annual construction costs, depending on asset class)
- Renewal forecasts consider asset condition, asset capacity and integrated planning principles
- Renewal forecasts have been aligned where appropriate with upgrade projects approved by Council and recognised in the Long-Term Financial Plan (e.g. Main Streets). Renewal extents assume the full length of the street for Main Street Revitalisation Projects, however as the extent of each revitalisation project is confirmed, renewal forecasts will be review and adjusted as required
- Renewal forecasts do not account for internal staff resourcing. These resources are to be allocated through a capital resource overhead and accommodated into the Long-Term Financial Plan separately
- Asset useful lives align with current levels of service and are based on the judgment and experience of internal staff
- Asset remaining useful life estimates are based off asset condition data, renewal intervention levels aligned with current levels of service and technical asset deterioration profiles which are based on the judgement and experience of internal staff and available industry standards
- Asset useful life and remaining useful life estimates assume existing maintenance resourcing levels are continued
- Acquisition (upgrade/new) costs are not recognised within this Asset Management Plan. These costs will be recognised in the Resource Plan and incorporated into the Long-Term Financial Plan separately
- Operations and maintenance forecasts are prioritised and delivered with respect to existing budget (standards to be reviewed and associated cost impacts to be incorporated into a future revision of this Asset Management Plan)
- Operations and maintenance forecasts do not currently account for the future acquisition of new assets through upgrade/new projects or gifted assets (to be considered through the annual business plan and budget and incorporated into future revisions of this Asset Management Plan)
- The Long-Term Financial Plan will appropriately escalate financial outlays communicated within this Asset Management Plan

7.5 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this Asset Management Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is classified on a A - E level scale[7] in accordance with Table 7.5-1.

Table 7.5-1: Data Confidence Grading System

Confidence Grade	Description
A. Very High	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment. Dataset is complete and estimated to be accurate ± 2%
B. High	Data 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 ± 10%
C. Medium	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated ± 25%
D. Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy ± 40%
E. Very Low	None or very little data held.

The estimated confidence level for and reliability of data used in this Asset Management Plan is shown in Table 7.5-2. This Asset Management Plan's Improvement Plan (Chapter 8) outlines further steps recommended to be undertaken to continue to increase the maturity and confidence in asset management and financial forecasts.

Table 7.5-2: Data Confidence Assessment for Data used in Asset Management Plan

Data	Confidence Assessment	Comment
Demand drivers	High	Based off corporate planning documents and strategies
Growth projections	High	Based off State government projections and industry research and analysis
Acquisition forecast	Low	Not accommodated within this Asset Management Plan
Operation forecast	Medium	Based off known requirements and known costs for condition audits
Maintenance forecast	Low	Maintenance requirements are not forecasted, currently just aligned to existing budget allocations

[7] IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

Asset values	Medium	Asset revaluation was last undertaken in 2018/19. Renewal forecasts have utilised updated 2023 treatment rates derived from quantity surveyor estimates, with adjustments for increased pipe sizes and financial escalations to represent anticipated costs to deliver works in 2024/25 dollars
Asset useful lives	High	In line with industry standards with regular review
Condition modelling	Low	The condition data for the underground stormwater network is considered to be of lower reliability. Network wide condition data is not available for all assets and age data has been utilised to forecast the estimated condition rating where no condition data is available. Further works are recognised in the improvement plan to define assets at amore granular level to improve condition auditing and deterioration modelling.
Disposal forecast	Low	Not accommodated within this Asset Management Plan

8.0 PLAN IMPROVEMENT AND MONITORING

8.1 Status of Asset Management Practices

8.1.1 Accounting and financial data sources

This Asset Management Plan utilises accounting and financial data. The source of the data is from the accounting module of CoA's Asset Management System (Assetic).

8.1.2 Asset management data sources

This Asset Management Plan also utilises asset management data. The source of the data is from CoA's Asset Management System (Assetic).

8.2 Improvement Plan

It is important that an entity recognise areas of their Asset Management Plan and planning process that require future improvements to ensure effective asset management and informed decision making. The improvement plan generated from this Asset Management Plan is shown in Table 8.2.

Table 8.2: Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
1	Comprehensive update of this Asset Management Plan following the completion of spatial data improvements, asset condition audit and asset revaluation.	Infrastructure Planning	Within existing resource allocations	2024-25
2	Finalise the Stormwater Management Plan and identify key priority projects for inclusion within the Resource Plan. Asset Management Plans to be reviewed and updated where required, considering any impacts to planned asset renewal programs.	Infrastructure Planning	Within existing resource allocations	2026-27
3	Finalise the Adelaide Park Lands Strategic Water Resources Study to identify key initiatives to enable sustainable water resource planning for current and future demands.	Infrastructure Planning, Park Lands & Sustainability	Within existing resource allocations ($50k grant)	2024-25
4	Finalise the Water Sensitive Urban Design (WSUD) Priority Investment Study to identify key priority upgrade projects that will improve the quality of stormwater runoff that is discharged into natural water courses.	Park Lands & Sustainability	Within existing resource allocations	2024-25
5	Finalise a 4-year Resource Plan to identify key upgrade/new projects to deliver Council's Strategic Plan objectives. Once key projects are recognised within the Long Term Financial Plan, Asset Management Plans will be updated to ensure associated acquisition costs (upgrade/new) and ongoing operational and maintenance costs are appropriately recognised, in conjunction with any scheduling adjustments required for asset renewal programs.	Strategy, Insights & Performance, with organisational support Infrastructure Planning	Within existing resource allocations	2024-25

6	Revise asset renewal forecasts for the Torrens Weir following the completion of the Lifecycle Study and Options Analysis.	Infrastructure Planning	Within existing resource allocations	2024-25
7	Continue to work in partnership with both the State and Federal Governments to pursue external funding opportunities for both renewal and significant upgrade/new water projects.	City Services Executive	Within existing resource allocations	2024-25 2025-26
8	Review and update operations and maintenance standards, to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. Include changes into future revisions of this Asset Management Plan and Long-Term Financial Plan.	Infrastructure Planning, City Operations	Within existing resource allocations	2024-25 2025-26
9	Continue to undertake regular condition audits and revaluation for all our water infrastructure assets within the nominated 4-year cycles, including regular review of asset useful lives.	Infrastructure Planning	Within existing resource allocations	Ongoing
10	Continue to review our technical standards for water infrastructure with respect to climate resilience, circular economy, recycled materials, durability and performance, whole-of-life cost, amenity, and heritage requirements.	Infrastructure Planning, Technical Services	Within existing resource allocations	Ongoing
11	Continue to monitor forecast climate change impacts to ensure we remain resilient through proactively implementing appropriate mitigation and adaptation controls.	Sustainability, Infrastructure Planning	Within existing resource allocations	Ongoing
12	Improve the capture of carbon emission data for technical standards and project procurement to support lower carbon decision making	Low Carbon & Circular Economy, Infrastructure Planning, Technical Services	Led by existing resources, with external support identified through the Business Plan and Budget	Ongoing
13	Review of corporate performance measure targets for customer satisfaction, to assist with performance gap analysis	Strategy, Insights & Performance, Infrastructure Planning	Within existing resource allocations	2024-25
14	Review and standardise asset hierarchies for all asset classes within Water infrastructure.	Infrastructure Planning, City Operations	Within existing resource allocations	2024-25
15	Review customer service requests codes to better align with Level of Service reporting and operational and maintenance sub-activities.	Infrastructure Planning, City Operations, Customer Centre	Within existing resource allocations	2024-25

8.3 Monitoring and Review Procedures

This Asset Management Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The Asset Management Plan will be reviewed and updated annually to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budgets will be incorporated into the Long-Term Financial Plan once completed.

The Asset Management Plan has a maximum life of 4 years and is due for complete revision and updating within two years of a general Council election, pursuant to section 122 of the Local Government Act 1999 (SA).

8.4 Performance Measures

The effectiveness of this Asset Management Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this Asset Management Plan are incorporated into the Long-Term Financial Plan
- The degree to which the 1-5 year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the Asset Management Plan
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans
- The Asset Renewal Funding Ratio achieving the Organisational target (90-110%)
- Achieving Technical Level of Service objectives
- Reviewing changes to customer service request numbers and customer satisfactory surveys
- Progressing with the implementation of Improvement Actions identified in Table 8.2
- Reviewing and update of the Plan at minimum every four years

9.0 REFERENCES

- IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
- IPWEA, 2015, 3rd edn., 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
- IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/namsplus.
- IPWEA, 2015, 2nd edn., 'Australian Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/AIFMM.
- IPWEA, 2020 'International Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney
- IPWEA, 2018, Practice Note 12.1, 'Climate Change Impacts on the Useful Life of Assets', Institute of Public Works Engineering Australasia, Sydney
- IPWEA, 2012, Practice Note 6 Long-Term Financial Planning, Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn6
- IPWEA, 2014, Practice Note 8 – Levels of Service & Community Engagement, Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn8
- ISO, 2014, ISO 55000:2014, Overview, principles and terminology
- ISO, 2018, ISO 31000:2018, Risk management – Guidelines
- City of Adelaide 2020-2024 Strategic Plan, https://www.cityofadelaide.com.au/about-council/plans-reporting/strategic-planning/

10.0 APPENDICES

Appendix A Operation Forecast

The forecast operational costs for the Water Infrastructure network are shown below. Future revisions of this Asset Management Plan will further review forecast requirements based on updated operations and maintenance standards. All values are shown in current day dollars.

Table A - Operation Forecast Summary

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2024-25	$620,937	$0	$620,937
2025-26	$620,937	$0	$620,937
2026-27	$620,937	$0	$620,937
2027-28	$620,937	$0	$620,937
2028-29	$620,937	$0	$620,937
2029-30	$620,937	$0	$620,937
2030-31	$620,937	$0	$620,937
2031-32	$620,937	$0	$620,937
2032-33	$620,937	$0	$620,937
2033-34	$620,937	$0	$620,937

Appendix B Maintenance Forecast

The forecast maintenance costs for the Water Infrastructure network are shown below. Future revisions of this Asset Management Plan will further review forecast requirements based on updated operations and maintenance standards. All values are shown in current day dollars.

Table B - Maintenance Forecast Summary

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2024-25	$734,502	$0	$734,502
2025-26	$734,502	$0	$734,502
2026-27	$734,502	$0	$734,502
2027-28	$734,502	$0	$734,502
2028-29	$734,502	$0	$734,502
2029-30	$734,502	$0	$734,502
2030-31	$734,502	$0	$734,502
2031-32	$734,502	$0	$734,502
2032-33	$734,502	$0	$734,502
2033-34	$734,502	$0	$734,502

Appendix C Renewal Forecast Summary

The forecast renewal costs for the Water Infrastructure network, relative to current renewal budgets are shown below, in conjunction with the annual renewal budget shortfall and the cumulative budget shortfall over the 10-year planning period. All Forecast costs are shown in 2024-25 dollar values.

Table C - Renewal Forecast Summary

Year	Renewal Forecast	Renewal Budget	Annual Budget Shortfall	Cumulative Budget Shortfall
2024-25	$6,200,000	$5,182,156	-$1,017,844	-$1,017,844
2025-26	$11,970,000	$5,057,968	-$6,912,032	-$7,929,876
2026-27	$14,100,000	$5,462,271	-$8,637,729	-$16,567,605
2027-28	$13,700,000	$5,771,245	-$7,928,755	-$24,496,360
2028-29	$20,000,000	$44,972,348	$24,972,348	$475,988
2029-30	$20,000,000	$5,467,581	-$14,532,419	-$14,056,431
2030-31	$10,000,000	$5,577,064	-$4,422,936	-$18,479,367
2031-32	$10,000,000	$5,703,793	-$4,296,207	-$22,775,574
2032-33	$10,000,000	$5,838,842	-$4,161,158	-$26,936,732
2033-34	$10,000,000	$5,838,842	-$4,161,158	-$31,097,890

Across the 10-year planning period, the forecast renewal costs are $125.97m, with a current budget allocation of $94.87 m, resulting in a cumulative budget shortfall of -$31.1 m. This equates to an asset renewal funding ratio of 75%.

Appendix D Budget Summary by Lifecycle Activity

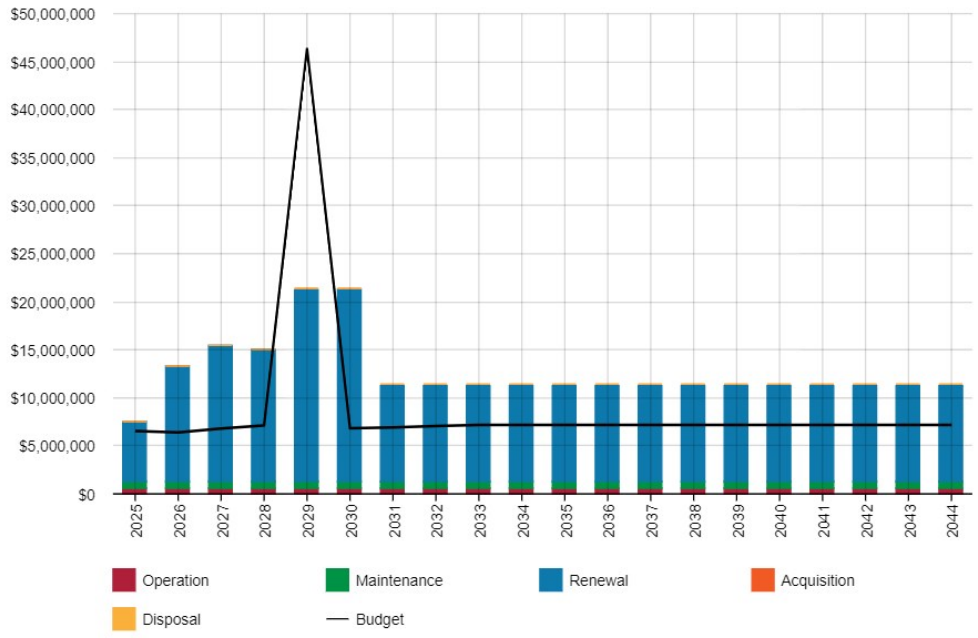
The forecast costs (outlays) required for consideration in the 10 year Long-Term Financial Plan are provided in shown below. These costs include renewal, maintenance, and operations of our existing assets. For the next revision of this Asset Management Plan, it is recommended to include the acquisition costs (upgrade/new) that are specified within the Resource Plan and are accommodated within the Long-Term Financial Plan. This has been recognised as an action within the Improvement Plan (Chapter 8). Costs associated with asset disposal, will continue to be identified through Council Reports and accommodated within the annual Business Plan and Budget and Long-Term Financial Plan as required. All forecast renewal costs are shown in 2024/25 dollar values and operations/maintenance costs are shown in 2023/24 dollar values.

Table D – Budget Summary by Lifecycle Activity

Year	Acquisition *	Operation	Maintenance	Renewal	Disposal
2024-25	$0	$620,937	$734,502	$6,200,000	$0
2025-26	$0	$620,937	$734,502	$11,970,000	$0
2026-27	$0	$620,937	$734,502	$14,100,000	$0
2027-28	$0	$620,937	$734,502	$13,700,000	$0
2028-29	$0	$620,937	$734,502	$20,000,000	$0
2029-30	$0	$620,937	$734,502	$20,000,000	$0
2030-31	$0	$620,937	$734,502	$10,000,000	$0
2031-32	$0	$620,937	$734,502	$10,000,000	$0
2032-33	$0	$620,937	$734,502	$10,000,000	$0
2033-34	$0	$620,937	$734,502	$10,000,000	$0

*Costs accounted for within the Resource Plan and incorporated into Long-Term Financial Plan separately (i.e. not through the Asset Management Plan)

Figure D: Budget Summary by Lifecycle Activity



Appendix E Asset Renewal Intervention Levels

Water Infrastructure

Table E: Renewal Condition Intervention Levels

Asset Class	Asset Type	Intervention Level	Useful Life (Years)
Underground Stormwater Drainage Network	Stormwater Pits	4.5	125
	Stormwater Junction Boxes	4.5	125
	Stormwater Pipes	4.5	125
	Stormwater Culverts	4.5	125
Stormwater Management Devices	Detention Basins	4	80
	Bioretention Basins	4	80
	Sedimentation basins	4	80
	Gross Pollutant Traps	4	40
River Torrens & Park Lands Water Courses	Torrens Weir Components	4	100*
	Earth retaining structures	4	100
	Concrete Open Channel	4	100
	Natural Open Channel	4	80
Potable Water Distribution	uPVC Pipes	4	50
	Pump Station	4	40
Non Potable Water Distribution	uPVC Pipes	4	50
	Pump Station	4	40
Sewer Infrastructure	Sewer Rising Main	4	50
	uPVC pipes	4	50
	Pump Station	4	40

*Estimated useful life for the whole structure, note there are shorter useful lives for minor components

CITY OF ADELAIDE

Asset Management Plan - Public Lighting & Electrical - Approval for Consultation

Strategic Alignment - Our Places

Public

Tuesday, 19 March 2024

Infrastructure and Public Works Committee

Program Contact:
Mark Goudge, Associate Director Infrastructure

Approving Officer:
Tom McCready, Director City Services

EXECUTIVE SUMMARY

Asset Management is a key business function undertaken by Councils to ensure their infrastructure portfolio is managed responsibly and effectively. Under the *Local Government Act 1999 (SA)*, Councils are legislatively required to establish a suite of Strategic Management Plans, which guide future planning, asset management and financial sustainability. Included in this suite are six Asset Management Plans (AM Plans), which are currently in the process of being reviewed and updated. Each AM Plan will require Council adoption prior to 30 June 2024 to enable review by the Essential Services Commission of South Australia (ESCOSA).

The draft Public Lighting and Electrical Infrastructure AM Plan has been informed by a community engagement process to understand current levels of community satisfaction and has been developed consistently with the Recommended Levels of Service report approved by Council in October 2023. The AM Plan has been prepared on the basis of documenting the asset management activities and funding requirements (operations, maintenance and renewal) recommended for inclusion into the Long-Term Financial Plan (LTFP) to achieve our asset performance targets (levels of service).

Work is currently underway to significantly improve the spatial data, asset condition information and asset attribute information utilised within this Public Lighting and Electrical Infrastructure Asset Management Plan. These activities align with good asset management practices and will provide more granular information to enable robust analysis to inform future decision making. The outcome of this work, which is due for completion by June 2025, will enable a more mature Public Lighting and Electrical Infrastructure Asset Management Plan with a higher degree of confidence for the future requirements of the asset class. Therefore, due to the current maturity level of the asset data, this Public Lighting and Electrical Infrastructure Asset Management Plan will be considered an interim document, which will be updated following the completion of the spatial data improvements, condition audit, and subsequent modelling and analysis.

The draft AM Plan's renewal strategy aims to minimise the number of assets that deteriorate into a poor condition and prohibit assets reaching a very poor condition, as well as ensuring heritage assets are managed in accordance with relevant conservation management plans. This ensures we continue to provide services in line with the community's expectations, appropriately manage risk and optimise whole-of-life costs. The forecast renewal costs are approximately $4.88 million on average each year across the ten-year planning period. The current LTFP accommodates renewal funding of $1.76 million on average each year (36% of the forecast costs). This means that additional funding of $3.12 million on average each year will need to be considered to deliver the recommendations of the AM Plan.

While this AM Plan does not identify forecast costs associated with new and upgrade projects, ongoing integrated planning will ensure asset renewals are aligned (where practical) with key new and upgrade projects required to deliver our Strategic Plan objectives, identified within the Resource Plan and Business Plan and Budget.

The purpose of this report is to seek Council endorsement to undertake community consultation for a six-week period, ahead of the future adoption of the Public Lighting and Electrical Infrastructure AM Plan scheduled for June 2024. The consultation will include a YourSay engagement page in conjunction with a drop-in session proposed for the City and North Adelaide, with physical and electronical promotion through City of Adelaide (CoA) platforms (e.g. community centres, social media).

RECOMMENDATION

The following recommendation will be presented to Council on 26 March 2024 for consideration

THAT THE INFRASTRUCTURE AND PUBLIC WORKS COMMITTEE RECOMMENDS TO COUNCIL

THAT COUNCIL

1. Notes the draft Public Lighting and Electrical Infrastructure Asset Management Plan as per Attachments A and B to Item 7.7 on the Agenda for the meeting of the Infrastructure and Public Works Committee held on 19 March 2024.
2. Endorses the draft Public Lighting and Electrical Infrastructure Asset Management Plan as per Attachments A and B to Item 7.7 on the Agenda for the meeting of the Infrastructure and Public Works Committee held on 19 March, for the purposes of public consultation.

IMPLICATIONS AND FINANCIALS

City of Adelaide 2024-2028 Strategic Plan	Strategic Alignment – Our Places
Policy	Asset Management Policy Strategic Asset Management Plan Public Communication and Consultation Policy
Consultation	Consultation on the draft Public Lighting and Electrical Infrastructure AM Plan will be open for a six-week period from Tuesday 2 April 2024 to Friday 10 May 2024. The results of the consultation feedback and analysis will be reported to Council in June 2024.
Resource	Consultation will be conducted using existing resources. There are no additional resources required as a result of this report.
Risk / Legal / Legislative	The review and update of Asset Management Plans, including levels of service, is required every four years or within two years of a general Council election pursuant to Section 122 of the *Local Government Act 1999 (SA)*.
Opportunities	Not as a result of this report
23/24 Budget Allocation	Not as a result of this report
Proposed 24/25 Budget Allocation	2024/25 budgets will be set by Council through the Annual Business Plan and Budget process (noting Asset Renewal Funding Ratio targets of between 90-110%). Asset renewal is generally funded through operational revenue, which includes rates, commercial revenue and grant allocations.
Life of Project, Service, Initiative or (Expectancy of) Asset	Not as a result of this report
23/24 Budget Reconsideration (if applicable)	Not as a result of this report
Ongoing Costs (eg maintenance cost)	As documented within AM Plan (no change)
Other Funding Sources	External funding opportunities will continually be pursued to offset costs, bring forward works, or provide for additional enhancements.

DISCUSSION

1. The purpose of this report is to present the draft Public Lighting and Electrical Infrastructure AM Plan and seek Council endorsement to release the summary and comprehensive versions of the Plan (as presented in **Attachments A and B**) to community consultation for a six-week period, ahead of the future adoption of the Public Lighting and Electrical Infrastructure AM Plan currently scheduled for June 2024.

Background

2. Under the *Local Government Act 1999 (SA)*, we are required to develop AM Plans for a period of at least 10 years, which includes information about the operation, maintenance, renewal, acquisition, expansion, upgrade and disposal for each infrastructure asset class under our care and control.

3. The City of Adelaide has six AM Plans, which include Transportation, Park Lands & Open Space, Buildings, Water Infrastructure, Public Lighting & Electrical Infrastructure and Urban Elements.

4. The City of Adelaide's Public Lighting and Electrical Infrastructure portfolio is valued at approximately $145.6 million. It is made up of 7829 streetlighting columns, 9986 streetlights, 993 switchboards, 153 CCTV cameras and 41 electric vehicle charging stations. These assets provide services that facilitate safe access and enjoyment of the City and it's amenities at night, in conjunction with supporting pedestrians, cyclists, motorists move into and around the City and Park Lands.

5. The Public Lighting and Electrical Infrastructure AM Plan has been developed with alignment to the City of Adelaide Strategic Plan 2024-2028.

6. The Public Lighting and Electrical Infrastructure AM Plan has been informed by a community engagement process to understand current levels of community satisfaction and has been developed consistently with the Recommended Levels of Service report approved by Council in October 2023.

7. AM Plans are technical documents, which are prepared in accordance with industry standard templates developed by the Institute of Public Works and Engineering Australasia (IPWEA) to ensure alignment with best practice and ISO 55000.

8. Due to the length of the Public Lighting and Electrical Infrastructure AM Plan, a concise standalone summary document has also been prepared (Public Lighting and Electrical Infrastructure Asset Management Plan Summary) to improve community engagement and understanding.

9. Work is currently underway to significantly improve the spatial data, asset condition information and asset attribute information utilised within this Public Lighting and Electrical Infrastructure Asset Management Plan. These activities align with good asset management practices and will provide more granular information to enable robust analysis to inform future decision making. The outcome of this work, which is due for completion by June 2025, will enable a more mature Public Lighting and Electrical Infrastructure Asset Management Plan with a higher degree of confidence for the future requirements of the asset class.

10. Therefore, due to the current maturity level of the asset data, this Public Lighting and Electrical Infrastructure Asset Management Plan will be considered an interim document, which will be updated following the completion of the spatial data improvements, condition audit, and subsequent modelling and analysis.

Lifecycle Management Summary

11. The Public Lighting and Electrical Infrastructure AM Plan defines the current state / condition of our $145.6 million asset portfolio, as well as the asset management activities and associated funding requirements recommended for inclusion into the LTFP to achieve our asset performance targets (levels of service).

12. This AM Plan's renewal strategy aims to minimise the number of assets that deteriorate into a poor condition and prohibit assets reaching a very poor condition. This strategy ensures we can continue to provide services in line with the community's expectations, appropriately manage risk and optimise whole-of-life costs. Renewal forecasts within the Public Lighting and Electrical Infrastructure AM Plan are presented in 2024/25 dollars.

13. Asset renewal forecasts have been derived based on the average annual asset consumption of the Public Lighting and Electrical Infrastructure asset class. It is supported by a detailed 4-year renewal plan, which has been developed utilising existing asset data captured within our Asset Management System, validated through on-site inspections, in conjunction with workshops with key operational staff to identify and discuss known performance deficiencies and risks.

14. Asset renewal forecasts include a luminaire renewal program, which aims to convert all existing High Intensity Discharge Lamps to LED technology. LED technology enables better outcomes with respect to lighting levels, while also being more energy efficient with lower operating costs.

15. This AM Plan does not identify forecast costs associated with new and upgrade projects, however ongoing integrated planning will ensure asset renewals are aligned (where practical) with key new and upgrade projects required to deliver our Strategic Plan objectives, identified within the Resource Plan and Business Plan and Budget.

16. This AM Plan does not identify financial forecasts associated with asset disposal, however where recommended, significant assets will be identified for decommissioning and disposal through Council Reports, to then be considered within the LTFP and Business Plan and Budget.

17. This AM Plan does not propose any forecast increases for operational and maintenance activities. Following the completion of this Asset Management Plan, operations and maintenance standards will be reviewed for Public Lighting and Electrical Infrastructure assets, to formalise intervention levels and response times for general maintenance and establish an acceptable balance between cost, risk, and customer expectations. The associated financial impacts will need to be further considered in future revisions of this Asset Management Plan and the Long-Term Financial Plan.

18. Current operations and maintenance budgets accommodate maintenance inspections for critical assets and which inform legislative maintenance and general maintenance programs. Currently, not all general maintenance activities can be accommodated within existing budget allocations, resulting in works being prioritised with respect to budget provisions within the Long-Term Financial Plan and Annual Business Plan and Budget. Where there are any critical maintenance requirements that cannot be accommodated within exiting budgets, these are assessed through regular budget reviews to ensure resources are appropriately re-allocated.

Financial Summary and Implications

19. The development of the draft Public Lighting and Electrical Infrastructure AM Plan has identified additional funding requirements, when compared against the adopted LTFP to enable the optimal renewal of our assets and continue providing current levels of service, which aim to provide services in line with community expectations, whilst optimising whole-of-life costs and appropriately managing asset risk.

20. The draft Public Lighting and Electrical Infrastructure AM Plan forecasts renewal costs of approximately $4.88 million (un-escalated) on average each year across the ten-year planning period, which sets the base for measuring the ARFR. That is, if $4.88 million is fully expended, this would reflect an Asset Renewal Funding Ratio (ARFR) of 100%.

21. Currently, the renewal funding allocation for Public Lighting and Electrical Infrastructure within the LTFP is $1.76 million (un-escalated) on average each year, which represents 36% of the funding required to deliver the recommended asset renewals outlined in the draft AM Plan.

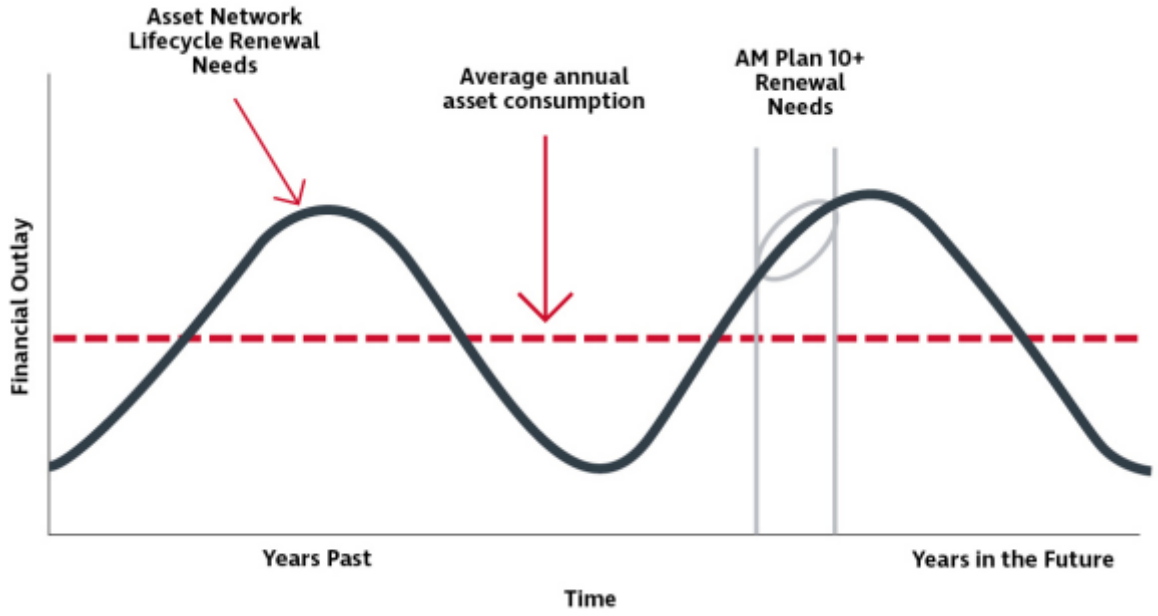
22. Contributing factors for the gap between the forecast renewal costs and current budgets within the LTFP include:

    22.1. Not achieving our ARFR targets over the past 4 financial years as a result of COVID-19 resourcing impacts and project delays associated with post-pandemic market saturation.

    22.2. Undertaking a comprehensive review of existing funding allocations and appropriately re-forecasting asset renewal requirements within this Asset Management Plan (noting the last comprehensive update was undertaken in 2015, with a desktop update made to financial forecasts and LTFP in 2021).

    22.3. Ensuring we accurately recognise asset replacement costs, utilising current construction costs and unit rates that take into consideration increasing costs associated with inflation and industry escalations. (We have experienced significant increases in project unit rates, noting that the Local Government Association (LGA) have indicated that costs and materials have increased up to 25% post pandemic).

23. It is important to understand that infrastructure networks are comprised of assets with varying age profiles and different useful lives and replacement costs. This results in AM Plans often identifying the need to replace more assets in some periods when compared with others and means that it is very unlikely that asset renewal needs will be consistent over time. The figure below highlights a typical scenario of varying asset renewal expenditure requirements over the asset lifecycle.



24. The financial strategy associated with funding the AM Plans is proposed to be consistent with the 2023/24 to 2032/33 LTFP, ensuring we continue to deliver upon our current suite of services and asset maintenance requirements, where asset renewals are prioritised based on audit condition and risk.

25. Funding requirements will need to be considered in the development of the 2024/25 Business Plan and Budget. Council will need to consider financial levers available in order to ensure sufficient funding of both operational and renewal funding requirements.

Improvement Plan

26. Through the development of this AM Plan, a number of improvement actions and next steps have been identified to promote continuous improvement and improved overall asset management maturity. These are identified in Section 9 of the Public Lighting and Electrical Infrastructure Asset Management Plan Summary (**Attachment A**).

Community Consultation

27. In accordance with section 122(6) of the *Local Government Act 1999 (SA)*, Council will follow the relevant steps in our public consultation policy to facilitate community feedback on the draft Public Lighting and Electrical Infrastructure AM Plan.

28. The consultation process will seek feedback from the community including our residents, ratepayers, businesses, and other key stakeholders.

29. Consultation will open on Tuesday 2 April 2024 and close on Friday 10 May 2024 (6-week duration in line with our Public Consultation Policy, noting the minimum legislative requirement is 21 days).

30. Notification of public consultation will be provided through the following avenues:

    30.1 A Public Notice in the Government Gazette and an advertisement in The Advertiser.

    30.2. Information published on the City of Adelaide website.

    30.3. Promotional advertisements on all Customer Service points including the Digital screens that Council operates, our Libraries and Community Centres.

    30.4. Social Media campaign via City of Adelaide social media channels.

31. ‘Your Say Adelaide’ - the community will be encouraged to engage and make written submissions on the draft Public Lighting and Electrical Infrastructure AM Plan through City of Adelaide’s website, linking to detailed information on the ‘Your Say Adelaide’ platform.

32. Two drop-in sessions will also be scheduled at community centre locations in the City and North Adelaide.

33. Submissions and feedback will also be able to be sent in writing or through e-mail.

34. Hard copy submission forms will be available inside Consultation Packs from the City of Adelaide’s Customer Service Centre, libraries and community centres.

35. The community will have the opportunity to have their questions answered by City of Adelaide project staff over the phone or by booking an appointment to chat to staff in person.

Next Steps

36. Subject to Council endorsement, the draft Public Lighting and Electrical Infrastructure AM Plan will be released for public consultation, with community engagement scheduled to occur from Tuesday 2 April 2024 to Friday 10 May 2024.
37. Following the six-week public consultation period, engagement feedback will be reviewed and findings will be presented to Council in conjunction with the finalised Public Lighting and Electrical Infrastructure AM Plan in June 2024 for adoption.
38. Following Council adoption of the Public Lighting and Electrical Infrastructure AM Plan, the LTFP will be updated.
39. Adoption of renewal budgets will be considered by Council on an annual basis through the Business Plan and Budget process.

ATTACHMENTS

Attachment A – Draft Public Lighting and Electrical Infrastructure Asset Management Plan Summary

Attachment B - Draft Public Lighting and Electrical Infrastructure Asset Management Plan (Comprehensive)

- END OF REPORT -

Public Lighting and Electrical Infrastructure Asset Management Plan

Summary

CITY OF ADELAIDE

Contents

1	PURPOSE OF THE PLAN	4
2	OUR PUBLIC LIGHTING AND ELECTRICAL INFRASTRUCTURE ASSETS	5
3	COMMUNITY ENGAGEMENT & CUSTOMER SATISFACTION	6
4	CURRENT AND FUTURE DEMANDS	7
5	STRATEGIC PLANNING	8
6	LIFECYCLE MANAGEMENT	10
7	FINANCIAL SUMMARY	12
8	POTENTIAL SERVICE AND RISK IMPACTS	14
9	MONITORING AND IMPROVEMENT PROGRAM	15

EXECUTIVE SUMMARY

1 The Purpose of the Plan

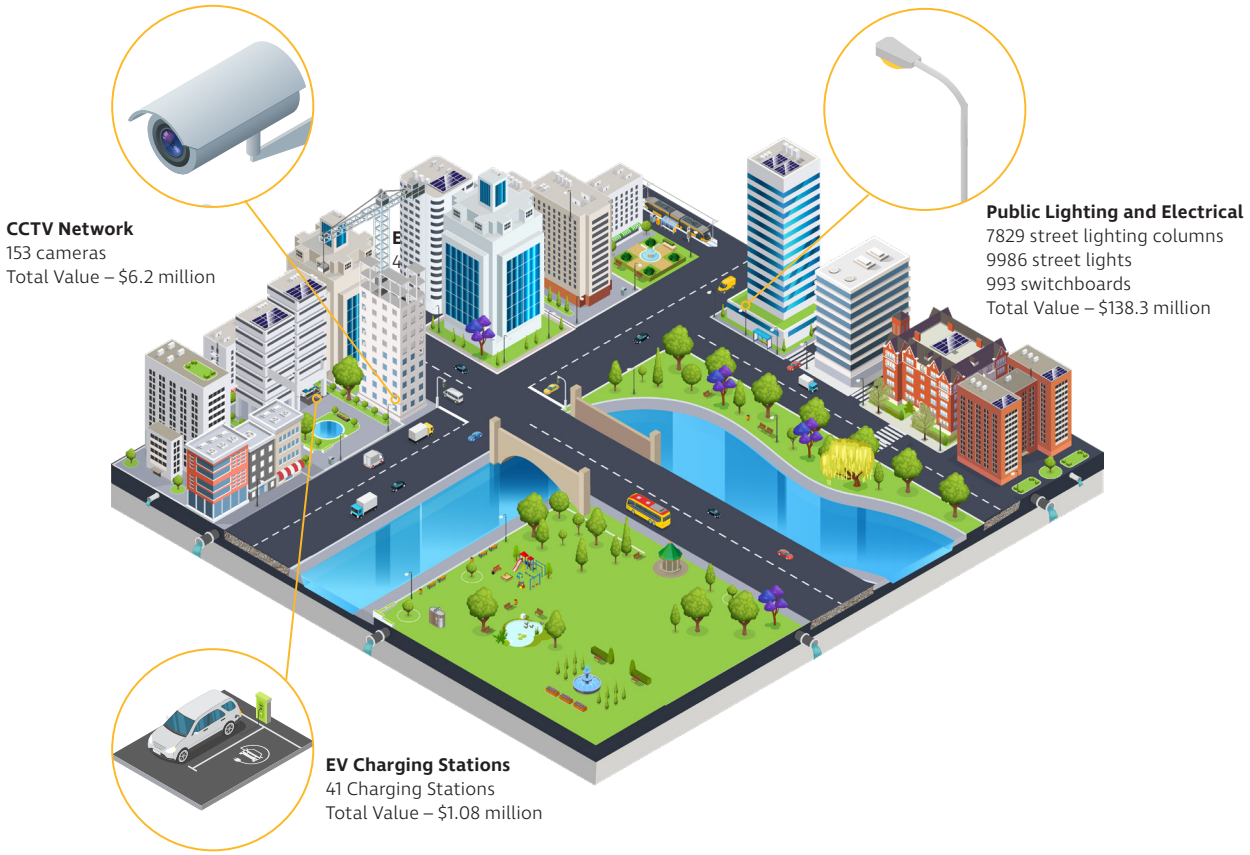
The City of Adelaide is responsible for an extensive and diverse asset portfolio valued at more than $2 billion, which represents a significant investment made over multiple generations. These assets play a vital role in providing essential services to our community and it is critical to ensure these assets continue to be effectively managed to enable ongoing service provision and benefits for both current and future generations.

Under South Australia's *Local Government Act 1999*, we are required to develop Asset Management Plans for a period of at least 10 years, which includes information about the operation, maintenance, renewal, acquisition, expansion, upgrade and disposal for each infrastructure assets class under our care and control.

The City of Adelaide has six Asset Management Plans, which includes Public Lighting and Electrical Infrastructure, Transportation, Park Lands & Open Space, Buildings, Water Infrastructure, and Urban Elements.

The fundamental purpose of this Public Lighting and Electrical Infrastructure Asset Management Plan is to outline the Council's high-level asset management priorities for the operation, maintenance and renewal of our assets over the next 10 years. Additionally, it aims to improve the long-term strategic management of our Public Lighting and Electrical Infrastructure assets, to cater for the community's required levels of service both now and into the future.

Work is currently underway to significantly improve the spatial data, asset condition information and asset attribute information utilised within this Public Lighting and Electrical Infrastructure Asset Management Plan. These activities align with good asset management practices and will provide more granular information to enable robust analysis to inform future decision making. The outcome of this work, which is due for completion by June 2025, will enable a more mature Public Lighting and Electrical Infrastructure Asset Management Plan with a higher degree of confidence for the future requirements of the asset class.



Therefore, due to the current maturity level of the asset data, this Public Lighting and Electrical Infrastructure Asset Management Plan will be considered an interim document, which will be updated following the completion of the spatial data improvements, condition audit, and subsequent modelling and analysis.

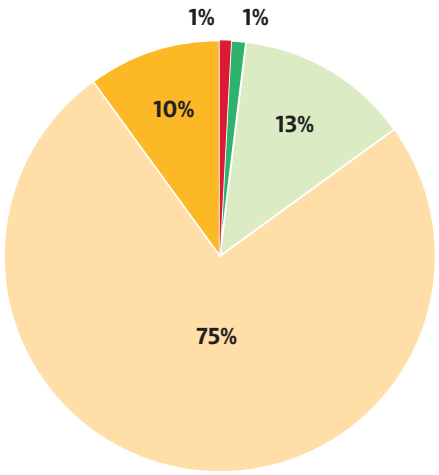
This interim plan defines the current state of our $145.6 million Public Lighting and Electrical Infrastructure asset portfolio, as well as the asset management activities and associated funding requirements recommended for inclusion into the Long-Term Financial Plan.

2 Our Public Lighting and Electrical Infrastructure Assets

The City of Adelaide's Public Lighting and Electrical Infrastructure network is valued at approximately $145.6 million and provides services that facilitate safe access and enjoyment of the city and it's amenities at night, in conjunction with supporting pedestrians, cyclists, motorists move into and around the city and Park Lands. These assets include street lighting, electrical reticulation infrastructure (i.e. cables, conduits and switchboards), CCTV cameras and EV charging stations.

Our Public Lighting assets consists of several different ownership and responsibility models. Some Public Lighting Assets are owned and operated entirely by City of Adelaide, some are owned entirely by South Australian Power Networks (SAPN), where we pay a contribution by way of a tariff for the maintenance and operation of these Public Lighting assets and some are a hybrid of City of Adelaide and SAPN ownership where Council own the luminaire (light fitting) and SAPN own the supporting structure (pole). Under a hybrid arrangement we also contribute to the maintenance and operation by way of a tariff.

To monitor the performance of our Public Lighting and Electrical Infrastructure assets, we undertake condition audits at regular intervals. Asset condition information is analysed with respect to technical intervention criteria to inform our maintenance and renewal programs. The current condition of our Public Lighting and Electrical Infrastructure is generally rated in a fair condition, with an overall condition index rating of 3.0. 89% of assets are rated in a very good to fair condition and 11% of assets are rated in poor or very poor condition, which form the general basis of our renewal program priorities.



Condition Grading	Description of Condition
1	**Very Good:** free of defects, only planned and/or routine maintenance required
2	**Good:** minor defects, increasing maintenance required plus planned maintenance
3	**Fair:** defects requiring regular and/or significant maintenance to reinstate service
4	**Poor:** significant defects, higher order cost intervention likely
5	**Very Poor:** physically unsound and/or beyond rehabilitation, immediate action required

It is important to note that this condition data is considered to be of low reliability, as the last full condition audit for our public lighting and electrical infrastructure was undertaken in 2018. Work is currently progressing with data cleansing to improve the overall data set for the asset categories referenced within this Asset Management Plan. In 2024 a condition audit for our Public Lighting and Electrical Infrastructure will commence to collect condition data to align with the updated spatial data and inform updates to this Asset Management Plan.

3 Community Engagement & Customer Satisfaction

In November 2021, we undertook an engagement process with city residents and visitors to better understand and measure levels of customer satisfaction for the services provided by our Public Lighting and Electrical Infrastructure assets. A summary of the responses is shown below.

Category	Average Score	Not Measured	Very Poor (<40%)	Poor (40–54%)	Average (55–69%)	Good (70–85%)	Excellent (>85%)
Public Lighting	62.5%					●	
CCTV Cameras	–	●					
EV Charging Stations	–	●					

For this Asset Management Plan, feedback was not sought for CCTV Cameras or Electric Vehicle Charging Stations, however ensuring this feedback is collected in the future has been recognised as an action within the Improvement Plan of this Asset Management Plan (Chapter 8).

The overall feedback confirmed appropriate levels of customer satisfaction for the maintenance and renewal of our existing public lighting and electrical infrastructure assets. Engagement did identify some locations where the community believed public lighting provisions could be improved. These locations were typically associated with city streets where public lighting infrastructure was owned and operated by SAPN and Park Lands locations where public lighting was not currently present. It is anticipated that the completion of the Public Lighting Strategy (currently under development) and the subsequent initiation, funding and delivery of new and upgrade Public Lighting projects, in conjunction with continuing to work with South Australian Power Networks to convert luminaires over to LED technology will incrementally bridge the gap between customer expectations and service provisions over time.

A Recommended Levels of Service Report was presented to Council, with the recommendations approved in October 2022. This report noted the community consultation undertaken and the associated benchmarking of current user satisfaction. Additionally, Council approved the development of the Public Lighting and Electrical Infrastructure Asset Management Plan based on the planning principles and recommended management strategies presented within the reports and its attachments.

4 Current and Future Demands

It is anticipated that the City of Adelaide will be subject to considerable change over the next ten years. This will result in our Public Lighting and Electrical Infrastructure assets being subject to new demands that have the potential to impact future service delivery and the requirements of our assets.

Key demand drivers and future challenges will include:

- City growth
- Changing demographic and user groups
- Tourism and event growth
- Climate change and carbon neutrality
- Emerging technology
- Legislation and regulation

Demand for new services will be managed through a combination of managing existing assets, upgrading existing assets, providing new assets and demand management. Demand management practices can include non-asset solutions, such as educating the community around alternative options, which facilitates service provision without the need to invest in new or upgraded infrastructure.

Demand management will include:

- Continuing to engage with our community through annual City User Profile surveys
- Finalising the Public Lighting Strategy (2024)
- Finalising the Integrated Transport Strategy (2024)
- Delivering priority upgrade/new projects identified within the Strategic Plan and strategic documents
- Ensuring climate risk mitigation and adaptation is a key focus for strategic planning, asset management and project delivery
- Continuing to review and update design standards and technical specifications to ensure our assets transition towards having a lower carbon footprint with improved circular economy outcomes through increased usage of recycled materials
- Continuing to partner with industry, to monitor and evaluate new and emerging technologies, with trials of new materials, approaches, and methodologies to inform appropriate changes to standards and practices
- Continuing to monitor changes to legislation and ensure appropriate adaptation into asset management practices

5 Strategic Planning

Under the *Local Government Act (SA) 1999*, we are legislatively required to establish a suite of Strategic Management Plans, which guide Council's future planning, asset management and financial sustainability. An overview of these strategic management plans are shown below:

Strategic Plan *Community*	Long term with a four year delivery focus. *Planning for the vision and aspirations of the Adelaide Capital City.*
Long-Term Financial Plan *Financial*	Ten year Plan, revised annually to ensure a ten year view is maintained. *Planning for the long-term financial sustainability of the City of Adelaide.*
Asset Management Plans *Infrastructure*	Suite of ten year Plans. *Planning for the sustainable renewal and maintenance of Council assets.*
City Plan *Development / Built Form*	Ten year Spatial Plan. *Planning for the future land uses and built form of the Adelaide Capital City.*

Through the City of Adelaide Strategic Plan 2024 – 2028, Council's vision is:

Our Adelaide. Bold. Aspirational. Innovative.

Achieving our vision for the future will be guided by our long term aspirations:

Our Community: Vibrant, connected and inclusive
Our Environment: Resilient, protected and sustainable
Our Economy: Growing, innovative and responsive
Our Places: Interesting, purposeful and safe
Our Corporation: High performing, customer-centric and bold

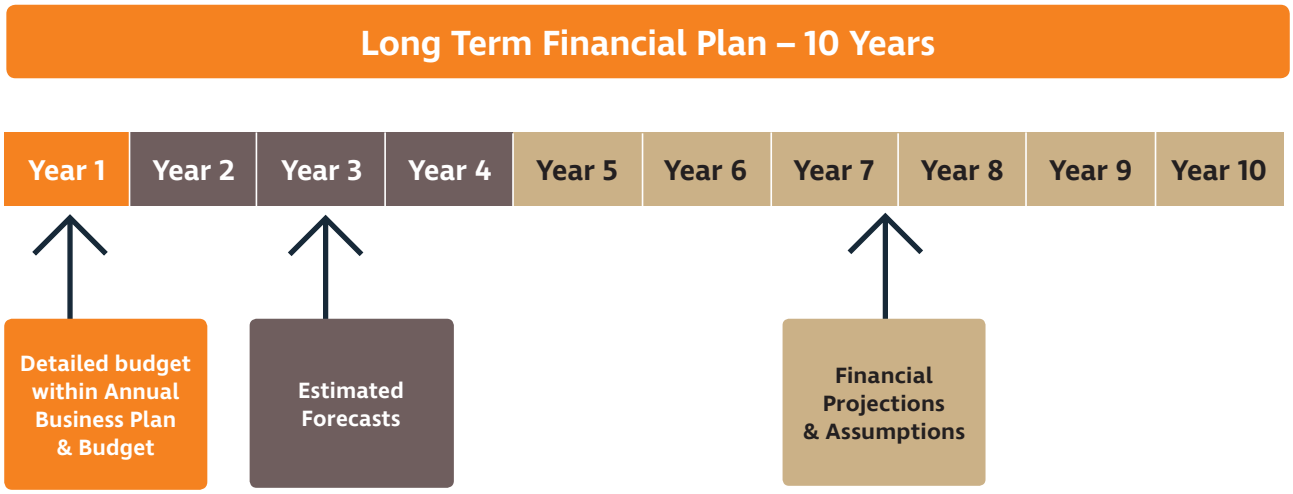
As Adelaide grows, we will need to consider economic vitality, social connectivity and wellbeing, distinctive precincts, environmental and financial sustainability, asset management and service delivery. To ensure we maintain our liveability and to support growth, these principles will underpin everything we do:

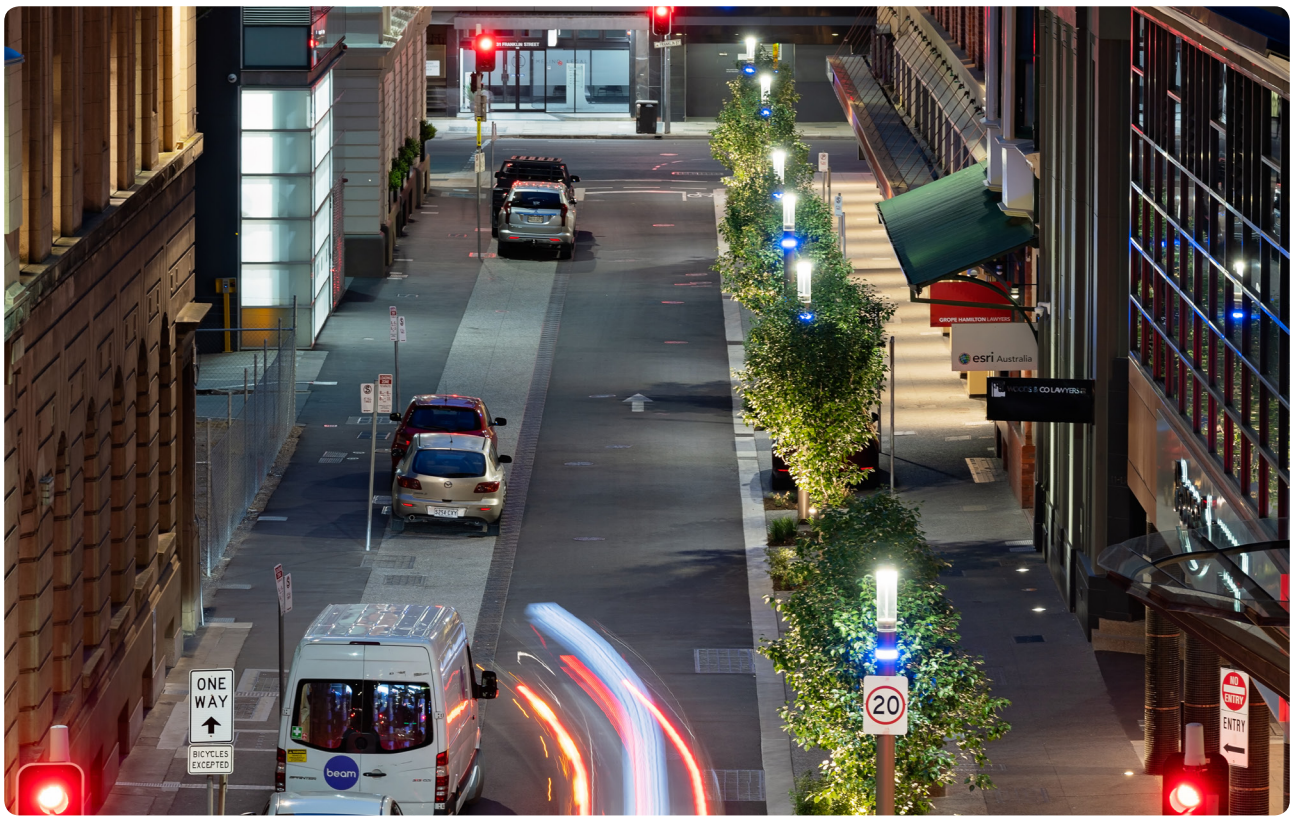
- Exceptional Amenity – Be bold and courageous in our pursuit of excellence for our city
- Quality Housing – Strive for liveability and affordability to attract and retain residents
- Community Connection – Strengthen connection, accessibility, diversity and inclusivity by putting people first
- Unique Experiences – Create interesting experiences for our residents, workers and visitors
- Climate Resilience – Embed climate resilience in all that we do
- Economic Growth – Encourage innovation, investment and development in current and emerging sectors
- Budget Repair – Provide quality services and ensure long-term financial sustainability

The Strategic Plan is supported by a suite of long and short-term strategies and action plans as well as a Resource Plan. The Resource Plan provides a four-year view of new and upgrade projects, resources, and budget requirements to deliver our Strategic Plan aspirations and objectives.

Integrated Delivery Planning ensures that prudent and efficient decisions are made, with line-of-sight between Council's Strategic Plan objectives and the major infrastructure projects we deliver. While this Asset Management Plan does not identify financial forecasts associated with new and upgrade projects, it does ensure required asset renewals are aligned (where practical) with key new and upgrade projects specified within the Resource Plan.

Each year our annual business plan and budget formalises funding allocations to continue providing services and progress new projects. It enables existing projects to move from one delivery stage to the next (eg progress concept design to detailed design and detailed design to construction) as well as consider emerging risks and opportunities that may result from Council decisions, community requests or other external factors.





6 Lifecycle Management

In order to effectively manage our assets, it is important to understand the relationship between all stages of the asset lifecycle. Effective asset management and sustainable financial planning requires a balance between the maintenance, renewal and disposal of existing assets and the delivery of new and upgraded assets.

Our goal is to provide assets that service the needs of the community, providing the agreed levels of service at the lowest lifecycle cost. To enable this, it is important to understand:

- How our assets are performing
- How our assets should be operated and maintained
- When our assets should be renewed
- When we should consider upgrading existing assets or constructing new assets
- How funding for new and upgraded assets is prioritised
- When we should consider disposing underperforming or underutilised assets

This Asset Management Plan's renewal strategy aims to minimise the number of assets that deteriorate into a poor condition and prohibit assets reaching a very poor condition. This strategy ensures we can continue to provide services in line with the community's expectations, appropriately manage risk and optimise whole-of-life costs. Renewal requirements have been identified through a combination of workshops with key infrastructure and maintenance staff and available condition audit information.

While we have proactive maintenance programs associated with legislative requirements, general operational and maintenance activities are typically evaluated and prioritised with respect to budget provisions within the Long-Term Financial Plan and Annual Business Plan and Budget. Following the completion of this Asset Management Plan, we will be reviewing operations and maintenance standards for Public Lighting and Electrical Infrastructure assets, with a view to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. The associated financial impacts will need to be further considered in future revisions of this Asset Management Plan and the Long-Term Financial Plan.

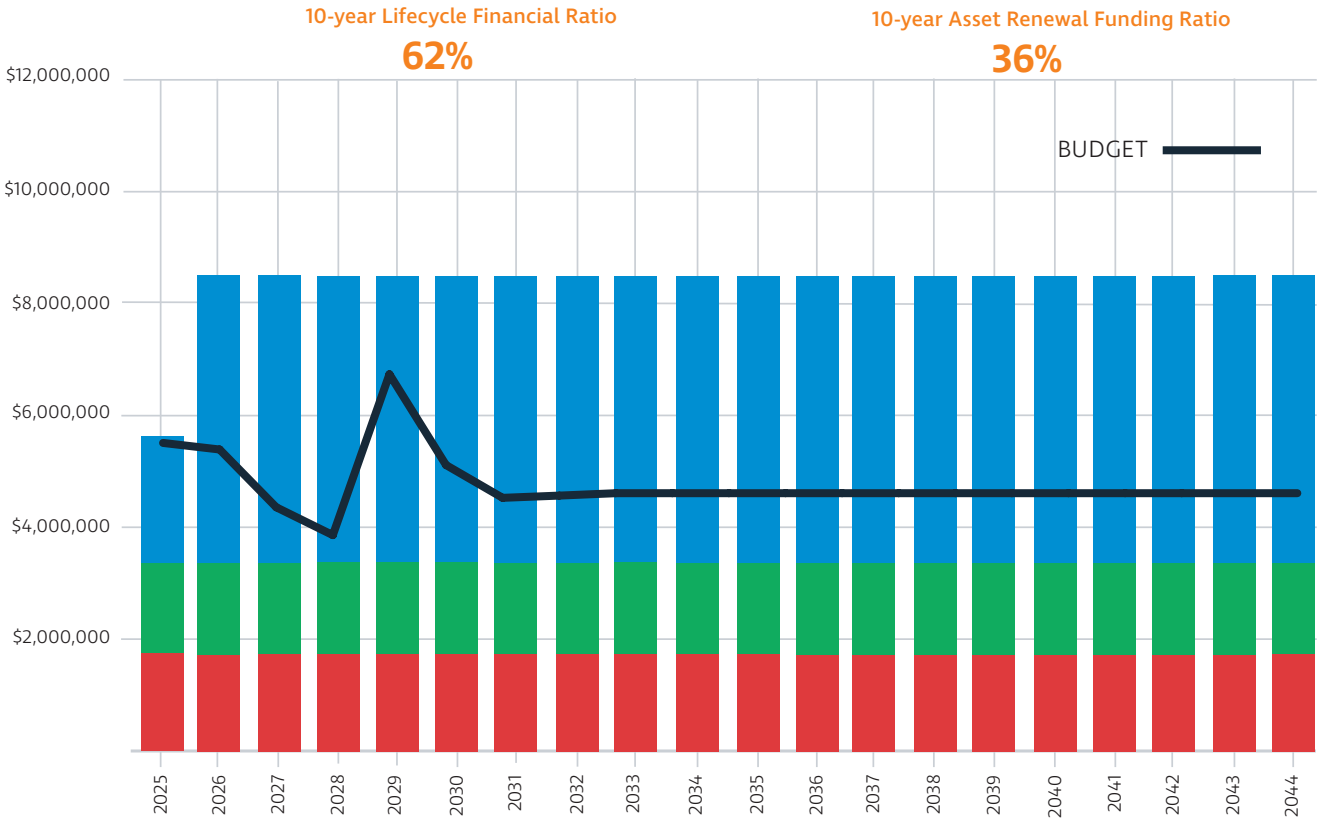
This Asset Management Plan does not identify financial forecasts associated with asset disposal, however where recommended, significant assets will be identified for decommissioning and disposal through Council Reports, to then be considered within the Long-Term Financial Plan and Business Plan and Budget.

7 Financial Summary

This Asset Management Plan defines the asset management activities and associated funding requirements recommended for inclusion into the Long-Term Financial Plan to achieve our asset performance targets. The lifecycle costs necessary to operate, maintain and renew our assets as outlined within this Asset Management Plan is approximately $8.10 million on average each year across the 10-year planning period. The associated 10-year annual average financial forecasts for renewal, maintenance and operation are presented below for Public Lighting and Electrical Infrastructure.

Lifecycle Category	10-Year Annual Average Forecast
Renewal	**$4.88 M**
Maintenance	**$1.48 M**
Operation Cost	**$1.74 M**
Lifecycle Cost	**$8.10 M**

Currently, the lifecycle budget allocation within the Long-Term Financial Plan is only $4.99 million on average each year. This leaves a funding shortfall of $3.11 million on average each year and means we currently only have 62% of the costs (Lifecycle Financial Ratio) to deliver the required activities to sustain current levels of service.



LIFECYCLE SUMMARY

Annual Average first 10 years

Lifecycle Summary	$8,101,727
Planned Budget	$4,986,639
Shortfall	-$3,115,088

MAINTENANCE

Annual Average first 10 years

Planned Budget	$1,478,327
Lifecycle Forecast	$1,478,327

OPERATION

Annual Average first 10 years

Planned Budget	$1,747,000
Lifecycle Forecast	$1,747,000

RENEWAL

Annual Average first 10 years

Planned Budget	$1,761,312
Lifecycle Forecast	$4,876,400

Noting that this Asset Management Plan has not forecast any additional operational and maintenance requirements, the identified lifecycle funding shortfall is associated with the revised asset renewal forecasting. The Public Lighting and Electrical Infrastructure network will require additional renewal funding across the 10-year planning period to maintain existing levels of service.

The Asset Renewal Funding Ratio indicates that over the next 10 years our current budgets within the Long-Term Financial Plan account for 36% of the forecast funding required for the optimal renewal of our Public Lighting and Electrical Infrastructure. Contributing factors for the gap between the forecast renewal costs and current budgets within the Long-Term Financial Plan include:

- Not achieving our Asset Renewal Funding Ratio targets over the past four financial years as a result of Covid-19 resourcing impacts and project delays associated with post-pandemic market saturation.
- Undertaking a comprehensive review of existing funding allocations and appropriately re-forecasting asset renewal requirements within this Asset Management Plan.
- Ensuring we accurately recognise asset replacement costs, utilising current unit rates that take into consideration increasing costs associated with inflation and industry escalations.

Only what is funded in the Long-Term Financial Plan and approved through the Annual Business Plan and Budget can be delivered. Should the Long-Term Financial Plan be unable to accommodate the revised asset renewal forecasts recommended within this Asset Management Plan, there will be associated service and risk impacts.

Continuing to leverage off external funding opportunities will allow us to maintain and enhance the quality of the service we provide, while reducing financial pressures through the efficiencies in an increased revenue. We will continue to work in partnership with both the State and Federal Governments to pursue these opportunities for both renewal and significant new and upgrade projects.

8 Potential Service and Risk Impacts

If the forecast activities outlined within this Asset Management Plan (operations, maintenance, renewal) are unable to be accommodated into the Long-Term Financial Plan, there will be potential service consequences for users. These service consequences include:

- Reduced levels of service for the Public Lighting and Electrical Infrastructure
- Increased service disruptions and public lighting outages
- Reduced customer satisfaction levels associated with the management of our existing assets
- Intergenerational inequity (burdening future generations)

These associated risk consequences include:

- Increased safety risks associated with assets becoming inoperative
- Increased reputational risks associated with services not aligning with community expectations
- Increased financial risks associated with additional maintenance requirements that cannot be accommodated within existing budgets
- Increased financial risks associated with higher renewal and/or rehabilitation treatments as asset renewals are not funded at the optimal point in time
- Increased economic risk associated with reduced business activity, events and tourism
- Intergenerational inequity (passing on costs and risk to future generations)

If the forecast activities outlined within this Asset Management Plan are unable to be accommodated into the Long-Term Financial Plan, we will endeavour to manage these risks within available funding by:

- Continuing to undertake regular asset condition and maintenance inspections
- Prioritising all asset renewal and maintenance activities with respect to available budget
- Revising our levels of service to establish an acceptable balance between cost, level of service and risk
- Developing a communication strategy to manage expectations and educate the community around affordable levels of service
- Continuing to seek out external funding opportunities
- Prioritisation of the delivery of key actions from the Improvement Plan.

9 Monitoring and Improvement Program

The next steps resulting from this Asset Management Plan to improve asset management practices are:

	Improvement Plan Actions
1	Comprehensive update of this Asset Management Plan following the completion of spatial data improvements, asset condition audit and asset revaluation.
2	Finalise a 4-year Resource Plan to identify key upgrade/new projects to deliver Council's Strategic Plan objectives. Once key projects are recognised within the Long Term Financial Plan, Asset Management Plans will be updated to ensure associated acquisition costs (upgrade/new) and ongoing operational and maintenance costs are appropriately recognised, in conjunction with any scheduling adjustments required for asset renewal programs.
3	Finalise the Public Lighting Strategy to identify key priority projects for inclusion within the Resource Plan. Asset Management Plans to be reviewed and updated where required, considering any impacts to planned asset renewal programs.
4	Continue to review asset renewal forecasts and requirements for existing EV charging stations as the City of Adelaide Electrical Vehicle Charging Infrastructure Roadmap is implemented.
5	Review and update operations and maintenance standards, to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. Include changes into future revisions of this Asset Management Plan and Long Term Financial Plan.
6	Continue to work in partnership with both the State and Federal Governments to pursue external funding opportunities for both renewal and significant upgrade/new Public Lighting and Electrical Infrastructure projects.
7	Continue to undertake regular condition audits and revaluation for all Public Lighting and Electrical Infrastructure assets, including regular review of asset useful lives.
8	Continue to review our technical standards and their application across the Public Lighting and Electrical Infrastructure with respect to climate resilience, circular economy, recycled materials, durability and performance, whole-of-life cost, amenity, and heritage requirements.
9	Continue to monitor forecast climate change impacts to ensure we remain resilient through proactively implementing appropriate mitigation and adaptation controls.
10	Improve the capture of carbon emission data for technical standards and project procurement to support lower carbon decision making.
11	Engage with the community and seek feedback regarding levels of customer satisfaction for CCTV Cameras and Electrical Vehicles Charging Station assets for the next revision of this Asset Management Plan.
12	Review of corporate performance measure targets for customer satisfaction, to assist with performance gap analysis.
13	Review and standardise asset hierarchies for all asset classes within Public Lighting and Electrical Infrastructure.
14	Review customer service requests codes to better align with Level of Service reporting and operational and maintenance sub-activities.
15	Further develop processes to ensure asset data is updated following the completion of contracted maintenance work and emergency asset replacement resulting from vandalism or knockdowns.

CITY OF ADELAIDE

Public Lighting and Electrical Infrastructure Asset Management Plan

CITY OF ADELAIDE

Contents

1	EXECUTIVE SUMMARY	5
2	INTRODUCTION	16
3	LEVELS OF SERVICE	23
4	FUTURE DEMAND	35
5	LIFECYCLE MANAGEMENT PLAN	40
6	RISK MANAGEMENT PLANNING	52
7	FINANCIAL SUMMARY	59
8	PLAN IMPROVEMENT AND MONITORING	65
9	REFERENCES	68
10	APPENDICES	69

1.0 EXECUTIVE SUMMARY

1.1 The Purpose of the Plan

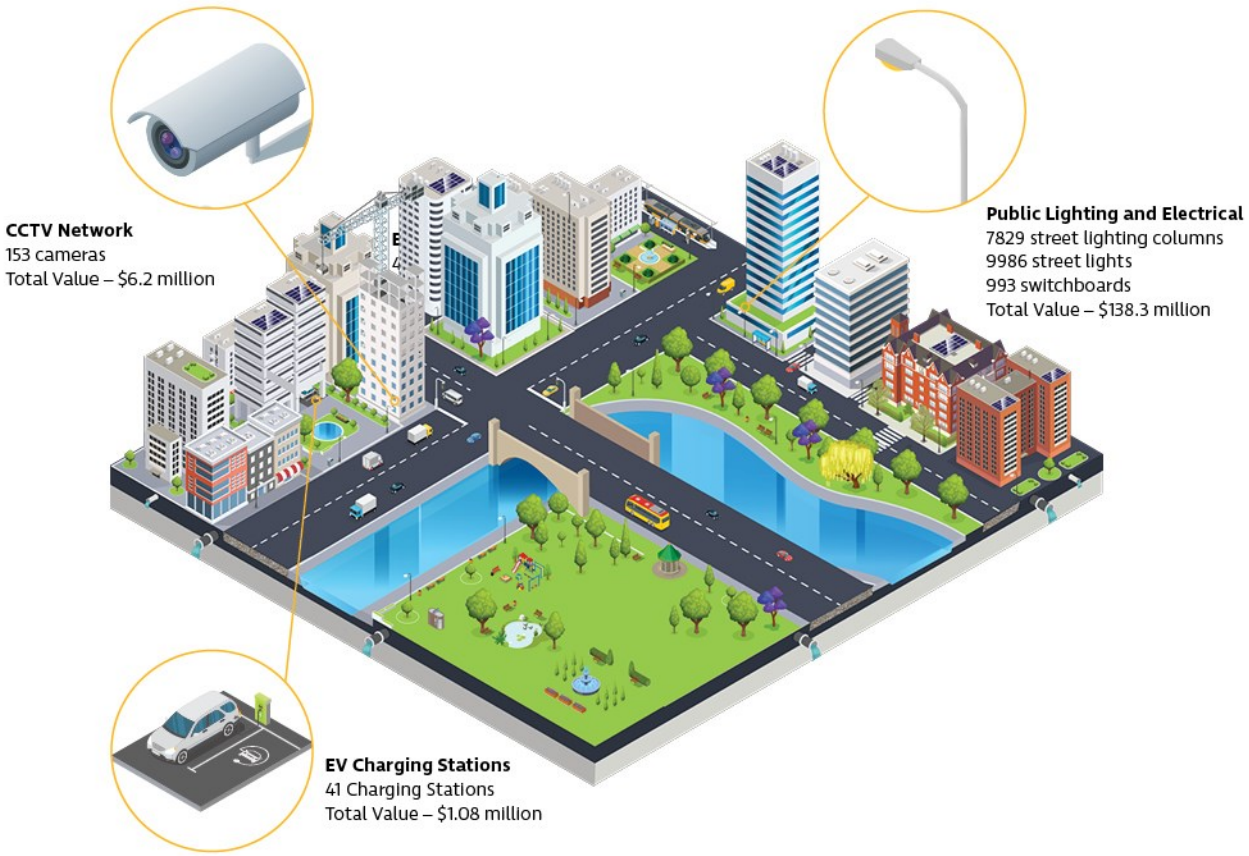
The City of Adelaide is responsible for an extensive and diverse asset portfolio valued at more than $2 billion, which represents a significant investment made over multiple generations. These assets play a vital role in providing essential services to our community and it is critical to ensure these assets continue to be effectively managed to enable ongoing service provision and benefits for both current and future generations.

Under South Australia's *Local Government Act 1999*, we are required to develop Asset Management Plans for a period of at least 10 years, which includes information about the operation, maintenance, renewal, acquisition, expansion, upgrade and disposal for each infrastructure assets class under our care and control.

The City of Adelaide has six Asset Management Plans, which includes Public Lighting and Electrical Infrastructure, Transportation, Park Lands & Open Space, Buildings, Water Infrastructure, and Urban Elements.

The fundamental purpose of this Public Lighting and Electrical Infrastructure Asset Management Plan is to outline the Council's high-level asset management priorities for the operation, maintenance and renewal of our assets over the next 10 years. Additionally, it aims to improve the long-term strategic management of our Public Lighting and Electrical Infrastructure assets, to cater for the community's required levels of service both now and into the future.

Work is currently underway to significantly improve the spatial data, asset condition information and asset attribute information utilised within this Public Lighting and Electrical Infrastructure Asset Management Plan. These activities align with good asset management practices and will provide more granular information to enable robust analysis to inform future decision making. The outcome of this work, which is due for completion by June 2025, will enable a more mature Public Lighting and Electrical Infrastructure Asset Management Plan with a higher degree of confidence for the future requirements of the asset class.



Therefore, due to the current maturity level of the asset data, this Public Lighting and Electrical Infrastructure Asset Management Plan will be considered an interim document, which will be updated following the completion of the spatial data improvements, condition audit, and subsequent modelling and analysis.

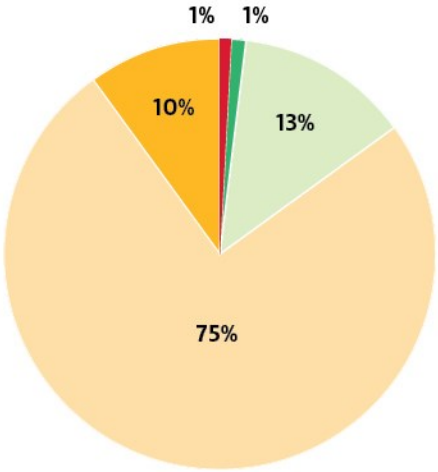
This interim plan defines the current state of our $145.6 million Public Lighting and Electrical Infrastructure asset portfolio, as well as the asset management activities and associated funding requirements recommended for inclusion into the Long-Term Financial Plan.

1.2 Our Public Lighting and Electrical Infrastructure Assets

The City of Adelaide's Public Lighting and Electrical Infrastructure network is valued at approximately $145.6 million and provides services that facilitate safe access and enjoyment of the city and it's amenities at night, in conjunction with supporting pedestrians, cyclists, motorists move into and around the city and Park Lands. These assets include street lighting, electrical reticulation infrastructure (i.e. cables, conduits and switchboards), CCTV cameras and EV charging stations.

Our Public Lighting assets consists of several different ownership and responsibility models. Some Public Lighting Assets are owned and operated entirely by City of Adelaide, some are owned entirely by South Australian Power Networks (SAPN), where we pay a contribution by way of a tariff for the maintenance and operation of these Public Lighting assets and some are a hybrid of City of Adelaide and SAPN ownership where Council own the luminaire (light fitting) and SAPN own the supporting structure (pole). Under a hybrid arrangement we also contribute to the maintenance and operation by way of a tariff.

To monitor the performance of our Public Lighting and Electrical Infrastructure assets, we undertake condition audits at regular intervals. Asset condition information is analysed with respect to technical intervention criteria to inform our maintenance and renewal programs. The current condition of our Public Lighting and Electrical Infrastructure is generally rated in a fair condition, with an overall condition index rating of 3.0. 89% of assets are rated in a very good to fair condition and 11% of assets are rated in poor or very poor condition, which form the general basis of our renewal program priorities.



Condition Grading	Description of Condition
1	**Very Good:** free of defects, only planned and/ or routine maintenance required
2	**Good:** minor defects, increasing maintenance required plus planned maintenance
3	**Fair:** defects requiring regular and/or significant maintenance to reinstate service
4	**Poor:** significant defects, higher order cost intervention likely
5	**Very Poor:** physically unsound and/or beyond rehabilitation, immediate action required

It is important to note that this condition data is considered to be of low reliability, as the last full condition audit for our public lighting and electrical infrastructure was undertaken in 2018. Work is currently progressing with data cleansing to improve the overall data set for the asset categories referenced within this Asset Management Plan. In 2024 a condition audit for our Public Lighting and Electrical Infrastructure will commence to collect condition data to align with the updated spatial data and inform updates to this Asset Management Plan.

1.3 Community Engagement & Customer Satisfaction

In November 2021, we undertook an engagement process with city residents and visitors to better understand and measure levels of customer satisfaction for the services provided by our Public Lighting and Electrical Infrastructure assets. A summary of the responses is shown below.

Category	Average Score	Not Measured	Very Poor (<40%)	Poor (40–54%)	Average (55–69%)	Good (70–85%)	Excellent (>85%)
Public Lighting	62.5%					●	
CCTV Cameras	–	●					
EV Charging Stations	–	●					

For this Asset Management Plan, feedback was not sought for CCTV Cameras or Electric Vehicle Charging Stations, however ensuring this feedback is collected in the future has been recognised as an action within the Improvement Plan of this Asset Management Plan (Chapter 8).

The overall feedback confirmed appropriate levels of customer satisfaction for the maintenance and renewal of our existing public lighting and electrical infrastructure assets. Engagement did identify some locations where the community believed public lighting provisions could be improved. These locations were typically associated with city streets where public lighting infrastructure was owned and operated by SAPN and Park Lands locations where public lighting was not currently present. It is anticipated that the completion of the Public Lighting Strategy (currently under development) and the subsequent initiation, funding and delivery of new and upgrade Public Lighting projects, in conjunction with continuing to work with South Australian Power Networks to convert luminaires over to LED technology will incrementally bridge the gap between customer expectations and service provisions over time.

A Recommended Levels of Service Report was presented to Council, with the recommendations approved in October 2022. This report noted the community consultation undertaken and the associated benchmarking of current user satisfaction. Additionally, Council approved the development of the Public Lighting and Electrical Infrastructure Asset Management Plan based on the planning principles and recommended management strategies presented within the reports and its attachments.

1.4 Current and Future Demands

It is anticipated that the City of Adelaide will be subject to considerable change over the next ten years. This will result in our Public Lighting and Electrical Infrastructure assets being subject to new demands that have the potential to impact future service delivery and the requirements of our assets.

Key demand drivers and future challenges will include:

- City growth
- Changing demographic and user groups
- Tourism and event growth
- Climate change and carbon neutrality
- Emerging technology
- Legislation and regulation

Demand for new services will be managed through a combination of managing existing assets, upgrading existing assets, providing new assets and demand management. Demand management practices can include non-asset solutions, such as educating the community around alternative options, which facilitates service provision without the need to invest in new or upgraded infrastructure.

Demand management will include:

- Continuing to engage with our community through annual City User Profile surveys
- Finalising the Public Lighting Strategy (2024)
- Finalising the Integrated Transport Strategy (2024)
- Delivering priority upgrade/new projects identified within the Strategic Plan and strategic documents
- Ensuring climate risk mitigation and adaptation is a key focus for strategic planning, asset management and project delivery
- Continuing to review and update design standards and technical specifications to ensure our assets transition towards having a lower carbon footprint with improved circular economy outcomes through increased usage of recycled materials
- Continuing to partner with industry, to monitor and evaluate new and emerging technologies, with trials of new materials, approaches, and methodologies to inform appropriate changes to standards and practices
- Continuing to monitor changes to legislation and ensure appropriate adaptation into asset management practices

1.5 Strategic Planning

Under the *Local Government Act (SA) 1999*, we are legislatively required to establish a suite of Strategic Management Plans, which guide Council's future planning, asset management and financial sustainability. An overview of these strategic management plans are shown below:

Strategic Plan *Community*	Long term with a four year delivery focus. *Planning for the vision and aspirations of the Adelaide Capital City.*
Long-Term Financial Plan *Financial*	Ten year Plan, revised annually to ensure a ten year view is maintained. *Planning for the long-term financial sustainability of the City of Adelaide.*
Asset Management Plans *Infrastructure*	Suite of ten year Plans. *Planning for the sustainable renewal and maintenance of Council assets.*
City Plan *Development / Built Form*	Ten year Spatial Plan. *Planning for the future land uses and built form of the Adelaide Capital City.*

Through the City of Adelaide Strategic Plan 2024 – 2028, Council's vision is:

Our Adelaide. Bold. Aspirational. Innovative.

Achieving our vision for the future will be guided by our long term aspirations:

Our Community: Vibrant, connected and inclusive
Our Environment: Resilient, protected and sustainable
Our Economy: Growing, innovative and responsive
Our Places: Interesting, purposeful and safe
Our Corporation: High performing, customer-centric and bold

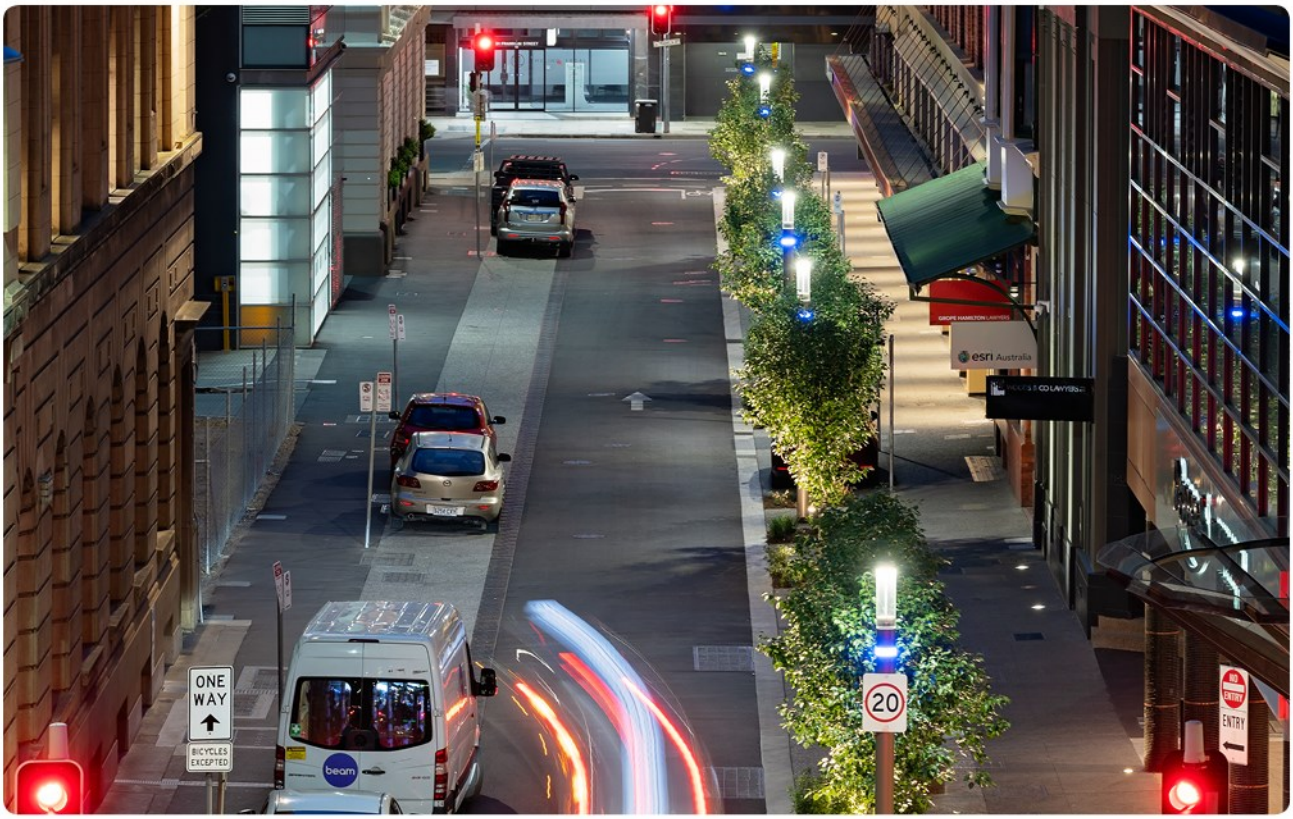
As Adelaide grows, we will need to consider economic vitality, social connectivity and wellbeing, distinctive precincts, environmental and financial sustainability, asset management and service delivery. To ensure we maintain our liveability and to support growth, these principles will underpin everything we do:

- Exceptional Amenity – Be bold and courageous in our pursuit of excellence for our city
- Quality Housing – Strive for liveability and affordability to attract and retain residents
- Community Connection – Strengthen connection, accessibility, diversity and inclusivity by putting people first
- Unique Experiences – Create interesting experiences for our residents, workers and visitors
- Climate Resilience – Embed climate resilience in all that we do
- Economic Growth – Encourage innovation, investment and development in current and emerging sectors
- Budget Repair – Provide quality services and ensure long-term financial sustainability

The Strategic Plan is supported by a suite of long and short-term strategies and action plans as well as a Resource Plan. The Resource Plan provides a four-year view of new and upgrade projects, resources, and budget requirements to deliver our Strategic Plan aspirations and objectives.

Integrated Delivery Planning ensures that prudent and efficient decisions are made, with line-of-sight between Council's Strategic Plan objectives and the major infrastructure projects we deliver. While this Asset Management Plan does not identify financial forecasts associated with new and upgrade projects, it does ensure required asset renewals are aligned (where practical) with key new and upgrade projects specified within the Resource Plan.

Each year our annual business plan and budget formalises funding allocations to continue providing services and progress new projects. It enables existing projects to move from one delivery stage to the next (eg progress concept design to detailed design and detailed design to construction) as well as consider emerging risks and opportunities that may result from Council decisions, community requests or other external factors.



1.6 Lifecycle Management

In order to effectively manage our assets, it is important to understand the relationship between all stages of the asset lifecycle. Effective asset management and sustainable financial planning requires a balance between the maintenance, renewal and disposal of existing assets and the delivery of new and upgraded assets.

Our goal is to provide assets that service the needs of the community, providing the agreed levels of service at the lowest lifecycle cost. To enable this, it is important to understand:

- How our assets are performing
- How our assets should be operated and maintained
- When our assets should be renewed
- When we should consider upgrading existing assets or constructing new assets
- How funding for new and upgraded assets is prioritised
- When we should consider disposing underperforming or underutilised assets

This Asset Management Plan's renewal strategy aims to minimise the number of assets that deteriorate into a poor condition and prohibit assets reaching a very poor condition. This strategy ensures we can continue to provide services in line with the community's expectations, appropriately manage risk and optimise whole-of-life costs. Renewal requirements have been identified through a combination of workshops with key infrastructure and maintenance staff and available condition audit information.

While we have proactive maintenance programs associated with legislative requirements, general operational and maintenance activities are typically evaluated and prioritised with respect to budget provisions within the Long-Term Financial Plan and Annual Business Plan and Budget. Following the completion of this Asset Management Plan, we will be reviewing operations and maintenance standards for Public Lighting and Electrical Infrastructure assets, with a view to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. The associated financial impacts will need to be further considered in future revisions of this Asset Management Plan and the Long-Term Financial Plan.

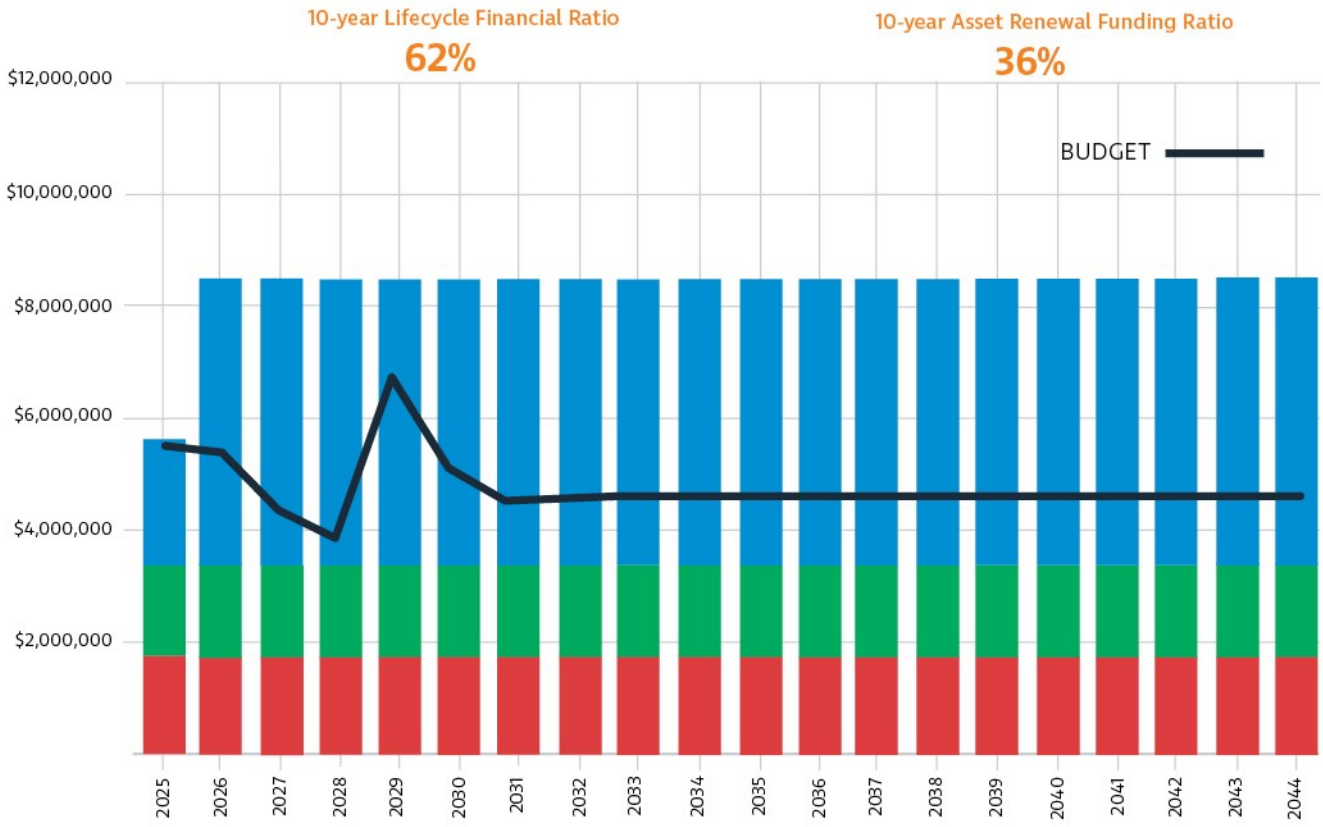
This Asset Management Plan does not identify financial forecasts associated with asset disposal, however where recommended, significant assets will be identified for decommissioning and disposal through Council Reports, to then be considered within the Long-Term Financial Plan and Business Plan and Budget.

1.7 Financial Summary

This Asset Management Plan defines the asset management activities and associated funding requirements recommended for inclusion into the Long-Term Financial Plan to achieve our asset performance targets. The lifecycle costs necessary to operate, maintain and renew our assets as outlined within this Asset Management Plan is approximately $8.10 million on average each year across the 10-year planning period. The associated 10-year annual average financial forecasts for renewal, maintenance and operation are presented below for Public Lighting and Electrical Infrastructure.

Lifecycle Category	10-Year Annual Average Forecast
Renewal	$4.88 M
Maintenance	$1.48 M
Operation Cost	$1.74 M
Lifecycle Cost	$8.10 M

Currently, the lifecycle budget allocation within the Long-Term Financial Plan is only $4.99 million on average each year. This leaves a funding shortfall of $3.11 million on average each year and means we currently only have 62% of the costs (Lifecycle Financial Ratio) to deliver the required activities to sustain current levels of service.



LIFECYCLE SUMMARY

Annual Average first 10 years

Lifecycle Summary	$8,101,727
Planned Budget	$4,986,639
Shortfall	-$3,115,088

MAINTENANCE

Annual Average first 10 years

Planned Budget	$1,478,327
Lifecycle Forecast	$1,478,327

OPERATION

Annual Average first 10 years

Planned Budget	$1,747,000
Lifecycle Forecast	$1,747,000

RENEWAL

Annual Average first 10 years

Planned Budget	$1,761,312
Lifecycle Forecast	$4,876,400

Noting that this Asset Management Plan has not forecast any additional operational and maintenance requirements, the identified lifecycle funding shortfall is associated with the revised asset renewal forecasting. The Public Lighting and Electrical Infrastructure network will require additional renewal funding across the 10-year planning period to maintain existing levels of service.

The Asset Renewal Funding Ratio indicates that over the next 10 years our current budgets within the Long-Term Financial Plan account for 36% of the forecast funding required for the optimal renewal of our Public Lighting and Electrical Infrastructure. Contributing factors for the gap between the forecast renewal costs and current budgets within the Long-Term Financial Plan include:

- Not achieving our Asset Renewal Funding Ratio targets over the past four financial years as a result of Covid-19 resourcing impacts and project delays associated with post-pandemic market saturation.
- Undertaking a comprehensive review of existing funding allocations and appropriately re-forecasting asset renewal requirements within this Asset Management Plan.
- Ensuring we accurately recognise asset replacement costs, utilising current unit rates that take into consideration increasing costs associated with inflation and industry escalations.

Only what is funded in the Long-Term Financial Plan and approved through the Annual Business Plan and Budget can be delivered. Should the Long-Term Financial Plan be unable to accommodate the revised asset renewal forecasts recommended within this Asset Management Plan, there will be associated service and risk impacts.

Continuing to leverage off external funding opportunities will allow us to maintain and enhance the quality of the service we provide, while reducing financial pressures through the efficiencies in an increased revenue. We will continue to work in partnership with both the State and Federal Governments to pursue these opportunities for both renewal and significant new and upgrade projects.

1.8 Potential Service and Risk Impacts

If the forecast activities outlined within this Asset Management Plan (operations, maintenance, renewal) are unable to be accommodated into the Long-Term Financial Plan, there will be potential service consequences for users. These service consequences include:

- Reduced levels of service for the Public Lighting and Electrical Infrastructure
- Increased service disruptions and public lighting outages
- Reduced customer satisfaction levels associated with the management of our existing assets
- Intergenerational inequity (burdening future generations)

These associated risk consequences include:

- Increased safety risks associated with assets becoming inoperative
- Increased reputational risks associated with services not aligning with community expectations
- Increased financial risks associated with additional maintenance requirements that cannot be accommodated within existing budgets
- Increased financial risks associated with higher renewal and/or rehabilitation treatments as asset renewals are not funded at the optimal point in time
- Increased economic risk associated with reduced business activity, events and tourism
- Intergenerational inequity (passing on costs and risk to future generations)

If the forecast activities outlined within this Asset Management Plan are unable to be accommodated into the Long-Term Financial Plan, we will endeavour to manage these risks within available funding by:

- Continuing to undertake regular asset condition and maintenance inspections
- Prioritising all asset renewal and maintenance activities with respect to available budget
- Revising our levels of service to establish an acceptable balance between cost, level of service and risk
- Developing a communication strategy to manage expectations and educate the community around affordable levels of service
- Continuing to seek out external funding opportunities
- Prioritisation of the delivery of key actions from the Improvement Plan.

1.9 Monitoring and Improvement Program

The next steps resulting from this Asset Management Plan to improve asset management practices are:

	Improvement Plan Actions
1	Comprehensive update of this Asset Management Plan following the completion of spatial data improvements, asset condition audit and asset revaluation.
2	Finalise a 4-year Resource Plan to identify key upgrade/new projects to deliver Council's Strategic Plan objectives. Once key projects are recognised within the Long Term Financial Plan, Asset Management Plans will be updated to ensure associated acquisition costs (upgrade/new) and ongoing operational and maintenance costs are appropriately recognised, in conjunction with any scheduling adjustments required for asset renewal programs.
3	Finalise the Public Lighting Strategy to identify key priority projects for inclusion within the Resource Plan. Asset Management Plans to be reviewed and updated where required, considering any impacts to planned asset renewal programs.
4	Continue to review asset renewal forecasts and requirements for existing EV charging stations as the City of Adelaide Electrical Vehicle Charging Infrastructure Roadmap is implemented.
5	Review and update operations and maintenance standards, to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. Include changes into future revisions of this Asset Management Plan and Long Term Financial Plan.
6	Continue to work in partnership with both the State and Federal Governments to pursue external funding opportunities for both renewal and significant upgrade/new Public Lighting and Electrical Infrastructure projects.
7	Continue to undertake regular condition audits and revaluation for all Public Lighting and Electrical Infrastructure assets, including regular review of asset useful lives.
8	Continue to review our technical standards and their application across the Public Lighting and Electrical Infrastructure with respect to climate resilience, circular economy, recycled materials, durability and performance, whole-of-life cost, amenity, and heritage requirements.
9	Continue to monitor forecast climate change impacts to ensure we remain resilient through proactively implementing appropriate mitigation and adaptation controls.
10	Improve the capture of carbon emission data for technical standards and project procurement to support lower carbon decision making.
11	Engage with the community and seek feedback regarding levels of customer satisfaction for CCTV Cameras and Electrical Vehicles Charging Station assets for the next revision of this Asset Management Plan.
12	Review of corporate performance measure targets for customer satisfaction, to assist with performance gap analysis.
13	Review and standardise asset hierarchies for all asset classes within Public Lighting and Electrical Infrastructure.
14	Review customer service requests codes to better align with Level of Service reporting and operational and maintenance sub-activities.
15	Further develop processes to ensure asset data is updated following the completion of contracted maintenance work and emergency asset replacement resulting from vandalism or knockdowns.

2.0 INTRODUCTION

2.1 Background

First shaped by the Kaurna People of the Adelaide Plains, then by Colonel William Light, Adelaide is a dynamic, accessible and safe city, that offers an enviable quality of life. The physical layout of the city enhances the attributes that make Adelaide unique. From the Nationally Heritage Listed Park Lands that surround our city, to the compact layout that makes the city walkable and cyclable, to our unique neighbourhoods and precincts, all these factors place Adelaide on the path to being one of the most liveable cities in the world. Despite our small footprint, the City of Adelaide is home to over 26,000 residents, 12,000 businesses and accommodates over 300,000 visitors daily, contributing close to 18% of the State's economic value.

The City of Adelaide's Public Lighting and Electrical network is essential to the health, wellbeing and safety of our community. It supports pedestrians, cyclists and motorists to move into and around the City and Park Lands and enhances the utilisation and activation of the City. This asset portfolio is valued at approximately $145.6 million and includes streetlights, CCTV Cameras, EV charging stations and switchboards.

Our Public Lighting assets consist of several different ownership and responsibility models. Some Public Lighting assets are owned and operated entirely by City of Adelaide, some are owned entirely by SAPN (CCS pay a contribution for the maintenance and operation of these Public Lighting assets) and some are a hybrid of CoA and SAPN ownership where Council own the luminaire (light fitting) and SAPN own the supporting structure (pole). Under a hybrid arrangement Council contribute to the maintenance and operation by way of a tariff.

With projected City and metropolitan growth, a changing climate, and advancements in technology, it is anticipated that higher demand will be placed on our existing assets and there will be increasing requirements for new and upgraded infrastructure.

With Council's strategic objectives to create a beautiful and diverse City that is welcoming, inclusive, and accessible to all, it is critical to ensure that our public lighting and electrical infrastructure network continues to be appropriately managed, ensuring we provide appropriate services and benefits for both current and future generations.

Work is currently underway to significantly improve the spatial data, asset condition information and asset attribute information utilised within this Public Lighting and Electrical Infrastructure Asset Management Plan. These activities align with good asset management practices and will provide more granular information to enable robust analysis to inform future decision making. The outcome of this work, which is due for completion by June 2025, will enable a more mature Public Lighting and Electrical Asset Management Plan with a high degree of confidence for the future requirements of the asset class. Therefore, due to the current maturity level of the asset data, this Public Lighting and Electrical Asset Management Plan will be considered an interim document, which will be updated following the completion of the spatial data improvements, condition audit, and subsequent modelling and analysis.

This interim Public Lighting & Electrical Infrastructure Asset Management Plan communicates the requirements for the sustainable delivery of services through management of assets, compliance with regulatory requirements, and required funding to provide the appropriate levels of service over the planning period. The infrastructure assets covered by this Asset Management Plan, including their quantities and replacement costs are shown in Table 2.1 below.

Table 2.1: Assets covered by the Public Lighting and Electrical Infrastructure Asset Management Plan

Asset Category	Quantity/Dimension	Replacement Value
Public Lighting and Electrical	7,829 street lighting columns	$138.3 million
	9,986 street lights / luminaires	
	993 switchboards	
CCTV Network	153 cameras	$6.2 million
EV Charging Stations	41 charging stations	$1.08 million
Total		$145.6 million

This Asset Management Plan is to be read in conjunction with the Asset Management Policy, Strategic Asset Management Plan and the following key Corporate planning documents:

- City of Adelaide Strategic Plan (2024-2028)
- Active City Strategy (2013-2023)
- Adelaide Park Lands Management Strategy (2014-2025)
- Carbon Neutral Strategy (2015-2025)
- Climate Change Risk Adaptation Action Plan (2021-2026)
- Community Land Management Plans
- Disability Access and Inclusion Plan (2019-2022)
- Heritage Strategy and Action Plan (2021-2036)
- Park Land and Precinct Master Plans
- Public Art Action Plan (2019-2022)
- Public Health and Wellbeing Plan (2020-2025)
- Smart Move Transport and Movement Strategy (2012-2022)
- The 30-Year Plan for Greater Adelaide (2017) - State Government
- Integrated Transport and Land Use Plan for Greater Adelaide - State Government
- South Australian Walking Strategy (2022-2032) – State Government
- South Australia's Road Safety Strategy (to 2031) – State Government

As existing planning documents are updated and new planning documents are approved by Council, Asset Management Plans will be reviewed and updated as required.

Infrastructure projects will reference the Adelaide Design Manual for transformational projects supported by upgrade/new funding allocated with the Business Plan and Budget and Long-Term Financial Plan.

2.2 Goals and Objectives of Asset Ownership

Our goal for managing infrastructure assets is to meet the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers.

The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing, and appropriately controlling risks, and
- Linking to a Long-Term Financial Plan which identifies required, affordable forecast costs and how it will be allocated.

Key elements of the planning framework are:

- Levels of service – specifies the services and levels of service to be provided,
- Risk management,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Lifecycle management – how to manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices – how we manage provision of the services,
- Monitoring – how the plan will be monitored to ensure objectives are met,
- Asset management improvement plan – how we increase asset management maturity.

Other references to the benefits, fundamentals principles and objectives of asset management are:

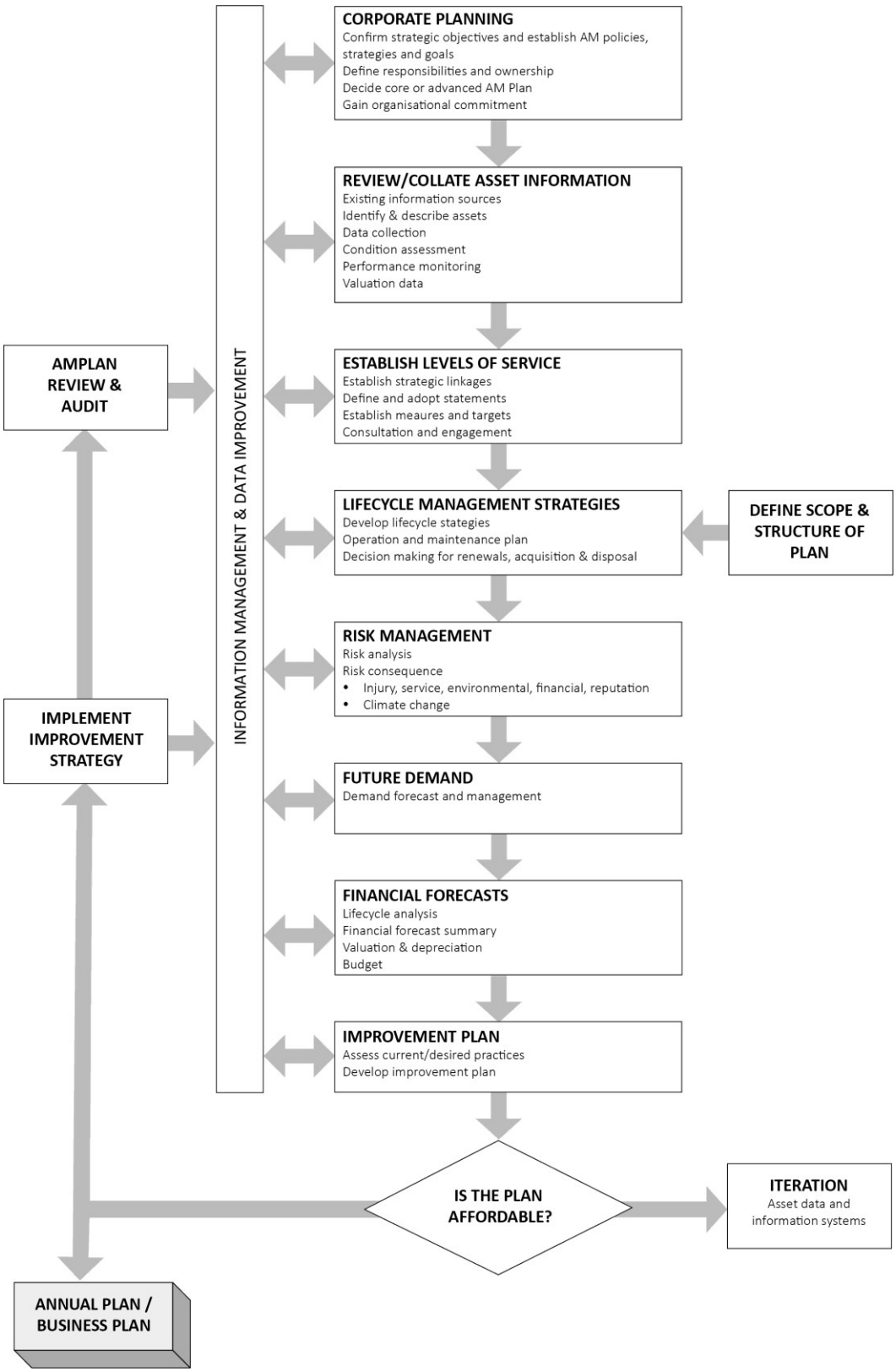
- International Infrastructure Management Manual 2015 [1]
- ISO 550001

[1] ISO 55000 Overview, principles and terminology

A road map for preparing an Asset Management Plan is shown below:

Figure 2.2: Road Map for preparing an Asset Management Plan

Source: IPWEA, 2006, IIMM, Fig 1.5.1, p 1.11



2.3 Key Stakeholders & Organisational Responsibilities

Key stakeholders in the preparation and implementation of this Asset Management Plan are shown in Table 2.3.

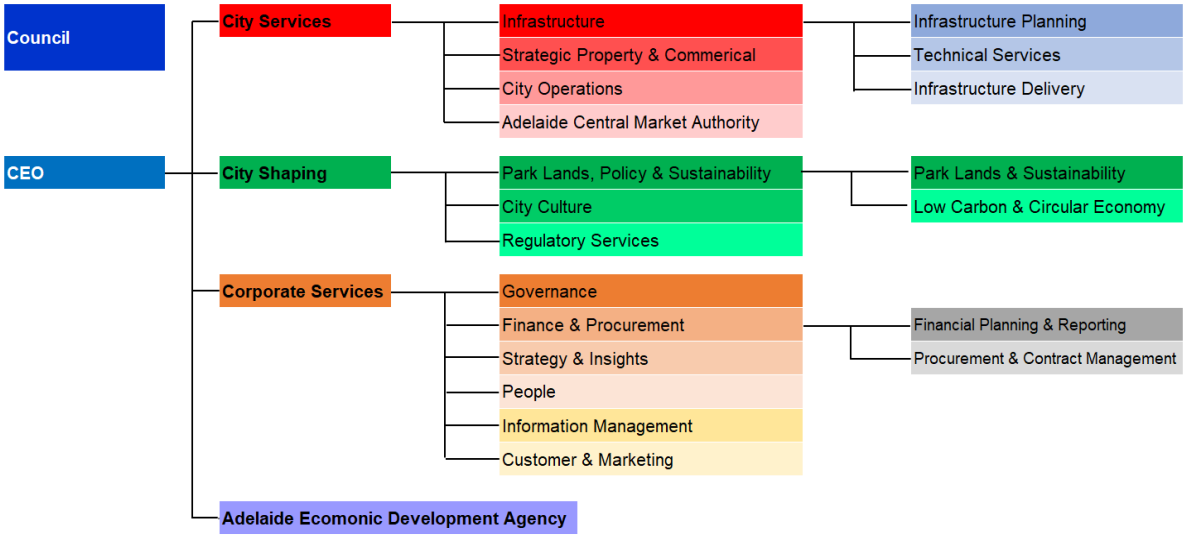
Table 2.3: Key Stakeholders in the Asset Management Plan

Key Stakeholder	Role in Asset Management Plan
Residents, Ratepayers & Businesses	Provide feedback on current and desired levels of service, which is considered in the development of Asset Management Plans.
Workers, Visitors, Tourists and Students	
Capital City Committee (CCC)	Intergovernmental body established under the City of Adelaide Act (1998) which initiates new projects to enhance and promote the development of the City of Adelaide as the capital city of the state.
Lord Mayor & Elected Members	Represent and advocate for the needs of the community and set high level direction through the development of asset management principles in the Strategic Plan. Approve the Asset Management Plan and Long-Term Financial Plan, to ensure the organisation maintains financial sustainability over the short, medium, and long terms, with consideration of community needs/expectations and corporate risk management requirements.
Chief Executive Officer & Executive Leadership Team	Responsible for the allocation of resources and development of sound asset management practice across the organisation as well as ensuring that all asset management activities are consistent with the objectives of Council's Strategic Plan, the Business Plan and Budget process and the Long-Term Financial Plan. Responsible for ensuring the financial projections in the adopted Asset Management Plans are reflected in the Long-Term Financial Planning and include sustainable maintenance, operations, renewal, and upgrade costs of current and future assets.
Associate Director Infrastructure	Responsible for providing leadership and direction for Council's Asset Management Framework and Project Delivery.
Infrastructure Planning	Responsible for the lifecycle management of Council's Infrastructure Assets and the development of Asset Management Plans, ensuring alignment with the Strategic Management Framework and principles and objectives outlined in the Strategic Plan and other relevant corporate planning documents.
Park Lands & Sustainability	Responsible for developing the Adelaide Park Lands Management Strategy, Park Lands and Square Master Plans and initiating priority Park Lands & Open Space upgrade/new project initiatives. Responsible for facilitating the identification of climate change risks and potential impacts to infrastructure assets.

Key Stakeholder	Role in Asset Management Plan
Low Carbon & Circular Economy	Responsible for facilitating the identification of opportunities to improve circular economy outcomes within infrastructure standards and specifications.
Traffic & Transport	Responsible for developing the Integrated Transport Strategy, Corridor Planning Studies and initiating priority Transportation upgrade/new project initiatives as well as providing technical traffic advice for capital works projects and operational issues.
Strategy & Insights	Responsible for the Strategic Management Framework, including the development of the Strategic Plan in consultation with the Executive Leadership Team, Elected Members, and key strategic stakeholders.
Technical Services	Responsible for technical design documentation to facilitate construction of infrastructure projects, review, and update infrastructure technical standards to ensure they are fit-for-purpose as well as the provision of general engineering and technical advice.
Infrastructure Delivery	Responsible for delivering Capital Works Projects identified in the Asset Management Plan and Annual Business Plan and Budget.
Financial Planning & Reporting	Responsible for the development and currency of the Asset Accounting Policy, Fixed Asset Guideline, as well as the preparation of asset sustainability and financial reports, which incorporate depreciation and asset revaluations in compliance with Australian accounting standards.
Procurement & Contract Management	Responsible for ensuring appropriate procedures are in place to enable efficient and effective procurement and contract management that demonstrates value for money and ensure public money is appropriately spent in accordance with the Local Government Act.
City Operations	Responsible for delivering day-to-day maintenance and operational activities, ensuring works are prioritised, planned and delivered consistently with operational and maintenance plans.
Regulatory Services	Responsible for issuing permits with conditions to enable external parties to undertake works on Council Infrastructure as well as enforcing rectification for works that are not compliant with City of Adelaide construction standards.
Department of Infrastructure and Transport (DIT)	Collaborative partner for major projects.
South Australian Power Networks	South Australian Power Networks own and maintain a network of street lighting within the City of Adelaide area and are the energy provider for City of Adelaide's ow public lighting network.
South Australian Police	Collaborative partner for the monitoring and operational aspects of the CCTV network. SAPOL have access to CCTV surveillance footage, to enable improved city safety outcomes.

Our organisational structure for service delivery associated with infrastructure assets is shown in Figure 2.3.

Figure 2.3: Organisational Structure



3.0 LEVELS OF SERVICE

3.1 Customer Research and Expectations

In November 2021, the City of Adelaide undertook an engagement process with City residents and visitors to better understand and measure levels of customer satisfaction for users who utilise the services provided by our public lighting and electrical infrastructure. The engagement was advertised on signage in City Streets as well as through the City of Adelaide's social media platforms.

The insights from the Survey are intended to be used to identify where current levels of service are not meeting the community's expectation. This will enable recommendations to be made to Council regarding future resourcing requirements for specific services.

The engagement process was primarily undertaken through questionnaire surveys (113 total respondents), where information was collected online using the YourSay platform (61 respondents), as well as through on street intercepts at various locations across the City (52 respondents). Additional information and feedback relating to CoA's infrastructure assets was also collected through the 2021 Resident Survey (318 comments) and engagement with the Disability Access and Inclusion Panel (44 comments).

The demographic distribution of respondents who provided feedback is presented across Figures 3.1-1 to 3.1-3 There were significantly more survey responses received from City visitors compared to residents and an even balance across genders.

Figure 3.1-1: Respondent distribution

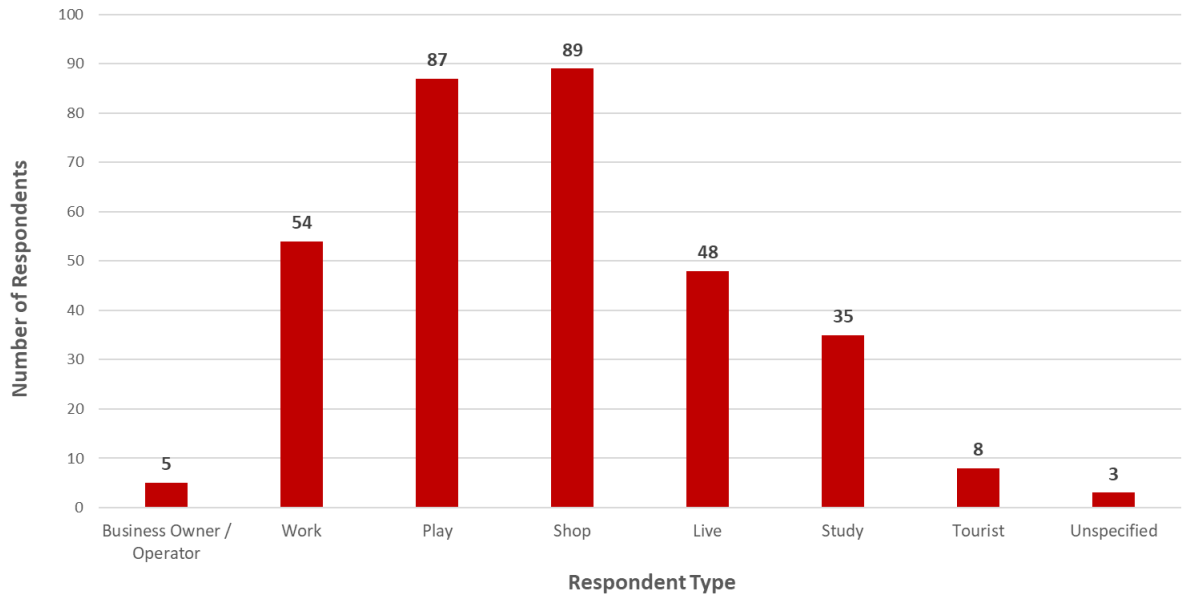


Figure 3.1-2: Respondent Distribution (Residents v Visitors)

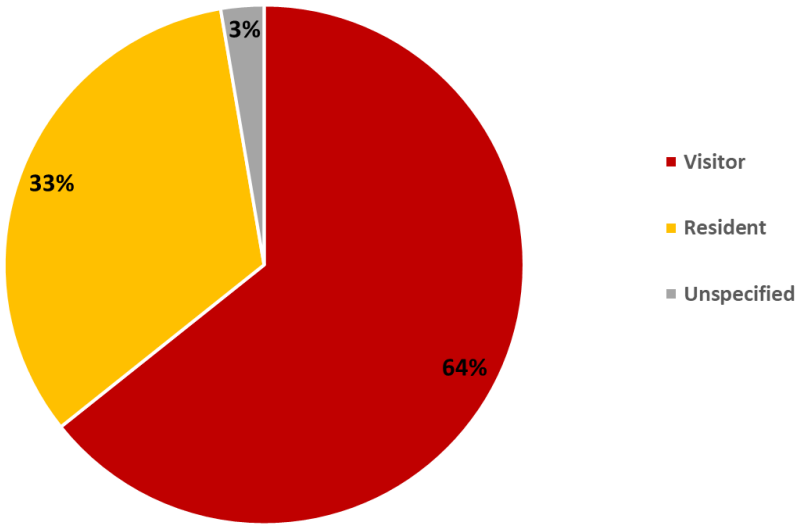
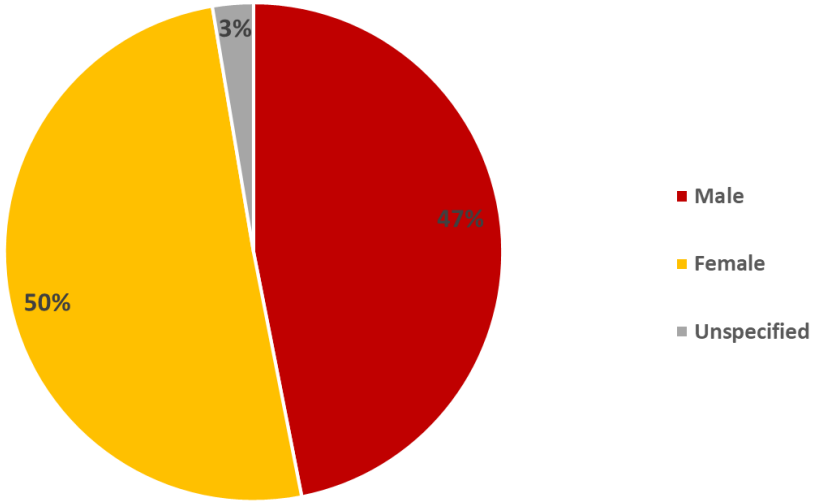


Figure 3.1-3: Respondent Distribution (Gender)



To ensure that data was collected to enable a clear line of sight for decision making purposes, the questionnaire was structured to differentiate responses relating to the City's streets and the Park Lands. The consultation process collected feedback on Public Lighting, however it did not collect feedback on the CCTV Network or EV Charging Stations, we will collect this information on these in future consultation works.

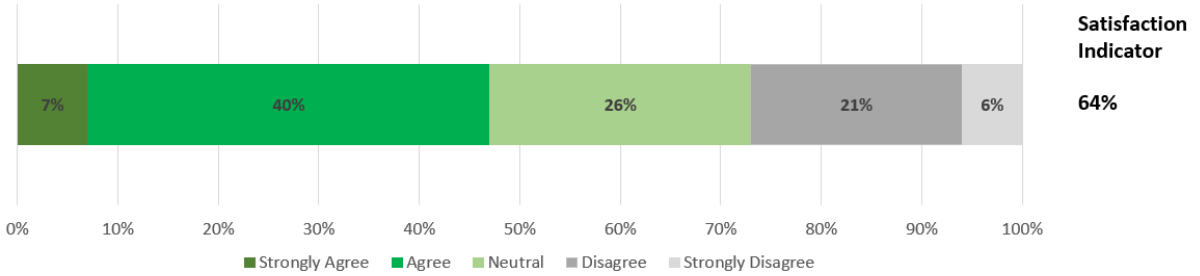
For each performance measure question, a customer satisfaction indicator was calculated which represents the percentage of respondents who were satisfied with the service (neutral responses were omitted from the calculation). These figures can then be compared against CoA's organisation scorecard target of 70% satisfaction to identify where our services are not being delivered in line with community expectations.

The results for City Streets and Park Lands Public Lighting and Electrical assets are presented and discussed below.

City Streets

Respondents were fairly satisfied with the overall performance of public lighting located on City Streets, where the performance measure had a satisfaction indicator of 64%, which is just below CoA's 70% target, as shown in Figure 3.1-4 below.

Figure 3.1-4: City Streets are adequately lit



Feedback identified that lighting levels in some City Street locations were considered insufficient. After assessing the feedback included within the consultation responses, it was identified that the majority of the feedback related to poor lighting levels on City Streets where South Australian Power Networks infrastructure lighting was installed.

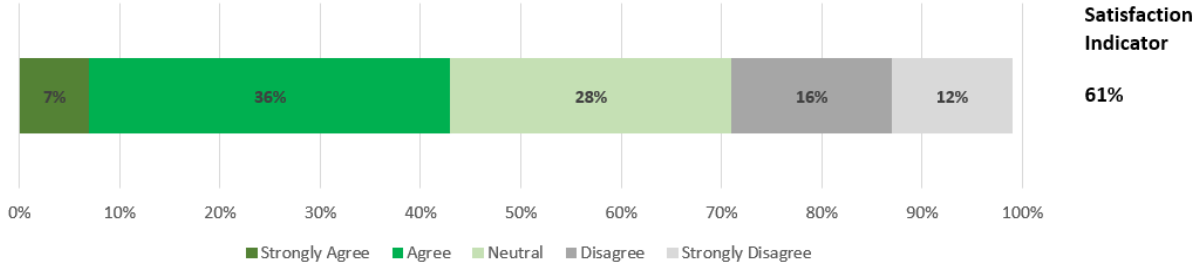
This has identified that key service deficiencies raised through the engagement process are generally associated with the requirement for new and upgraded infrastructure to improve public lighting levels, more-so than the maintenance and renewal of our existing assets.

It is anticipated that the completion of the public lighting strategy (currently under development) and the subsequent initiation, funding and delivery of priority new and upgrade public lighting projects will incrementally bridge the gap between customer expectations and service provision over time.

Park Lands

Respondents were fairly satisfied with the overall performance of our public lighting located within the Park Lands, where the performance measure had a satisfaction indicator of 61%, below CoA's 70% target, as shown in Figure 3.1-5 below.

Figure 3.1-5: Parks Lands are adequately lit



Feedback identified that lighting levels in some Park Lands locations were considered insufficient. After assessing the feedback included within the consultation responses, it was identified that majority of the feedback was associated with locations where no public lighting currently exists.

Similarly to City Streets, the key service deficiencies raised for the Park Lands was associated with the requirement for the creation of additional/new public lighting, more-so than the maintenance and renewal of our existing assets. Again, it is anticipated that the completion of a Public Lighting Strategy (currently under development) and the subsequent initiation, funding and delivery of new and upgrade Public Lighting projects will incrementally bridge the gap between customer expectations and service provision over time.

Summary

For this Asset Management Plan, feedback was not sought for CCTV or Electric Vehicle charging stations. Ensuring this feedback is collected in the future has been recognised as an action within this Asset Management Plan's Improvement Plan (Section 8.2), to enable customer satisfaction levels to be measured for these assets.

Table 3.1 below provides a high-level summary of the community's feedback for our public lighting assets.

Table 3.1: Consultation Summary Table

Category	Average Score	Not measured	Very Poor (<40%)	Poor (40-54%)	Average (55-69%)	Good (70-85%)	Excellent (>85%)
Public Lighting	62.5%				●		
CCTV	-	●					
EV Charging Stations	-	●					

The overall feedback confirmed appropriate levels of customer satisfaction for the maintenance and renewal of our existing Public Lighting and Electrical infrastructure assets. However, engagement did identify some locations where the community believed public lighting provisions could be improved in both the City and Park Lands.

3.2 Strategic Planning

Under the Local Government Act (SA) 1999, we are legislatively required to establish a suite of Strategic Management Plans, which guide Council's future planning, asset management and financial sustainability. An overview of these strategic management plans are shown below in Table 3.2-1:

Table 3.2-1: Strategic Management Documents

Strategic Plan *Community*	Long term with a four year delivery focus. *Planning for the vision and aspirations of the Adelaide Capital City.*
Long-Term Financial Plan *Financial*	Ten year Plan, revised annually to ensure a ten year view is maintained. *Planning for the long-term financial sustainability of the City of Adelaide.*
Asset Management Plans Infrastructure	Suite of ten year Plans. *Planning for the sustainable renewal and maintenance of Council assets.*
City Plan *Development / Built Form*	Ten year Spatial Plan. *Planning for the future land uses and built form of the Adelaide Capital City.*

Through the City of Adelaide Draft Strategic Plan 2024-2028, Council's vision is:

Our Adelaide. Bold. Aspirational. Innovative.

Achieving our vision for the future will be guided by our long term aspirations:

Our Community: Vibrant, connected and inclusive
Our Environment: Resilient, protected and sustainable
Our Economy: Growing, innovative and responsive
Our Places: Interesting, purposeful and safe
Our Corporation: High performing, customer-centric and bold

As Adelaide grows, we will need to consider economic vitality, social connectivity and wellbeing, distinctive precincts, environmental and financial sustainability, asset management and service delivery. To ensure we maintain our liveability and to support growth, these principles will underpin everything we do:

- Exceptional Amenity - Be bold and courageous in our pursuit of excellence for our city.
- Quality Housing - Strive for liveability and affordability to attract and retain residents.
- Community Connection - Strengthen connection, accessibility, diversity and inclusivity by putting people first.
- Unique Experiences - Create interesting experiences for our residents, workers and visitors.
- Climate Resilience - Embed climate resilience in all that we do.
- Economic Growth - Encourage innovation, investment and development in current and emerging sectors.
- Budget Repair - Provide quality services and ensure long-term financial sustainability.

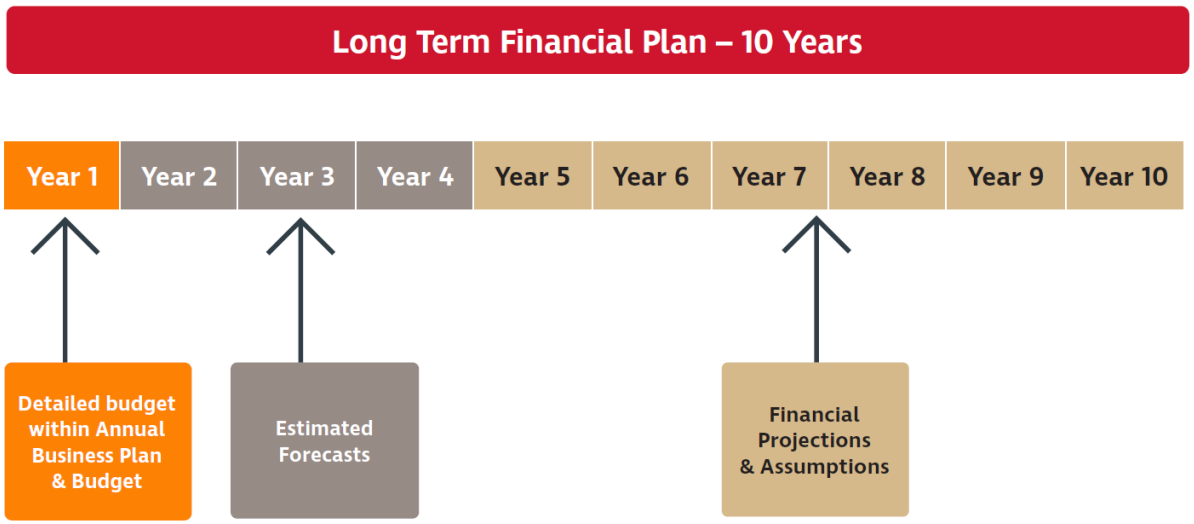
The Strategic Plan is supported by a suite of long and short-term strategies and action plans as well as a Resource Plan. The Resource Plan will provide a 4-year view of the projects, resources, and budgets required to deliver our Strategic Plan objectives. It informs the Long-Term Financial Plan (as shown in Figure 3.2) and acts as the key link between the Strategic Plan and Annual Business Plan & Budget, providing transparency between our vision and the key projects we deliver.

Integrated Delivery Planning ensures that prudent and efficient decisions are made, with line-of-sight between Council's Strategic Plan objectives and the major infrastructure projects we deliver. While this Asset Management Plan does not identify financial forecasts associated with new and upgrade projects, it does ensure required asset renewals are aligned (where practical) with key new and upgrade projects specified within the Resource Plan. Infrastructure projects will reference the Adelaide Design Manual for

transformational projects supported by upgrade/new funding allocated with the Resource Plan and Long-Term Financial Plan.

Each year our annual business plan and budget formalises funding allocations to continue providing services and progress new projects. It enables existing projects to move from one delivery stage to the next (e.g. progress concept design to detailed design and detailed design to construction) as well as consider emerging risks and opportunities that may result from Council decisions, community requests or other external factors.

Figure 3.2: Long-Term Financial Plan



The relevant aspirations and objectives of the City of Adelaide 2024-2028 Strategic Plan and how they are considered within this Asset Management Plan are summarised in Table 3.2-2.

Table 3.2-2: Strategic aspirations, objectives and outcomes and how these are considered in this Plan

Aspirations	Objectives	Outcomes	Asset Management Alignment
Our Communities *Vibrant, connected and inclusive*	Support our communities thrive Create fun, lively and interesting experiences Celebrate and honour community and cultures	Drive affordable, safe and quality housing outcomes that attract and retain residents in our city An interesting and engaging place to live, learn and visit An inclusive, equitable and welcoming community where people feel a sense of belonging	• Create welcoming civic infrastructure that enables City growth and fosters community connections through the adoption of universal and sustainable design principles • Create enabling infrastructure to support world class events, festivals and activation • Support the development of new cultural and civic infrastructure • Deliver key infrastructure projects and programs outlined within the Disability Access and Inclusion Plan • Deliver asset renewal and asset maintenance programs to ensure our assets are safe for people of all ages and abilities
Our Environment *Resilient, protected and sustainable*	Protect, enhance, and activate our Park Lands and open space Be climate conscious and resilient Prioritise sustainability in our decisions for the future	Lead as a Low Carbon Emissions City A sustainable city where climate resilience is embedded in all that we do The status, attributes and character of our green spaces and the Park Lands are protected and strengthened	• Increase the use of recycled or sustainable materials • Implement sustainable, renewable and green systems, infrastructure, practices and materials in our projects and services • Adapt to climate change and enhancing our climate resilience through upgrading our existing assets and creating new assets • Ensure all asset investment (design, construct and maintenance) considers and embeds appropriate climate resilience measures • Make public electric vehicle charging infrastructure available for all users, including micro-mobility, catalysing the uptake of electric vehicles in Adelaide and improving Council and community performance on transport emissions • Enhance the environmental value, productivity, quality and biodiversity of the Park Lands, squares, open space and streetscapes
Our Economy *Growing, innovative and responsive*	Continue to grow our economy in alignment with the Community Support existing businesses to be agile and responsive to change Create strong skilled workforces	Adelaide's unique experiences and opportunities attract visitors to our city Achieve a critical mass of jobs and investment and attract and retain businesses by growing a dynamic, holistic economy Council is driving development opportunities for our community via diverse commercial activities	• Deliver infrastructure upgrade projects to attract increased visitation into the City and promote business development and economic growth • Explore project partnership opportunities with State Government, developers and other third-parties
Our Places *Interesting, purposeful and safe*	Manage assets to meet the needs of our community Encourage bold, interesting and purposeful development Facilitate and activate our places in a safe and accessible way for our community	Community assets are adaptable and responsibly maintained Encourage bold, interesting and purposeful development that supports the changing needs of our community and city Create safe, inclusive and healthy places for our community	• Deliver asset renewal and asset maintenance programs to ensure our assets are safe for people of all ages and abilities • Ongoing review of asset management strategies and technical standards to optimise whole-of-life costs • Continue to undertake regular condition audits and revaluation for all our assets within the nominated 4-year cycles, including regular review of asset useful lives • Deliver quality street and laneway upgrades, main streets, precincts and neighbourhood revitalisation and improvements that make Adelaide well-designed, safe and unique • Support the creation of multi-use green spaces such as open space, community gardens and pocket parks that enable shared use and community connection • Deliver Park Land and Streetscape improvements to cater for emerging community needs • Improve accessibility and connectivity for pedestrians, cyclists, and public transport users through delivering key projects from the integrated transport strategy (under development) • Preserve and promote heritage assets • Maintain and improve disability access and inclusion

3.3 Legislative Requirements

There are many legislative requirements relating to the management of infrastructure assets including Australian Legislation, State Legislation and State Regulations. Legislative requirements relevant to the Public Lighting and Electrical Asset Management Plan are outlined in Table 3.3.

Table 3.3: Legislative Requirements

Legislation	Requirement
Aboriginal Heritage Act 1988	An Act to provide for the protection and preservation of the Aboriginal heritage
Adelaide Park Lands Act 2005	An Act and Framework that promotes the special status, attributes, and character of the Adelaide Park Lands; to provide for the protection of those Park Lands and their management as a world class asset to be preserved as an urban park for the benefit of present and future generations
Australian Accounting Standards	Standards that set out the financial reporting standards relating to the revaluation and depreciation of assets
Australian Standard AS/NZS 1158 Series	Provides minimum standards for Public Lighting and specifies performance and design requirements
Australian Standard AS/NZS 3000	This standard sets out the requirements for the design, construction and verification of electrical installations
Australian Road Rules 1999	The Australian Road Rules have been made into regulations under the Road Traffic Act (South Australia) and came into operation throughout Australia on 1 December 1999
City of Adelaide Act 1998	An Act to establish mechanisms to enhance the role of the city of Adelaide as the capital city of South Australia; to make special provision in relation to the local governance of the city of Adelaide; and for other purposes
Civil Liability Act 1936	An Act to outline liability of road authorities under Section 42
Code of Technical Requirements (Part 2)	Outlines the design and construction parameters to which traffic management devices must comply
Development Act 1993	An Act to provide for planning and regulate development in the state; to regulate the use of management of land and building; and for other purposes

Disability Discrimination Act 1992	An Act to provide protection for everyone in Australia against discrimination based on disability. It encourages everyone to be involved in implementing the Act and to share in the overall benefits to the community and the economy that flow from participation by the widest range of people
Environmental Protection Act 1993	An Act to provide for the protection of the environment: to establish the Environmental Protection Authority and define functions and powers and for other purposes
Highways Act 1926	An Act to provide for the appointment of a Commissioner of Highways and to make further and better provisions for the construction and maintenance of roads and works and for other purposes
Linear Parks Act 2006	An Act to provide the protection of the River Torrens Linear Park, as world-class assets to be preserved as public parks for the benefit of present and future generations
Local Government Act 1999	An Act to set out the role, purpose, responsibilities, and powers of local governments including the preparation of a Long-Term Financial Plan supported by asset management plans for sustainable service delivery
Roads (Opening and Closing) Act 1991	An Act to provide for the opening and closing of roads and allows for formalisation of roadway status
Road Traffic Act 1961	An Act to prescribe the duties of road users; to provide for nationally consistent road rules; to provide for vehicle standards, mass, and loading requirements; to provide for the installation, use, and maintenance of traffic control devices; to provide for the closing of roads for traffic management and other purposes
State Records Act 1997	An Act to ensure Local Government's record and store all relevant information as set out by the State Government of South Australia
Work Health and Safety Act 2012	Provides minimum standards for health and safety of individuals performing works

3.4 Customer Levels of Service

Customer Levels of Service measure how the community receives a service and whether the organisation is providing community value. Levels of service are monitored and adjusted from the public consultation process, customer satisfaction surveys and customer service centre feedback.

The Customer Levels of Service are considered in terms of:

Quality How good is the service … what is the condition or quality of the service?

Function Is it suitable for its intended purpose ... is it the right service?

Capacity Is the service over or under used … do we need more or less of these assets?

In Tables 3.4 under each of the service measures types (Quality, Function, Capacity) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

These are measures of fact related to the service delivery outcome (e.g. number of occasions when service is not available or proportion of replacement value by condition %'s) to provide a balance in comparison to the customer perception that may be more subjective.

Table 3.4: Customer Level of Service Measures

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Current Budget
Quality	Condition – Public Lighting and Electrical assets are operational and are in a condition appropriate for use	Customer service requests relating to Public Lighting and Electrical faults and maintenance issue	2022 – 111 requests Past 4 years average - 89/year	Expected to increase as Public Lighting and Electrical assets deteriorate
		Customer satisfaction survey results relating to public lighting levels	City Streets – 64% Park Lands – 61% Average – 62.5%	Expected to decrease as Public Lighting and Electrical assets deteriorate
	Condition – CCTV Network is operational and are in a condition appropriate for use	SAPOL and customer service requests relating to CCTV Network faults, operation, and cleaning	2022 – 38 requests Past 4 years average - 25/year	Expected to increase as CCTV cameras deteriorate
	Condition - Electric Vehicle Charging Stations are operational and are in a condition appropriate for use	Customer service requests relating to Electric Vehicle Charging Stations	2022 – not currently measured	Expected to increase as EV charging station assets deteriorate
	Confidence levels		**Medium**	**Low-Medium**
Function	Fit for Purpose – Public Lighting levels provide adequate visibility for safety and efficient movement for all modes of transport	Customer service requests for increased Public Lighting levels for safety	2022 – 12 requests Past 4 years average – 18/year	Expected to increase as Public Lighting and Electrical assets deteriorate
	Fit for Purpose – CCTV cameras are located in suitable locations which enable public safety surveillance and monitoring by SAPOL	SAPOL and customer service requests to requests to relocate or remove CCTV Network equipment	2022 – 2 requests Past 4 years average – 0.5/year	Expected to increase as the population and usage of the city increases
	Confidence levels		**Medium**	**Low-Medium**
Capacity	Capacity – Public lighting infrastructure is present in locations to meet user demands	Customer service requests relating to new public lighting	2022 – 4 requests Previous 4 years average – 6/year	Subject to Council adoption of upgrade/new projects through Business Plan and Budget
	Capacity – There are an adequate number of CCTV cameras located across the city to enable surveillance and monitoring for public safety	Customer service requests relating to new CCTV cameras	2022 – 0 requests Previous 4 years average – 2/year	Subject to Council adoption of upgrade/new projects through Business Plan and Budget
	Capacity – There are an adequate number of Electric Vehicle Charging Stations to meet user needs	Customer service requests relating to new EV charging stations	2022 – not currently measured	To be reviewed as the City of Adelaide Electrical Vehicle Charging Infrastructure Roadmap is implemented.
	Confidence levels		**Medium**	**Low-Medium**

3.5 Technical Levels of Service

To deliver the customer values, and impact the achieved Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

Technical service measures are linked to the activities and annual budgets covering:

- **Acquisition** – the activities to provide a higher level of service (e.g. installing additional street lighting, replacing an electrical switchboard with a larger size) or a new service that did not exist previously (e.g. installing new lighting in an unlit park)
- **Operation** – the regular activities to provide services (e.g. energy/power costs)
- **Maintenance** – the activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life (e.g. minor cabling or switchboard repairs)
- **Renewal** – the activities that return the service capability of an asset up to that which it had originally provided (e.g. renewal of existing Public Lighting poles and luminaires, electrical conduit replacement)
- **Disposal** – the activities to remove and/or dispose of an asset that may be considered as underperforming, underutilised or obsolete

Service and asset managers plan, implement and control technical service levels to influence the service outcomes.[2]

Table 3.5 shows the activities expected to be provided under the current 10 year Planned Budget allocation, and the Forecast activity requirements being recommended in this Asset Management Plan.

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

[2] IPWEA, 2015, IIMM, p 2|28.

Table 3.5: Technical Levels of Service

Lifecycle Category	Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance	Recommended Performance
Acquisition (upgrade/new)	Upgrade / New Projects	To upgrade and further develop the public lighting and electrical infrastructure network to ensure it is safe, fit-for-purpose and meets the needs of the community	Delivery of key upgrade/new projects	Upgrade/new projects aligned to Strategic Plan objectives are initiated through the Business Plan and Budget process on an annual basis, where projects are evaluated and prioritised based on strategic alignment and financial capacity	Upgrade/new projects aligned to Strategic Plan objectives are informed by City Plan, with financial requirements accommodated into the Long-Term Financial Plan. Initiatives are confirmed to proceed annually through the Business Plan and budget process
			Budget:	As adopted annually in BP&B	To be developed
Operation	Condition Audits	To collect asset condition data to inform capital renewal planning and revaluation	Full condition audit of Public Lighting and Electrical Infrastructure network	Every 4 years	Every 4 years
	Power Supply	Utility costs associated with providing power to operate public lighting and electrical infrastructure	Ongoing power supply to operate public lighting and electrical infrastructure	Ongoing power supply to operate public lighting and electrical infrastructure	Ongoing power supply to operate public lighting and electrical infrastructure
			Budget	Condition Audits: $500,000/4 years Power Supply: $1,622,000/Year	Condition Audits: $500,000/4 years Power Supply: $1,622,000/Year
Maintenance	Maintenance Audits	To ensure Public Lighting and Electrical Infrastructure defects are proactively identified prior to faults occurring	Frequency of maintenance audits	Each site inspected every 6 months	To be reviewed with planned updates to operations and maintenance standards
	Night Audits	To ensure Public Lighting outages and faults are proactively identified	Frequency of night audits	Night audits of the network are undertaken 5 times a year.	To be reviewed with planned updates to operations and maintenance standards
	Maintenance Activities	To ensure Public Lighting and Electrical assets are maintained in a serviceable condition free of hazards to enable reliable and ongoing service provision	Completion of planned and reactive maintenance	Priority 1 – make safe within 1 working day Priority 2 – rectify within 2 working days Priority 3 – rectify within 5 working days	To be reviewed with planned updates to operations and maintenance standards
			Budget	$1,478,327	To be reviewed with planned updates to operations and maintenance standards
Renewal	Renewal Projects	To ensure assets are renewed, providing service in line with community expectations at lowest lifecycle costs	% of assets in condition 4 & 5	Condition 4 - 10 % Condition 5 - 1 %	Condition 4 – less than 5% Condition 5 - 0 %
			Asset renewal funding ratio	90% (existing Asset Management Plan)	100% (assuming budget is adopted)
			Budget	$2,233,000	$4,743,295(10 Year Average)
Disposal	Disposals Projects	To ensure that assets that may be underperforming, underutilised or obsolete are removed from service	Disposal of assets	Major assets are recommended for disposal through Council decision, with financial requirements identified and incorporated through the Business Plan and Budget	Major assets are recommended for disposal through Council decision, with financial requirements identified and incorporated through the Business Plan and Budget
			Budget	As adopted annually in BP&B	As adopted annually in BP&B

4.0 FUTURE DEMAND

4.1 Demand Drivers

The drivers affecting demand on assets include population change, regulations, changes in demographics, seasonal factors, vehicle ownership rates, consumer preferences and expectations, technological changes, economic factors, and environmental impacts.

4.2 Demand Forecasts

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented.

4.3 Demand Impact and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.3.

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can also include non-asset solutions with a focus on providing the required service without the need for the organisation to invest in new or upgraded infrastructure. Management actions could include reducing the demand for the service or educating users around alternative options. It is important to ensure that these strategies consider the associated risks and consequences.

Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this Asset Management Plan.

Table 4.3: Demand Management Plan

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
City Growth	2021 Statistics: Residents - 25,551 Businesses – 11,519 Daily Visitors – 321,500	2041 Forecast: 46,000 residents 2036 Target: 50,000 residents Anticipated ongoing business growth in line with residential city growth and South Australian State growth projections Anticipated daily visitor growth in line with South Australian State growth projections	City growth will place higher demands on Public Lighting and Electrical Infrastructure with increasing level of service expectations. This will likely result in the need to create additional assets to service community needs.	Delivery of prioritised upgrade/new projects identified in the Strategic Plan and key Corporate planning documents (referenced in Section 2.1) to enhance our Public Lighting and Electrical Infrastructure network and accommodate city growth through upgrading existing assets and creating new assets to align service provision with the evolving needs of the community. This Asset Management Plan will ensure asset renewals will consider and align where practical with these key upgrade/new initiatives.
Changing Demographic	2021 Statistics 0 to 11 Years 1,246 (5%) 12 to 17 Years 587 (2%) 18 to 34 Years 12,117 (51%) 35 to 49 Years 4,409 (19%) 50 to 59 Years 2,281 (10%) 60 to 69 Years 2,233 (10%) 70 Years & Above 2,633 (3%)	2041 Forecast 0 to 11 Years 2,633 (6%) 12 to 17 Years 1,501 (3%) 18 to 34 Years 21,771 (47%) 35 to 49 Years 8,933 (19%) 50 to 59 Years 4,272 (9%) 60 to 69 Years 3,274 (7%) 70 Years & Above 4,175 (9%)	Changing expectations from a culturally and demographically diverse customer base will result in our Public Lighting and Electrical Infrastructure being subject to new demand.	Ongoing engagement with city users through annual City User Profile surveys and ensuring that Strategic Documents are updated on a cyclic basis to reflect changes with community expectations. Delivery of prioritised upgrade/new projects identified in the Strategic Plan and key Corporate planning documents (referenced in Section 2.1) to align service provision with the evolving needs of the community. This Asset Management Plan will ensure asset renewals will consider and align where practical with these key upgrade/new initiatives.
Tourism & Event Growth	A key objective in Council's 2023-24 Business Plan and Budget was to provide 'year round' events that attract people to visit the City. Investment in public infrastructure has also been identified as part of the South Australian Tourism Plan (2020) and the SA Visitor Economy Sector Plan 2030. In 2020 annual tourism expenditure in Adelaide was estimated to be approximately $3.9 billion.	Cultural and event infrastructure will be an ongoing and increasing priority for both the City of Adelaide and South Australian State Government. It is projected that annual tourism expenditure will continue to grow and it is estimated to be $7.7 billion/year by 2030.	Increasing demands on Public Lighting and Electrical Infrastructure to facilitate tourism and event growth by supporting new cultural, civic and event infrastructure in the City and connecting city users to place through curated city experiences.	Delivery of prioritised upgrade/new projects identified in the Strategic Plan and key Corporate planning documents (referenced in Section 2.1) to support tourism and event growth. This Asset Management Plan will ensure asset renewals will be consider and align where practical with these key upgrade/new initiatives.

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Environmental Sustainability & Carbon Neutrality	Changes to the global climate (climate change) are clear. There are documented increases in the average air and ocean temperature, widespread melting of snow and ice, and rising average sea levels. City of Adelaide's 2020-2024 Strategic Plan has an objective to become one of the world's first carbon neutral cities by 2025. Additionally, a Climate Action Plan (2022-2025) has been developed to ensure we continue to drive down our carbon footprint and mitigate climate impacts for our residents and visitors. Currently City of Adelaide is reviewing recycled materials for use in public lighting and electrical projects, where there is demonstrated environmental benefits that also consider cost and performance.	Inaction to climate change and climate risk will result in negative health impacts to our community and potentially impact to our businesses and economy. Reduced water availability and increasing heat will result in increased stress and resources required for maintaining and operating our assets. To effectively manage climate change and climate risk Council will need to continue to respond through substantial reductions in greenhouse gases (mitigation controls) and helping to prepare for and respond to the changing climate (adaptation controls).	There will be an increased demand to ensure we utilise more environmentally sustainable materials and construction technique for public lighting and electrical projects, with lower carbon footprint and improved circular economy outcomes. There will be an increased demand for improved Public Lighting to support active modes of transport at night time. The increasing uptake in electric vehicle usage for both public transport and private commuter vehicles, will result in additional demands for electric vehicle charging stations.	Our Strategic Planning, Asset Management and Project Delivery (including design and procurement) will continue to focus on ensuring that climate risk mitigation and adaption is a key focus. Ongoing reviews and updates to our design standards and technical specifications to ensure our assets transition towards having a lower carbon footprint with improved circular economy outcomes, as well as ensure they are more resilient to withstand extreme weather events. Delivery of prioritised upgrade/new projects identified in the Strategic Plan and key corporate planning documents (referenced in Section 2.1), which support environmental sustainability and climate risk mitigation and adaptation. This Asset Management Plan will ensure asset renewals will consider and align where practical with these key upgrade/new initiatives. Facilitating the implementation of additional EV charging stations within the City through partnerships in line with the Electrical Vehicle Charging Infrastructure Roadmap.
Emerging Technology	Asset construction techniques and associated materials are currently undertaken in line with industry standards	Alternative construction techniques and materials with durability and sustainability benefits will continue to become more readily available and standardised.	Improvements in construction techniques and materials could result in improved asset durability, increased asset lifespans, reduced whole-of-life costs and improved environmental outcomes.	Continue to partner with industry, to monitor and evaluate new and emerging technologies, with trials of new materials, approaches, and methodologies to inform appropriate changes to standards and practices.
	Asset management systems and condition audit methodologies are in line with industry standards and best practice.	Asset management systems and technology will continue to evolve over time, particularly with respect to the collection of condition data and monitoring of asset deterioration over time.	Improved asset information and systems will enable improved decision making and efficiencies with respect to optimising whole-of-life-costs and managing asset risks.	
	Smart lighting platforms are available and can be utilised to operate, monitor and manage public lighting infrastructure.	Intelligent Public Lighting systems are continually being developed and enhanced. It is anticipated they will provide further opportunities to optimise the operation eg timing/dimming, maintenance and reduce power consumption/utility costs for the organisation.	Enhancements to intelligent Public Lighting systems will introduce efficiencies into the Public Lighting and Electrical Infrastructure, and potentially result in new and enhanced services being provided through emerging technologies.	
Legislation & Regulation	Legislation exists which outlines requirements for how Council's must manage infrastructure assets.	There is potential for future changes to legislation will influence how Council's infrastructure is managed.	New legislation may impose or require changes to asset management planning principles and activities. They may include requirements that have a financial and/or service level impact that must be met.	Continue to monitor changes to legislation and ensure appropriate adaptation into asset management practices. Any material impacts would be considered as part of the Annual Business Plan and Budget process and included in the next revision of the Asset Management Plan.

4.4 Asset Programs to meet Demand

The new assets required to meet demand will be acquired, donated or constructed. Additional assets are discussed in Section 5.5.

Acquiring new assets will commit City of Adelaide to ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs.

All upgrade/new projects responding to demand will involve developing business cases, cost estimates and facilitating decision making to integrate upgrade/new project initiatives with operational asset management planning and the Long-Term Financial Plan. This process will be facilitated with Council and the Community through the Annual Business Plan & Budget Process.

4.5 Climate Change Adaptation

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. In the context of the Asset Management Planning process climate change can be considered as both a future demand and a risk.

How climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which we respond and manage those impacts. As a minimum we consider how to manage our existing assets given potential climate change impacts for our region.

Risk and opportunities identified to date are shown in Table 4.5

Table 4.5 Managing the Impact of Climate Change on Public Lighting and Electrical Infrastructure Assets and Services

Climate Change Description	Projected Change	Potential Impact on Assets and Services	Management
Increasing temperatures and more frequent, long-running and intense heatwaves	The number of days over 40°C to double by 2050 Average temperatures to increase across all seasons by between 1.5°C and 2°C by 2050	Increased heat related damage to assets including damage to paint finishes and the overheating of electrical circuitry and electrical switchboards Reduced lifespan of Public Lighting and Electrical Infrastructure assets Increased costs to provide the same level of service Premature obsolescence as functionality is not met	Strategic Planning, Asset Management and Project Delivery (including design and procurement) will continue to focus on ensuring that climate risk mitigation and adaption is a key focus. Mitigation and adaptation measures will include: • Ongoing reviews and updates to our design standards and technical specifications to ensure our assets transition towards having a lower carbon footprint with improved circular economy outcomes as well as ensure they are more resilient to withstand extreme heat events • Proactively reviewing our asset management strategies with respect to the impacts of climate change, to ensure we continue to provide the agreed level of service at the lowest lifecycle cost • Reducing the impacts of heat through increasing canopy cover
Less rain overall but more intense storms and flooding	Average annual rainfall to decrease by 7% by 2050 Intensity of heavy rainfall events to increase by at least 10% by 2050	Increased stormwater related damage to assets including electrical circuits shorting, operation outages and subsequent repair of assets to maintain operation. Reduced lifespan of Public Lighting and electrical assets Increased costs to provide the same level of service Premature obsolescence as functionality is not met	Strategic Planning, Asset Management and Project Delivery (including design and procurement) will continue to focus on ensuring that climate risk mitigation and adaption is a key focus. Mitigation and adaptation measures will consider: • Ongoing reviews and updates to our design standards and technical specifications to ensure our assets transition towards having a lower carbon footprint with improved circular economy outcomes as well as ensure they are more resilient to increased flood risk and inundation • Proactively reviewing our asset management strategies with respect to the impacts of climate change, to ensure we continue to provide the agreed level of service at the lowest lifecycle cost

The impact of climate change on assets is a new and complex discussion and further impacts and management strategies will considered and developed in future revisions of this Asset Management Plan. It is recommended to continue monitoring the impacts of climate conditions and associated cost implications as further investigation is undertaken and more data becomes available. This is included as a key action within this Asset Management Plans Improvement Plan.

5.0 LIFECYCLE MANAGEMENT PLAN

5.1 Lifecycle Management Overview

In order to effectively manage our assets, it is important to understand the relationship between all stages of the asset lifecycle. Effective asset management and sustainable financial planning requires a balance between the maintenance, renewal and disposal of existing assets and the delivery of new and upgraded assets.

Our goal is to provide assets that service the needs of the community, providing the agreed levels of service at the lowest lifecycle cost. To enable this, it is important to understand:

- How our assets are performing
- How our assets should be operated and maintained
- When our assets should be renewed
- When we should consider upgrading existing assets or constructing new assets
- How funding for new and upgraded assets is prioritised
- When we should consider disposing underperforming or underutilised assets

An overview of the asset lifecycle is shown in Figure 5.1 below:

Figure 5.1: Asset Lifecycle Overview

The lifecycle management plan details how CoA plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) while managing life cycle costs.

5.2 Background Data

5.2.1 Physical parameters

The assets covered by this Asset Management Plan are shown in Table 5.2.1 and all figure values are shown in current day dollars.

Table 5.2.1: Assets Covered by this Plan

Asset Category	Quantity/Dimension	Replacement Value
Public Lighting and Electrical	7,829 street lighting columns	$138.3 million
	9,986 street lights / luminaires	
	993 switchboards	
CCTV Network	153 cameras	$6.2 million
EV Charging Stations	41 charging stations	$1.08 million
Total		$145.6 million

5.2.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available. However, there are insufficient resources to address all known deficiencies. Locations where deficiencies in service performance are known are detailed in Table 5.2.2.

Table 5.2.2: Known Service Performance Deficiencies

Asset / Location	Service Deficiency
Direct buried underground cabling	There are a number of locations where underground cabling is buried directly into the ground and does not have a protective conduit. Current design standards require for cabling to be installed within a protective conduit. Locations of direct buried cabling are being consolidated and will be verified in the condition audit scheduled for 2024/25 to inform asset renewal program priorities.
Luminaire technologies – High Intensity Discharge Lamps	A number of public lighting luminaires utilise High Intensity Discharge Lamps. These assets are considered to be old technology and their modern equivalent in LED technology provides better outcomes with respect to lighting levels, while also being more energy efficient with lower operating costs. This Asset Management Plan's renewal program aims to convert all luminaires to LED technology.
Public lighting assets inherited from South Australia Power Networks (SAPN)	Through a legacy agreement a number of SAPN Public Lighting assets were gifted and transferred into CoA's public lighting portfolio. The gifted assets included public lighting poles, luminaires and associated cabling. Many of the transferred assets are now in an aged condition and will require renewal in the short-medium term, forming part of this Asset Management Plan's renewal program priorities.

SAPN assets - Public lighting levels	User engagement and customer service requests have identified that a number of locations lit by SAPN public lighting are providing a lower level of service and are not aligning with customer expectations. We will continue to work closely with SAPN to explore options to convert their public lighting network to LED technology and improve public lighting levels in these locations. Programs of work will be proposed through the Business Plan and Budget process annually as a Strategic Project.
Park Lands lighting– gaps in provision of lighting	There are a number of pathways within the Park Lands where no public lighting is currently provided. Installation of new public lighting infrastructure within the Park Lands, will be guided by the Public Lighting Strategy (to be developed) and relevant Park Lands Master Plans.
Traffic Intersections – Lighting levels	There are a number of traffic intersection sites within the City of Adelaide where opportunities to enhance safety, efficiency and reliability have been identified. The public lighting provisions at these sites are incrementally being improved through CoA's renewal program and the Federal Government's Blackspot Program.

5.2.3 Asset condition

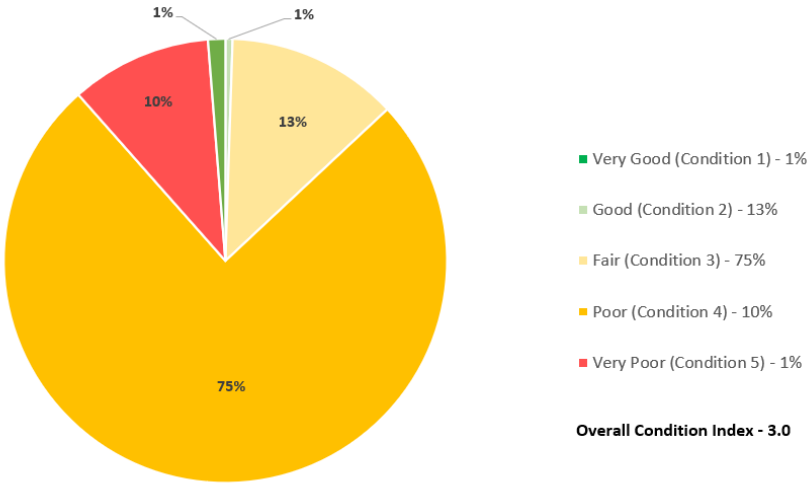
Condition is measured using a 1 - 5 grading system as detailed in Table 5.2.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the Asset Management plan results are translated to a 1 – 5 grading scale for ease of communication.

Table 5.2.3: Condition Grading System

Condition Grading	Description of Condition
1	**Very Good**: free of defects, only planned and/or routine maintenance required
2	**Good**: minor defects, increasing maintenance required plus planned maintenance
3	**Fair**: defects requiring regular and/or significant maintenance to reinstate service
4	**Poor**: significant defects, higher order cost intervention likely
5	**Very Poor**: physically unsound and/or beyond rehabilitation, immediate action required

Public Lighting and Electrical assets are typically condition audited every 4 years, with the most recent audit undertaken in 2018. Figure 5.2.3 presents the predicted Public Lighting and Electrical Infrastructure condition distribution as of November 2023. Overall the majority of the Public Lighting and Electrical assets are rated in very good to fair condition (89%). However, 11% of the Public Lighting and Electrical Infrastructure is rated in a poor to very poor condition.

Figure 5.2.3: Network Condition Profile



A condition audit is planned to commence in the 2024/25 financial year. This revised data will provide a higher level of reliability in our asset condition information to inform future maintenance and renewal planning and will be utilised to inform a comprehensive update to this Asset Management Plan within the next two years.

5.3 Operations and Maintenance Plan

Operations include regular activities to provide services. Examples of typical operational activities include condition audits, asset inspections and utility costs.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include streetlighting repairs, cleaning and lamping replacement, night audits to check operation of street light outages for CoA (and city areas lit by SA Power Networks streetlights), switchboard audits, CCTV Network camera cleaning, equipment repairs and legislative electrical testing. Requirements are informed by both customer service requests and proactive maintenance inspections.

Currently, maintenance activities are generally evaluated and prioritised with respect to annual budgets. This process is undertaken by experienced staff, where risk-based assessment and resource allocation considers the severity of the defect as well as its location. Any critical maintenance requirements that cannot be accommodated within exiting budgets are assessed and considered through regular budget reviews to ensure resources are appropriately re-allocated.

Following the completion of this Asset Management Plan, we will be reviewing operations and maintenance standards for Public Lighting and Electrical Infrastructure assets, with a view to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. This activity has been recognised as an action within the Improvement Plan of this Asset Management Plan (Section 8.2), where the associated financial impacts will need to be further considered in future revisions of this Asset Management Plan and the Long-Term Financial Plan.

Updated standards will document both maintenance intervention levels and response times. Intervention levels will document the criteria for actioning maintenance defects and response times will set targets that we aim to work within to repair defects. Typically, both of these elements will vary depending on the severity of the defect as well as its position/location within the asset hierarchy.

Monitoring whether maintenance activities are being delivered in accordance with the specified intervention levels and response times, will enable us to understand whether resourcing levels are sufficient. Where resourcing levels are identified as insufficient, additional budget requirements can be considered through the business plan and budget process, or intervention levels and response times can be adjusted with respect to budget constraints.

5.3.1 Maintenance Budget Trends

The trend in maintenance budgets for all public lighting and electrical assets over the past 4 years is shown in Table 5.3.1.

Table 5.3.1: Maintenance Budget Trends

Year	Public Lighting and Electrical Infrastructure
2020-21	$729,174
2021-22	$795,177
2022-23	$1,344,609
2023-24	$1,478,327

5.3.2 Asset hierarchy

An asset hierarchy provides a framework for structuring data in an information system to assist in collection of data, reporting information and making decisions. The hierarchy includes the asset class and component used for asset planning and financial reporting and service level hierarchy used for service planning and delivery.

The hierarchy for each public lighting and electrical asset category is shown is Table 5.3.2.

Table 5.3.2: Asset Service Hierarchy

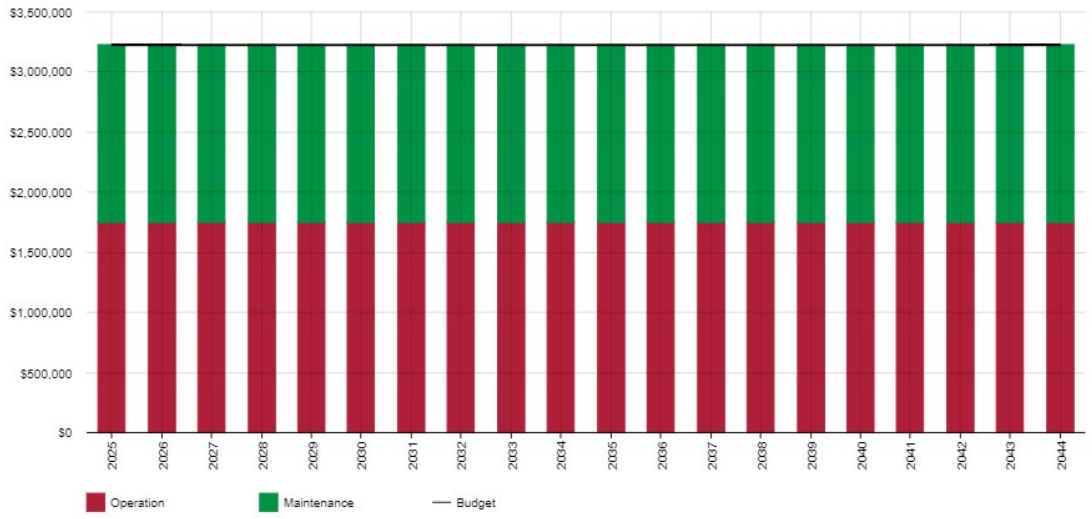
Asset Category	Asset Hierarchy
Public Lighting	City Streets (e.g. North Terrace)
	Residential Streets (e.g. Archer Street)
	Park Lands (e.g. Rymill Park Footpaths)
	Decorative Lighting
CCTV Network	All locations ranked equally
EV Charging Stations	UPark Carparking facilities
	City Streets
Defibrillators	All locations equally ranked

5.3.3 Summary of future operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease.

The forecast operations and maintenance costs for the public lighting and electrical assets, relative to the proposed operations and maintenance budgets are shown in Figure 5.3.3. Future revisions of this Asset Management Plan will further review forecast requirements based on updated operations and maintenance standards. All values are shown in current day dollars.

Figure 5.3.3 : Operations and Maintenance Summary



5.4 Renewal Plan

Renewal is major capital work which does not significantly alter the original service provided by the asset, but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is considered to be an acquisition (new/upgrade) resulting in additional future operations and maintenance costs.

Asset renewal is typically undertaken to:

- Ensure ongoing reliability of existing infrastructure to deliver the service it was constructed to facilitate.
- Ensure infrastructure is of sufficient quality to meet the service requirements.
- Optimise whole-of-life costs, when maintenance activities are no longer economical.

This interim Asset Management Plan's 20-year renewal forecast has been derived based on the average annual asset consumption of the Public Lighting and Electrical Infrastructure asset class. It is supported by a detailed 4-year renewal plan, which has been developed utilising existing asset data captured within our Asset Management System, validated through on-site inspections, in conjunction with workshops with key operational staff to identify and discuss known performance deficiencies and risks.

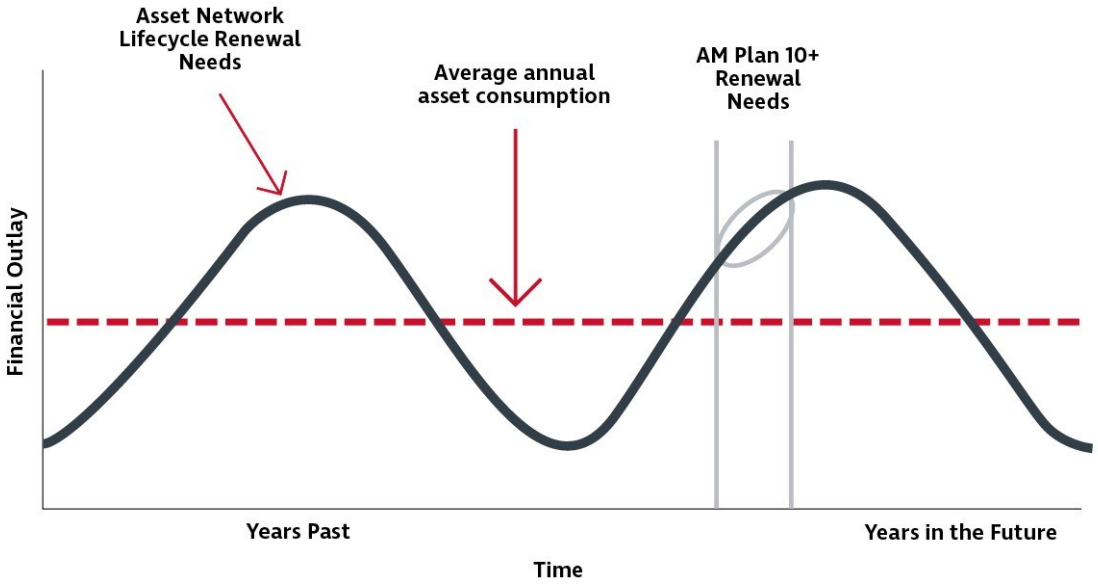
We are currently in the process of transforming the maturity of our Public Lighting and Electrical Infrastructure asset management data. Preliminary spatial data work is scheduled for completion by June 2024, followed by a comprehensive condition complete by June 2025. This updated asset data will provide a more granular understanding of the condition of our existing assets. Following the completion of this condition audit, this Asset Management Plan will be comprehensively updated, utilising predictive deterioration modelling to improve renewal forecasting and overall asset management practices.

This Asset Management Plan's renewal strategy generally aims to minimise the number of assets that deteriorate into a poor condition and prohibit assets reaching a very poor condition. Assets can generally be cost effectively maintained and provide appropriate levels of service up to a fair condition, however assets in poor and very poor condition have higher risk profiles and maintenance treatments are generally not economical. This strategy ensures we can continue to provide services in line with the community's expectations, appropriately manage risk and optimise whole-of-life costs.

Asset renewal planning is undertaken with a holistic and integrated approach, to ensure consideration is given to asset functionality, adjacent assets and Council's higher-level strategic objectives (e.g. new and upgrade requirements). This allows capital works programming to be optimised through the development of logical works packages, that provide value to the community.

It is important to understand that infrastructure networks are comprised of assets with varying age profiles and different useful lives and replacement costs. This results in having to replace more assets in some periods when compared with others and means that it's very unlikely that asset renewal needs will be consistent over time. Figure 5.4-1 highlights a typical scenario of varying asset renewal expenditure requirements over the asset lifecycle.

Figure 5.4-1: Asset Network Lifecycle Renewal Needs



To account for fluctuations in asset lifecycle renewal needs and enable efficient resourcing planning, often there will be a need to smooth out expenditure requirements over multiple years through a combination of deferring renewal (where appropriate) and bringing scheduled works forward.

At times, this may result in a small number of assets exceeding prescribed renewal intervention criteria~~,~~ requiring projects to be prioritised with respect to available budget. It is possible to prioritise renewals by identifying assets or asset groups that:

- Have a higher consequence of failure
- Have higher usage and the subsequent impact on users would be more significant
- Have higher than expected operational and maintenance costs

Prioritisation criteria used to inform the renewal forecasts within this Asset Management Plan include:

- Compliance with current legislative requirements
- Asset condition
- Asset hierarchy and criticality
- Cost effectiveness of maintenance investment
- Alignment with Strategic Plan objectives and corporate strategies
- Financial capacity and sustainable financial management principles
- Council decisions
- Asset functionality deficiencies
- Community interest

The typical useful lives and condition intervention level of assets used to develop projected asset renewal forecasts are shown in Table 5.4 Asset useful lives were last reviewed in 2023.

Table 5.4: Useful Lives of Assets

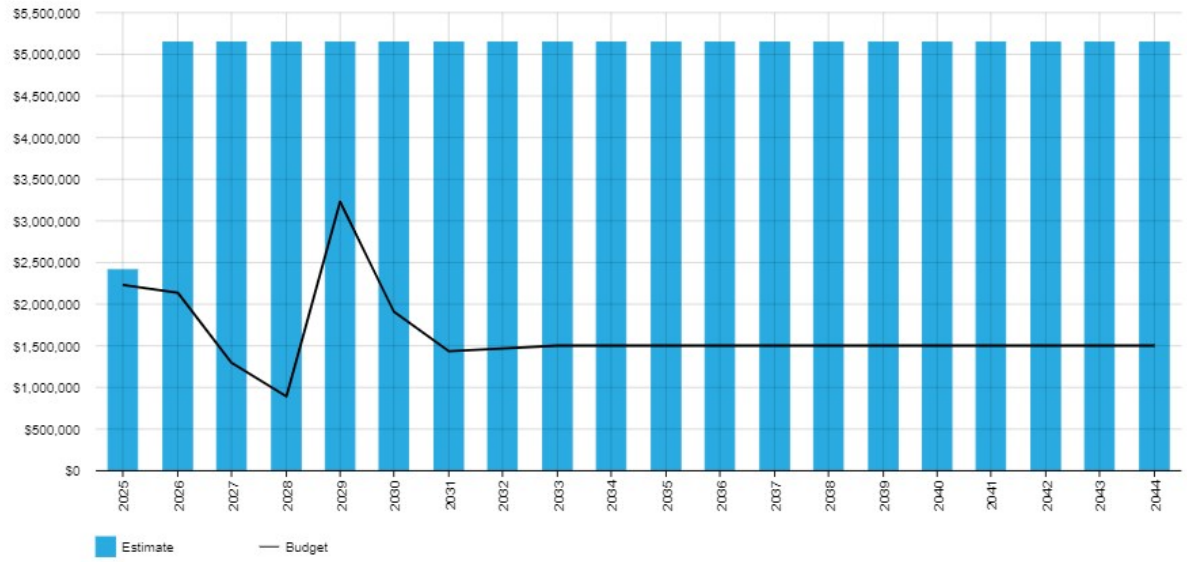
Asset Category	Asset Type	Intervention Level	Useful Life (years)
Public Lighting and Electrical	Luminaires	4	30
	Poles	4	30
	Brackets	4	30
	Electrical cables	4	30
	Electrical conduit	4	30
	Pits	4	30
	Switchboards	4	30
	C-Bus (lighting control)	4	30
CCTV Network	CCTV Camera – low resolution	4	12
	CCTV Camera – high resolution	4	5
	Equipment Hub	4	12
	Fibre Optic Network Cable	4	30
	Fibre Optic Network Conduit	4	30
	Servers	4	7
	Switches	4	7
EV Charging Stations	EV Charger	4	10
Defibrillators	Defibrillator Unit	4	8

5.4.1 Summary of Future Renewal Costs

The recommended asset renewal strategy aims to minimise the number of assets that deteriorate into condition 4 (target less than 5%) and prohibit assets reaching condition 5 (target 0%). This interim Asset Management Plan's renewal forecast has been derived based on the average annual asset consumption of the Public Lighting and Electrical Infrastructure asset class. Increased renewal funding of $5.15 million is required each year. Specific renewal intervention levels are documented in Appendix E.

The projected 20-year renewal forecast compared against the current Long-Term Financial Plan budget allocation for the Public Lighting and Electrical Infrastructure is shown in Figure 5.4.1 below (note: all figure values are shown in current day dollars). When comparing the forecast renewal costs against the existing budget allocation (black line), it is evident that there is a significant funding shortfall and additional funding is required to maintain current levels of service. Not funding the shortfall will result in the health of the Public Lighting and Electrical Infrastructure network to continue steadily decreasing over time, resulting in increased whole-of-life costs and risks of asset failure that cannot be rectified through maintenance resources.

Figure 5.4.1: Forecast Renewal Costs



5.5 Acquisition of Assets (New & Upgrade)

Acquisition reflects new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, demand, social or environmental needs. Assets may also be donated to the City of Adelaide.

Opportunities for acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, initiatives identified within strategic plans and corporate strategies as well as partnerships with third parties (e.g. State Government and Developers).

Potential new and upgrade works should be reviewed to verify that they are essential to City of Adelaide's needs and include analysis to understand ongoing operations, maintenance and renewal requirements to ensure that the services are sustainable over the longer term.

While this Asset Management Plan does not identify financial forecasts associated with new and upgrade projects, it does ensure required renewal scheduling is aligned (where practical) with key new and upgrade initiatives linked to our Strategic Plan through Integrated Delivery Planning.

Prioritisation and scheduling of new and upgrade works is currently undertaken on an annual basis through the business plan and budget process, where key prioritisation criteria include:

- Alignment with Strategic Plan objectives and corporate strategies
- Financial capacity and sustainable financial management principles
- Council decisions
- Asset functionality deficiencies
- Asset condition
- Compliance with current legislative requirements
- Community interest

The Resource Plan will provide a 4-year view of new and upgrade projects, resources, and budgets required to deliver our Strategic Plan objectives. It will inform the Long-Term Financial Plan and act as the key link between the Strategic Plan and Annual Business Plan & Budget.

Transformational new and upgrade projects will reference the Adelaide Design Manual that have allocated funding within the Resource Plan and Long-Term Financial Plan.

5.6 Disposal of Assets

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Disposal can be considered when an asset has been identified as underperforming, underutilised, or obsolete and does not provide value to the community.

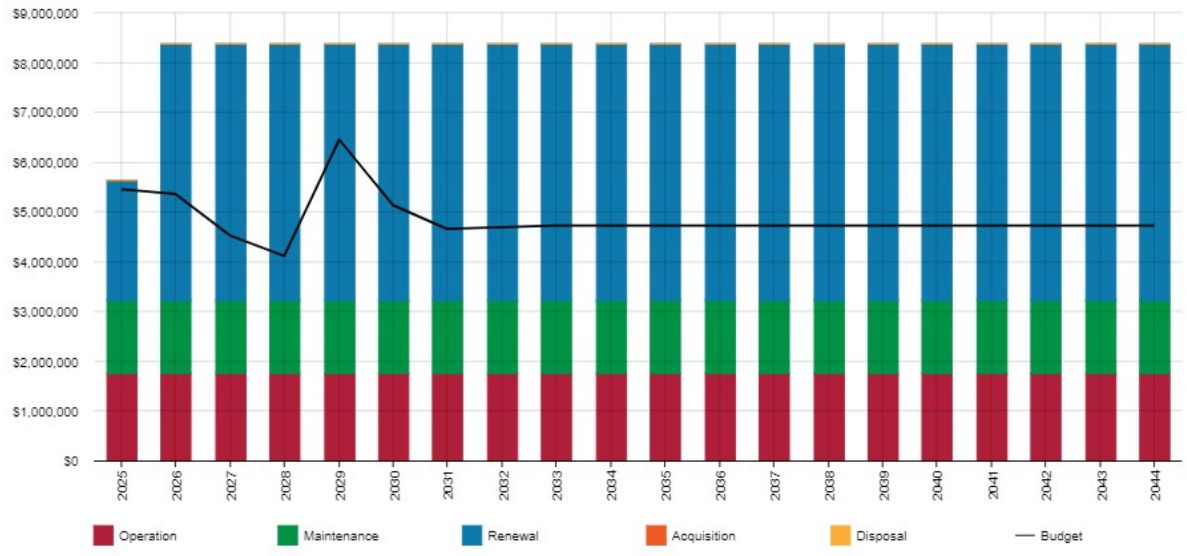
This Asset Management Plan does not identify financial forecasts associated with asset disposal, however where recommended, significant assets will be identified for decommissioning and disposal through Council Reports. To enable informed decision making, reports will include any anticipated impacts to service provision as well as financial impacts including disposal costs, revenue gained and estimated reductions in annual operations and maintenance expenditure that will be included into the Business Plan and Budget and Long-Term Financial Plan.

5.7 Summary of Asset Forecast Costs

The total financial projections from this Asset Management Plan are shown in Figure 5.7 below. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimise the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is discussed in detail within sections 5.3 and 5.4.

Figure 5.7 : Lifecycle Summary



6.0 RISK MANAGEMENT PLANNING

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'[3].

An assessment of risks[4] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarised in Table 6.1. Failure modes may include physical failure, collapse or essential service interruption.

Table 6.1 Critical Assets

Critical Asset / Component	Failure Mode	Impact
Public lighting located on Arterial and Primary Collector roads	Electrical fault and/or equipment failure	Road safety risks associated with inoperative public lighting at high risk location.
Public lighting located adjacent traffic control devices (e.g. pedestrian crossings, signalised intersections)	Electrical fault and/or equipment failure	Road safety risks associated with inoperative public lighting at high risk location.
Switchboards	Electrical fault and/or equipment failure Switchboard fire	Public safety risks including switchboard fires resulting from switchboard defects. Inoperative public lighting assets and disruption to service provision.
CCTV Network	Electrical fault and/or equipment failure	Public safety risks associated with inoperative cameras utilised by SAPOL for surveillance and monitoring.
Defibrillators	Electrical fault and/or equipment failure	Public safety risks associated with inoperative medical devices that are used in the event of a medical emergency.

By identifying critical assets and failure modes an organisation can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

[3] ISO 31000:2009, p 2

[4] REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

6.2 Risk Assessment

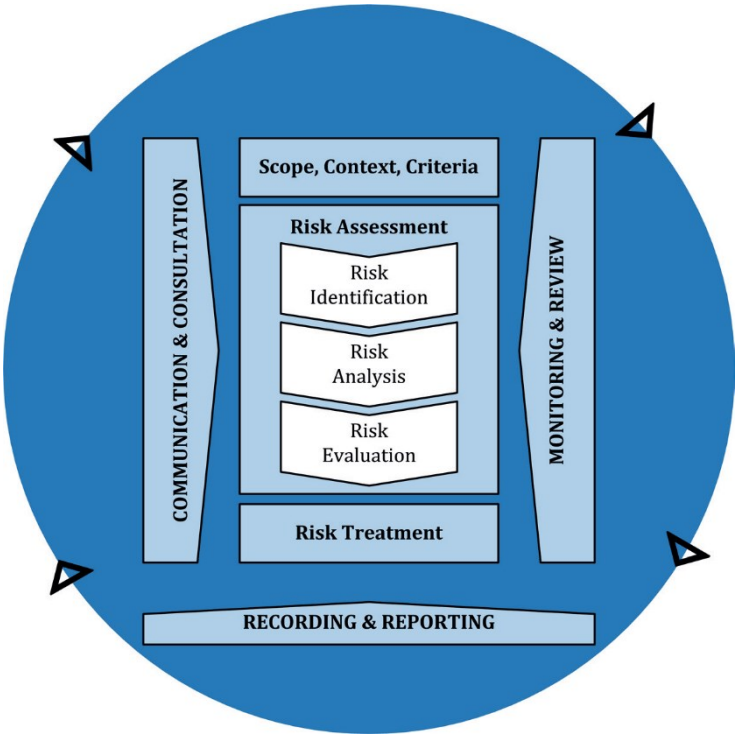
The risk management process used is shown in Figure 6.2 below.

It is an analysis and problem-solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

The process is based on the fundamentals of International Standard ISO 31000:2018.

Fig 6.2 Risk Management Process – Abridged

(Source: ISO 31000:2018, Figure 1, p9)



The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Extreme' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2. It is essential that these critical risks and costs are reported to management and the Strategic Risk and Internal Audit Group (SRIA).

Table 6.2: Risks and Treatment Plans

Asset at Risk	What can Happen	Risk Rating	Risk Treatment Plan	Residual Risk	Treatment Cost
All Public Lighting and Electrical Assets	Renewal, maintenance, and operational budgets are not adopted as recommended in Asset Management Plan, resulting in increased asset risk, reduced levels of service and increased whole of life costs	High	Reduce levels of service, to better align asset management activities with financial constraints. This will result in renewal and maintenance activities being prioritised, with respect to available budgets.	Medium	Within existing resources / budgets
	City growth will place higher demands on Public Lighting and Electrical Infrastructure with increasing level of service expectations, particularly for the creation of new assets to service community needs.	High	Delivery of prioritised upgrade/new projects to accommodate city growth through upgrading existing assets and creating new assets to align service provision with the evolving needs of the community.	Medium	Within existing resources / budgets Upgrade/new projects are considered as part of the Annual Business Plan & Budget
	CoA do not have the financial capacity to undertake all recommended upgrades in conjunction with asset renewal projects to address functionality deficiencies and strategic objectives.	High	Upgrade opportunities associated with significant renewal projects are discussed with Council on an annual basis through the Business Plan and Budget Process. Prior to allocating resources to detailed design and construction activities, concept design options are developed with cost estimates and presented to CoA's Senior Leadership Team, to confirm project priority in conjunction with the recommended scope and timing of works.	Medium	Upgrade/new projects are considered as part of the Annual Business Plan & Budget
	Compromised decision making caused by insufficient asset information	High	Continue to regularly collect and update asset condition and financial information in our asset management system, to inform sound decision making. Undertake predictive scenario modelling to effectively communicate the relationship between cost, level of service and risk to inform asset management strategies.	Medium	Within existing resources / budgets Planned 2024/25 & 2025/26
	Accelerated asset deterioration and technical obsolescence, resulting in assets requiring renewal earlier than scheduled within Asset Management Plan.	High	Undertake regular condition audits and routine maintenance inspections to understand asset deterioration trends. Review emerging renewal priorities on a regular basis and update the 4-year renewal plan through the business plan and budget process on an annual basis as required.	Medium	Within existing resources / budgets
	Increasing operational and maintenance requirements and costs	High	Undertake routine maintenance inspections and maintenance planning to proactively identify financial risks associated with maintenance requirements to provide the agreed level of service. Review and update maintenance standards, intervention levels and response times following adoption of Asset Management Plan. Utilise established processes through the annual business plan and budget to submit a business case to re-forecast additional operational and maintenance costs.	Medium	Within existing resources / budgets

Asset at Risk	What can Happen	Risk Rating	Risk Treatment Plan	Residual Risk	Treatment Cost
All Public Lighting and Electrical Infrastructure Assets	Third party works associated with private development (e.g. temporary removal and reinstatements and temporary lighting provisions) are not constructed or implemented in accordance with CoA standards, resulting in potential hazards to public and/or premature asset failure and reduced useful life.	High	All third-party works require City Works Permits, to ensure works are delivered in accordance with City Works Guidelines and CoA standards. Defects and omission inspections are undertaken following the completion of works to ensure compliance with CoA standards. Where defects are identified the third-party is instructed to undertake required rectifications works.	Medium	Within existing resources / budgets
	Gifted assets associated with developments are not constructed in accordance with CoA standards, resulting in potential hazards to public and/or premature asset failure and reduced useful life.	High	All third-party works require City Works Permits, to ensure works are delivered in accordance with City Works Guidelines and CoA standards. Additionally, where appropriate, infrastructure agreements are established with developers to ensure proposed works are designed and constructed in accordance with CoA standards. Defects and omission inspections are undertaken following the completion of works to ensure compliance with CoA standards and/or infrastructure agreement. Where defects are identified, the developer is instructed to undertake required rectifications works.	Medium	Within existing resources / budgets
	Public lighting outages caused by electrical faults and/or equipment failure, resulting in major unplanned service disruption	High	Cyclic condition audits and routine maintenance inspections to monitor the condition of the public lighting assets. Delivery of planned and reactive maintenance programs with annual reviews of the capital works program to re-prioritise and incorporate emerging risks.	Medium	Within existing resources / budgets

6.3 Infrastructure Resilience Approach

The resilience of our infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions we need to understand our capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service.

Our current measure of resilience is shown in Table 6.3 which includes the type of threats and hazards and the current measures that the organisation takes to ensure service delivery resilience.

Ensuring we remain resilient to the impacts of projected future climate will require ongoing investigation, monitoring and adaption within future revisions of this Asset Management Plan. This has been recognised as a key action within the Improvement Plan (Chapter 8).

Table 6.3: Resilience Assessment

Threat / Hazard	Assessment Method	Current Resilience Approach
Increasing temperatures and more frequent, long-running and intense heatwaves	Data SA Climate Projections for South Australia Climate change modelling scenarios based on weather station data	Implementation key actions from the Climate Change Risk Adaptation Action Plan, which include: • Continuing to work with industry to identify new/superior products (or new applications) for application in CoA
Less rain overall but more intense storms and flooding	Data SA Climate Projections for South Australia Climate change modelling scenarios based on weather station data	Implementation key actions from the Climate Change Risk Adaptation Action Plan, which include: • Continuing to work with industry to identify new/superior products (or new applications) for application in CoA • Identify the Public Lighting and Electrical assets that will be impacted by flooding in the future

6.4 Service and Risk Trade-Offs

The decisions made in adopting this Asset Management Plan are based on the objective to achieve the optimum benefits from the available resources.

6.4.1 What we cannot do

Based on our current Long-Term Financial Plan budgets, there are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years.

Maintenance & Operations

While all proactive maintenance inspections and legislative maintenance works are fully accommodated within existing funding, not all preventative and general maintenance works can be accommodated within existing budget allocations to meet user expectations. Currently, general maintenance activities are evaluated and prioritised with respect to available budgets. While make-safe treatments are always undertaken as soon practical (generally within 24 hours), we are currently unable to undertake all works within the timeframes aligned with user expectations.

Following the completion of this Asset Management Plan, we will be updating maintenance standards to formalise maintenance intervention levels and response times, with the objective of establishing an acceptable balance between cost, risk, and customer expectations. This activity has been recognised as an action within the Improvement Plan of this Asset Management Plan (Chapter 8), where the associated financial impacts will need to be further considered in future revisions (by June 2025) of this Asset Management Plan and the Long-Term Financial Plan.

Renewal

There is an estimated $3.11 million renewal funding shortfall on average per year over the next 10 years, to continue to provide services in line with community expectations and reduce whole-of-life costs.

Acquisition (New & Upgrade)

It will not be possible to deliver all new and upgrade initiatives identified within corporate strategies and action plans within the 10-year planning period. New and upgrade initiatives will be prioritised and assessed against key criteria (see section 5.5) and considered with respect to available budgets. This process will be undertaken in consultation with the community through the Business Plan and Budget process and the development of the Resource Plan.

6.4.2 Service trade-off

If there is forecast work (operations, maintenance, renewal, acquisition or disposal) that cannot be undertaken due to available resources, then this will result in service consequences for users. These service consequences include:

- Increased service disruptions and public lighting outages
- Reduced levels of service for the Public Lighting and Electrical Infrastructure (maintenance and renewal backlog)
- Reduced customer satisfaction levels associated with the management of our existing assets
- Intergenerational inequity (burdening future generations)

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- Increased safety risks associated with assets becoming inoperative
- Increased reputational risks associated with service provisions not aligning with community expectations
- Increased financial risks associated with surplus maintenance requirements that cannot be accommodated within existing budgets
- Increased financial risks associated with higher renewal and/or rehabilitation treatments as asset renewals are not funded at the optimal point in time
- Increased economic risk associated with reduced business activity, events and tourism
- Intergenerational inequity (burdening future generations)

7.0 FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this Asset Management Plan. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

7.1 Financial Sustainability and Projections

7.1.1 Sustainability of service delivery

There are two key indicators of sustainable service delivery that are considered in the Asset Management Plan for this service area. The two indicators are the:

- Asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years)
- Medium term forecast costs/proposed budget (over 10 years of the planning period)

Asset Renewal Funding Ratio

The Asset Renewal Funding Ratio is 36%. This is an important indicator and illustrates that over the next 10 years we expect to have 36% of the funds required for the optimal renewal of assets. The forecast renewal work along with the proposed renewal budget, and the cumulative shortfall, is illustrated in Appendix C.

Contributing factors for the gap between the forecast renewal costs and current budgets include:

- Not achieving our Asset Renewal Funding Ratio targets over the past 4 financial years as a result of Covid-19 resourcing impacts and project delays associated with post-pandemic market saturation.
- Undertaking a comprehensive review of existing funding allocations and appropriately re-forecasting asset renewal requirements within this Asset Management Plan.
- Ensuring we accurately recognise asset replacement costs, utilising current unit rates that take into consideration increasing costs associated with inflation and industry escalations.

Medium Term – 10 Year Financial Planning Period

This Asset Management Plan identifies the forecast operations, maintenance and renewal costs required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner. This forecast work can be compared to the proposed budget over the first 10 years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs for the Public Lighting and Electrical Infrastructure over the 10 year planning period is approximately $8.10 million on average per year.

The current (budgeted) operations, maintenance and renewal funding is approximately $4.99 million on average per year giving a 10 year funding shortfall of approximately $3.11 million on average per year.

This indicates that approximately 62% of the forecast costs needed to provide the services documented in this Asset Management Plan are accommodated in the proposed budget. Note, these calculations exclude acquired assets.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately 100% for the first years of the Asset Management Plan and ideally over the 10 year life of the Long-Term Financial Plan.

7.1.2 Forecast Costs (outlays) for the Long-Term Financial Plan

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the Long-Term Financial Plan.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the Asset Management Plan or revising the Long-Term Financial Plan.

The forecast costs (outlays) required for consideration in the 10 year Long-Term Financial Plan are shown below in Table 7.1.2, where forecast costs are shown in 2024/25 dollar values.

Table 7.1.2: Forecast Costs (Outlays) for the Long-Term Financial Plan

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2024/25	$0	$1,747,000	$1,478,327	$2,414,000	$0
2025/26	$0	$1,747,000	$1,478,327	$5,150,000	$0
2026/27	$0	$1,747,000	$1,478,327	$5,150,000	$0
2027/28	$0	$1,747,000	$1,478,327	$5,150,000	$0
2028/29	$0	$1,747,000	$1,478,327	$5,150,000	$0
2029/30	$0	$1,747,000	$1,478,327	$5,150,000	$0
2030/31	$0	$1,747,000	$1,478,327	$5,150,000	$0
2031/32	$0	$1,747,000	$1,478,327	$5,150,000	$0
2032/33	$0	$1,747,000	$1,478,327	$5,150,000	$0
2033/34	$0	$1,747,000	$1,478,327	$5,150,000	$0

For the next revision of this Asset Management Plan, it is recommended to include the acquisition costs (upgrade/new) that are specified within the Resource Plan and accommodated within the Long-Term Financial Plan. This has been recognised as an action within the Improvement Plan (Chapter 8). Costs associated with asset disposal, will continue to be identified through Council Reports and accommodated within the annual Business Plan and Budget and Long-Term Financial Plan as required.

7.2 Funding Strategy

The proposed funding for assets is outlined in the City of Adelaide Annual Business Plan and Budget and Long-Term Financial Plan.

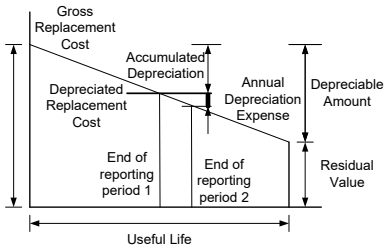
The financial strategy of the entity determines how funding will be provided, whereas the Asset Management Plan communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

7.3 Valuation Forecasts

7.3.1 Asset Valuations

The best available estimate of the value of assets included in this Asset Management Plan are shown below. The assets are valued at fair value cost to replace service capacity in accordance with Australian Accounting Standards.

Gross Replacement Cost	$145.6 million
Depreciable Amount	$145.6 million
Depreciated Replacement Cost[5]	$62.5 million
Depreciation	$5.1 million



7.3.2 Valuation Forecast

Asset values are forecast to increase as additional assets are added to the network.

Additional assets will generally add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts.

Increases to asset valuation are formally recognised through asset revaluations in conjunction with updates to Asset Management Plans, which are both typically undertaken every 4 years.

[5] Also reported as Written Down Value, Carrying or Net Book Value.

7.4 Key Assumptions Made in Financial Forecasts

In compiling this Asset Management Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this Asset Management plan and provides readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this Asset Management Plan are:

- All current assets will remain within the organisation's ownership throughout the planning period.
- Renewal forecasts are based on costs associated with like for like or modern equivalent replacement and are based off current design standards and any legislated requirements. They do not account for additional costs to upgrade assets or install new ancillary assets.
- Renewal forecasts for this Interim Asset Management Plan have been derived based on the average annual asset consumption of the Public Lighting and Electrical Infrastructure asset class. This financial figure is derived utilising asset quantities, renewal unit rates and asset useful life information.
- Renewal forecasts have been escalated into FY24/25 dollars (based on historic and forecast inflation).
- Renewal forecasts account for external design requirements, where costs are allocated within each FY of the Asset Management Plan as a "Design Program" where applicable (typically between 5-10% of annual construction costs)
- Renewal planning consider asset condition, asset functionality and integrated planning principles.
- Renewal forecasts have been aligned where appropriate with upgrade projects approved by Council and recognised in the Long-Term Financial Plan (e.g. Main Streets).
- Renewal forecasts do not account for internal staff resourcing. These resources are to be allocated through a capital resource overhead and accommodated into the Long-Term Financial Plan separately.
- Asset useful lives align with current levels of service and are based on the judgment and experience of internal staff.
- Asset useful life and remaining useful life estimates assume existing maintenance resourcing levels are continued.
- Acquisition (upgrade/new) costs are not recognised within this Asset Management Plan. These costs will be recognised in the Resource Plan and incorporated into Long-Term Financial Plan separately.
- Operations and maintenance forecasts are prioritised and delivered with respect to existing budget (standards to be reviewed and associated cost impacts to be incorporated into a future revision of this Asset Management Plan).
- Operations and maintenance forecasts do not currently account for the future acquisition of new assets through upgrade/new projects or gifted assets (to be considered through the annual business plan and budget and incorporated into future revisions of this Asset Management Plan).
- The Long-Term Financial Plan will appropriately escalate financial outlays communicated within this Asset Management Plan.

7.5 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this Asset Management Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is classified on a A - E level scale[6] in accordance with Table 7.5-1.

Table 7.5-1: Data Confidence Grading System

Confidence Grade	Description
A. Very High	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment. Dataset is complete and estimated to be accurate ± 2%
B. High	Data 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 ± 10%
C. Medium	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated ± 25%
D. Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy ± 40%
E. Very Low	None or very little data held.

The estimated confidence level for the reliability of data used in this Asset Management Plan is considered to be of a medium confidence level. Further, more granular assessment is shown in Table 7.5.2.

Table 7.5.2: Data Confidence Assessment for Data used in Asset Management Plan

Data	Confidence Assessment	Comment
Demand drivers	High	Based off corporate planning documents and strategies
Growth projections	High	Based off State government projections and industry research and analysis
Acquisition forecast	Low	Not accommodated within this Asset Management Plan
Operation forecast	High	Based off known requirements and known costs for condition audits and utility costs.
Maintenance forecast	Medium	Maintenance requirements are not forecasted, currently just aligned to existing budget allocations
Asset values	Medium	Asset revaluation was last undertaken in 2019/20. Renewal forecasts have utilised these figures, with escalations to represent anticipated costs to deliver works in 2024/25 dollars
Asset useful lives	Medium	In line with industry standards with regular review

[6] IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

Condition modelling	Low	Due to the low reliability of existing asset condition information, renewal forecasts have been derived based on the average annual asset consumption of the Public Lighting and Electrical Infrastructure asset class, rather than from condition information for individual assets. Further works are recognised in the improvement plan to define assets at amore granular level to improve condition auditing and deterioration modelling.
Disposal forecast	Low	Not accommodated within this Asset Management Plan

8.0 PLAN IMPROVEMENT AND MONITORING

8.1 Status of Asset Management Practices

8.1.1 Accounting and financial data sources

This Asset Management Plan utilises accounting and financial data. The source of the data is from the accounting module of CoA's Asset Management System (Assetic).

8.1.2 Asset management data sources

This Asset Management Plan also utilises asset management data. The source of the data is from CoA's Asset Management System (Assetic).

8.2 Improvement Plan

It is important that an entity recognise areas of their Asset Management Plan and planning process that require future improvements to ensure effective asset management and informed decision making. The improvement plan generated from this Asset Management Plan is shown in Table 8.2.

Table 8.2: Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
1	Comprehensive update of this Asset Management Plan following the completion of spatial data improvements, asset condition audit and asset revaluation.	Infrastructure Planning	Within existing resource allocations	2025-26
2	Finalise a 4-year Resource Plan to identify key upgrade/new projects to deliver Council's Strategic Plan objectives. Once key projects are recognised within the Long Term Financial Plan, Asset Management Plans will be updated to ensure associated acquisition costs (upgrade/new) and ongoing operational and maintenance costs are appropriately recognised, in conjunction with any scheduling adjustments required for asset renewal programs.	Strategy, Insights & Performance, with organisational support Infrastructure Planning	Within existing resource allocations	2024-25
3	Finalise the Public Lighting Strategy to identify key priority projects for inclusion within the Resource Plan. Asset Management Plans to be reviewed and updated where required, considering any impacts to planned asset renewal programs.	Infrastructure Planning	Within existing resource allocations	2024-25
4	Continue to review asset renewal forecasts and requirements for existing EV charging stations as the City of Adelaide Electrical Vehicle Charging Infrastructure Roadmap is implemented.	Infrastructure Planning	Within existing resource allocations	2024-25
5	Review and update operations and maintenance standards, to develop more structured and proactive maintenance regimes which provide an acceptable balance between cost, risk, and customer expectations. Include changes into future revisions of this Asset Management Plan and Long Term Financial Plan.	Infrastructure Planning, City Operations	Within existing resource allocations	2024-25 2025-26
6	Continue to work in partnership with both the State and Federal Governments to pursue external funding opportunities for both renewal and significant upgrade/new Public Lighting and Electrical Infrastructure projects.	Infrastructure Planning	Within existing resource allocations	Ongoing

7	Continue to undertake regular condition audits and revaluation for all our Public Lighting and Electrical Infrastructure assets within the nominated 4-year cycles, including regular review of asset useful lives.	Infrastructure Planning	Within existing resource allocations	Ongoing
8	Continue to review our technical standards and their application across the City and Park Lands with respect to climate resilience, performance, whole-of-life cost, amenity, and heritage requirements.	Infrastructure Planning, Technical Services	Within existing resource allocations	Ongoing
9	Continue to monitor forecast climate change impacts to ensure we remain resilient through proactively implementing appropriate mitigation and adaptation controls.	Sustainability, Infrastructure Planning	Within existing resource allocations	Ongoing
10	Improve the capture of carbon emission data for technical standards to support lower carbon decision making	Low Carbon & Circular Economy, Infrastructure Planning, Technical Services	Led by existing resources, with external support identified through the Business Plan and Budget	Ongoing
11	Improve the capture of carbon emission data for project procurement to support lower carbon decision making	Low Carbon & Circular Economy, Procurement, Infrastructure Delivery	Led by existing resources, with external support identified through the Business Plan and Budget	Ongoing
12	Engage with the community and seek feedback regarding levels of customer satisfaction for CCTV Cameras and Electrical Vehicles Charging Station assets for the next revision of this Asset Management Plan.	Infrastructure Planning	Within existing resource allocations	2025-26
13	Review of corporate performance measure targets for customer satisfaction, to assist with performance gap analysis	Strategy, Insights & Performance, Infrastructure Planning	Within existing resource allocations	2024-25
14	Review and standardise asset hierarchies for all asset classes within Public Lighting and Electrical Infrastructure assets in context with the Streets, Park Lands and Buildings Categories.	Infrastructure Planning, City Operations	Within existing resource allocations	2024-25
15	Review customer service requests codes to better align with Level of Service reporting and operational and maintenance sub-activities.	Infrastructure Planning, City Operations, Customer Centre	Within existing resource allocations	2024-25
16	Further develop processes to ensure asset data is updated following the completion of contracted maintenance work and emergency asset replacement resulting from vandalism or knockdowns	Infrastructure Planning, City Operations	Within existing resource allocations	2024-25

8.3 Monitoring and Review Procedures

This Asset Management Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The Asset Management Plan will be reviewed and updated annually to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budgets will be incorporated into the Long-Term Financial Plan once completed.

This Asset Management Plan is scheduled to be comprehensively updated in the 2025-26 Financial Year following the completion of spatial data improvements, asset condition audit and asset revaluation. It has a maximum life of 4 years and will require complete revision and updating within two years of a general Council election, pursuant to section 122 of the Local Government Act 1999 (SA).

8.4 Performance Measures

The effectiveness of this Asset Management Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this Asset Management Plan are incorporated into the Long-Term Financial Plan
- The degree to which the 1-5 year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the Asset Management Plan
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans
- The Asset Renewal Funding Ratio achieving the Organisational target (90-110%)
- Achieving Technical Level of Service objectives
- Reviewing changes to customer service request numbers and customer satisfactory surveys
- Progressing with the implementation of Improvement Actions identified in Table 8.2
- Reviewing and update of the Plan at minimum every four years

9.0 REFERENCES

- IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
- IPWEA, 2015, 3rd edn., 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
- IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/namsplus.
- IPWEA, 2015, 2nd edn., 'Australian Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/AIFMM.
- IPWEA, 2020 'International Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney
- IPWEA, 2018, Practice Note 12.1, 'Climate Change Impacts on the Useful Life of Assets', Institute of Public Works Engineering Australasia, Sydney
- IPWEA, 2012, Practice Note 6 Long-Term Financial Planning, Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn6
- IPWEA, 2014, Practice Note 8 – Levels of Service & Community Engagement, Institute of Public Works Engineering Australasia, Sydney, https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn8
- ISO, 2014, ISO 55000:2014, Overview, principles and terminology
- ISO, 2018, ISO 31000:2018, Risk management – Guidelines
- City of Adelaide 2020-2024 Strategic Plan, https://www.cityofadelaide.com.au/about-council/plans-reporting/strategic-planning/
- AS/NZS 1158 Series - Provides minimum standards for Public Lighting and specifies performance and design requirements.
- AS/NZS 3000 - This standard sets out the requirements for the design, construction and verification of electrical installations

10.0 APPENDICES

Appendix A Operation Forecast

The forecast operational costs for the Public Lighting and Electrical Infrastructure are shown below. Future revisions of this Asset Management Plan will further review forecast requirements based on updated operations and maintenance standards. All values are shown in current day dollars.

Table A - Operation Forecast Summary

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2024-25	$1,747,000	$0	$1,747,000
2025-26	$1,747,000	$0	$1,747,000
2026-27	$1,747,000	$0	$1,747,000
2027-28	$1,747,000	$0	$1,747,000
2028-29	$1,747,000	$0	$1,747,000
2029-30	$1,747,000	$0	$1,747,000
2030-31	$1,747,000	$0	$1,747,000
2031-32	$1,747,000	$0	$1,747,000
2032-33	$1,747,000	$0	$1,747,000
2033-34	$1,747,000	$0	$1,747,000

Appendix B Maintenance Forecast

The forecast maintenance costs for the Public Lighting and Electrical Infrastructure are shown below. Future revisions of this Asset Management Plan will further review forecast requirements based on updated operations and maintenance standards. All values are shown in current day dollars.

Table B - Maintenance Forecast Summary

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2024-25	$1,478,327	$0	$1,478,327
2025-26	$1,478,327	$0	$1,478,327
2026-27	$1,478,327	$0	$1,478,327
2027-28	$1,478,327	$0	$1,478,327
2028-29	$1,478,327	$0	$1,478,327
2029-30	$1,478,327	$0	$1,478,327
2030-31	$1,478,327	$0	$1,478,327
2031-32	$1,478,327	$0	$1,478,327
2032-33	$1,478,327	$0	$1,478,327
2033-34	$1,478,327	$0	$1,478,327

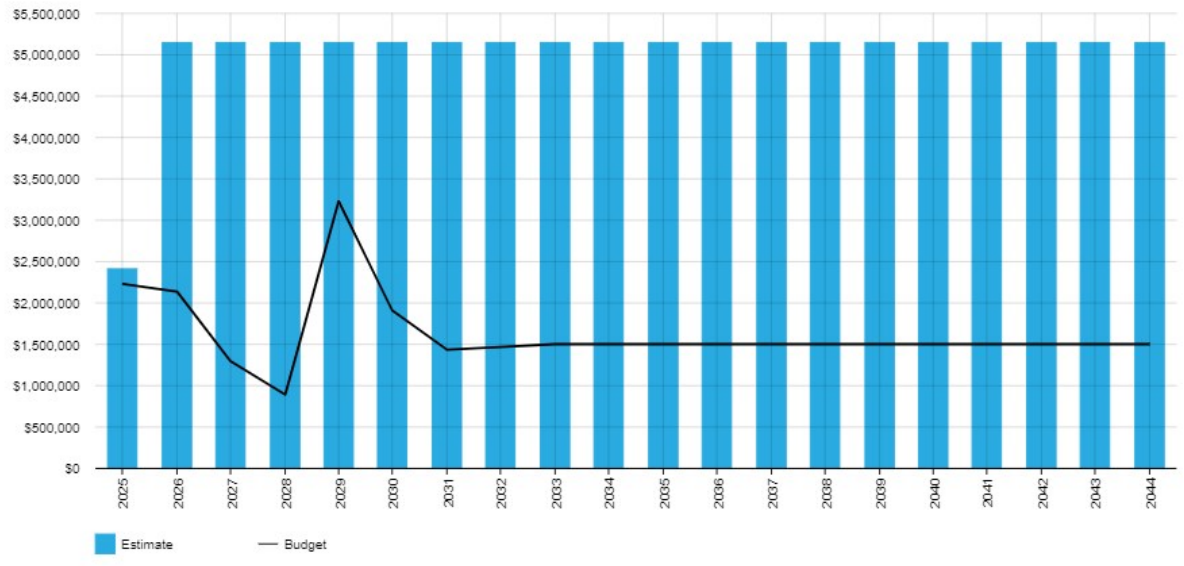
Appendix C Renewal Forecast Summary

The forecast renewal costs for the Public Lighting and Electrical Infrastructure, relative to current renewal budgets are shown below, in conjunction with the annual renewal budget shortfall and the cumulative budget shortfall over the 10-year planning period. All Forecast costs are shown in 2024-25 dollar values.

Table C - Renewal Forecast Summary

Year	Renewal Forecast	Renewal Budget	Annual Budget Shortfall	Cumulative Budget Shortfall
2024-25	$2,414,000	$2,232,950	$181,050	$181,050
2025-26	$5,150,000	$2,137,455	$3,012,545	$3,193,595
2026-27	$5,150,000	$1,298,457	$3,851,543	$7,045,138
2027-28	$5,150,000	$893,688	$4,256,312	$11,301,450
2028-29	$5,150,000	$3,230,150	$1,919,850	$13,221,300
2029-30	$5,150,000	$1,911,518	$3,238,482	$16,459,782
2030-31	$5,150,000	$1,435,384	$3,714,616	$20,174,398
2031-32	$5,150,000	$1,468,000	$3,682,000	$23,856,398
2032-33	$5,150,000	$1,502,758	$3,647,242	$27,503,640
2033-34	$5,150,000	$1,502,758	$3,647,242	$31,150,882

Across the 10-year planning period, the forecast renewal costs are $48.8 million, with a current budget allocation of $17.6 million, resulting in a cumulative budget shortfall of $31.15 million. This equates to an asset renewal funding ratio of 36%.



Appendix D Budget Summary by Lifecycle Activity

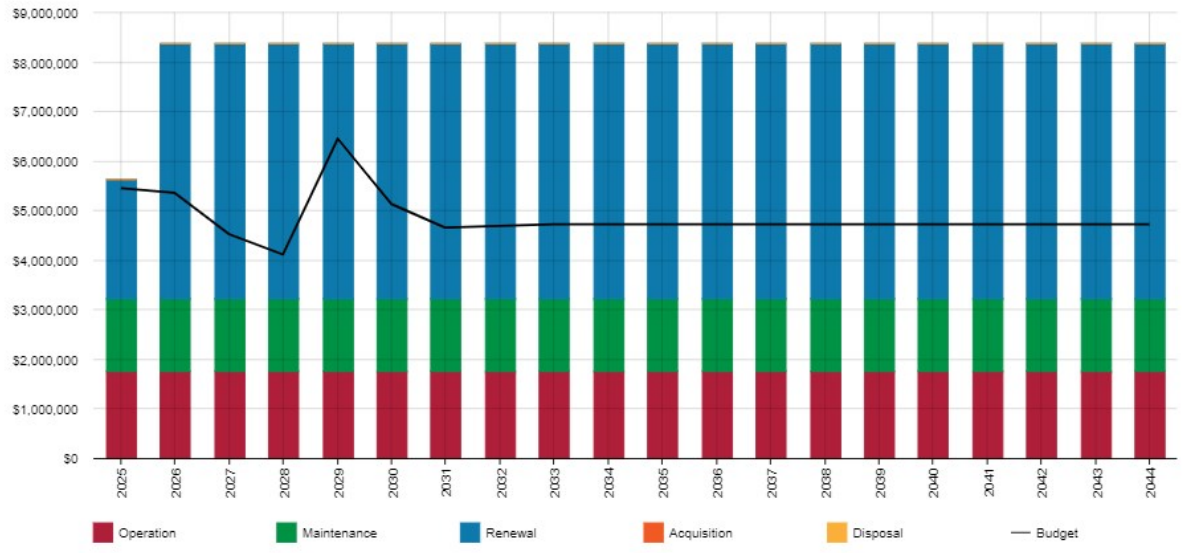
The forecast costs (outlays) required for consideration in the 10 year Long-Term Financial Plan are provided in shown below. These costs include renewal, maintenance, and operations of our existing assets. For the next revision of this Asset Management Plan, it is recommended to include the acquisition costs (upgrade/new) that are specified within the Resource Plan and are accommodated within the Long-Term Financial Plan. This has been recognised as an action within the Improvement Plan (Chapter 8). Costs associated with asset disposal, will continue to be identified through Council Reports and accommodated within the annual Business Plan and Budget and Long-Term Financial Plan as required. All forecast renewal costs are shown in 2024/25 dollar values and operations/maintenance costs are shown in 2023/24 dollar values.

Table D – Budget Summary by Lifecycle Activity

Year	Acquisition *	Operation	Maintenance	Renewal	Disposal
2024-25	$0	$1,747,000	$1,478,327	$2,414,000	$0
2025-26	$0	$1,747,000	$1,478,327	$5,150,000	$0
2026-27	$0	$1,747,000	$1,478,327	$5,150,000	$0
2027-28	$0	$1,747,000	$1,478,327	$5,150,000	$0
2028-29	$0	$1,747,000	$1,478,327	$5,150,000	$0
2029-30	$0	$1,747,000	$1,478,327	$5,150,000	$0
2030-31	$0	$1,747,000	$1,478,327	$5,150,000	$0
2031-32	$0	$1,747,000	$1,478,327	$5,150,000	$0
2032-33	$0	$1,747,000	$1,478,327	$5,150,000	$0
2033-34	$0	$1,747,000	$1,478,327	$5,150,000	$0

*Costs accounted for within the Resource Plan and incorporated into Long-Term Financial Plan separately (i.e. not through the Asset Management Plan)

Figure D: Budget Summary by Lifecycle Activity



Appendix E Asset Renewal Intervention Levels

The useful lives and condition intervention level of assets used to develop projected asset renewal forecasts are shown in Table 5.4 Asset useful lives were last reviewed in 2023.

Table 5.4: Useful Lives of Assets

Asset Category	Asset Type	Intervention Level	Useful Life (years)
Public Lighting and Electrical	Luminaires	4	30
	Poles	4	30
	Brackets	4	30
	Electrical cables	4	30
	Electrical conduit	4	30
	Pits	4	30
	Switchboards	4	30
	C-Bus (lighting control)	4	30
CCTV Network	CCTV Camera – low resolution	4	12
	CCTV Camera – high resolution	4	5
	Equipment Hub	4	12
	Fibre Optic Network Cable	4	30
	Fibre Optic Network Conduit	4	30
	Servers	4	7
	Switches	4	7
EV Charging Stations	EV Charger	4	10
Defibrillators	Defibrillator Unit	4	8

Exclusion of the Public

Tuesday, 19 March 2024
Infrastructure and Public Works Committee

Program Contact:
Alana Martin, Manager Governance

2018/04291
Public

Approving Officer:
Michael Sedgman, Acting Chief Executive Officer

EXECUTIVE SUMMARY

Section 90(2) of the *Local Government Act 1999 (SA)* (the Act), states that a Council may order that the public be excluded from attendance at a meeting if the Infrastructure and Public Works Committee considers it to be necessary and appropriate to act in a meeting closed to the public to receive, discuss or consider in confidence any information or matter listed in section 90(3) of the Act.

It is the recommendation of the Chief Executive Officer that the public be excluded from this Infrastructure and Public Works Committee meeting for the consideration of information and matters contained in the Agenda.

For the following Chief Executive Officer Report seeking consideration in confidence

10.1 Adelaide City Connector Bus Deed of Agreement [section 90(3) (d) of the Act]

The Order to Exclude for Item 10.1:

1. Identifies the information and matters (grounds) from section 90(3) of the Act utilised to request consideration in confidence.
2. Identifies the basis – how the information falls within the grounds identified and why it is necessary and appropriate to act in a meeting closed to the public.
3. In addition, identifies for the following grounds – section 90(3) (b), (d) or (j) of the Act - how information open to the public would be contrary to the public interest.

ORDER TO EXCLUDE FOR ITEM 10.1

THAT THE INFRASTRUCTURE AND PUBLIC WORKS COMMITTEE:

1. Having taken into account the relevant consideration contained in section 90(3) (d) and section 90(2) & (7) of the *Local Government Act 1999 (SA)*, this meeting of the Infrastructure and Public Works Committee dated 20 March 2024 resolves that it is necessary and appropriate to act in a meeting closed to the public as the consideration of Item 10.1 [Adelaide City Connector Bus Deed of Agreement] listed on the Agenda in a meeting open to the public would on balance be contrary to the public interest.

   Grounds and Basis

   This Item is confidential as information relates to operation costs and contractual agreements between the Department for Infrastructure and Transport and its bus contractors.

   The disclosure of information in this report could reasonably be expected to prejudice the commercial position of the contractors that supplied the information through a tender process.

   Public Interest

   The Committee is satisfied that the principle that the meeting be conducted in a place open to the public has been outweighed in the circumstances because the disclosure of this information could be commercially damaging to the bus contractors involved.

2. Pursuant to section 90(2) of the *Local Government Act 1999 (SA)* (the Act), this meeting of the Infrastructure and Public Works Committee dated 20 March 2023 orders that the public (with the exception of members of Corporation staff and any person permitted to remain) be excluded from this meeting to enable this meeting to receive, discuss or consider in confidence Item 10.1 [Adelaide City Connector Bus Deed of Agreement] listed in the Agenda, on the grounds that such item of business, contains information and matters of a kind referred to in section 90(3) (d) of the Act.

DISCUSSION

1. Section 90(1) of the *Local Government Act 1999 (SA)* (the Act) directs that a meeting of Council must be conducted in a place open to the public.

2. Section 90(2) of the Act, states that a Council may order that the public be excluded from attendance at a meeting if Council considers it to be necessary and appropriate to act in a meeting closed to the public to receive, discuss or consider in confidence any information or matter listed in section 90(3) of the Act.

3. Section 90(3) of the Act prescribes the information and matters that a Council may order that the public be excluded from.

4. Section 90(4) of the Act, advises that in considering whether an order should be made to exclude the public under section 90(2) of the Act, it is irrelevant that discussion of a matter in public may -

   '(a) cause embarrassment to the council or council committee concerned, or to members or employees of the council; or

   (b) cause a loss of confidence in the council or council committee; or

   (c) involve discussion of a matter that is controversial within the council area; or

   (d) make the council susceptible to adverse criticism.'

5. Section 90(7) of the Act requires that an order to exclude the public:

   5.1 Identify the information and matters (grounds) from section 90(3) of the Act utilised to request consideration in confidence.

   5.2 Identify the basis – how the information falls within the grounds identified and why it is necessary and appropriate to act in a meeting closed to the public.

   5.3 In addition identify for the following grounds – section 90(3) (b), (d) or (j) of the Act - how information open to the public would be contrary to the public interest.

6. Section 83(5) of the Act has been utilised to identify in the Agenda and on the Report for the meeting, that the following report is submitted seeking consideration in confidence.

   6.1 Information contained in Item 10.1 – Adelaide City Connector Bus Deed of Agreement

      6.1.1 Is not subject to an Existing Confidentiality Order.

      6.1.2 The grounds utilised to request consideration in confidence is section 90(3) (d) of the Act

         (d) commercial information of a confidential nature (not being a trade secret) the disclosure of which—

            (i) could reasonably be expected to prejudice the commercial position of the person who supplied the information, or to confer a commercial advantage on a third party; and

            (ii) would, on balance, be contrary to the public interest

ATTACHMENTS

Nil

- END OF REPORT -

Document is Restricted

Document is Restricted