DRAFT Coastal Walkway Asset Management Plan 2020 - 2030

CITY OF MARION



CONTENTS

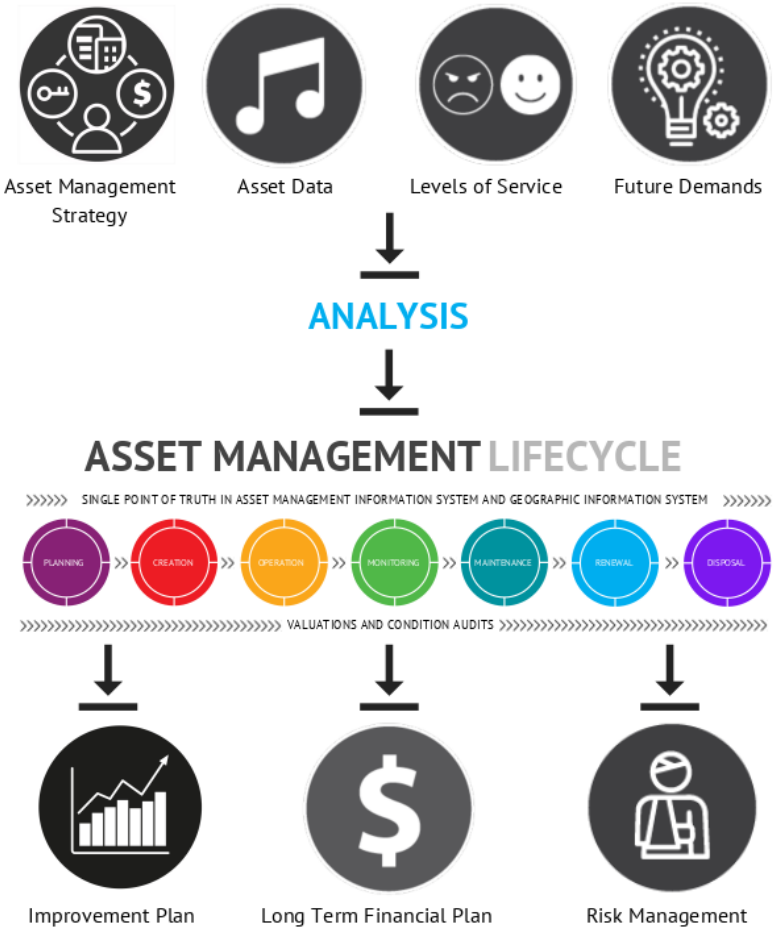
INTRODUCTION	2
EXECUTIVE SUMMARY	5
WHY WE NEED A PLAN	6
WHAT ASSETS WE HAVE	8
LEVELS OF SERVICE	13
HOW WE PROVIDE THE SERVICE (ASSET MANAGEMENT LIFECYCLE)	18
RISK MANAGEMENT	26
WHAT IT WILL COST AND HOW WE WILL PAY FOR IT	27
WHAT WE WILL DO NEXT (IMPROVEMENT PLAN)	30
APPENDIX A: BUDGETED EXPENDITURE FOR LONG TERM FINANCIAL PLAN	31
APPENDIX B: COASTAL WALKWAY PLAN	32

DATA SOURCES

CoM Coastal Walkway Plan 2020
JLL CoM Valuation Data 2018
Open Space Operations Budget 2018-19
CoM Tree Management Framework 2018
CoM Remnant Native Vegetation Plan 2018-23
2020 City of Marion Community Satisfaction Survey
30 Year Plan for Greater Adelaide

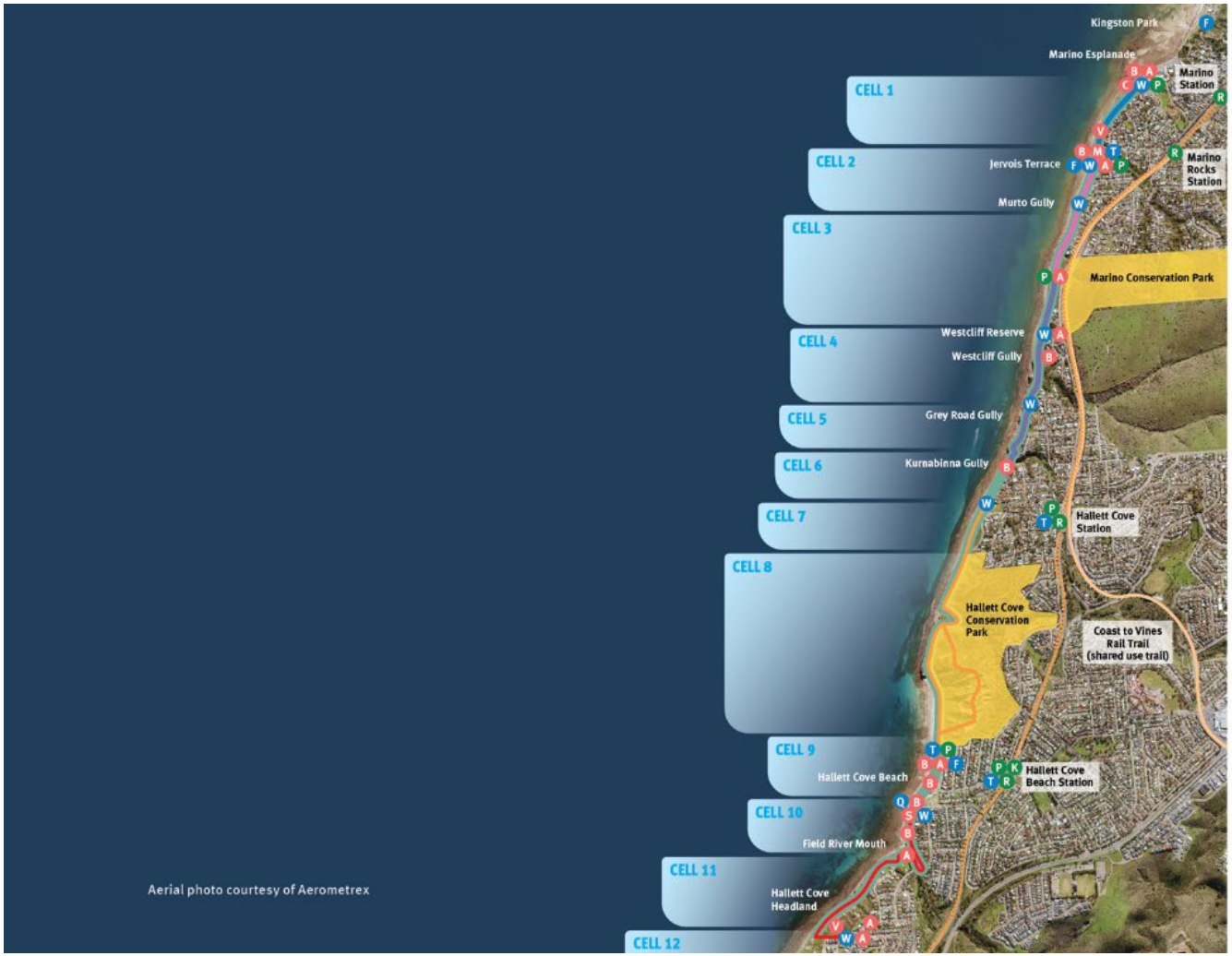
REFERENCES

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, 2015, 3rd edn. 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM



1 - INTRODUCTION

What is this plan about?



NORTH

Key

Transport
- R Railway Station
- K Bike cage
- P Parking

Utilities/food
- T Toilet
- Q BBQ
- W Drinking fountain
- F Café

Landmarks
- B Beach access
- M Marino mosaics
- V Viewing platform
- A Access to trail
- C Contemplation artwork
- S Commemorative space

- Walk 1: The Art Walk
- Walk 2: The Murto Gully Walk
- Walk 3: The Kurnabinna Walk
- Walk 4: The Geology Circuit
- Walk 5: The Headland Walk
- Walk 6: The Marion Coast Park Walk
- Coast to Vines Rail Trail (shared use trail)
- Railway line

The City of Marion Coastal Walkway from Marino to Hallett Cove commenced construction in the mid to late 1990's. The walkway today is a highly valued and well utilised community asset which attracts visitors into the region and contributes to the liveability of the City.

The broader Adelaide Metropolitan Coast Park extends along Adelaide's coastline from Sellicks Beach to North Haven, with the Marion Coastal Walkway providing an approximate 8km section between Marino and Hallett Cove.

In addition to the stunning geological formations, native coastal vegetation and sites of indigenous cultural significance, the Coastal Walkway contains structures (stairways secured to cliff faces, board walks and bridges), pathways at ground level, lookouts and other surrounding public infrastructure such as bins, signs, artwork and benches.

The Coastal Walkway traverses a number of Council reserves and Road Reserve land under Council ownership and/or care and control. These Reserves exist to preserve natural assets including cliff faces, watercourses and natural vegetation along the coast.

The plan interfaces with other Asset Management Plans (AMPs) in particular the Stormwater AMP where stormwater assets discharge through those reserves, and Open Space AMP for the reserves.

The Coastal Walkway is described in a series of 12 Cells covering the entire coast from The Esplanade, Marino (Council northern boundary) to Sigma Road, Lonsdale (Council Southern boundary). Note: Cell 8 covers the Hallett Cove Conservation Park which is a State Government asset managed by the Department for Environment and Water.

This group of assets exists to provide open space for community recreation and conservation of the natural environment. It also provides a key tourism and visitation destination to visitors from outside the City of Marion.

This group of assets is a network which combine to create a recreational experience as well as a conservation corridor for natural vegetation and resident native fauna. The entire length of the corridor is in Coastal Land as designated by Coast Protection Board policy guidelines and listed as Coastal Conservation Zone in the City of Marion Development Plan.

Valued features of such zones in evidence along this section of coast include:

- coastal features and habitats that are sensitive to the direct impacts of development (including coastal dunes and cliffs, coastal wetlands, saltmarsh and mangrove areas)
- important coastal geological features or other natural features of scientific, educational, heritage or cultural importance (including coastal cliffs)
- buffer areas separating development from sensitive coastal and marine features and habitats
- coastal landscapes of high scenic quality
- areas exposed to coastal hazards (including flooding, erosion, acid sulfate soils and sand dune drift) where there are not adequate provisions to mitigate the hazard (such as a managed seawall or levee bank) or any strategies to provide future protection.

What is asset management?

Asset management is about how assets are 'looked after', both on a day-to-day basis (maintenance, monitoring and operation) and in the medium-to-long term (planning, creation, renewal and disposal).

What will we do?

A significant part of Council's annual spend is devoted to the repair, maintenance and upgrade of the assets which deliver safe and sustainable services to the community. Council will continue to invest in these assets as cost effectively as possible whilst considering beneficial advancements in technology.

This Asset Management Plan (AMP) has been aligned with Council's Asset Management Policy (2018) and Asset Management Strategy (2019). Any upgrades or new asset expenditure will require Council prioritisation.

Council recognises that climate change is likely to affect asset life and functionality. We are exploring what we can do to make fleet assets more environmentally sustainable and resilient to climate change.

What can you do?

Better understanding of community needs can help us improve user experience, attract more users and provide services more efficiently.

Council will be pleased to consider your thoughts on the issues raised in this plan and suggestions on how we may change or reduce the mix of services to ensure that the appropriate level of service can be provided to the community within available funding.

2 - EXECUTIVE SUMMARY

COASTAL WALKWAY ASSET MANAGEMENT PLAN

EXECUTIVE SUMMARY

Assets covered by this plan



Coastal Walking trail from Marino to Hallett Cove
Gross replacement cost $5.56M
Reliable asset data

What it will cost over the 10-year planning period



Creation	$0.57M
Operation	$0.50M
Monitoring	$0.10M
Maintenance	$1.64M
Renewal	$10.90M
Total	$13.71M

Levels of Service



Provide a renewed Walking Trail, generally at Grade 2 standard as per the Australian Standard for Walking Track Construction (AS 2156) with a track width no less than 1.8 m with useful life of 50 years.

Funding levels are sufficient to continue to provide identified Community Levels of Service

Risk Management



Controls manage the major risk of a renewal funding shortfall

Infrastructure is monitored with increased maintenance intervention to manage high utilisation and the impacts of extreme weather events

Funding levels are sufficient to continue to manage risks in the medium term

Future Demands managed through ongoing monitoring



- Community Expectations
- Environmental Sustainability
- Improvement Initiatives
- Legislation
- Technology

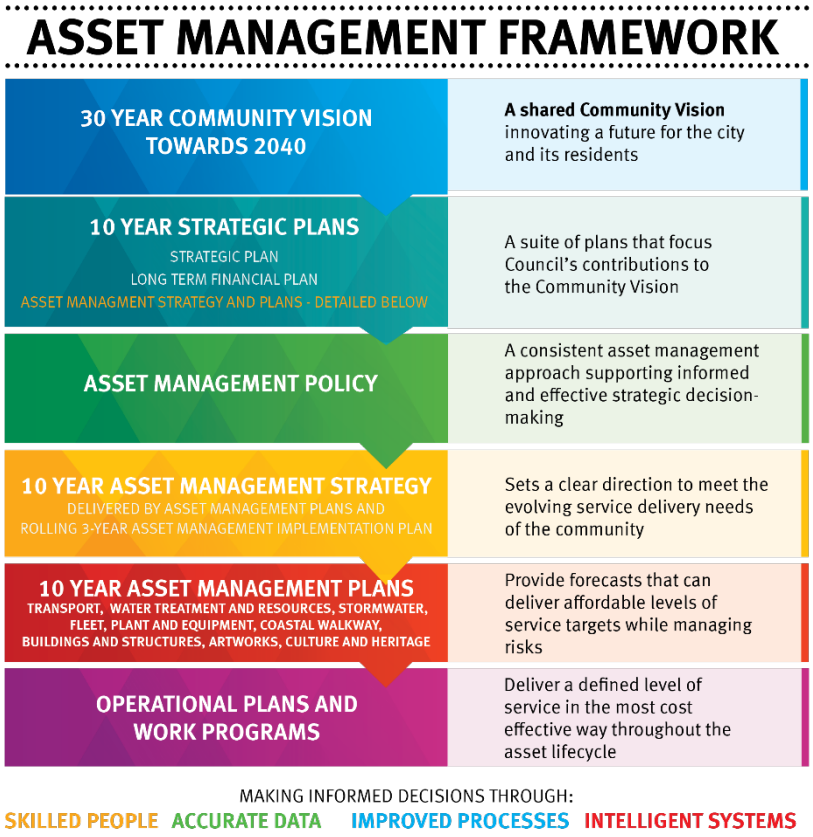
Improvement Plan



- Measure utilisation to drive data driven decision making around future planning and service provision.
- Approve approach to Remnant Native Vegetation management along trail to ensure best long-term conservation results
- Review lessons learnt from Stages 1 and 2 of the Coastal Walkway Plan

3 - WHY WE NEED A PLAN

"Good asset management is critical to a high performing Council. Investing in People, Data, Process and Systems enables effective and informed decision-making and optimises community outcomes" Brendon Lyons, Unit Manager Asset Solutions



The Asset Management Framework aligns Council's asset portfolio to meet the service delivery needs of our community.

Council's purpose is:

To improve our residents' quality of life; continuously, smartly and efficiently

The City of Marion Asset Management vision is:

To maintain our assets to agreed levels of service which maximise community value throughout an asset's life

Supported by four Strategic Objectives:

1. **MAXIMISE COMMUNITY VALUE**
2. **DELIVER AGREED LEVELS OF SERVICE**
3. **INFORMED DECISION MAKING**
4. **OPTIMALLY MANAGED**

This Asset Management Plan reflects and responds to change It is based on the format recommended in Section 4.2.6 of the *International Infrastructure Management Manual* (IPWEA 2015).

This plan is driven by the priorities of Council's Strategic Plan, the Asset Management Policy and Asset Management Strategy. It is funded by the Long-Term Financial Plan and Annual Business Plan.

The effectiveness of this Asset Management Plan is measured annually through the following key performance indicators:

KEY PERFORMANCE INDICATOR
Asset Renewal Funding Ratio Calculated by measuring capital expenditure on renewal and replacement of assets relative to the Infrastructure and Asset Management Plan required expenditure. This indicates whether Council is renewing or replacing existing non-financial assets in accordance with its future Asset Management renewal requirements.
Asset Management Maturity Assessment Assessed against the Institute of Public Works Engineering Australasia (IPWEA) National Asset Management Strategy (NAMS) targets. The maturity scale builds from 1 - Aware to 3 - Core Maturity to 5 - Advanced Maturity

4 - WHAT ASSETS WE HAVE

Assets exist to meet community needs and support the delivery of services to the service levels adopted by Council. The Coastal Walkway assets in their current form are listed as follows:

Service Provided	Asset Category	Quantity
Built infrastructure	Pathways – on ground	5,750 m2
	Pathways – on road	729 m2
	Pathways - structural	927 m2
	Bridges - Timber beam, composite fibre deck	279 m2
	Bridges – Timber beam, timber deck	931 m2
	Bridges - other construction	123 m2
	Retaining wall	285 m
	Barriers - general fencing	3,311 m
	Barriers - stock fencing	1,012 m
	Barriers - Vehicle	498 m
	Barriers - other	147 m
	Signs	109 units
	Seats	31
	Artwork	2 items
	Toilet Blocks	2 units
	Off street carparking	3 areas
Green infrastructure	Constructed landscape as primary use (Heron Way Reserve and Grand Central Ave Reserve)	4 Ha
	Natural landscape/ vegetation as primary use – coastal reserves	31.8 Ha

Infrastructure items along the Coastal Walkway are recorded in the following categories:

- Artwork
- Signs
- General Fixtures
- Subsoil Drains
- Barrier Point
- Barrier Continuous
- Retaining Walls
- Pathways
- Bridges

Vegetation is recorded through independent arboriculture and native vegetation records.

The Coastal Walkway is also independently recorded spatially on the GIS system. Data includes reserve boundaries, selected infrastructure and the footprints of City of Marion owned buildings The GIS system also accesses up to date commercially sourced aerial photography for the entire City of Marion.

The City of Marion engaged Sproutt Professional Engineering Services in March – April 2019 to undertake a detailed audit of the Coastal Walkway. This audit was more comprehensive in scope and detail than the data previously stored by Council. The entire audit process was undertaken by Sproutt and Innovis professional engineering service firms. Sproutt undertaking all Level 2 bridge inspections as well as network associated asset capture, inspections and reporting. Innovis undertook all Level 3 bridge inspections and associated reporting. Bridge assessments were done using the Local Roads Bridge Management Manual as specified by Council.

The audit and subsequent report enabled the creation of a new asset database for these assets. The identification of defects along the Coastal Walkway assisted the development of a renewal program that Council has adopted in the Coastal Walkway Asset Management Plan. Implementing the Coastal Walkway Asset Management Plan will then ensure Council is in control of the lifecycle and operation of the asset.

Given the coastal location and the steep topography, preservation of the natural assets of the coastal reserves is a key feature of its community value. Accordingly, coastal erosion, the stability of natural slopes, riparian features and the health of indigenous vegetation are key to ensure the trail retains its integrity and its value to the community.

Indigenous vegetation assessments have taken place periodically. The most recent full assessment was done in 2008.

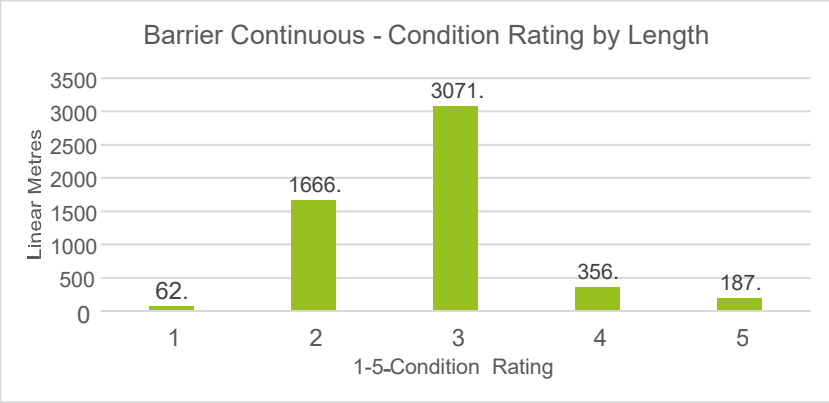
The Sproutt Audit 2019

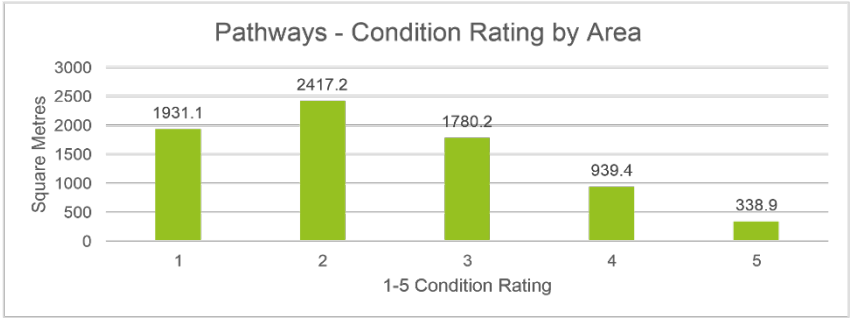
The Sproutt audit incorporated overall inspections at Level 1 with Level 2 and Level 3 audits for critical suspended infrastructure items.

The audit findings precipitated a decision to take the most vulnerable sections of the walkway out of service until investigations could be concluded and any practicable initial stabilising repairs could be undertaken.

The current state of the walkway is that all but a 0.45 km section is open for public use. A detailed 10 year upgrade program (the Coastal Walkway Plan) has been adopted by Council subject to receiving adequate external funding and is attached to this plan as Appendix B.

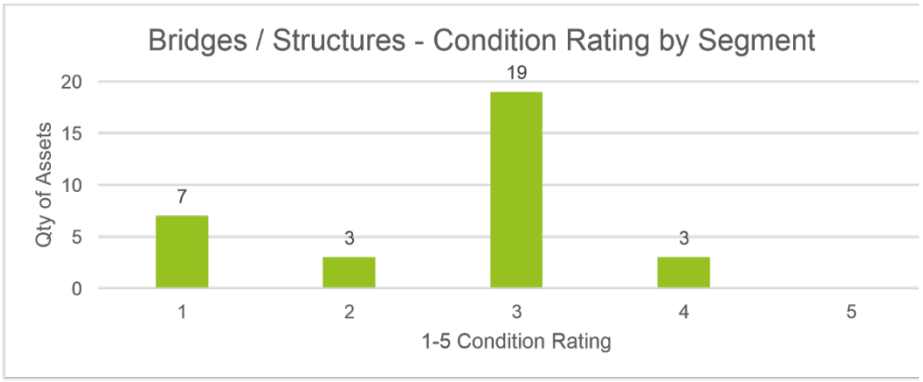
A summary of the outcomes follows:

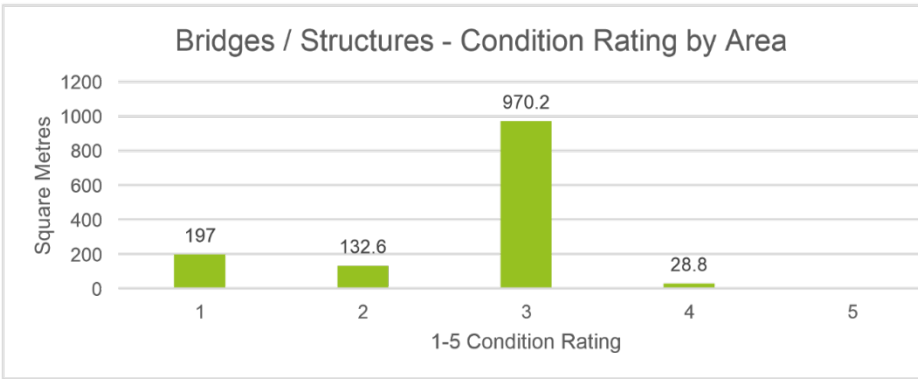




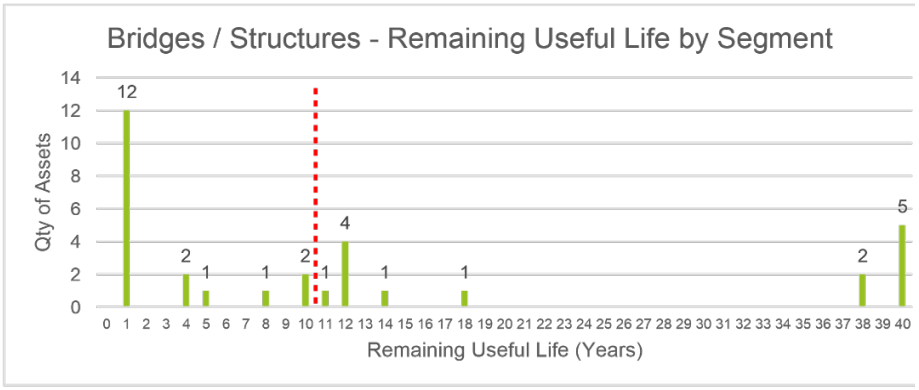
Five retaining walls will need replacing in the next 10 years.

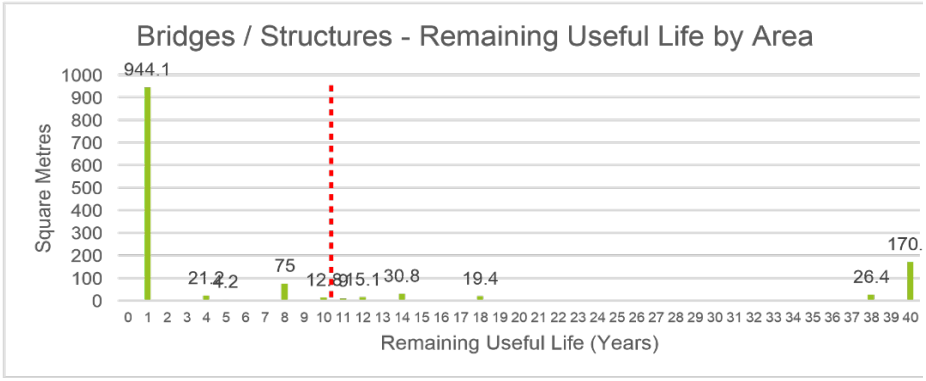
The rectification and renewal costs for Bridges and Structures far outweighed the remaining costs of the asset class pertaining to minor structures. As a consequence, a detailed Level 3 Bridge Audit Report focusing on these concerns added to the scope of the audit.





Although many bridge superstructure components were found to be in Good – Average condition, the footings and founding strata of all major structures (Level 3 inspections) are not able to be confirmed adequate to support the existing structure. Due to this, these assets were assigned a significantly lower remaining life as follows:





:

Data Quality

Currency and accuracy of asset data is critical to effective asset and financial management. Data confidence is classified on a 5-level scale:

Confidence Grade	Data Confidence	Description
A	Highly reliable data	• Based on sound records, procedures, investigations and analysis • Documented accurately • Agreed as the best method of assessment • Dataset is complete and estimated to be accurate ± 2%
B	Reliable data	• Based on sound records, procedures, investigations and analysis • Documented properly but has minor shortcomings • For example, some 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	Uncertain data	• Either 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	Very uncertain data	• 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	Unknown	• Unknown, as none or very little data held

Data confidence is assessed for asset data used in the preparation of this plan at level B (Reliable) except for some items of infrastructure that were not accessible for level 3 inspections of structure footing conditions.

All figures in Council's Asset Management Plans are in present value (today's dollars) as a number of factors influence the indexation rates. When incorporating the figures into Council's Long Term Financial Plan, relevant indexations linked to the type of expenditure will be applied.

5 - LEVELS OF SERVICE

Community Levels of Service

Community levels of service are associated with the variety of services provided by Council to our community. The following table demonstrates how the assets covered under this Asset Management Plan assist in achieving community levels of service.

	Community Level of Service	Achieved By
Safety	Provide a safe open space walkway for the enjoyment by members of the public.	No preventable injuries Infrastructure risk assessed to ensure it is safe for community use. Due regard is given to community expectations to incorporate controlled environments that support a learned approach to developing risk-taking skills in children and adolescents. Compliance with applicable legislative or community standards is collected in the lead up to a major renewal project.
Quality	Operational requirements are safely and effectively met	Assets are managed and maintained to best practice industry standards.
Function	A Walkway that provides a range of experiences to the public that supports health, wellbeing and nature conservation.	Provide sufficient assets to meet levels of service Maintaining and renewing to a set Service Level. Data is currently collected in the lead up to a major renewal project. This is also tested through community surveys ahead of upgrade projects to get a general picture of demand and suitability. To date this has been lacking in a Service Level benchmark.
Capacity	Assets are designed to cater for current demand	Improved utilisation measurement. It is proposed to install remote LoRaWAN people counting technology at selected points along the walkway to gather utilisation data. Data is currently collected in the lead up to a major renewal project. This is also tested through community surveys ahead of upgrade projects to get a general picture of demand and suitability. To date this has been lacking in a Service Level benchmark.
Sustainability	Operational requirements are safely and effectively met, whilst minimising impact on the environment.	Environmental performance is assessed when selecting asset materials and products

The 2019 City of Marion Community Satisfaction Survey revealed the following data about the City of Marion's Open Space assets.

	Importance				Satisfaction			
	Very Important	Somewhat important	Low importance	Not important at all	Very Satisfied	Somewhat satisfied	Dissatisfied	Very Dissatisfied
Sport and Recreation Facilities	46%	39%	12%	3%	25%	62%	10%	3%
Quality and features of Playgrounds and reserves	54%	34%	10%	2%	29%	52%	12%	7%

This data indicates that Open Space assets as they are currently configured are highly valued by the community and there is a high level of satisfaction with their standard of facilities and upkeep. No specific survey questions were targeted at the Coastal Walkway. The Improvement Plan includes an action to investigate the feasibility of adding additional questions to Council's future Community Satisfaction Surveys.

Walking Trail Standards

The Australian Standard for Walking Track Construction (AS 2156) lists 5 potential grades as follows:

- Grade 1 - No bushwalking experience required. Flat even surface with no steps or steep sections. Suitable for wheelchair users who have someone to assist them.
- Grade 2 - No bushwalking experience required. The track is hardened or compacted surface and may have a gentle hill section or sections and occasional steps.
- Grade 3 - Suitable for most ages and fitness levels. Some bushwalking experience recommended. Tracks may have short steep hill sections a rough surface and many steps.
- Grade 4 - Bushwalking experience recommended. Tracks may be long, rough and very steep. Directional signage may be limited.
- Grade 5 - Very experienced bushwalkers with specialised skills, including navigation and emergency first aid. Tracks are likely to be very rough, very steep and unmarked.

Note that while the standard does not give guidance as to path width, a width of 1,200mm or more is expected for Grade 1 and 900mm or more for Grade 2 and logically depend of anticipated traffic and shared use.

The current City of Marion sector walkway, other than sections shared with urban footpaths, is generally classifiable as Grade 3 with capacity limitations that require negotiated passing or use of track verges thereby threatening adjacent vegetation. Notwithstanding the well documented issues associated with stair and boardwalk structures through the coastal ravines and highlighted in the Coastal Walkway Plan and the Sproutt Condition and Risk assessment which informed it, the general path surface includes long sections that are rough, narrow, poorly drained and have little or no constructed surface.

Similarly, the frequent level changes and reliance on steep steps in the ravine structures is another factor which gives the current walkway a Grade 3 rating. Alternative routing in these locations, including those now funded, should reduce reliance on steps for users. The southernmost sector of the walkway, that was recently constructed from Bilbao Ave Hallett Cove to the City of Onkaparinga boundary is classifiable as Grade 2 in its current state.

Service Standard adopted for Coastal Walkway

This Plan adopts a service level target line with AS 2156 Grade 2 as achieved in the Hallett Cove Conservation Park sector for the walkway from the City of Holdfast Bay boundary to the Field River (i.e. Cells 1-7 and 90), as well the sector south of Bilbao Ave to the City of Onkaparinga boundary (i.e. Cell 12). It adopts a service level target of AS2156 Grade 3 for the sector of the walkway south of the Field River through Hallett Cove Headland Reserve to Bilbao Ave (i.e. Cell11), but gives priority to measures that retain this standard of access while enhancing nature conservation.

It is proposed that the walkway improvements will be designed and constructed to a standard which will meet a service level target in line with Australian Standard for Walking Track Construction (AS 2156.1) Grade 2 as achieved in the existing Hallett Cove Conservation Park sector. This level aims to serve users with no bushwalking experience. The track shall have a hardened or compacted surface and may have a gentle hill section or sections and occasional steps.

Note: Grade 2 standard is not currently achieved in current configuration of the walkway. Also note that Grade 2 does not allow for full DDA accessibility, however favourable consideration will be given to routes that maximise DDA accessibility where vehicular access, topography and other constraints allow it. The clear width of the walkway shall be not less than 1.8m, except where local constraints render it impractical.

This position is based upon the following reasoning:

1. Maintaining the current infrastructure and replacing current closed or temporarily repaired structures with “like for like” in terms of location and step numbers would see Marion’s sector of the Coastal Walkway remain as a Grade 3 level walk. Improvements to path surface, path drainage and path width could achieve a more sustainable outcome in terms of increased user capacity and reduced threat to natural vegetation, however the route would retain its attractiveness as a trail run, while large sections would remain inaccessible to people with mobility issues and/or lower fitness levels. In addition, the “like for like” replaced structures on steep sections of the ravines would remain prone to instability due to erosion.

2. Clearly the natural topography of the walkway route makes upgrading to a Grade 1 route prohibitive, and would require large scale engineering for the length of the route which is not compatible with retaining natural vegetation or appreciation of the natural features of the coastline. In addition, it would easily become a shared use pathway attracting cyclists and skateboarders increasing danger for walkers. It is noted that alternatives for cyclists already exist on the Sea to Vines cycleway nearby.

3. Adopting Grade 2 as the service level target would be more consistent with the aim of preserving the current natural features which make this section of coast unique while making the route more accessible to community members with fitness and mobility issues. In addition, some changes of route, increased use of suspended walkways, and the introduction of some larger span structures would decrease its vulnerability to erosion while eliminating excessive steps. This would be consistent with the existing section within the Hallett Cove Conservation Park. Consideration should also be given to maintaining the walkway width at a minimum of 1.8m or wider if social distancing considerations become the norm.

4. The section south of the Field River through Hallett Headland Reserve to Bilbao Ave (i.e Cell 11) is particularly significant for the quality of its remnant natural vegetation. It is currently a Grade 3 standard. Its upgrade to Grade 2 may require rerouting and additional structures that may impinge on the existing vegetation. This AMP assumes this section will remain as a Grade 3 section but with priority given to vegetation conservation measures.

Technical Levels of Service

This determines the allocation of resources to service activities to best achieve the desired community outcomes and demonstrate effective performance throughout an asset's lifecycle. Council manages and operates assets at the agreed levels of service while managing whole-of-life costs to ensure the best value for resources used.

The following table demonstrates how community levels of service are supported by the assets covered under this Asset Management Plan.

Technical Level of Service	Achieved By
Planning in line with a 40-50 year asset renewal program based on optimum replacement	Preparation and regular review of the Coastal Walkway Plan.
Creation of the asset subject to a business case assessment which sets out capital requirements, whole of life costs and predicted utilisation	Assets created in keeping with intention to complete metropolitan Coast Park and in accordance with the service level targets.
Operation of an asset in the manner it was designed to be used	Regular upkeep of structures, path infrastructure, native vegetation, landscaped zones.
Monitoring utilisation, condition and recording asset downtime	• Level 1 Inspection - Weekly • Level 2 Inspection - Bi-monthly • Level 3 Inspection - At least every 3 years Incorporate measurement of Coastal Walkway utilisation to drive data driven decision making around future planning and service provision.
Maintenance of assets in line with a long-term asset sustainability index averaging 95-100%	Scheduled maintenance of structures and path infrastructure.
Renewal in accordance with optimum replacement timing principles based on whole of life costs	Assets are programmed to be renewed on the basis of current condition and vulnerability of location. Annual Replacement Program Budget developed, and Long-Term Financial Plan updated
Disposal where the item fails to meet minimum service levels or is no longer required	Complies with legislative requirements including Disposal of Land and Assets Policy. Disposal of Open Space subject to Community Land Management Provisions of the Local Government Act.

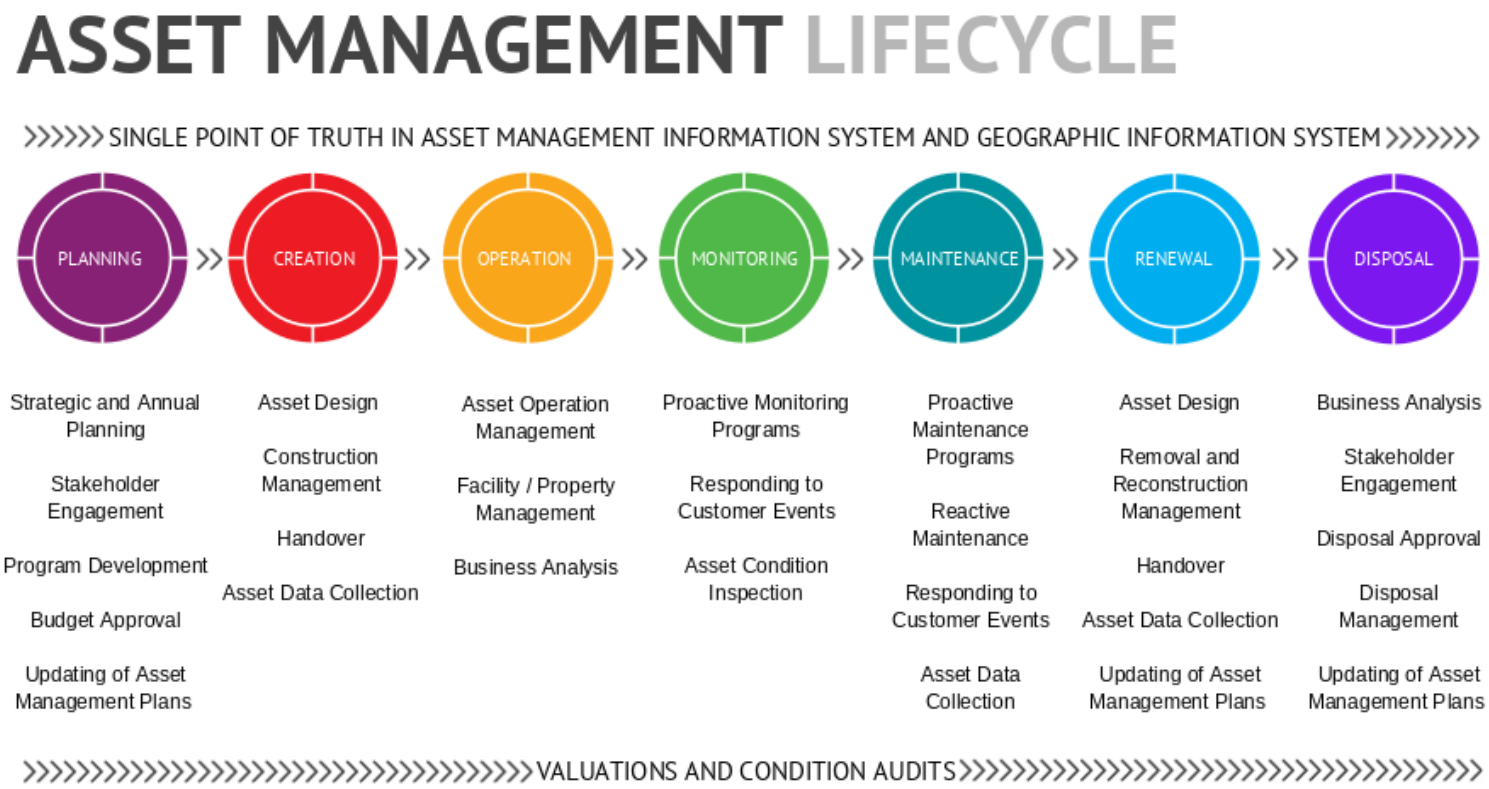
Legislative Requirements

Council considers the following legislative framework in the management of Open Space assets.

Legislation	Requirement
Aboriginal Heritage Act 1988	Provides for the protection and preservation of aboriginal heritage and includes legislation governing the discovery, acquisition, damage or sale of sites, objects, or remains of Aboriginal significance
Animal and Plant Control Act 1986	Seeks to control animals and plants for the protection of agriculture and the environment and for the safety of the public, amongst other purposes.
Australian Accounting Standards	Set out the financial reporting standards relating to the (re)valuation and depreciation of infrastructure assets
Coast Protection Act 1973	Defines the role of Coast Protection Board
Development Act 1993	Regulates development in the State; to regulate the use and management of land and buildings, and the design and construction of buildings; to make provision for the maintenance and conservation of land and buildings where appropriate; and for other purposes including the operation of Coastal Zones
Disability Discrimination Act 1992 and other relevant disability legislation	Sets the standard for accessibility to eliminate, as far as possible, discrimination against persons on the grounds of disability.
Environmental Protection Act 1993	Aims to protect the environment; it establishes the Environment Protection Authority and defines its functions and powers, amongst other purposes.
Local Government Act 1999	Sets out the role, purpose, responsibilities and powers of local governments including the preparation of a Long-Term Financial Plan supported by infrastructure and asset management plans for sustainable service delivery
Local Government (Financial Management and Rating) Amendment Act 2005	Provides the requirement for the development of a Strategic Management Plan, comprising an Asset Management Plan and Long-Term Financial Plan
Native Vegetation Act 1991	Provides incentives and assistance to landowners in relation to the preservation and enhancement of native vegetation; to control the clearance of native vegetation; and for other purposes
Work Health and Safety Act 2012 (SA)	Provides for the health, safety and welfare of persons at work

6 - HOW WE PROVIDE THE SERVICE

In simplest terms, asset management is about how assets are 'looked after', both on a day-to-day basis (operation, monitoring and maintenance) and in the medium-to-long term (planning, creation, renewal and disposal).



ASSET PLANNING

When specifying asset requirements, Council seeks to balance a range of factors including:

- Safety requirements by applying the hierarchy of hazard controls to designs to ensure hazards are eliminated, or where that is not reasonably practicable, are effectively controlled.
- Operational needs and functional requirements and where possible seek to identify innovation that may provide for greater level of efficiency or effectiveness in undertaking council's services or reduce risk of downtime.
- Factors that impact on our environment or where the environment may impact on the function or lifecycle of the asset

The Coastal Walkway Plan has reviewed the operation of the Coastal Walkway and its vulnerabilities. It conforms with the objectives of the companion Open Space Plan described below.

Focus Area	Objective
Low Open space areas	Improve the provision of open space in the areas with low provision across the City.
Environmental needs (people and nature)	Strengthen biodiversity, ecosystems and natural settings for our residents and the environment.
Open space activities	Create a vibrant city through the development, irrigation and renewal of open space to encourage active and healthy lifestyles and connect communities.
Partnership Projects	Develop partnerships to support the delivery of open spaces to maximise community outcomes.
Linkages and access to open space	Improve connections and access to open space
Promotion of Open Space	Improve community awareness of open space through effective marketing. Improve community awareness in open space through informative signage
Innovative use of open space	Create and enhance open spaces with the development of innovative treatments and activities to encourage healthy lifestyles
Integration with other open space related programs	Ensure a holistic and integrated approach to open space developments through considering all of Councils open space related programs and smart cities programs.
Asset Management	Improve asset management through the provision of planning and maintenance programs

The City of Marion has prepared the Coastal Walkway Plan based upon the best available information including investment in detailed auditing of the walkway infrastructure.

Implementation of the Plan has been premised upon gaining a significant (50%) contribution from the State Government through the Planning and Development Fund.

In March 2020 an initial tranche (**$2.48M**) of funding was announced which is enabling Stages 1 and 2 of the Plan to be delivered. The City of Marion will continue to seek a matching contribution for the remaining funding outlined in the Plan.

In any event, the completion of Stages 1 and 2 will be subject to review to confirm the validity of the assumptions made with regard to the costs and practicability of achieving the detailed objectives of the current Plan.

Therefore, the timing and scope of subsequent stages will be subject to a review of these factors in 2022-23.

A further full review of the Plan is due after 5 years

Future Demands

The Coastal Walkway runs the entire length of the Coastal Ward which has a resident population of just under 15,000. An increasing proportion of whom are aged 65 years and older. It also serves as the nearest section of coastline to the almost 14,000 residents in the Southern Hills Ward. Similarly, it is readily accessible to residents in adjacent wards of the City of Onkaparinga and the City of Holdfast Bay.

The Hallett Cove Conservation Park Management Plan (2010) confirmed that based on two years of data obtained from a counter at the most popular entrance to Hallett Cove Conservation Park, it is estimated in 2010 that 20 - 30,000 people visit the park per year, with the warmer months appearing to be a more popular time to visit. Anecdotal evidence suggests current usage of the CoM sections of the trail is at least this level and possibly higher, since Council have received numerous amounts of correspondence from residents and the broader community in relation to the 2019 Coastal Walkway closures, which has reiterated the popularity and importance of this asset to the community. The majority of the feedback has been centred on how valued the asset is for the community and queries around what time frames in which sections of the walkway will be reopened.

Open space in Marion serves a resident population as at June 2019 of 93,000. It is also accessible to the wider Greater Adelaide population and visitors. The population distribution is currently split at 0-14 years 16.2%, 15-34 years 27.7%, 35 – 64 years 38.8% and 65 years and over 17.3%and is reflecting the general ageing trend in the wider community and is increasing at a rate of 1.23% per annum which is slightly above the rate of increase for Greater Adelaide.

The importance of Open Space infrastructure such as the Coastal Walkway is supported by health studies which have demonstrated the numerous positive health effects of urban green spaces. Benefits include reduced depression and improved mental health, reduced cardiovascular morbidity and mortality, and reduced rates of obesity and diabetes through physical activity.

These factors are reflected in the 30 Year Plan for Greater Adelaide 2016 which includes the completion of the implementation of the Coast Park as a priority focus of the Planning and Development Fund.

Council recognises that climate change is likely to affect asset life and functionality. We are exploring what we can do to build asset resilience in response to climate impacts such as less rainfall, more frequent and intense rainfall events, increased frequency and intensity of bushfires, increased temperatures, more frequent and intense heatwaves and increased risk of coastal erosion and flooding as a result of sea level rise. The Marion Coast ‘s susceptibility to climate change has been the subject of detailed consideration through the Coastal Climate Change Adaptation Study 2018. The potential local impacts of Climate Change on the Walkway and the land it traverses has been the factored into this Asset Management Plan.

The City of Marion Carbon Neutral Plan 2020 – 2030 is currently being developed as a roadmap to reduce carbon emissions from Council operations by 2030.

Council has considered the following future demands during development of this Asset Management Plan:

Area	Demand	Impact on services	Demand Management Plan
Political	Political changes, Productivity Commissioner's report and possibility of council amalgamations	Change in services or service levels	Opportunities to coordinate Coastal Walkway Plan with Coast Park plans with neighbouring coastal Councils.
Social	Changing community demographics, needs and expectations	Change in services or service levels	Monitoring community expectations Communicating service levels and financial capacity with the community to balance asset priorities with what the community is prepared to pay.
Social	Changes in social interaction frameworks (e.g. COVID -19)	Potential impact of normalised social distancing.	Monitor and respond to community expectations of the walkway in the context of changed social norms.
Technological	Being a smart organisation that uses data to drive decision-making.	Ability to deliver services at a higher operational level achieved through use of GPS data. Implementing Internet of Things within facilities, assets and services to understand current demand and identify opportunities to improve service delivery	Utilisation based asset maintenance and renewal.
Legal	Legal changes	Complex legal and compliance requirements.	Established compliance registers. Considered within standard replacement cycle. Decisions made on a range of evaluation criteria
Environmental	Impacts of climate change	Change in services or service levels	Consider vulnerability of Coastal Walkway. Climate Risk Assessments will determine impact on asset useful lives. Communicating service levels and financial capacity with the community to balance asset priorities with what the community is prepared to pay.
Relationships	Collaboration between neighbouring councils and stakeholders within shared catchments	Improved information and data sharing.	Continue to work with neighbouring councils and share information.
Relationships	Collaboration between Cities of Marion, Charles Sturt and Port Adelaide Enfield	Ability to deliver services at a higher operational level.	Adopting best practice principles across all three councils to deliver best value. Note the collaboration partners all host sections of the metropolitan Coast Park. Continue to engage and consult with key stakeholders.
Relationships	Testing of levels of service	Improve understanding of costs and capacity to maintain current service levels.	Continue to analyse the cost of providing service and the capacity to fund at the required level of service.

ASSET CREATION

The creation of the last, currently missing section of Coastal Walkway adjacent the Field River Mouth is included in Stage 1 of the Coastal Walkway Plan which has been funded ($572,000) and the project is underway and described under Asset Renewal. No further asset creation activity is envisaged.

Activity	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Section Creation	$250,000	$322,000	Not applicable							

ASSET OPERATION

Asset operation of reserves is included in the Open Space AMP. This includes the care of green infrastructure and landscaping at Heron Way Reserve which encompasses Cell 9 of the Coastal Walkway Plan.

Similarly, the operation of building assets along the walkway, namely two toilet blocks and the Boatshed Café at Heron Way are included in the Buildings and Property AMP.

It is however recognised that the remnant native vegetation along the walkway is particularly vulnerable from pressure from high numbers of users, where inadequate pathway surfaces and widths encourage users to veer away from the defined route in un-renewed sections , and re-establishing native vegetation along path edges and revegetated areas in renewed sections Accordingly an allowance for $50,000 per annum for native vegetation care is recommended.

Activity	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Coastal Walkway Operations Expenditure –constructed landscape	Refer to Open Space AMP									
Stormwater operations	Refer to Stormwater AMP									
Remnant Native Vegetation and restored vegetation care pre and post renewal and trail rerouting	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000

After renewal it is assumed that vulnerability of Coastal Walkway structures to erosion is significantly reduced.

ASSET MONITORING

Council assesses the condition of its Coastal Walkway assets through a range of planned activities including:

- Routine visual inspections.
- Maintenance Reports
- Safety and Operational Audits.
- Valuation inspections.

The Technical Officer – Asset Systems Unit records the results of Level 1 audits of reserves annually for shelters and twice yearly for suspended decks. . Condition is measured using a 1 – 5 grading system in accordance with IPWEA standards:

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

Additional condition data is recorded in Level 2 audits when justified. Full Level 3 technical audits, including engineering assessments, occur on selected assets due for renewal. Going forward a 2-yearly Level 3 engineering assessment will be required on non-renewed structures.

Audit	Description
Level 1	Defect / Visual Inspection
Level 2	Condition Inspection (Includes Level 1 audit)
Level 3	Engineering /Technical Inspection (Includes Level 1 & Level 2 audit) Provides remaining life and recommendations on maintenance schedules etc.)

Asset Monitoring Forward Program (internal resourcing except for Level 3 Engineering assessments)

Asset	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Level 1 inspections (internal resources)	Weekly									
Level 1 Condition surveys (internal resources)	Ongoing on annual cycle									
Level 3 Condition Engineering Surveys of structures		2 yearly at $20,000		2 yearly at $20,000		2 yearly at $20,000		2 yearly at $20,000		2 yearly at $20,000
Annual Photo point monitoring of revegetation sites as per Remnant Native Vegetation Plan	Included in Open Space AMP									

ASSET MAINTENANCE

Asset Maintenance is fully funded by Council and will continue prior and post renewal. Council engaged independent cost management consultants RLB to estimate ongoing maintenance costs for the Coastal Walkway pre and post renewal in accordance with the proposed staging. Consequently, the ongoing maintenance costs of built infrastructure over the ten years from 2020 to 2030 are as follows:

Asset Maintenance Forward Program - Breakdown by Cell

Stage	Cell	Scheduled renewal works period	Pre renewal Maintenance - to 2030	Post Renewal Maintenance - to 2030	Total Maintenance per stage to 2030
1	6,10	2020-22	$27,000	$100,522	$127,522
2	5	2020-22	$38,000	$112,347	$150,348
3	3	2024-26	$91,000	$38,783	$129,783
4	4	2026-28	$162,000	$22,435	$184,435
5	1	2028-30	$195,000	$0	$195,000
6	7	2029-31	$332,000	$0	$332,000
7	2	2030-32	$44,000	$0	$144,000
8	11	2031-33	$113,636	$0	$113,636
9	12	2032-34	$107,500	$0	$107,500
10	9	2033-35	$156,923	$0	$156,923
Total to 2030			**$1,367,059**	**$274,087**	**$1,641,146**

Breakdown by Year

Activity	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Pre – Renewal Maintenance Planned	$82,000	$82,000	$82,000	$62,000	$62,000	$62,000	$62,000	$62,000	$62,000	$62,000
Pre – Renewal Maintenance - Unplanned	$82,000	$82,000	$82,000	$62,000	$62,000	$62,000	$62,000	$62,000	$62,000	$62,000
Post –renewal maintenance Planned	$0	$0	$0	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
Post – Renewal maintenance Unplanned	$0	$0	$0	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
Totals	**$164,000**	**$164,000**	**$164,000**	**$164,000**	**$164,000**	**$164,000**	**$164,000**	**$164,000**	**$164,000**	**$164,000**

This 10 year forward maintenance figure compares with the maintenance expenditure of the trail over the last 10 years of:

- $600,000 planned and reactive maintenance,
- $238,000 special structure investigation and repair (post Audit) in 2019, and
- Balustrade and handrail renewal expenditure of $713,000, totalling $1,551,000 in that 10-year period.

ASSET RENEWAL AND DISPOSAL

Asset Renewal Forward Program

Coastal Walkway Plan funding	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	Totals
Total Capital Funding required	$544,000	$4,328,000	$0	$0	$160,000	$2,428,000	$128,000	$ 2,576,000	$70,000	$1,240,000	$11,474,000
Staging	Cells 5,6, 10	Cells 5,6,10			Cell 3	Cell 3	Cell 4	Cell 4	Cell 1	Cell 1, 7 Design	
Council Capital Contribution - Total	$277,000 Includes $250,000 for Asset Creation	$2,164,000 Includes $322,000 for Asset Creation	$0	$0	$80,000	$1,214,000	$64,000	$1,288,000	$35,000	$620,000	$5,737,000
Council Capital Contribution – Renewal only	$22,000	$1,842,000	$0	$0	$80,000	$1,214,000	$64,000	$1,288,000	$35,000	$620,000	$5,737,000
External Capital Contribution – Secured (State Government)	$277,000	$2,164,000									$2,440,000
External Capital contribution – yet to be secured					$80,000	$1,214,000	$64,000	$1,288,000	$35,000	$620,000	$3,297,000
Total Renewal Funding Required	**$294,000**	**$4,006,000**	**$0**	**$0**	**$160,000**	**$2,428,000**	**$128,000**	**$ 2,576,000**	**$70,000**	**$1,240,000**	**$10,903,000**

Disposal includes any activity associated with disposal of a decommissioned asset including sale, demolition or relocation. The demolished sections of the Coastal Walkway will be disposed of as they are renewed.

7 - RISK MANAGEMENT

Risk management provides a process for the selection of treatment plans and management actions to protect the community against unacceptable risks. Risk assessment identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks

An assessment of risks associated with service delivery from assets has identified the risks that will result in significant loss, 'financial shock' or a reduction in service:

Hazard Description	Current Controls	Current Rating	Further Actions	Forecast Rating
Current funding does not cover full costs of upgrade after necessary detailed engineering investigation is completed.	Project hold points.	Medium	Value management of design process.	Low
Future external funding of subsequent stages not secured.	Review after completion of initial stages and ensure documentation for further grant bids is prepared.	Medium	Consider other funding and staging options.	Low
High levels of utilisation accelerate deterioration of non-renewed sections.	Monitor utilisation patterns.	Medium	Increase maintenance levels, accelerate renewal or manage access.	Low
Extreme weather events damage key infrastructure.	Reduce vulnerability through improved structures and walkway routes.	Low	Monitoring	Low
Reduction of useful life of structures compared to expected design life due to climate change and erosion.	Ongoing monitoring of structures.	Medium	Design renewal of structures to account for potential future impacts.	Low

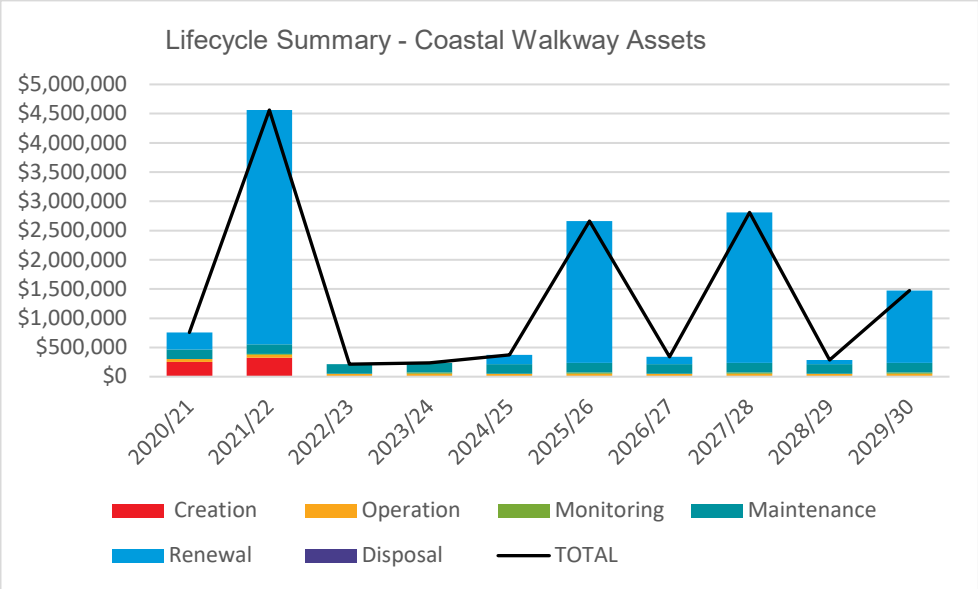
Critical assets are those which have a high consequence of failure causing significant loss or reduction of service. Similarly, critical failure modes are those which have the highest consequences. By identifying critical assets and failure modes, investigative activities, condition inspection programs, maintenance and capital expenditure plans can be targeted at the critical areas. Activities may include increased inspection frequency, higher maintenance intervention levels, etc. No assets have been identified as critical in this plan. All high-risk Coastal Walkway sections have been repaired or closed.

8 - WHAT IT WILL COST AND HOW WE WILL PAY FOR IT

Financial Statements and Projections

The decisions made in adopting this Plan are based on the objective to achieve the optimum benefits from the available resources.
This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

Funding Strategy



This Asset Management Plan identifies the projected operations, maintenance and capital renewal expenditures 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. Funding is predicated on operating and maintenance costs escalating year on year by CPI of 2.5%.

All figures in Council's Asset Management Plans are in present value (today's dollars) as a number of factors influence the indexation rates. When incorporating the figures into Council's Long-Term Financial Plan, relevant indexations linked to the type of expenditure will be applied.

These figures will be revisited with each iteration of the Long-Term Financial Plan.

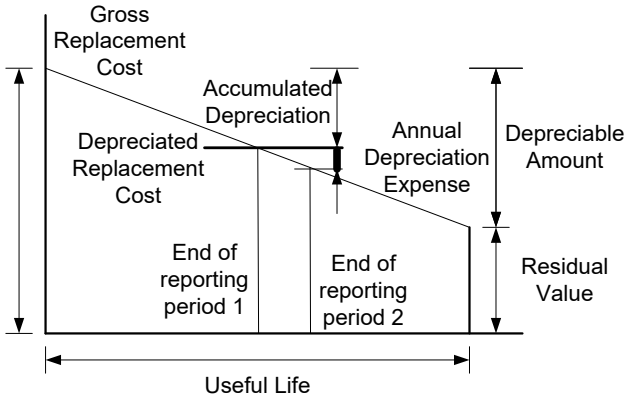
Lifecycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the asset life cycle. Lifecycle costs include operations and maintenance expenditure and asset consumption (depreciation expense). The lifecycle cost for the services covered in this Asset Management Plan is **$13.71M** (average operations and maintenance expenditure plus depreciation expense projected over 10 years).

The depreciation expense will increase as upgraded sections of the Coastal Walkway come into service increasing the Gross Replacement Cost

Lifecycle costs can be compared to llifecycle expenditure to give an initial indicator of affordability of projected service levels when considered with age profiles. Lifecycle expenditure includes operations, maintenance and renewal expenditure. Lifecycle expenditure will vary depending on the timing of asset renewals. The lifecycle expenditure over the 10-year planning period is **$13.71M** (average operations and maintenance plus capital renewal budgeted expenditure in LTFP over 10 years). These levels reflect Council's plan to upgrade the trail to a higher Service Level and longer service life with the help of external contributions.

Valuation Forecasts

The value of assets recorded in the asset register at 30 June 2019 covered by this asset management plans is shown below.



Gross Replacement Cost	**$5.56M**
Depreciable Amount	**$5.56M**
Depreciated Replacement Cost (Written Down Value / Fair Value)	**$3.56M**
Annual Average Asset Consumption	**$0.15M**

Council's useful life of trail elements is

- Structures and pathways 40 years
- Barriers 30 years

Rate of Annual Asset Consumption	**2.5%** (Depreciation/Depreciable Amount)
Rate of Annual Asset Renewal	**196%** (Capital renewal expenditure/Depreciable amount)

This reflects Council's plan to upgrade the walkway to a higher Service Level and longer service life with the help of external contributions, and the fact that the Native Vegetation and Coastal Topography assets included in the Coastal Walkway asset grouping is not given a monetary value despite their community and tourism value.

Coastal Walkway infrastructure was valued in 2018 by Jones Lang LaSalle.

Note that 'Green infrastructure', trees, remnant native vegetation are not valued under current valuation procedures. Green infrastructure includes the following:

- Indigenous flora, fauna and landscape, which may be in various states of health from fairly intact through to almost 100% exotic.
- Developed open spaces covering parks and gardens including sports fields and golf courses, roadside verges and nature strips.
- Waste land or unallocated sites where vegetation provides some ecosystem services but is essentially unmanaged.
- Water-sensitive urban design incorporating natural and artificial components.
- Vegetation integrated into the built environment, which includes street trees, green roofs and walls.
- Agricultural and horticultural land, where the primary activity is commercial.

(Source: Jones, R. N., Symons, J. and Young, C. K. (2015) Assessing the Economic Value of Green Infrastructure: Green Paper. Climate Change Working Paper No. 24. Victoria Institute of Strategic Economic Studies, Victoria University, Melbourne).

The table below details the key assumptions made in presenting the information contained in this Asset Management Plan and in preparing forecasts of required operating and capital expenditure and asset values, depreciation expense and carrying amount estimates.

Key Assumptions	Risk of Change to Assumptions
Climate Risk Assessments may impact asset useful lives	Medium
Carbon Neutral Plan may impact asset planning and renewal evaluation criteria	Medium
Community level of service expectations remain consistent.	Low
No significant changes in legislation.	Low
The materiality threshold for Infrastructure, Land and Buildings is $5,000	Low
Assets should have a useful life of greater than one year in order for the expenditure to be capitalised and have a value above the Materiality Thresholds described below. Any expenditure considered to be Capital must also pass a materiality test. Materiality levels are set so as not to misstate Financial Statements and to provide a guide whether it is practical from an Administrative perspective that expenditure is capitalised.	Low
Networked/Aggregate Assets - Expenditure can still be capitalised on items that fall below materiality thresholds individually but operate together as a cohesive whole to form a substantial/significant total value. Examples are the Computer Network, Library Books, and Reserve Furniture.	Low
The Long-Term Financial Plan will not change over the planning period.	Low
The new asset management system will be able to capture operations and maintenance costs to better manage the overall expenditure.	Low
Operation and Maintenance costs for new assets will be consistent with the operation and maintenance costs of existing assets.	Low

9 - WHAT WE WILL DO NEXT - IMPROVEMENT PLAN

	Task	Responsibility	Timeline/Frequency
1	Ensure asset handover process is utilised to ensure asset acquisition, upgrade, renewal and disposal is captured and communicated to maintain the Asset Management Information System.	Asset Owner – Manager City Activation	Ongoing
2	Review and revise chart of accounts to facilitate consistent and accurate cost allocation for all asset expenditure aligned with the Asset Management Lifecycle.	Manager Finance	Ongoing
3	Incorporate measurement of Coastal Walkway utilisation to drive data driven decision making around future planning and service provision.	Asset Owner – Manager City Activation	August 2020
4	Document and approve approach to Remnant Native Vegetation management along trail to ensure best long-term conservation results.	Manager Operations	June 2021
5	Investigate options to conduct Climate Risk Assessments for City of Marion assets and the forecast impacts on asset useful lives.	Unit Manager Asset Solutions	June 2021
6	Revise valuation procedures and valuer briefing to better reflect needs of Asset Management Planning cycle.	Unit Manager Asset Solutions	June 2021
7	Investigate feasibility of adding additional questions of Council's future Community Satisfaction Surveys.	Unit Manager Asset Solutions	June 2021
8	Explore alternative asset management systems (as part of council's Digital Transformation initiative) to monitor servicing schedules, record maintenance activities undertaken, and impacts of asset downtime.	Unit Manager Asset Solutions	June 2021 (highly dependent on other factors)
9	Develop targets for Community Levels of Service.	Asset Owner – Manager City Activation	June 2021
10	Undertake annual review of Asset Renewal Funding Ratio for asset class to ensure assets are being renewed as they are consumed (Ratio of 1.0).	Unit Manager Statutory Finance and Payroll	June 2021 then annually
11	Annual review of KPIs and benchmarks aligned to Asset Management Strategy.	Unit Manager Asset Solutions	June 2021 then annually
12	Update this Asset Management Plan during annual budget planning processes to show any material changes in service levels and/or resources available to provide those services as a result of budget decisions.	Manager City Activation	November 2021 then annually
13	Review lessons learnt from Stages 1,2 of Coastal Walkway Plan.	Asset Owner – Manager City Activation	June 2023
14	Undertake a full review of this plan at least every four years, within two years of each Council election or any review to Council's Strategic Plan.	Manager City Activation	November 2024
15	Full Review of Coastal Walkway Plan	Asset Owner – Manager City Activation	June 2025

APPENDIX A: Budgeted Expenditures Accommodated in Long Term Financial Plan

All figures in Council's Asset Management Plans are in present value (today's dollars) as a number of factors influence the indexation rates. When incorporating the figures into Council's Long-Term Financial Plan, relevant indexations linked to the type of expenditure will be applied.

Year	Creation	Operation	Monitoring	Maintenance	Renewal	Disposal	TOTAL
2020/21	$250,000	$50,000	$0	$164,000	$294,000	$0	**$758,000**
2021/22	$322,000	$50,000	$20,000	$164,000	$4,006,000	$0	**$4,562,000**
2022/23	$0	$50,000	$0	$164,000	$0	$0	**$214,000**
2023/24	$0	$50,000	$20,000	$164,000	$0	$0	**$234,000**
2024/25	$0	$50,000	$0	$164,000	$160,000	$0	**$374,000**
2025/26	$0	$50,000	$20,000	$164,000	$2,428,000	$0	**$2,662,000**
2026/27	$0	$50,000	$0	$164,000	$128,000	$0	**$342,000**
2027/28	$0	$50,000	$20,000	$164,000	$2,576,000	$0	**$2,810,000**
2028/29	$0	$50,000	$0	$164,000	$70,000	$0	**$284,000**
2029/30	$0	$50,000	$20,000	$164,000	$1,240,000	$0	**$1,474,000**
TOTAL	**$572,000**	**$500,000**	**$100,000**	**$1,640,000**	**$10,902,000**	**$0**	**$13,714,000**

Renewal includes secured and yet to be secured external contributions totalling $5,737,000

APPENDIX B

Coastal Walkway Plan

CITY OF MARION

A Coast Park for all South Australians to enjoy





CONTENTS

EXECUTIVE SUMMARY 2
BACKGROUND 3
ALIGNMENT 4
STRUCTURAL ASSESSMENTS & INVESTIGATIONS 5
COMMUNITY CONSULTATION 5
ASSET MANAGEMENT LIFECYCLE 6
FORWARD PROGRAMMING & PRIORITIES / PLANNING 8
- COSTING ANALYSIS 9
- CELL PROGRAMMING / PRIORITIES 9

COASTAL WALKWAY CELL ANALYSIS 10
- CELL LOCATION 11
- CELL MAPS / OVERVIEW 12

DESIGN / STANDARDS AND GUIDELINES (to be developed) 24

EXECUTIVE SUMMARY

Coast Park is a State Government initiative to develop a 70 km linear park along the Adelaide metropolitan coastline from Sellicks Beach to North Haven.

The City of Marion Coastal Walkway is a highly valued and well used community asset which attracts visitors into the region and contributes to the liveability of the City.

The City of Marion coastline includes topographical and geological features that limit opportunities to develop a shared use path for the full length of the coast and is recognised by the State Government.

This City of Marion Coastal Walkway Plan provides an overview of the status of the delivery of the Coastal Walkway and a forward plan for Cell renewal, possible realignment and cost analysis.

For the purpose of this plan the Coastal Walkway has been separated into a twelve Cell stage approach.

The Coastal Walkway Plan will be reviewed every 5 years.

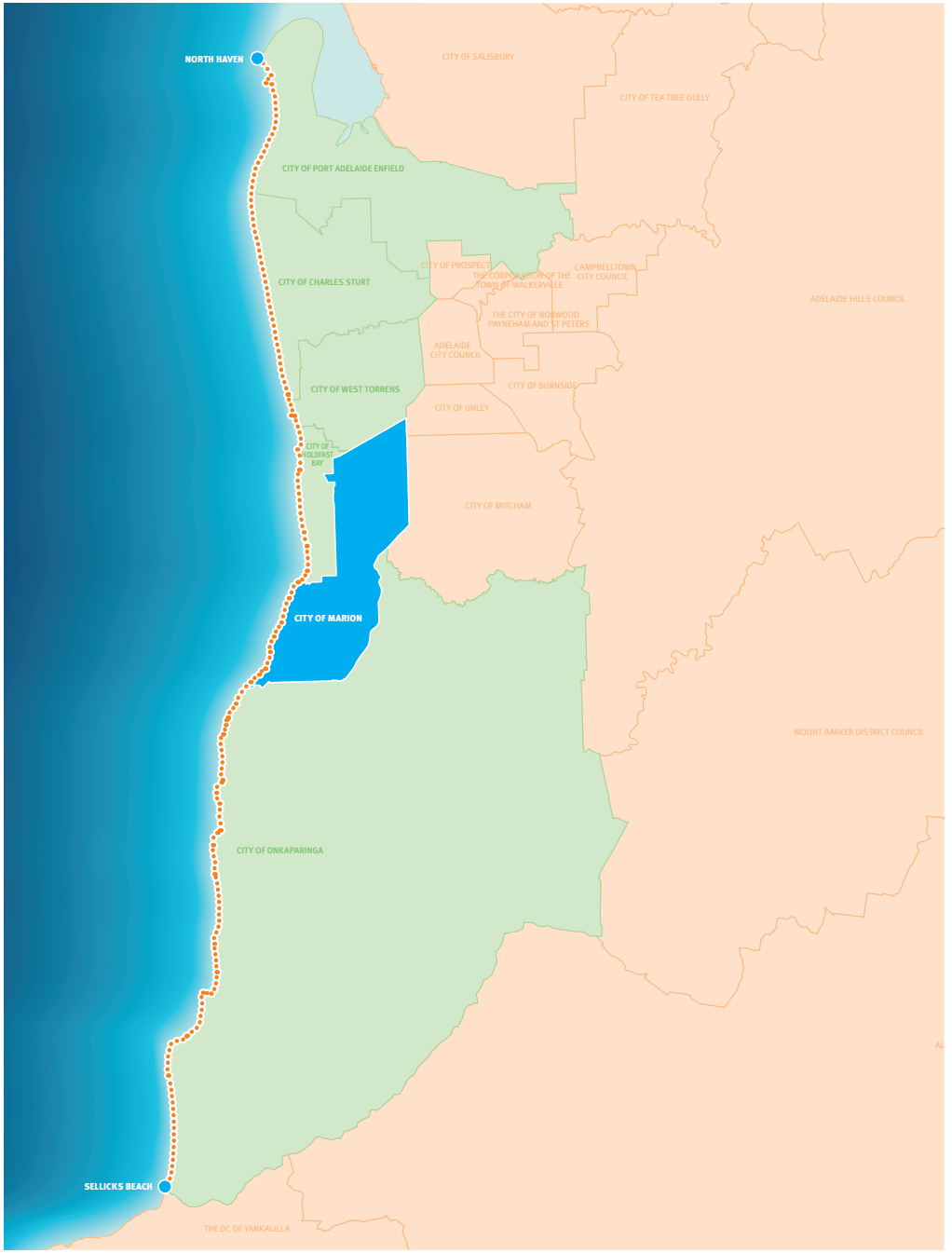
BACKGROUND

The Coastal Walkway from Marino to Hallett Cove commenced construction in the mid to late 1990's. The walkway today is a highly valued and well used community asset which attracts visitors into the region and contributes to the liveability of the City.

The broader Adelaide Metropolitan Coast Park Plan extends along Adelaide's coastline from Sellicks Beach to North Haven, with the City of Marion Coastal Walkway providing a 7.2km section between Marino and Hallett Cove.

In addition to the stunning geological formations, native coastal vegetation and sites of indigenous cultural significances, the City of Marion Coastal Walkway contains structures (stairways secured to cliff faces, boardwalks and bridges), pathways at ground level, lookouts and other surrounding public infrastructure such as bins, signs, artwork and benches.

The walkway was initially constructed with limited planning considerations to justify alignment and documented designs.



ALIGNMENT

State Government:

The City of Marion's Coastal Walkway Plan is Council's approach to the delivery of the State Government's Adelaide Metropolitan Coast Park Concept Plan (2001).

Coast Park forms part of the state government's open space strategic direction and supports the 30 Year Plan for Greater Adelaide targets of Getting Active (Target 3) and Walkable Neighbourhoods (Target 4).

Coast Park aligns with the following 20 Year Plan's Policy themes:

- **Health, well-being and inclusion:**
  Create greenways in transit corridors, along major watercourses, linear parks, the coast and other strategic locations to provide walking and cycling linkages.
- **Open space, sport and recreation:**
  Provide for a Greater Adelaide open space framework that builds on the Metropolitan Open Space System (MOSS) to create quality open space across the region. The open space will feature urban forest and parks, watercourse and coastal linear parks, trails, greenways, shared use paths and green buffers, and sustainable recreation and sporting facilities.

City of Marion:

The City of Marion's lead strategic document 'City of Marion Strategic Plan' identifies key objectives that are supported by the continued improvement of the Coast Park (Coastal Walkway).

The City of Marion Coastal Walkway Plan is prepared under the direction of four organisational themes of our Community Vision:

- **Liveable:**
  Enhancement of community living, assists in creating vibrant community facilities and open spaces.
- **Valuing Nature:**
  Promotes biodiversity (plants and animals on public or private land, coastal area and marine development), and improves opportunities for people to play in open spaces and interact with nature.
- **Engaged:**
  Encourages the community to be engaged and empowered to influence the improvement of their own neighbourhood.
- **Connected:**
  Enhanced ability for social interaction, improves movement across the city, enhances walking path connections across the city.



STRUCTURAL ASSESSMENTS & INVESTIGATIONS

The City of Marion Coast Park contains a walking trail consisting of sections of elevated timber walkways and areas of gravel path.

Twelve elevated timber walkway structures along the walkway were rated as high risk, due to the lack of information on the adequacy of the footings. It was recommended that intrusive investigations involving earthworks, geotechnical inspections and structural assessments be undertaken to determine the condition of repair and / or replacement options.

Approximately 560 footings were inspected across the twelve large timber structures. Due to the age of the asset, a management plan to manage these structures for the next 10 years has been developed.



COMMUNITY CONSULTATION

A proactive communications approach has been undertaken to inform the community and broader stakeholders of any decisions of Council and will continue to keep the community and key stakeholders up to date with future developments.

The emphasis has been on informing the community of safety precautions, diversions, structural assessments, plus current and historical information surrounding:

- Vegetation
- Fencing
- Hooded Plovers
- Signage
- Dogs
- Shoreline accessibility
- Dunes
- Bridge Connections
- Proposed Locations / Preferred Alignments
- Native Flora & Fauna
- Risk & Injury
- Tourism
- Recreation & Health Benefits
- Cultural Significance



Coastal Walkway Update

Erosion under structural pillar

Walkway bridge structure on cliff face.

First walkway sections set to re-open

Two sections of the Coastal Walkway are set to be re-opened as Marion Council continues to assess and repair the 20-year-old structure.

Marino Rocks Boat Ramp and Marine Parade, Marino – a combined 140 metres of walkway – are scheduled to re-open in October after being temporarily closed for repairs since June.

A 2.5km section of the 8km walkway has been temporarily closed since June as a safety precaution following an engineering audit.

Diversions are in place, so where possible, people can continue to enjoy the trail and coastal views.

For your safety, do not use any part of the walkway that is marked as being closed until further notice.

Hallett Cove Conservation Park remains open.

Bridge structure traversing gully erosion

What's Council doing to fix it?

Council has engaged structural engineers who are progressively inspecting 560 footings and the wooden structures across 12 sites between Marino Esplanade and Peera Street, Hallett Cove.

Investigations have involved earthworks, geotechnical inspections and an assessment of each structure to determine its condition before repairs are made.

Council considered an update on engineering investigations on 24 September.

The update outlined:

- All sites surveyed and that the GPS location of each footing has been recorded
- Investigations into the condition of footings at five sites along the trail
- Progress of slope stability assessments
- Overall structural assessment to determine if sections can be reopened, repaired, or possibly replaced will be considered

The investigations concluded the coastal cliffs are a fragile environment for the walkway.

Stormwater runoff combined with erosion and climate change have had an extreme impact on the structures' footings.

A detailed report will be brought to Council in November, including the cost of future repair work and when the sections are likely to be re-opened.

CITY OF MARION

How to stay informed

Look out for information updates on the City of Marion website, Facebook page, and in the Coast City Weekly.

Call Customer Service on 8375 6600

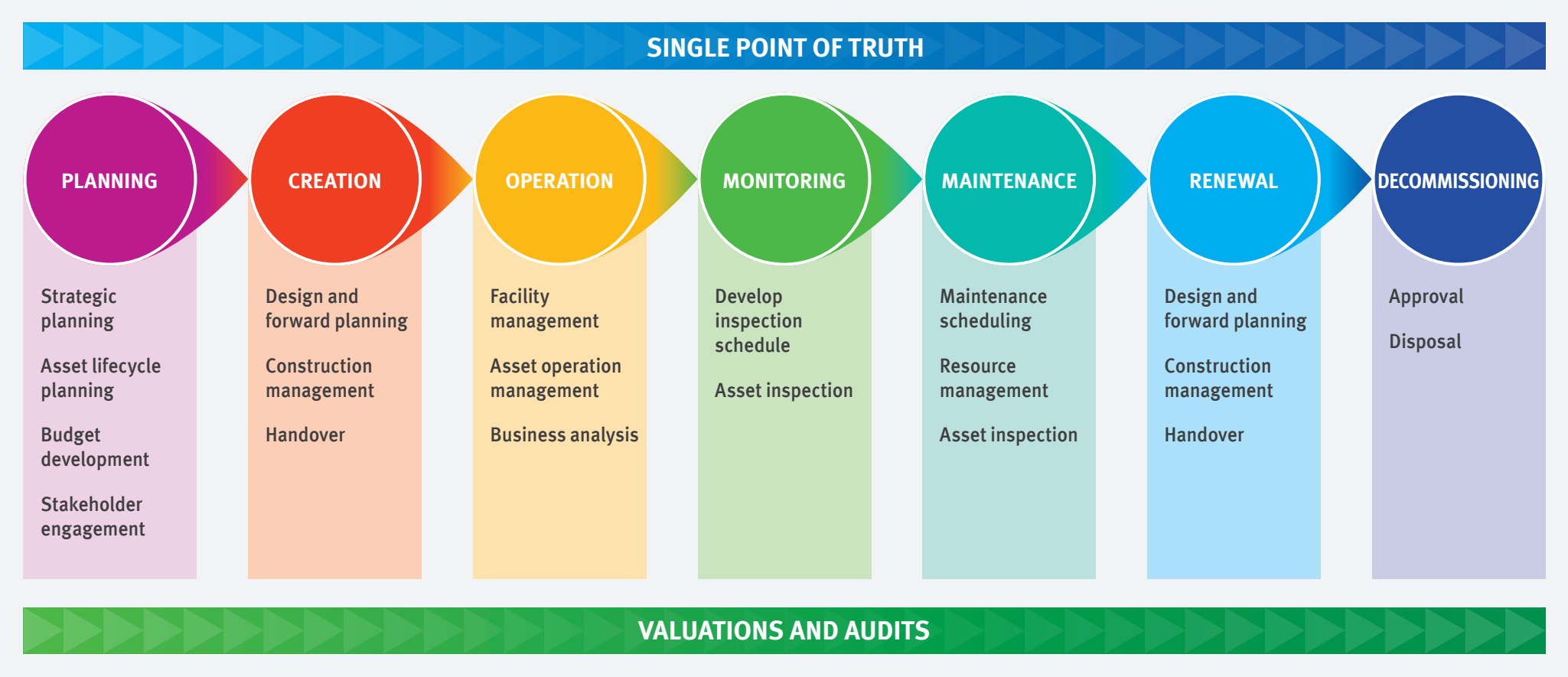
View the webpage www.marion.sa.gov.au/coastal-walkway

Follow us on facebook City of Marion

Email us coastalwalkwayupdate@marion.sa.gov.au

COASTAL WALKWAY ASSET MANAGEMENT LIFECYCLE

The Asset Management Lifecycle describes how the asset is 'looked after', both on a day-to-day basis (operational, monitoring and maintenance) and in the medium-to-longterm (planning, creation, renewal and disposal).



Renewal of an asset occurs when the asset has reached the end of its useful life and can no longer provide its intended service to the community. Renewal replaces the asset with another that maintains the existing services to the community.



FORWARD PROGRAMMING & PRIORITIES / PLANNING



COSTING ANALYSIS

The following information provides programming, Cell priorities and costing for the renewal of the City of Marion Coastal Walkway.

Cost Estimate

Cost estimates have been based on the replacement of existing infrastructure at existing locations with new and improved materials.

Location Summary

Location				Timeframe	Total Cost	Est. Total Cost Stage 1 & Stage 2
1	STAGE 1	CELL 6	Kurnabinna Gully	2020–2021 to 2023–2024	$1,820,293.15	
		CELL 10	Field River		$572,081.85	
2	STAGE 2	CELL 5	Grey Road Gully		$2,488,833.00	
						$4,881,208.00
Location				**Timeframe**	**Total Cost**	**Est. Total Cost Remaining Stages**
3	STAGE 3	CELL 3	Cove Road Lookout	2024–2025 to 2034–2035	$2,589,063.00	
4	STAGE 4	CELL 4	Westcliff		$2,186,925.00	
5	STAGE 5	CELL 1	The Holdfast Link		$1,288,360.00	
6	STAGE 6	CELL 7	Fryer Street		$261,609.50	
7	STAGE 7	CELL 2	Marino Rocks		$1,339,793.00	
8	STAGE 8	CELL 11	Hallett Headland		$913,967.00	
9	STAGE 9	CELL 12	The Onkaparinga Link		$174,737.00	
10	STAGE 10	CELL 9	Heron Way		$875,237.00	
						$9,629,691.50
					ESTIMATED TOTAL COST	**$14,510,899.50**

*All costing incorporates CPI increases.

***Specifically Excluded Items within Project Renewal Cost Scope:**

- Realignment of walkways and bridges, i.e. replacement as per current configuration
- Removal and replacement of any dune silt fences required for access to structure and pathways
- Stormwater infrastructure replacement
- Surrounding areas soil erosion remediation or revegetation
- DDA compliance requirements

Notes on Costing:

- Higher contingency allowed in estimate for projects that are yet to commence planning

Notes:

- Timing is indicative and subject to many variables including funding, land access and design complexity
- Cost estimates are high level and will change as designs progress and certainty increase

COASTAL WALKWAY CELL ANALYSIS



COASTAL WALKWAY CELL LOCATION



Aerial photo courtesy of Aerometrex

NORTH

Key

Transport
- R Railway Station
- K Bike cage
- P Parking

Utilities/food
- T Toilet
- Q BBQ
- W Drinking fountain
- F Café

Landmarks
- B Beach access
- M Marino mosaics
- V Viewing platform
- A Access to trail
- C Contemplation artwork
- S Commemorative space

- Walk 1: The Art Walk
- Walk 2: The Murto Gully Walk
- Walk 3: The Kurnabinna Walk
- Walk 4: The Geology Circuit
- Walk 5: The Headland Walk
- Walk 6: The Marion Coast Park Walk
- Coast to Vines Rail Trail (shared use trail)
- Railway line

CELL 1 | THE HOLDFAST LINK | 0.65KM



Scope

Shared use trail 0.65km in length that commences on the City of Holdfast & City of Marion council boundaries at the end of Burnham Rd, Marino.

Adjacent the 'Contemplation' artwork the trail consists of a paved footpath before turning to gravel and concludes at the Marino Rocks Ramp within the carpark.

Cost Solution

$1,288,360.00

Includes: viewing platforms, walkways, pathways, retaining walls and barriers
*Cost estimated - to be confirmed as design progresses and certainty increases.

Description

- **Existing Infrastructure:** Shared use paved and gravel surfaced trail with timber viewing platform and timber ramp leading to Marino Rocks carpark.
- **Aboriginal Cultural Heritage:** Unknown Aboriginal cultural heritage throughout this Cell segment. High probability that Aboriginal cultural activity would have existed due to Tjilbruke Spring located at Kingston Park Coastal Reserve in the City of Holdfast further north.
- **Biodiversity:** Some remnant coastal vegetation present linking with private property boundaries.

Programming and Planning Considerations

- **Access Node Connectivity:** The shared use trail has linkages at both the northern and southern ends and a shared use gravel path linking Shaftesbury Tce
- **Natural Element Remediation:** Some areas of moderate erosion along trail and adjacent viewing platform.
- **Biodiversity Management:** Continued programmed management in place to conserve native flora species & to perform weed control.
- **Kaurna Heritage:** No registered Kaurna Heritage sites
- **Access Considerations:** Access is good at either end of the Cell for vehicles and machinery.

Recommendation (high / medium / low priority)

Medium Priority

Current Asset Management Lifecycle Status



CELL 2 | MARINO ROCKS | 0.5KM



Scope

Shared use trail 0.5km in length adjacent Marine Parade.

Cost Solution

$1,339,793.00

Includes: walkways, pathways and barriers
*Cost estimated - to be confirmed as design progresses and certainty increases.

Description

- **Existing Infrastructure:** Paved footpath with one flexipaved timber trail structure north of Murto Road.
- **Aboriginal Cultural Heritage:** Unknown Aboriginal cultural heritage throughout this Cell segment.
- **Biodiversity:** Some remnant coastal vegetation present on cliff face side of shared use trail.

Programming and Planning Considerations

- **Access Node Connectivity:** Due to this trail being alongside Marine Parade, access can be made via Emma Street, Allen Street, Murto Road and at either end of the Cell.
- **Natural Element Remediation:** Some areas of moderate erosion linked to SA Water concrete platform structure off of Marine Parade.
- **Biodiversity Management:** Continued programmed management in place to conserve native flora species & to perform weed control.
- **Kaurna Heritage:** No registered Kaurna Heritage sites.
- **Access Considerations:** Access is good throughout this Cell for vehicles and machinery.

Recommendation (high / medium / low priority)

Low Priority

Current Asset Management Lifecycle Status



CELL 3 | COVE ROAD LOOKOUT | 0.95KM



Scope

0.95km of shared use trail dependant on renewal considerations.

Cost Solution

$2,589,063.00

Includes: bridges, walkways, ramps, decommissioning beach access, stairs, landings, barriers and pathways.
*Cost estimated - confirmed as design progresses and certainty increases.

Description

- **Existing Infrastructure:** Combination of natural rocky ground surface, timber structured staircases and bridges and newly replaced Fibre Reinforced Polymer steps / platforms. Beach access from CWT004 timber structure is to be decommissioned.
- **Aboriginal Cultural Heritage:** Unknown Aboriginal cultural heritage throughout this Cell segment.
- **Biodiversity:** Significant coastal heath vegetation to be protected and conserved.

Programming and Planning Considerations

- **Access Node Connectivity:** Access can be made from Murto Road and links occur from both Cove Road carpark and Westcliff Reserve in the southern portion of the Cell.
- **Natural Element Remediation:** Severe erosion occurring within Murto Road gully due to stormwater outlet. Minor repairs of steps utilising FRP due to water erosion. Further works needed.
- **Biodiversity Management:** Continued programmed management in place to conserve native flora species & to perform weed control of this protected flora within this Cell.
- **Kaurna Heritage:** No registered Kaurna Heritage sites.
- **Access Considerations:** Access is not possible throughout this cell for vehicles and heavy machinery.

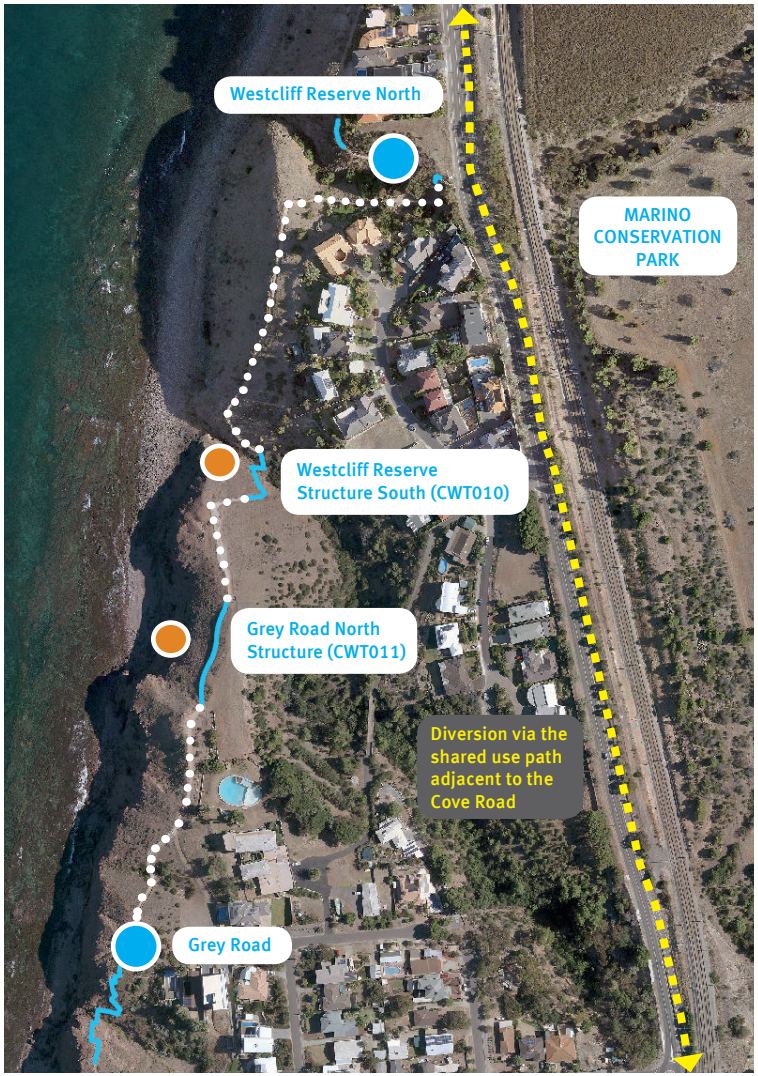
Recommendation (high / medium / low priority)

High Priority

Current Asset Management Lifecycle Status



CELL 4 | WESTCLIFF | 0.63KM



Scope

0.63km of shared use trail incorporating superb coastal view lookout opportunities

Cost Solution

$2,186,925.00

Includes: stairs, landings, pathways and barriers.
*Cost estimated - confirmed as design progresses and certainty increases.

Description

- **Existing Infrastructure:** Combination of natural rocky ground surface, timber structures and steps with some replaced Fibre Reinforced Polymer trail platforms.
- **Aboriginal Cultural Heritage:** Unknown Aboriginal cultural heritage throughout this Cell segment.
- **Biodiversity:** Some native vegetation needing to be considered throughout coastal cliff zone & within gully alignment.

Programming and Planning Considerations

- **Access Node Connectivity:** Access can only be made from Westcliff Reserve north off of Cove Road, Hallett Cove
- **Natural Element Remediation:** Some surface erosion present throughout gully adjacent CWT010.
- **Biodiversity Management:** Continued programmed management in place to conserve native flora species & to perform weed control of this protected flora within this Cell.
- **Kaurna Heritage:** No registered Kaurna Heritage sites.
- **Access Considerations:** Access is not possible throughout this cell for vehicles and heavy machinery.

Recommendation (high / medium / low priority)

Medium Priority

Current Asset Management Lifecycle Status



CELL 5 | GREY ROAD GULLY | 0.25KM



Scope

0.25km of shared use trail dependant on renewal considerations and realignment

Cost Solution

$2,488,833.00

Includes: walkways, stairs, landings, pathways and barriers.
*Cost estimated - confirmed as design progresses and certainty increases.

Description

- **Existing Infrastructure:** Combination of natural ground surface with large timber structure bridge network across Grey Road gully and timber steps.
- **Aboriginal Cultural Heritage:** Unknown Aboriginal cultural heritage throughout this Cell segment.
- **Biodiversity:** Some native vegetation needing to be considered throughout coastal cliff zone & within gully alignment.

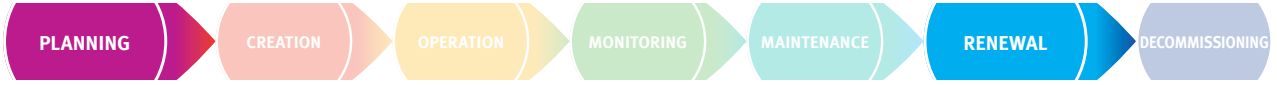
Programming and Planning Considerations

- **Access Node Connectivity:** Access can only be achieved from the south via Nungamoora Street Laneway. Proposed trail realignment needing investigation.
- **Natural Element Remediation:** Major erosion concerns within Grey Road gully due to stormwater pipeline outlets and hard surface runoff. Major topsoil erosion issues. Loss of vegetative cover.
- **Biodiversity Management:** Continued programmed management in place to conserve native flora species & to perform weed control of this protected flora within this Cell.
- **Kaurna Heritage:** No registered Kaurna Heritage sites
- **Access Considerations:** Access is not possible throughout this cell for vehicles and heavy machinery.

Recommendation (high / medium / low priority)

High Priority

Current Asset Management Lifecycle Status



CELL 6 | KURNABINNA GULLY | 0.45KM



Scope

0.45km of shared use trail dependant on renewal considerations and realignment

Cost Solution

$1,820,293.15

Includes: walkways, stairs, landings, decommissioning beach access, ratianing walks, information boards, pathways and barriers.
*Cost estimated - confirmed as design progresses and certainty increases.

Description

- **Existing Infrastructure:** Combination of natural ground surface with large timber structure bridge network across Kurnabinna Road gully
- **Aboriginal Cultural Heritage:** Unknown Aboriginal cultural heritage throughout this Cell segment.
- **Biodiversity:** Some native vegetation needing to be considered throughout coastal cliff zone & within gully alignment.

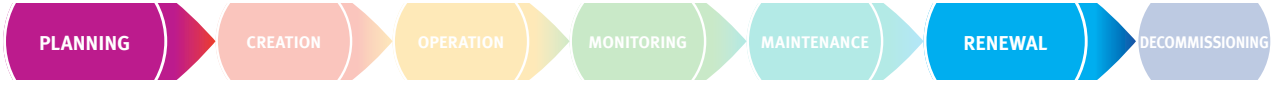
Programming and Planning Considerations

- **Access Node Connectivity:** Access can only be achieved from The Esplanade from the south and Nungamorra Street in the north with some informal trails linking through Kurnabinna Road gully. Proposed trail realignment needing investigation.
- **Natural Element Remediation:** Major erosion concerns within Kurnabinna Road gully due to stormwater pipeline outlets, hard surface runoff and residential development adjacent gully edge. Major topsoil erosion issues. Loss of vegetative cover.
- **Biodiversity Management:** Continued programmed management in place to conserve native flora species & to perform weed control of this protected flora within this Cell. Fuel management is currently being considered and managed throughout the gully and adjacent private property boundaries.
- **Kaurna Heritage:** No registered Kaurna Heritage sites.
- **Access Considerations:** Access is not possible throughout this cell for vehicles and heavy machinery.

Recommendation (high / medium / low priority)

High Priority

Current Asset Management Lifecycle Status



CELL 7 | FRYER STREET | 0.5KM



Scope

0.5km of shared use trail

Cost Solution

$261,609.50

Includes: pathways, stairs and barriers
*Cost estimated - confirmed as design progresses and certainty increases.

Description

- **Existing Infrastructure:** Primarily natural ground surface and some minor timber steps with paved footpath segment adjacent The Esplanade, Hallett Cove.
- **Aboriginal Cultural Heritage:** Unknown Aboriginal cultural heritage throughout this Cell segment. Significant Aboriginal Cultural Heritage has been recorded in the adjacent Hallett Cove Conservation Park (DEW) - Cell # 8.
- **Biodiversity:** Some native vegetation needing to be considered throughout coastal cliff zone & within gully alignment.

Programming and Planning Considerations

- **Access Node Connectivity:** Access can be achieved from The Esplanade, via Fryer Street Reserve, Clifftop Crescent and from the Hallett Cove Conservation Park (DEW) - Cell # 8.
- **Natural Element Remediation:** Major erosion concerns within Kurnabinna Road gully due to stormwater pipeline outlets, hard surface runoff and residential development adjacent gully edge. Major topsoil erosion issues. Loss of vegetative cover.
- **Biodiversity Management:** Continued programmed management in place to conserve native flora species & to perform weed control of this protected flora within this Cell.
- **Kaurna Heritage:** No registered Kaurna Heritage sites.
- **Access Considerations:** Access is good throughout this Cell via The Esplanade, Fryer Street Reserve and Clifftop Crescent.

Recommendation (high / medium / low priority)

Medium Priority

Current Asset Management Lifecycle Status



CELL 8 | HALLETT COVE CONSERVATION PARK (DEW) | 1.48KM



Scope

1.48km of shared use trail

Cost Solution

Not Council owned Land

Description

- **Existing Infrastructure:** Structured timber boardwalk throughout shared use trail incorporating sealed trail
- **Aboriginal Cultural Heritage:** Significant Aboriginal Cultural Heritage
- **Biodiversity:** Significant, protected, remnant native vegetation

Programming and Planning Considerations

- **Access Node Connectivity:** Access can be achieved Clifftop Crescent (Cell # 7), South Ave and Heron Way (Cell # 9)
- **Natural Element Remediation:** N/A
- **Biodiversity Management:** Refer to Department for Environment and Water website
- **Kaurna Heritage:** Significant Kaurna Heritage
- **Access Considerations:** N/A

Recommendation (high / medium / low priority)

Not Council owned Land

Note: The Hallett Cove Conservation Park is owned and maintained by Department for Environment and Water (DEW). Council will continue to communicate with the State Government Department around the Coastal Walkway linkages.

Current Asset Management Lifecycle Status



CELL 9 | HERON WAY | 0.4KM



Scope

0.4km of shared use trail

Cost Solution

$875,237.00

Includes: walkways, stairs, landings, pathways, stairs and barriers
*Cost estimated - confirmed as design progresses and certainty increases.

Description

- **Existing Infrastructure:** Sealed shared use trail incorporating playspace, BBQ facilities and amenity plantings.
- **Aboriginal Cultural Heritage:** Unknown Aboriginal cultural heritage throughout this Cell segment.
- **Biodiversity:** Some native coastal vegetation to be considered throughout this Cell segment.

Programming and Planning Considerations

- **Access Node Connectivity:** Access can be achieved north through the Hallett Cove Conservation Park and via the Boatshed Cafe, on Heron Way. An access pathway network feeds the Coastal Walkway through the playspace from the corner of Heron Way and Dutchman Drive. There are several beach access paths leading from this trail.
- **Natural Element Remediation:** Natural remediation has been primarily addressed during the Heron Way Res upgrade
- **Biodiversity Management:** Continued programmed management in place to conserve native flora species & to perform weed control of this protected flora within this Cell.
- **Kaurna Heritage:** No registered Kaurna Heritage sites.
- **Access Considerations:** Access is good throughout this Cell via Heron Way.

Recommendation (high / medium / low priority)

Low Priority

Current Asset Management Lifecycle Status



CELL 10 | FIELD RIVER | 0.85KM



Scope

0.85km of varied trail system

Cost Solution

$572,081.85

Includes: stairs, landings, pathways, stairs, furniture and barriers.
*Cost estimated - confirmed as design progresses and certainty increases.

Description

- **Existing Infrastructure:** Informal trail features including gravel adjacent Heron Way to structured timber steps leading onto beach access. Some formalised paved footpath segments from River Parade to Cormorant Drive exist. Beach trail includes traversing rocks infront of dune system.
- Aboriginal Cultural Heritage: Aboriginal cultural heritage report completed. Registered Aboriginal sites exist.
- **Biodiversity:** Some native coastal and riparian vegetation to be considered throughout this Cell segment. Hooded Plover nesting site exists during certain periods of the year.

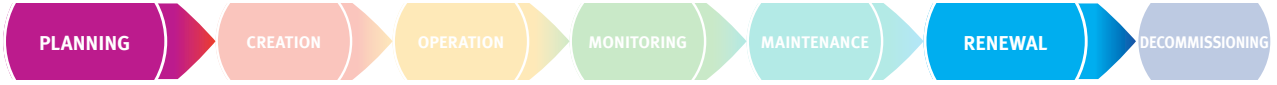
Programming and Planning Considerations

- **Access Node Connectivity:** Access can be achieved from Cormorant Drive, Osprey Court, River Parade and from the northern entrance on Heron Way.
- **Natural Element Remediation:** Remnant sand dune on the Field River Mouth needs protection when considering possible trail realignment. Rock revetment works to be considered at front of dune system.
- **Biodiversity Management:** Continued programmed management in place to conserve native flora species & to perform weed control of this protected flora within this Cell.
- **Kaurna Heritage:** Registered Aboriginal heritage sites.
- **Access Considerations:** Limited access through the majority of this Cell. Good access to paved trail segment off of Cormorant Drive, River Parade and Osprey Court.

Recommendation (high / medium / low priority)

High Priority

Current Asset Management Lifecycle Status



CELL 11 | HALLETT HEADLAND 1.25KM



Scope

0.85km of varied trail system

Cost Solution

$913,967.00

Includes: walkways, viewing platforms, stairs, pathways and barriers
*Cost estimated - confirmed as design progresses and certainty increases.

Description

- **Existing Infrastructure:** Clifftop gravel / rubble trail with occasional interpretive timber signage platforms with shelters.
- **Aboriginal Cultural Heritage:** Unknown Aboriginal cultural heritage throughout this Cell segment.
- **Biodiversity:** Significant remnant coastal / cliff top vegetation is present throughout this Cell. Conservation efforts are a primary objective.

Programming and Planning Considerations

- **Access Node Connectivity:** Access can be achieved from Balboa Drive, Petrel Close trail linkages and via an easement off of Albatross Walk.
- **Natural Element Remediation:** Natural erosional elements exist within Hallett Cove Headland Reserve.
- **Biodiversity Management:** Continued programmed management in place to conserve native flora species & to perform weed control of this protected flora within this Cell.
- **Kaurna Heritage:** No registered Kaurna Heritage sites.
- **Access Considerations:** No machinery or vehicle access throughout this Cell segment.

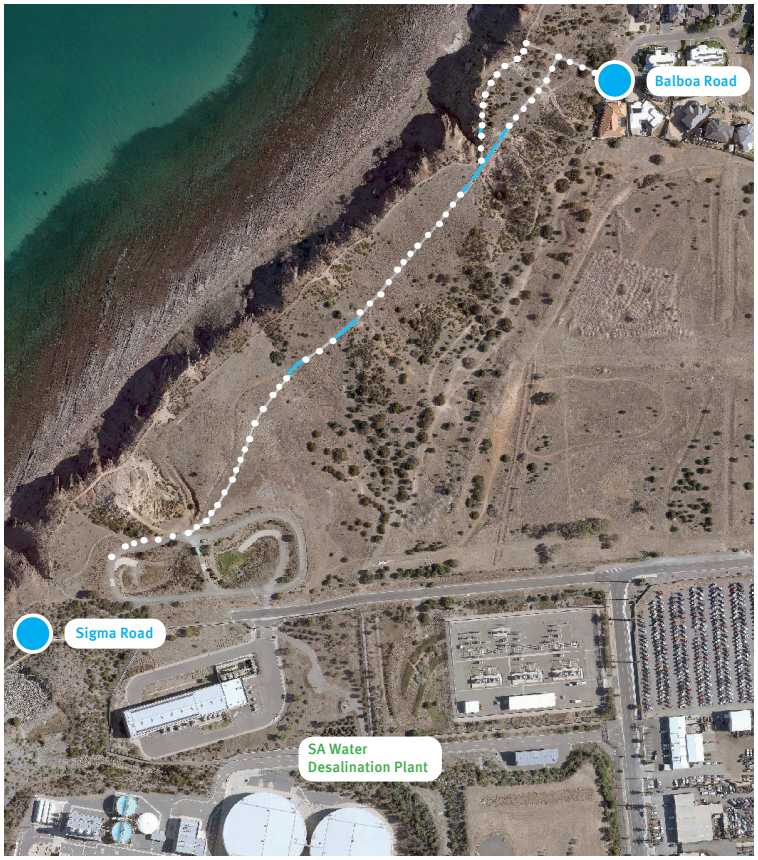
Recommendation (high / medium / low priority)

Low Priority

Current Asset Management Lifecycle Status



CELL 12 | THE ONKAPARINGA LINK | 0.65KM



Scope

0.65km of shared use trail

Cost Solution

$174,737.00

Includes: pathways and barriers
*Cost estimated - confirmed as design progresses and certainty increases.

Description

- **Existing Infrastructure:** Clifftop gravel / rubble trail with occasional interpretive timber signage platforms with shelters. Some Fibre Reinforced Polymer (FRP) elements have been implemented during maintenance phases.
- **Aboriginal Cultural Heritage:** Unknown Aboriginal cultural heritage throughout this Cell segment.
- **Biodiversity:** Significant remnant coastal / cliff top vegetation is present throughout this Cell. Conservation efforts are a primary objective.

Programming and Planning Considerations

- **Access Node Connectivity:** Access can only be achieved from Sigma Road and via a trail linkage off of Balboa Drive.
- **Natural Element Remediation:** Natural erosional elements exist within Hallett Cove Headland Reserve.
- **Biodiversity Management:** Continued programmed management in place to conserve native flora species & to perform weed control of this protected flora within this Cell.
- **Kaurna Heritage:** No registered Kaurna Heritage sites.
- **Access Considerations:** No access occurs through the majority of this Cell for machinery or vehicles.

Recommendation (high / medium / low priority)

Low Priority

Current Asset Management Lifecycle Status



DESIGN / STANDARDS AND GUIDELINES

*TO BE DEVELOPED through the Asset Management Plan

These documents will guide the standards, materials and furniture to be used throughout the Coastal Walkway. Standards and materials will be a guide only and may vary. Final selection of material palettes will be determined by Cell characteristic.

The Asset Management Plan will detail information about the asset including the provision of an agreed level of service.

The Asset Management Plan (to be reviewed by November 2020) will define the services to be provided, how the services will be provided and funds that are required for service.

This Coastal Walkway Plan will feed into the development of the revised Asset Management Plan.



CITY OF MARION

Coastal Walkway Plan

CONNECT WITH US ONLINE

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Front Cover Artwork
Title: Coastal Walkway