

# NATURAL AREAS ASSET MANAGEMENT PLAN



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## 1. EXECUTIVE SUMMARY

### 1.1 The Purpose of the Plan

Natural areas containing pristine and/or remnant native vegetation are significant assets for the City of Wanneroo (City), not only in terms of their biodiversity, ecological processes and functions, but also, as they provide economic, health and wellbeing benefits for City residents, the broader community and visitors. The City recognises the need to preserve natural area parks, with infrastructure assets built at these parks being a result of the presence of the vegetation and to facilitate the intended use of the natural area park. Therefore, the inclusion of the management of native vegetation within this Asset Management (AM) Plan in some parts is vital to the holistic management of the infrastructure asset built to preserve them.

Native vegetation assets are inherently difficult to integrate into traditional infrastructure-based AM Plans and asset management practices, due to non-conformance with the recognized 'asset life cycle' stages, asset ratios and standard 'renewable costs'. The City does not put a financial value on Natural Areas but values their significance by ensuring there are ongoing preservation maintenance practises in place and provisions made for the installation of associated infrastructure.

This Natural Area AM Plan (NAAMP) has attempted to consider both aspects of the management requirements resulting a very complex AM Plan. It is intended to split the two aspects enabling an improved management plan for the natural areas itself and the infrastructure that is built to help preserve the natural areas.

This NAAMP is specifically developed for Natural Areas and forms part of a suite of AM Plans namely, Transport Infrastructure, Stormwater Drainage, Buildings, Parks and Natural Areas that enables the City of Wanneroo (the City) to improve its long term strategic management of infrastructure assets and ensure current and future levels of service are sustainable.

The NAAMP looks into the current state of natural area infrastructure assets and considers current and future requirements together with associated risks to inform the optimum lifecycle costs and management into the future. The NAAMP aims to:

- determine an agreed level of service at a cost that is affordable to the community,
- determine the short, medium and long-term financial requirements for assets and to inform the City's Long Term Financial Plan (LTFP),
- document AM practises that ensure sustainable management of community assets and identify opportunities for improvement,
- ensure legislative and reporting requirements are met,
- support business cases and funding applications, and
- support community and organisational needs.

This NAAMP defines the services to be provided, how the services are provided and what funds are required over the 20 year planning period.

## 1.2 Asset Description

This plan covers the infrastructure assets located within natural area parks that assist with the long-term protection of native vegetation. The current infrastructure assets in this NAAMP have a replacement value estimated at **\$12.6M** and covers the following assets:

- Fences and Gates,
- Conservation Signage, and
- Pedestrian and Maintenance Vehicle Access Tracks.

Natural area parks have been grouped into three (3) different types of environments due to their similar management requirements. These are:

- Bushland,
- Coastal Foreshore, and
- Wetland.

## 1.3 Levels of Service

The Technical Levels of Service governs much of measures for natural area preservation infrastructure and are driven mainly by legislative and industry requirements. Critical natural area parks have been identified with a strong focus on Regional Open Spaces such as Badgerup Reserve, Lake Gnangara and Koondoola Reserve. The following critical measures are in place:

- Targeted inspections and servicing of natural areas based on their criticality

Criticality of Conservation Area	Scheduled Visits
Very high priority	12 times a year
High	6 times a year
Medium High	4 times a year
Medium Low	3 times a year
Low – all contractors	3/year

- Inspections include assessing the health of the natural area parks and the condition of the associated infrastructure.

## 1.4 Future Demand

The factors influencing future demand and the impacts they have on this category of assets include things such as population growth, regulations, changes in demographics, consumer preferences and expectations, technological changes, economic factors, seasonal factors, climate change and sea level rises. These demands will be approached using a combination of preservation practises with the assistance of building new infrastructure assets, upgrading existing assets and replacing existing assets that are no longer serving their purpose.

As more and more areas are cleared for development particularly in East Wanneroo, there will be increasing pressure to preserve large parcels of natural areas. Development also increases the maintenance cost with increased threat to the natural environment from human intervention. 'New' conservation areas added to the City's care and control will result from developments and will be 'gifted' to the City through the land development process. Providing

additional access tracks to natural areas for visitors, maintenance and emergency management purposes will also add to the demand.

## 1.5 Lifecycle Management Plan

### What does it Cost?

Preservation of natural areas are highly operational with the major cost coming from ongoing day to day maintenance operations. Infrastructure asset works associated with natural areas represent only a very small percentage of the cost. There are also high costs associated with the rehabilitating native vegetation for bushland and coastal foreshore dunes.

There is currently adequate funding available for the renewal of associated infrastructure. The need for additional funding for rehabilitation measures for natural areas on the other hand require further consideration. This will be further investigated as part of future developments in the NAAMP. The forecast lifecycle costs necessary to provide the services covered by this CIAMP includes:

Lifecycle Activity & Costs	Financial Year (FY)				
	2026	2027	2028	2029	2030
Operations & Maintenance	\$2.800M	\$2.940M	\$3.120M	\$3.305M	\$3.510M
Planned renewals	\$ 90K	\$ 70K	\$ 70K	\$ 70K	\$ 70K
Planned rehabilitation works	\$ 1,000K	\$ 690K	\$ 700K	\$ 410K	\$ 210K
Planned upgrades & acquisitions	\$ 360K	\$ 270K	\$ 270K	\$ 260K	\$280K
<b>Total</b>	<b>\$4.250M</b>	<b>\$3.970M</b>	<b>\$4.160M</b>	<b>\$4.045M</b>	<b>\$4.070M</b>

Although the AM Plan and LTFP may be prepared for a 20-years planning period, the accuracy of the predictions outside of the first 5 year would be less accurate.

## 1.6 Financial Summary

### What we will do

It is considered that the current maintenance budget allocation and trends are adequate to meet the required service levels, which may be less than or equal to current service levels. Detailed maintenance budgeting will be evaluated in future revisions of this plan to determine more accurate operating and maintenance cost. This will be critical when additional funding is required for additional conservation sites coming from the further urbanisation of East Wanneroo.

At this stage, the requirements of the NAAMP is expected to be fully funded within the LTFP at least for the next 5 years. This requirement will be reviewed following further evaluation of maintenance needs for conservation areas.

## **What we cannot do**

The confidence level for native vegetation asset data is currently low, particularly with respect to vegetation condition information. Floristic data collecting, collating and validation is required throughout the City's natural area park portfolio. As the confidence in the City's floristic data increases and is representative of on ground conditions, leading to accuracy in planning rehabilitation works (renewal) and assisting budgeting processes, including the Long-Term Financial Plan (LTFP). More work need to be undertaken to quantify the need.

### **1.7 Asset Management Planning Practices**

Key assumptions made in this AM Plan are:

- Future operation and maintenance budgets are assumed to be consistent and increase with expansion of natural areas acquired.
- Forecasts have been made based on current asset database and accurate rates for replacement cost.
- The timing of capital renewals is derived from an estimate of remaining useful life of assets supplemented by a combination of regular asset condition assessments, expert knowledge and information available from the asset registers.

The figures presented in this AM Plan is based on data with a confidence rating of 'C' which is a medium level of confidence.

### **1.8 Monitoring and Improvement Program**

The next steps resulting from this AM Plan to improve asset management practices with some of the key action being:

- Undertake regular audits on asset data inventory and condition assess all infrastructure assets not currently included in the AM Information System (AMIS) and improve data reliability and confidence.
- Investigate long term budget requirements from future conservation areas resulting from further urbanisation of East Wanneroo.
- Investigate opportunities to capture and track detailed operational and maintenance expenditures for natural areas.
- Expand future community satisfaction surveys (Wanneroo Liveability Survey) to include feedback on asset performance specifically for the management of natural areas. This will enable the City to measure its performance against community expectations and how customers value these assets.
- Review and analyse Natural Area and Native Vegetation specific data for the City's Natural Area Parks to assist with comparing parks across the City and the Swan Coastal Plain (SCP) and to additionally assist with maintenance and management planning.
- Develop a program to implement floristic surveys for relevant reserves on the natural area park priority list to be undertaken once every five years.



## 2. INTRODUCTION

### 2.1 Background

Asset Management (AM) Plans support the AM Policy in alignment with the City of Wanneroo's (the City) AM framework which is detailed in the City's AM Strategy. AM Plans detail the levels of service and tactical requirements for the management of assets to deliver services to the community. These plans define the services to be provided, how they are provided and what funds are required over the 20-year planning period and linking these to the City's Long-Term Financial Plan (LTFP).

The NAAMP focuses on the City's approach to the management of its natural areas and forms part of a suite of AM Plans for other asset categories namely, Transport Infrastructure, Stormwater Drainage, Buildings, Parks and Coastal Infrastructure.

The NAAMP provides information on the state of natural area assets, processes and systems used to manage the associated assets that services rely on and consider how current and future services to the community will be safely and sustainably provided in the most cost-effective manner. In delivering the service, risks are identified and managed so that a balance is achieved between achieving the desired performance of the asset, against the cost of providing the service.

In accordance with Liveable Neighbourhoods (2015), Nature Open Spaces are defined as land for which the primary function is the retention and ongoing management of indigenous flora and fauna. Nature open spaces also provide for people to connect and enjoy nature, whilst protecting its environmental values. The balance of these two purposes is at times mutually exclusive, whereby the environmental values of these natural areas supersede recreational values or pursuits. The NAAMP will refer to Nature Open Space as a Natural Area (NA) and is distinctly different from the other infrastructure AM Plans. The infrastructure assets that are constructed help preserve and protect the environmental values of NAs while enabling where appropriate people to connect and enjoy these natural spaces.

The City currently manages approximately **1,735** hectares of reserved land containing native vegetation for which the City has Management Orders for the purposes of 'conservation'; 'conservation and passive recreation'; and 'recreation'. The total area encompasses approximate **150** parks made up of bushland, coastal foreshore and wetland environments.

NA parks containing remnant native vegetation are significant assets for the City, not only in terms of their biodiversity, ecological processes and functions, but also, as they provide economic, health and wellbeing benefits for City residents, the broader community and visitors. Native vegetation assets are inherently difficult to integrate into traditional infrastructure-based AM Plans and asset management practices, due to non-conformance with the recognized 'asset life cycle' stages, asset ratios and standard 'renewable costs'.

The City recognizes that native vegetation is the keystone asset of natural area parks, with infrastructure assets at these parks being resultant on the presence of the vegetation and to facilitate the intended use of the natural area park, therefore the inclusion of native vegetation within this AM Plan is vital to holistic asset management within this asset class.

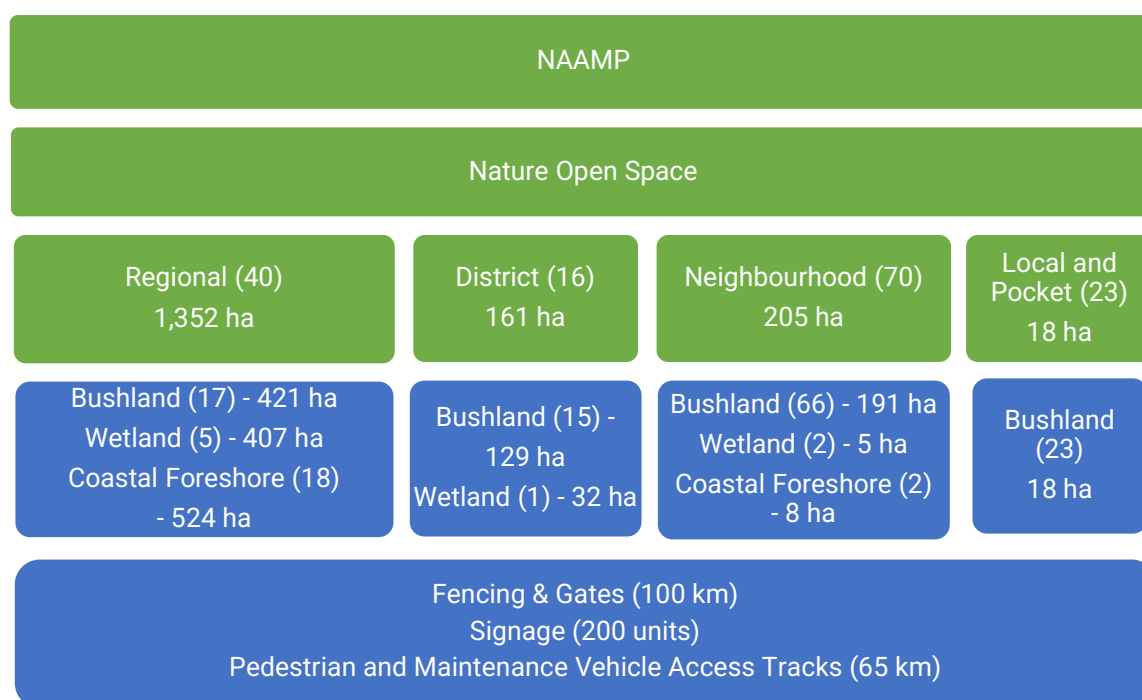
Due to the above reasons, native vegetation assets will not be discussed in all sections of this AM Plan. Other natural area infrastructure assets yet to be included in this AM Plan, such as certain Signage types will progressively be included in future revisions of this plan.

The natural area infrastructure asset portfolio does not include certain fixed assets which are identified within the portfolios of other AM Plans. The infrastructure asset exclusions are contained in Table 1.

**Table 1: Assets excluded from the NAAMP**

Asset	Description	Responsibility
Other Infrastructure Assets located within Natural Areas	Carparks, Carpark Lighting, Footpath components of BAW's (concrete and bitumen material), Footpaths (concrete and bitumen material) and Road Reserves.	Transport Infrastructure AM Plan (TIAMP)
	Drainage	Stormwater Drainage AM Plan (SAMP)
	Water fountains, bench seats, showers, nature play areas	Parks AM Plan (PAMP)
	Beach Access Ways (Structures), Boardwalks (coastal) and significant Coastal Infrastructure (Revetment Wall, Groynes, Breakwaters etc	Coastal Infrastructure AM Plan (CIAMP)
	Buildings/Other structures	Building AM Plan (BAMP)

Information contained in this plan is current as of June 2024. The infrastructure assets covered under this NAAMP are shown below and the total replacement value of these asset is **\$12.6M**.



A variety of management issues exist across these differing environmental areas and this NAAMP will provide guidance for the long-term management of these natural areas. The

NAAMP will demonstrate the responsive and planned management of both, remnant native vegetation assets and infrastructure assets (and the services provided from these assets), compliance with regulatory requirements and communicate the funding required to ensure satisfactory levels of service are delivered.

The NAAMP has been developed in conjunction with other City planning documents. These include (refer to Section 10 for additional reference documents)

- Asset Management Policy (CE03-06/23):
- Asset Management Strategy –2024-2030: and
- Asset Management Implementation Plan 2024-2030

## 2.2 Goals and Objectives of Asset Ownership

The goal of the NAAMP is to document the measures currently taken by the City, or which need to be improved upon to ensure that the City will:

- continue to provide adequate protection to natural areas,
- ensure that the supporting infrastructure is adequately maintained, and
- where appropriate provide an appropriate level of service, safe access and accessibility for all users to natural areas at a cost that is affordable to the community.

The objectives of the AM Plan are:

- To document the defined levels of service and performance monitoring schedules,
- To manage the impact of growth and future demand through demand management and infrastructure investment,
- To take a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined levels of service,
- To determine appropriate asset management practices to manage the provision of the services ensuring at a minimum legislative and reporting requirements are met,
- To identify, assess and appropriately control associated risks,
- To identify required and affordable forecast costs and link these to the City’s LTFP, and
- To monitor performance and identify areas of improvements to ensure objectives are met with the aim to continually increase AM maturity.

## 2.3 Key Stakeholders

Table 2 shows the key stakeholders in the preparation and implementation of this AM Plan.

**Table 2: Stakeholders**

Stakeholders	Description and Level of Involvement
Ratepayer Groups and residents	<ul style="list-style-type: none"> <li>• End-user involvement.</li> <li>• Stakeholder Consultation including the bi-annual Community Perception Survey, reviews as part of project planning.</li> </ul>
Local Environmental Groups, Friends of Groups and Volunteers	<ul style="list-style-type: none"> <li>• Environmental Stewardship by specific natural area end-users.</li> <li>• Involvement and participation in scheduled events for natural area on-ground management works (e.g. planting, weeding) or environmental education opportunities (e.g. Guided walks through natural area parks). Volunteer involvement that assists with the management of local natural area parks.</li> </ul>

Stakeholders	Description and Level of Involvement
Elected members	<ul style="list-style-type: none"> <li>• Stewardship and Asset Management Leadership.</li> <li>• Endorsement of Asset Management Policy, AM Strategy, AM Plan. Adoption of the key AM principles and the approval of Capital Works Budgets that support good Asset Management principles.</li> </ul>
Environmental Advisory Committee	<ul style="list-style-type: none"> <li>• Environmental Stewardship and Advocacy for Natural Areas.</li> <li>• Support and endorsement of plans and proposals that support long-term natural area management.</li> </ul>
Executive Leadership Team	<ul style="list-style-type: none"> <li>• Provide strategic direction and leadership for asset management practices and decisions within the City.</li> <li>• Responsible for the development of AM Policy, AM Strategy and AM Plans.</li> </ul>
Tree and Conservation Maintenance	<ul style="list-style-type: none"> <li>• Inspect and maintain remnant native vegetation assets to achieve biodiversity outcomes including the determination of technical levels of service and monitoring performance measures.</li> <li>• Inspect and maintain natural area infrastructure assets to a safe standard including the determination of technical levels of service and monitoring performance measures. These infrastructure assets assist in providing long-term protection to native vegetation assets within the City's natural areas.</li> </ul>
Assets Maintenance	<ul style="list-style-type: none"> <li>• Assist with the maintenance of certain natural area infrastructure assets to a safe standard.</li> </ul>
Building Maintenance	<ul style="list-style-type: none"> <li>• Assist with the maintenance of certain natural area infrastructure assets to a safe standard.</li> </ul>
Infrastructure Capital Works	<ul style="list-style-type: none"> <li>• Survey, design (if required) and deliver new, upgrade and renewal projects for natural area parks.</li> </ul>
Asset Planning	<ul style="list-style-type: none"> <li>• Long term planning and management of natural area assets (infrastructure and remnant native vegetation), data collection, condition reports, assets inventory, renewal demand modelling and long term renewal budget analysis. Author and reviewer of this AM Plan</li> </ul>
Corporate Strategy and Performance Directorate	<ul style="list-style-type: none"> <li>• Long-term strategic and financial planning incorporating asset management principles.</li> </ul>
Strategic Land Use Planning and Environment	<ul style="list-style-type: none"> <li>• Advocates and practices good planning and urban management in future growth areas to enable the retention of significant landform features, vegetation and habitat.</li> <li>• Creates and reviews environmental policies and guidelines resulting in optimal biodiversity outcomes, including the retention of significant vegetation and habitat and the provision of appropriate infrastructure assets within proposed natural area parks</li> </ul>
Land Development	<ul style="list-style-type: none"> <li>• Identifies natural area park infrastructure asset requirements for new developments. Assesses, determines, audits and accepts the handover of new natural area park assets from land developers. Collects all natural area asset data (including O-Spec) and forwards to Asset Planning for validation and input into the Asset Management Information System (AMIS).</li> <li>• Manages the review, provision of City feedback and approval of management plans (conservation, foreshore and wetland) proposed by developers for natural areas within new developments. These plans could include areas of intact native vegetation, as well as bare areas proposed for revegetation activities.</li> </ul>

Stakeholders	Description and Level of Involvement
	<ul style="list-style-type: none"> <li>• Manages the review and provision of City feedback for land developer monitoring reports for natural area parks with approved management plans.</li> </ul>
Community and Place Directorate	<ul style="list-style-type: none"> <li>• Use of City natural area parks to deliver services to the community.</li> <li>• Liaison with park users to confirm levels of service and identify opportunities to improve service delivery through pro-active natural area asset management.</li> </ul>
Property Services	<ul style="list-style-type: none"> <li>• Manage the property management requirements of the City's Leased Areas portfolio (includes leased areas that contain native vegetation assets). Granting and monitoring of leases.</li> </ul>
Local Government Authorities (e.g. CoJ and CoSwan)	<ul style="list-style-type: none"> <li>• Ongoing stakeholder consultation, coordinated maintenance activities and agreed management objectives of natural areas present across Local Government boundaries (e.g. Yellagonga Regional Park). Complimenting LBS Implementation Plan Action # 5.2.</li> <li>• Ongoing stakeholder consultation and coordinated maintenance agreements for infrastructure assets that directly impact the City's natural area parks (e.g. Drainage infrastructure and outfalls within Koondoola Regional Reserve, Koondoola). Complimenting LBS Implementation Plan Action # 5.2</li> </ul>
State Government Agencies	<ul style="list-style-type: none"> <li>• Funding assistance and development of relevant standards and legislation for natural areas.</li> <li>• Coordinated maintenance and management of abutting natural areas that are managed by State Agencies and the City respectively</li> </ul>
(DBCA, DFES, DPIRD, DPLH, DWER)	<ul style="list-style-type: none"> <li>• DBCA - Works to ensure the natural assets of WA are conserved, protected and valued.</li> <li>• DFES – Fire mitigation within natural areas to ensure fire safety can be achieved whilst maintaining protection of biodiversity values. DPIRD – Reducing the impact of pests, weeds and diseases to ensure the protection of WA's agriculture and food sectors.</li> <li>• DPLH – Planning and managing the State's land and heritage.</li> <li>• DWER - Manages and regulates the State's environmental and water resources (including wetlands, contaminated sites, clearing legislation).</li> <li>• DCCEEW- Department of Climate Change, Energy, the Environment and Water- Leads Australia's response protection of the environment, heritage, and water resources</li> </ul>
Federal Government (DAWE)	<ul style="list-style-type: none"> <li>• Funding assistance and development of relevant advice, standards, guidelines and legislation for natural areas containing Matters of National Environmental Significance (MNES).</li> <li>• DAWE- Protect and manage Australia's natural resources and heritage and help develop agricultural industry.</li> </ul>
Contractors / Consultants / Suppliers	<ul style="list-style-type: none"> <li>• External providers of goods and services for the maintenance and management of natural area park assets.</li> </ul>

### 3. LEVELS OF SERVICE

The City has recently completed a Wanneroo Liveability Survey whereby the results of the survey have yet to be analysed to inform this AM Plan. These will be considered in future revision of this plan. Past Community Perception Surveys (Pre-2020) indicates that the City performs on par to the industry average standards.

The levels of service and performance measures identified in the NAAMP have been based on past community engagement surveys, together with inputs and feedback from Resident Groups, Advisory Groups and Elected Members. Other factors that heavily influence the level of service determinations are:

- service risks, Industry best practice and consequences to meet legislative and safety requirements,
- strategic objectives,
- the availability of resources and financial constraints, and.
- customer expectations of the quality of service, balanced against the price they are willing and able to pay.

The levels of service defined in this section will be used to:

- Clarify the level of service that the community should expect.
- Identify works required to meet these levels of service.
- Enable Council and the community to discuss and assess the suitability, affordability and the quality of the existing service level and to determine the impact of increasing or decreasing this level in future.

The primary objective of the infrastructure assets within this NAAMP is that they are suitably managed to provide the necessary protection to natural areas to preserve their environmental values. The following sections describes the service levels and performance measures.

#### 3.1 Strategic and Corporate Goals

The CIAMP is aligned with the goals and priorities of the City's SCP as shown in Table 3.

**Table 3: Alignment to Strategic Community Plan Goals**

Goal	Priority	How Goal and Objectives are addressed in the NAAMP
4: A sustainable City that balances the relationship between urban growth and the environment.	4.2 Manage and protect local Biodiversity.	Survey Flora and Fauna within the City's natural area parks to establish baseline data to inform the City's capital works, maintenance and management programs. Revegetation, regeneration and rehabilitation projects within City of Wanneroo natural area parks. Planning, scheduling and undertaking on-ground maintenance and management activities in City natural area parks. Identification and removal of contaminated material, and remediation of contaminated sites within natural area parks.
	4.3 Manage natural assets and resources.	Natural area infrastructure asset data collection and validation.

Goal	Priority	How Goal and Objectives are addressed in the NAAMP
		<p>New, Upgrade and Renewal projects for natural area infrastructure assets.</p> <p>Survey Flora and Fauna within the City's natural area parks to establish baseline data to inform the City's capital works, maintenance and management programs.</p> <p>Revegetation, regeneration and rehabilitation projects within City of Wanneroo natural area parks. Implementation and on-going review of the YICM Plan 2021-26 with key stakeholders.</p> <p>Implementation, on-going monitoring and review of endorsed natural area management plans.</p> <p>Planning, scheduling and undertaking on-ground maintenance and management activities in City natural area parks.</p> <p>Planning, scheduling, hosting and advocating for environmental events and educational opportunities within City natural areas parks and surrounding regional natural areas.</p>
<p>5: A well- planned, safe and resilient City that is easy to travel around and provides connection between people and places.</p>	<p>5.2 Plan for and manage land use.</p>	<p>Natural area stakeholder involvement during project initiation and planning stages of proposed City projects and developments in order to, avoid and minimise impacts to significant vegetation and habitat.</p> <p>Providing stakeholder feedback to relevant agencies for proposed developments in line with relevant legislation and in accordance with City guidelines, policies and plans.</p> <p>Within new subdivisional developments the creation of new Nature POS via the Planning process is managed for the City by both SLUPE and LD.</p>
	<p>5.4 People can move around easily.</p>	<p>Provision of new, upgrade and renewal EMVAT projects within City natural area parks that establish connections to pathway infrastructure surrounding these sites.</p>
<p>6: A future focused City that advocated, engages and partners to progress the priorities of the community.</p>	<p>6.3 Build local partnerships and work together with others</p>	<p>Compliance with, and administration of, State and Federal legislation for the maintenance and management of natural areas within the City.</p> <p>Advocacy and participation in stakeholder consultation regarding the development and/or review of State agency documentation affecting natural areas.</p> <p>Advocacy for optimal environmental outcomes in natural areas.</p> <p>Reporting and mapping of contamination in City natural areas to DWER.</p>
<p>7: A well governed and managed City that makes informed decisions, provides strong community leadership and</p>	<p>7.1 Clear direction and decision making</p>	<p>The City of Wanneroo will have a clear plan for the future and be able to demonstrate successful result. Decision-making will focus on achieving the best outcomes and be in line with the Vision, Goals and Priorities informed by the community</p>

Goal	Priority	How Goal and Objectives are addressed in the NAAMP
valued customer focused services		

### 3.2 Legislative Requirements and Industry Standards

The planning, development, management, maintenance and use of City natural areas and the implementation of the NAAMP needs to consider the strategic context in which it operates including: International legislation, Federal legislation and policy, State legislation and policy, Regional policy and Local law and policy. Some of the Legislative and Industry Standards requirements are listed in Table 4. A comprehensive list of relevant levels of legislation and policy impacting the City's natural areas are included in Appendix A.

Legislative requirements and industry standards that impact the delivery of natural area services are outlined in Table 4.

**Table 4: Legislative and Regulatory Requirements, and Industry Standards**

Legislation / Industry Standard	Requirement
<b>Regional Context</b>	
<i>Bush Forever (2000) Department of Planning</i>	The aim is to provide a policy and implementation framework that will ensure bushland protection and management issues in the Perth Metropolitan Region are appropriately addressed and integrated with broader land use planning and decision-making. E.g. Yellagonga Regional Park is designated a Bush Forever site (299).
<i>Bushland Policy for the Perth Metropolitan Region (State Planning Policy No.2.8) (2010)</i>	The aim of the policy is to provide a policy and implementation framework that will ensure bushland protection and management issues in the Perth Metropolitan Region are appropriately addressed and integrated with broader land use planning and decision-making.
<i>Gnangara Sustainability Strategy (2009)</i>	A cross-government initiative working on an action plan that will ensure the sustainable use of water for drinking and commercial purposes and to protect the environment.
<b>State Context</b>	
<i>Aboriginal Heritage Act 1972 and Aboriginal Cultural Heritage act 2021</i>	Conserves registered places and provides protection for Aboriginal Sites and objects.
<i>Agriculture and Related Resources Protection Act 1976 and Regulations 2015</i>	The Act lists, and categorises, declared plants and animals that local government authorities are required to control. The Act also identifies methods to prevent the introduction of declared plants and animals into an area. The regulations highlight specific declared plants or animals and their particular management requirements (e.g. European House Borer).
<i>Better Urban Water Management Framework (2008)</i>	Facilitates better management of urban water resources by ensuring an appropriate level of consideration is given to the total water cycle at each stage of the planning system and provides guidance on the implementation of State Planning Policy 2.9 Water Resources.
<i>Biodiversity Conservation Act 2016</i>	Provides for the conservation and protection of Western Australian biodiversity (inclusive of flora and fauna) and biodiversity components and the ecological sustainable use of biodiversity components. Replaces the <i>Wildlife Conservation Act 1950</i> and the <i>Sandalwood Act 1929</i> .



<b>Legislation / Industry Standard</b>	<b>Requirement</b>
<i>Biological Control Act 1986</i>	The Act makes provision for the biological control of pests in Western Australia.
<i>Biosecurity and Agriculture Management Act 2007 (BAM Act) and Regulations 2013</i>	Provision for effective biosecurity and agriculture management for Western Australia. Declared plants and animals listed on the WAOL (Western Australian Organism List) can be controlled; if located on, and in relation to, land under the City's control. City Local Laws can be made regarding pest plants.
<i>Building Act 2011 and relevant Regulations</i>	Legislates the Building Approvals process. A building approval is required for the construction of certain types of infrastructure assets within natural areas including retaining walls, boardwalks, staircases, lookouts etc.
<i>Bushfires Act 1954</i>	Provision for diminishing the dangers resulting from bushfires and for the prevention, control, and extinguishment of bushfires.
<i>Cat Act 2011</i>	The Act makes provision for the control and management of cats and promotes and encourages the responsible ownership of cats.
<i>Conservation and Land Management Act 1984</i>	Provisions for the use, protection and management of certain public lands and waters and the flora and fauna therein. For example National Parks, Nature Reserves, Marine Protected , lands under the management of Conservation Commission etc.
<i>Construction Contracts Act 2004</i>	Provides protections to contractors and suppliers.
<i>Contaminated Sites Act 2003 and relevant Regulations 2006</i>	Provision for the remediation and treatment of sites affected by contamination. Outlines the reporting of known or suspected contaminated sites.
<i>Dog Act 1976</i>	The Act makes provisions for the control of dogs in public and private spaces and promotes responsible dog ownership.
<i>Dividing Fences Act 1961</i>	Local government exempt from 50/50 contribution for dividing fences abutting public open space (including natural area parks).
<i>Emergency Management Act 2005</i>	Provides for prompt and coordinated organisation of emergency management in the State (including functional response to community public emergencies).
<i>Environmental Protection Act 1986 and relevant Regulations 2004</i>	The Act provides for the prevention, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected with the foregoing.
<i>Environmental Protection (Noise) Regulations 1997</i>	Regulates noise from public places and provides standards for noise emissions.
<i>Fire &amp; Emergency Services Act 1998</i>	Provides for functions relating to the provision and management of emergency services.
<i>Firebreak Location, Construction and Maintenance Guidelines (FESA)</i>	Assists with the location, construction and maintenance of fire breaks within natural areas.
<i>Fish Resources Management Act 1994</i>	The Act is the primary State legislation regulating the management of, and utilisations and conservation of fish (which includes all aquatic organisms except reptiles, birds, mammals, and amphibians) and their habitat.
<i>Health Act 1911</i>	The Act deals with certain matters concerning public health, including the discharge of material(s) causing pollution to waterways

<b>Legislation / Industry Standard</b>	<b>Requirement</b>
<i>Health (Asbestos) Regulations 1992</i>	Regulates asbestos to ensure proper management of potential public health risks from exposure to asbestos.
<i>Health (Pesticides) Regulations 2011</i>	Regulates the storage, use and transport of pesticides.
<i>Heritage Act 2018</i>	Recognises the importance and promotes understanding and appreciation of WA cultural heritage. Identifies and documents places of cultural heritage significance and for the conservation, use, development and adaptation of such places.
<i>Land Administration Act 1997</i>	Provision for dealing with the management of the State's Crown Land, including the creation, administration and management of reserves over Crown land/waters.
<i>Litter Act 1979</i>	Provision for the abatement of litter, to establish, incorporate and confer powers upon the Keep Australia Beautiful Council (W.A.).
<i>Local Government Act 1995 and associated Regulations</i>	Sets out role, purpose, responsibilities and legal powers of local governments including the requirement for the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.
<i>Local Government Biodiversity Planning Guidelines for the Perth Metropolitan Region (WALGA) 2004</i>	Guidelines providing strategic approaches to Local Government to conserve biodiversity.
<i>Local Government Guidelines for Bushland Management (In the Perth and Coastal South-West Natural Resource Management Regions Western Australia) (WALGA) 2009</i>	Provides local government officers direction in prioritising management actions for natural areas and to ensure that management of these areas is in line with biodiversity principles.
<i>Planning &amp; Development Act 2005 and relevant Regulations.</i>	Provides for the planning regime in WA, including zoning and development approval processes. Setting aside land for open space or payment in lieu as conditions of subdivision.
<i>Managing Phytophthora Dieback – Guidelines for Local Government (Dieback Working Group) 2000</i>	Identifies methods to identify phytophthora dieback and subsequent management techniques. Identifies cleaning and sterilising techniques in order to undertake natural area maintenance activities. In addition, a joint publication by the Threatened Species Network and the Dieback Working group was released in 2008 'Managing Phyphthora Dieback in Bushland – a Guide for Landholders and Community Conservation Groups'.
<i>Rights in Water and Irrigation Act 1914</i>	The Act relates to rights in water resources, making provision for the regulation, management, use and protection of water resources.
<i>Soil and Land Conservation Act 1945 or Soil Conservation Act 1945</i>	Provides for and regulates the conservation of soil and land resources and for the mitigation of the effects of erosion, salinity and flooding.
<i>State Planning Policy 2.0 Environmental and Natural Resources (2003)</i>	Protection, conservation and enhancement of the natural environment. Integration of environment and natural resource management with broader land use planning and decision-making.

<b>Legislation / Industry Standard</b>	<b>Requirement</b>
<i>State Planning Policy 2.2 Gnangara Groundwater Protection (2005)</i>	To prevent, control or manage development and land use changes in the policy area that are likely to cause detrimental effects to the groundwater resource.
<i>State Planning Policy 2.6 State Coastal Planning and Policy Guidelines (2013)</i>	Provides for the long-term sustainability of WA's coast.
<i>State Planning Policy 2.7 Public Drinking Water Source (2003)</i>	Provides provisions for land use and development in public drinking water supply areas.
<i>State Planning Policy 2.8 Bushland Policy for the Perth Metropolitan Region (2010)</i>	Provides provisions to ensure bushland protection and management issues in the Perth Metropolitan Region are appropriately addressed and integrated with broader land use planning and decision-making.
<i>State Planning Policy 2.9 Water Resources (2006)</i>	Provides clarification and additional guidance to planning decision-makers for consideration of water resources in land use planning strategy.
<i>Securing Western Australia's water future</i>	A position paper (2013) Sets out a proposed legislative and policy framework to help deliver new water management solutions in Western Australia.
<i>Waste Avoidance and Resource Recovery Act 2007</i>	Provision for waste avoidance and resource recovery and waste services by Local Governments. Includes the protection of human health and the environment through the reduction in environmental harm, including pollution through waste materials.
Australian Standards	Local government duty of care to ensure that the minimum established industry standards are met.
Biodiversity Conservation Act 2016	Provides for the conservation and protection of Western Australian biodiversity (inclusive of flora and fauna) and biodiversity components and the ecological sustainable use of biodiversity components.
Building Act 2011 and relevant Regulations	Legislates the building approvals process. A building approval is required for the construction of certain types of infrastructure assets within coastal areas including retaining walls, boardwalks, staircases, lookouts etc.
CHRMAP Guidelines 2014	Provides guidance to support the implementation of SPP 2.6 by assisting statutory decision-makers, landholders and those conducting investigations on their behalf in developing and implementing effective CHRMAP
Conservation and Land Management Act 1984	Provisions for the use, protection and management of certain public lands and waters and the flora and fauna therein. E.g. National Parks, Nature Reserves, Marine protected lands under the management of Conservation Commission etc.
Disability Discrimination Act 1992	Provides protection against discrimination based on disability, in this case access to facilities.
Environment Protection and Biodiversity Conservation Act 1999	The EPBC Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places defined in the Act as matters of national environmental significance.

<b>Legislation / Industry Standard</b>	<b>Requirement</b>
(EPBC Act 1999) and relevant Regulations 2000	Regulates activities that are likely to have a significant impact on nationally protected matters Establishes the National Heritage List which includes natural, indigenous and historical places on Commonwealth lands and waters or under Australian Government control that are of outstanding heritage value to the nation.
<i>Environmental Protection Act 1986 and relevant Regulations 2004</i>	The Act provides for the prevention, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected with the foregoing.
<i>Fish Resources Management Act 1994</i>	The Act is the primary State legislation regulating the management of, and utilisations and conservation of fish (which includes all aquatic organisms except reptiles, birds, mammals, and amphibians) and their habitat.
<i>Heritage Act 2018</i>	Recognises the importance and promotes understanding and appreciation of WA cultural heritage. Identifies and documents places of cultural heritage significance and for the conservation, use, development and adaptation of such places.
<i>Land Administration Act 1997</i>	Provision for dealing with the management of the State's Crown Land, including the creation, administration and management of reserves over Crown land/waters.
<i>Liveable Neighbourhoods</i>	State Planning guidelines for urban development requirements.
<i>Local Government Act 1995 and relevant Regulations</i>	Sets out role, purpose, responsibilities and legal powers of local governments including the requirement for the preparation of a long-term financial plan supported by asset management plans for sustainable service delivery
<i>Marine and Harbours Act 1981</i>	Provides for the advancement of efficient and safe shipping and effective boating and port administration through the provision of certain facilities and services, and for incidental and connected purposes.
<i>State Planning Policy No.2.6 - State Coastal Planning Policy (SPP 2.6) and Guidelines</i>	Provides statutory guidance and informs matters related to sustainable coastal land use and development.
<i>Coastal Engineering Manual (USACE 2002)</i>	Provides coastal engineering guidelines for all coastal management activities including design and construction of coastal protective structures, beach access and beach renourishment.

### 3.3 Customer Values

Service levels are defined in three (3) ways, customer values, customer levels of service and technical levels of service.

Customer Values indicate:

- what aspects of the service is important to the customer,
- whether they see value in what is currently provided and
- the likely trend over time based on the current budget provision

The results from the recent Wanneroo Liveability Survey, which has yet to be analysed to inform this AM Plan, will be used to populate Table 5.

**Table 5: Customer Values and Satisfaction Survey Levels**

Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Assets are fit for purpose	Not available	Performance not currently measured	Not available
Satisfaction with coastal and marine assets	Not available	Performance not currently measured	Not available

### 3.4 Customer Levels of Service

Customer Levels of Service relate to how the community perceives quality, functionality and safety of the natural areas in terms of:

- Quality – how well the City manages its natural area based on the condition of the natural area,
- Functionality – How well the natural area is preserved,
- Accessible - where appropriate accessible for the community to connect and enjoy nature, while protecting its environmental values.
- Safety – How well fire mitigation measures and emergency access are executed.

Targeted research on customer expectation and satisfaction for the City's natural areas is limited. This will need to be a key area of work in the future and will be included in future updates of this plan. Without this specific evidence, the City maintains its natural areas based on its Technical Levels of Service.

### 3.5 Technical Levels of Service

Operational or technical measures of performance, termed 'Technical Levels of Service' (or technical service levels), relate to the allocation of resources to service activities that Council undertakes to best achieve the desired community outcomes and demonstrate effective organisational performance.

The Technical Levels of Service for natural areas are divided to two distinct areas of management; managing the health of the vegetation within the natural area, and managing the infrastructure that is built to assist with preserving the natural area.

#### 3.5.1 Native Vegetation Assets

Technical Levels of Services for native vegetation assets are not specifically defined by the City, however these will be developed as part of the Improvement Plan. Examples of service activities would include:

- Operations and maintenance – the activities necessary to ensure ecological function, vegetation condition and integrity are maintained as near as practical to agreed industry standards and relevant scientific guidelines (e.g. – weed

management, revegetation, ground stabilisation, litter removal, removing or reducing the effect(s) of threatening processes etc).

- Renewal – implementation of industry standard revegetation and restoration activities that assist in: promoting the return of ecological function, improving vegetation condition and increasing the robustness and integrity of native vegetation within a natural area park.
- Upgrade/New – this service measure does not apply to native vegetation.

### 3.5.2 Natural Area Infrastructure Assets

Technical levels of service measures for infrastructure asset are linked to annual budgets covering:

- Operations and maintenance – the activities necessary to retain an infrastructure asset as near as practicable to an appropriate level of service (e.g. repair works, minor structure repairs).
- Renewal – the activities that return the service capability of an infrastructure asset up to that which it had originally (e.g. re-surfacing formalised Emergency and Maintenance Vehicle Access Track's (EMVAT's), replacing fencing wire, replacing interpretative signage plates). An infrastructure asset is renewed when the cost to maintain the asset is no longer viable to meet the required level of service.
- Upgrade/New – the activities to provide a higher level-of-service (e.g. increased robustness requirement for fencing/gates, provision of formalised EMVAT's, accessible amenities such as bench seating and drink fountains) to meet a higher usage demand.

**Table 6 Technical Measures for NA infrastructure assets**

Service Criteria	Technical measures
Quality/Condition	Condition of EMVAT surfaces and NA park access points, fencing suitability, and direction or educational signage. Accessibility to natural area infrastructure.
Function	Adequacy of natural area infrastructure to meet user's needs.
Quantity	Natural Area Parks provided in accordance with Local Planning Policy – 4.3 Public Open Space and Developer's Structure Plans
Safety	Number of injury complaints associated with natural area park assets.

**Table 1 Current Technical Service Levels for NA Infrastructure Assets**

Key Performance Measure	Level of Service	Performance Measure Process	Performance Target
Quality/Condition	Infrastructure assets renewed at the end of their useful life.	Condition Audits of all infrastructure assets.	Whole of infrastructure asset base condition audits completed once in every 5 years and prioritise for maintenance and renewal

Key Performance Measure	Level of Service	Performance Measure Process	Performance Target
Function	EMVATs to provide accessibility to natural area parks for Emergency and Maintenance Vehicles	Schedule Fire Mitigation works for completion by November 1st annually.	Fire Mitigation requirements for natural area parks to be complied with, and completed, in accordance with Section 33 of the <i>Bushfires Act 1954</i> .
Safety	Safe natural area parks	Injury complaints	Target to be set when new (Customer Management System) CMS is implemented - Refer Improvement Action 6.

Technical Level of Service for Natural Area Assets will be further developed over time, including the development of technical levels of service for native vegetation within natural area parks.

### 3.6 New/Renewal of Assets Level of Service Provision

The current level of service for the provision of new natural area park assets is covered in the Local Planning Policy 4.3 – Public Open Space. For natural area parks (known as Nature POS within the LPP4.3) the policy defines the standard requirements to be addressed, including:

- No earthworks except where it pertains to grading for universally accessible trails;
- Weed control management strategy;
- Tree/bush retention

The current level of service for the provision of new natural area park assets is covered in the Local Planning Policy 4.3 – Public Open Space. For natural area parks (known as Nature POS within the LPP4.3) the policy defines the standard requirements to be addressed, including:

- No earthworks except where it pertains to grading for universally accessible trails;
- Weed control management strategy;
- Tree/bush retention;
- 3m wide vehicle access gates for maintenance, service and emergency vehicles (includes fire access);
- Cement stabilised limestone trail surfacing;
- Benches/Seating (off access track on concrete pad);
- Directional or Interpretative signage;
- Pedestrian access control gates (where appropriate);
- Development and implementation of a management plan; and
- Park sign wall with signage panel and play as per City of Wanneroo signage style guide.

To support LPP4.3, and to provide further clarification for new and renewal works, Community Facilities plan to develop a hierarchy of documents, focusing on policies, strategies, design guidelines and specifications to inform the planning and design of the City's open space (including natural area parks) and community buildings. It will involve the development of evidence based standards that will provide the City with justified benchmarks and other criteria in order to determine facility requirements into the future. These standards will influence the

provision of all new infrastructure and will inform the City's asset management plans in terms of renewal, upgrades and maintenance.

### **3.7 Maintenance of Assets Level of Service**

The City's current levels of service specific to the operational maintenance activities for Parks and Reserves are shown in Table 8. The level of service for maintenance standards varies dependent on the classification listed below (Bushland, Foreshore, Wetland and Buffers). Levels of Services were adopted by Council in 2011 and will require an update to be undertaken to ensure they remain relevant - Refer Improvement Action 9.



**Table 8: Service Levels – Conservation**

<b>CONSERVATION</b>								
<b>Class</b>	<b>Description</b>	<b>Example</b>	<b>Boundaries</b>	<b>Fire Mitigation</b>	<b>Weed Control</b>	<b>Signage</b>	<b>Tracks</b>	<b>General</b>
Bushland	Conservation areas with bushland as sole component and bushland components of Passive Parks	Koondoola Regional Bushland, Waldburg Park	Boundaries are to be kept clear of weeds and rubbish at all times. Maintain gates, locks and fences in good repair and working order	Carry out seasonally programmed fire mitigation in conjunction with FESA and the relevant State Fire regulations	Carry out Annual woody, annual and perennial weed control programs as per seasonal requirements. Utilise current industry best practice with control methods	Ensure signs are visible and well maintained. Report graffiti/ vandalism within 24 hours	Maintain in good order, repair erosion to limestone surfaces, maintain hard stands adjacent to entry points	The Work Practice Manual identifies the full task range, staff responsibilities and reporting. All staff are to familiarise themselves with this.
Foreshore	Coastal frontal sand dunes and rocky outcrops	North Mindarie Foreshore, Yanchep lagoon	Boundaries are to be kept clear of weeds and rubbish at all times. Maintain gates, locks and fences in good repair and working order	Carry out seasonally programmed fire mitigation in conjunction with FESA and the relevant State Fire regulations	Carry out Annual woody, annual and perennial weed control programs as per seasonal requirements. Utilise current industry best practice with control methods	Ensure signs are visible and well maintained. Report graffiti/ vandalism within 24 hours	Maintain in good order, repair erosion to limestone surfaces, maintain hard stands adjacent to entry points	The Work Practice Manual identifies the full task range, staff responsibilities and reporting. All staff are to familiarise themselves with this.
Wetlands and Buffers	Conservation category wetlands	Lake Joondalup	Boundaries are to be kept clear of weeds and rubbish at all times. Maintain gates, locks and fences in good repair and working order	Carry out seasonally programmed fire mitigation in conjunction with FESA and the relevant State Fire regulations	Carry out Annual woody, annual and perennial weed control programs as per seasonal requirements. Utilise current industry best practice with control methods	Ensure signs are visible and well maintained. Report graffiti/ vandalism within 24 hours	Maintain in good order, repair erosion to limestone surfaces, maintain hard stands adjacent to entry points	The Work Practice Manual identifies the full task range, staff responsibilities and reporting. All staff are to familiarise themselves with this.

Source: City of Wanneroo Service Levels for Parks, Streetscapes and Conservation, 2011.

**Notes:**

1. *These standards acknowledge the availability of resources to maintain these facilities.*
2. *All defects and repeated maintenance issues (cost of cycle), to be investigated and rectified in appropriate timescale.*
3. *The number and schedules of the maintenance visits may change subject to seasonal requirements and specific needs for each location*

## 4. FUTURE DEMAND

### 4.1 Demand Drivers

Drivers affecting demand include things such as population change, changes in demographics, seasonal factors, consumer preferences and expectations, technological changes, economic factors, environmental awareness, climate change, legislative Changes, etc.

Demand for new services with respect to natural area park infrastructure will be in the form of requests associated with:

- Legislative changes regarding the management of natural areas
- Improved accessibility within open space facilities (including natural area parks)
- Climate change and sustainability requirements
- Policy changes e.g: higher levels of service
- Increased use of natural area parks, i.e. above their capacity to cope with passive use
- High community expectations leading to an increase in community consultation
- New Asset Growth in the North Coastal Growth Corridor
- Population growth & urban sprawl and
- Social and technology changes including smart technology.

### 4.2 Demand Management Plan

The City will need to ensure that the factors associated with future demand are considered in the planning and determination of its LTFP. The Community Facilities Provision Framework: Open Space and Community Buildings which is currently being developed will provide the overarching framework to develop a sustainable future for POS development.

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

The present position and projections for demand drivers that may impact future service delivery and utilisation of assets are documented in Table 9 and a Demand Management Summary shown in Table 10.

**Table 9: Demand Drivers, Projections and Impact on Services**

Demand Drivers	Present Position	Projection	Impact on Services	Demand Management Plan
Increased focus on accessibility	Pathways, playgrounds, Park amenities, moderate level of consideration	Improved application of access considerations	Associated accessible infrastructure	Continue to consider accessible elements during renewal planning.

Demand Drivers	Present Position	Projection	Impact on Services	Demand Management Plan
Population growth	243,013 2025 forecast	437,016 2046 forecast	Population increases, combined with above average percentages of children 0-18 years and elderly residents (over 65 year olds) will increase demand for pathways, particularly shared-use paths that are mobility scooter compatible.	City to adapt towards improved design standards for accessibility
			Associated future subdivision development will result in additional new natural area park assets being handed over to Council from developers	Continue to allow for maintenance and renewal costs associated with increasing natural area park asset base.

**Table 10: Demand Management Plan Summary**

Service Activity	Demand Management Plan
Demand for facilities in new suburbs	This City's Local Planning Policy 4.3: Public Open Space policy articulates Council's position on the planning, provision, location, design, development and interim maintenance of Public Open Space (POS). The City will prepare a Community Facilities Provision Framework, an over-arching document to develop a sustainable future for park development. Allocation of capital expenditure on creation of new assets and upgrade of existing assets where appropriate. Whole Life Costing evaluations to be undertaken to ensure development of sustainable, flexible and affordable new natural area parks.
Increased demand for local accessible natural area parks	Improving access to all POS, wherever possible, to meet the increasing requirements of the AIP policy. Ensure flexibility of design to allow natural area parks to adapt to changing user needs and to meet AIP objectives wherever possible, without compromise on flora or fauna values.
Customer expectations	Suitability audits and input from natural area park users to better understand expectations. Planned maintenance, good initial design and flexible space will help to mitigate this impact.
Maintenance, renewal and upgrade of ageing natural area infrastructure park assets in established communities	Planned maintenance and minor works programs to ensure natural area park infrastructure assets are fit for purpose. Developing Long Term Financial Management Plans to ensure financial sustainability and adequate allocation of renewal funding for the eventual renewal of ageing natural area park infrastructure assets and/or upgrading these to maximise service delivery.

New POS and natural area park assets required to meet growth in new residential developments will be acquired from land developers through the land subdivision and development process. All plans submitted by developers for new nature POS are considered against LPP 4.3 and other relevant City environmental policies. In some instances, the decision is for provision in excess of requirements.

Acquiring new natural area park infrastructure assets from Land Developers will commit Council to fund ongoing operations, maintenance costs and eventual replacement. Natural area park assets, in particular, those located within coastal proximity have short life spans (i.e. estimated useful life of 10 to 15 years). In these cases, the City needs to budget for additional renewal costs in future years.

## 5. LIFE CYCLE MANAGEMENT

### 5.1 Background Data

The natural area infrastructure asset data shown in this AM Plan provides the baseline for growth and infrastructure asset renewal demand predictions to be generated and is used to inform the City's annual budget and LTFP development.

In the last 4 years, the City has experienced an increase in natural area parks within bushland and foreshore areas only. Natural area parks now encompass 1,735 ha of Open Space, provided in bushland, foreshore and wetland habitats. The City manages 150 natural area parks with 122 located in bushland areas, 20 located in foreshore areas and 8 located in wetland areas. City parks are categorized as nature open space in accordance with the City's Local Planning Policy 4.3: Public Open Space (LPP4.3 - POS).

POS Category	No of Parks	Area (ha)
<b>Regional</b>	<b>40</b>	<b>1,352</b>
Bushland	17	421
Coastal Foreshore	18	524
Wetland	5	407
<b>District</b>	<b>16</b>	<b>161</b>
Bushland	15	129
Wetland	1	32
<b>Neighbourhood</b>	<b>71</b>	<b>205</b>
Bushland	67	191
Coastal Foreshore	2	8
Wetland	2	5
<b>Local &amp; Pocket</b>	<b>23</b>	<b>18</b>
Bushland	23	18
<b>Grand Total</b>	<b>150</b>	<b>1,735</b>

The types of infrastructure that support the preservation of natural areas are:

- fences and gates,
- conservation signage, and
- pedestrian and maintenance vehicle access tracks.

The replacement value these assets as at 30 June 2024, is shown in Table 11.

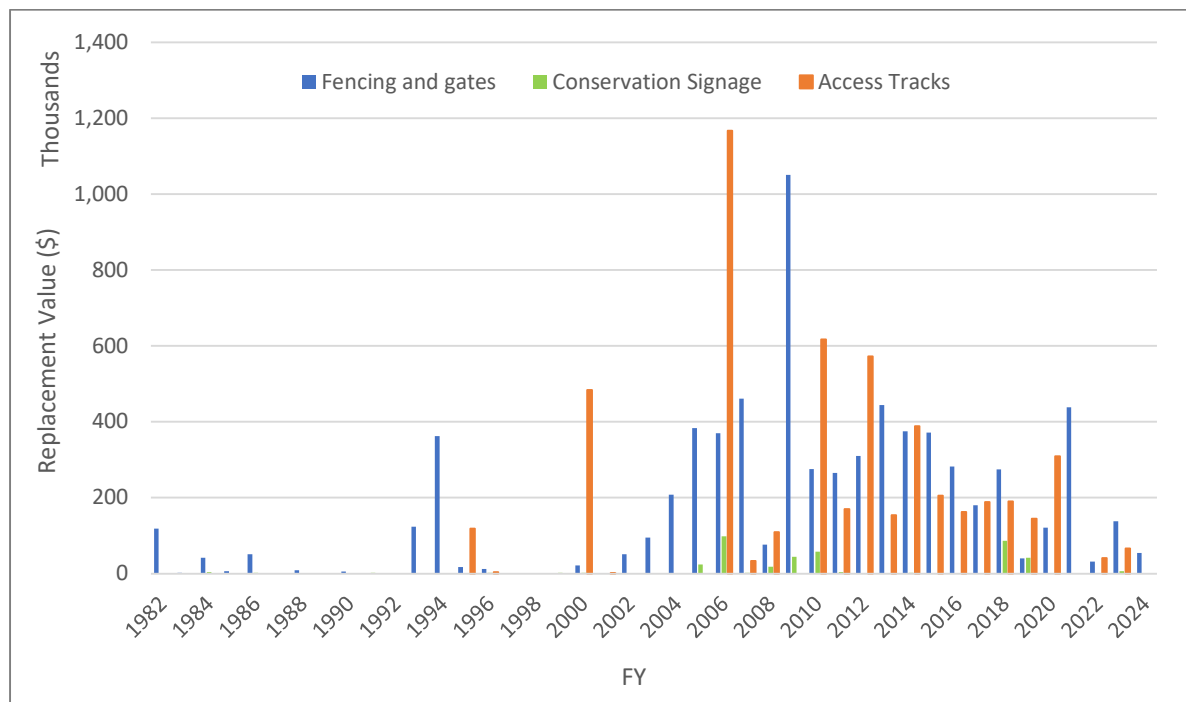
**Table 2: Replacement Cost of Natural Area infrastructure**

Asset Type	Estimated Quantity	Replacement Cost (\$)
Fences and Gates	100 km	\$ 7,065 K
Conservation Signage	200 units	\$ 400 K
Access Tracks	65 km	\$ 5,126K
<b>Total</b>		<b>\$12,600K</b>

## 5.2 Age Profile

The age profile of natural area's infrastructure assets is shown in Figure 1.

**Figure 1: Asset Age Profile – Natural Area infrastructure**



The asset age profiles depicted above provide an indication of the growth experienced within the City with relatively high rates of assets being constructed since 2006.

Increased investment in natural area infrastructure assets has many benefits including; supporting the long-term protection of native vegetation, the increasing community demand for passive recreation pursuits in natural area POS, the expansion of citizen science, increased opportunities for environmental education and community involvement in natural area POS.

## 5.3 Condition Profile

### 5.3.1 Native Vegetation Assets

Native vegetation assets are maintained by the City with the focus of perpetual management. Integral to the maintenance and long-term management of native vegetation is vegetation extent, type and condition data, without which, effective natural area conservation management could not occur. The assessment and monitoring of changes to vegetation condition over time, enables comparisons and evaluations of the effectiveness of the City's maintenance and management techniques, the instigation of adaptive management processes and detection of impacts of threatening processes, such as frequent fire, erosion, climate change and disease.

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate.

Disturbance at a site can be a cumulative effect from a number of interacting disturbance types (DWER, 2018). Within the South West and Interzone Botanical Province, incorporating the Swan Coastal Plain (SCP) which the City is located on, vegetation condition assessments should be undertaken in accordance with the Keighery (1994) rating scale.

Vegetation condition assessments for native vegetation within the City’s natural area parks were previously undertaken for a portion of the City’s reserves in 2002/2003 to inform the City’s Bushland Assessment document, however these assessments are considered out-dated and also were not undertaken in accordance with current accepted industry standards, (instead the Natural Area Initial Assessment templates (NAIA) by the Perth Biodiversity Project (PBP) were utilised). Therefore, the 2002/2003 data is inappropriate to utilise in the planning and scheduling of maintenance and management activities.

To ensure that native vegetation data accuracy is improved and maintained and to assist in effect conservation management, it is recommended that vegetation condition assessments for identified priority reserves, be undertaken over a (5) year rolling programme utilising qualified and experienced botanists.

Table 12 below describes frequency details of NA asset condition assessments.

**Table 3: Natural Area POS Asset Condition Assessment Cycles**

Asset type	Condition assessment cycle (years)	Comments
Access tracks	5	Includes ESL, Limestone and Sand EMVATs
Park Equipment	5	Includes drink fountains and pest equipment*
Park Structures	5	Includes balustrades/handrails, bird nesting (Osprey), non-coastal boardwalks, bollards and fencing, lighting, bench seats, gazebos, signage**, non-coastal steps, walls, showers.
Native Vegetation***		#Flora and vegetation surveys should be coordinated and led by botanists with experience in systematic sampling and analysis methods. It is essential that survey is led by a botanist with knowledge and experience in the ecology of the flora and vegetation of the biogeographic region (bioregion) to be surveyed. The botanist leading the survey should have at least five years’ experience in botanical survey in the bioregion in which the survey is to be conducted (EPA, 2016).

*Notes:*

1. \*Pest Equipment will now be included in the NA park infrastructure asset condition monitoring program.
2. \*\*Signage will be included in a future revision of the NAAMP subject to data validation.
3. \*\*\*Measuring vegetation condition for the South West and Interzone Botanical Province should be in accordance with the Keighery, 1994 scale (DWER, 2018).
4. #Source – EPA Technical Guidance, 2016.

### 5.3.2 Natural Area Infrastructure Assets

Condition assessments for infrastructure assets within NA POS are undertaken on a periodic basis providing critical information to inform infrastructure asset management. Condition assessment data for NA infrastructure assets is currently used by the City for the following purposes:

- to make predictions on expected renewal timeframes;
- to make predictions on long term financial requirements;
- verifying and/or determining the actual condition of an infrastructure asset;
- ensuring renewals are only considered when necessary; and
- validating the useful life predicted for the various infrastructure asset types.

Condition assessment frequency for natural area infrastructure assets has fallen away over the past five years due to resourcing constraints, leading to data-inaccuracies. Inaccurate data causes errors and inconsistencies for both, renewal modelling and long term financial predictions. To ensure that data accuracy is improved and maintained, condition assessments will be undertaken over a (5) year rolling programme; with structural assessments and data validation to be addressed using external resources.

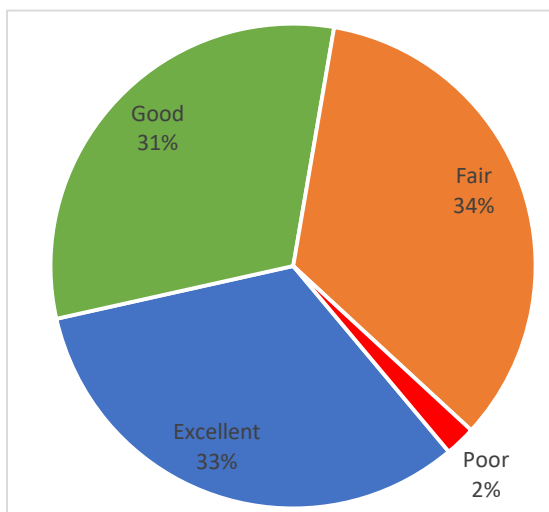
Condition of assets is measured using a 1 – 5 grading system as detailed in Table 13. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system of 1 - 10 is used operational, however, for reporting in the AM Plan results are translated to a 1 – 5 grading scale for ease of communication.

**Table 13: Asset Condition Grading System**

Condition Grading	Description of Condition	Equivalent Grading at 1 -10
1	<b>Excellent:</b> free of defects, only planned and/or routine maintenance required	0 - 2
2	<b>Good:</b> minor defects, increasing maintenance required plus planned maintenance	2 - 5
3	<b>Fair:</b> defects requiring regular and/or significant maintenance to reinstate service	5 - 7
4	<b>Poor:</b> significant defects, higher order cost intervention likely	7 - 8
5	<b>Very Poor:</b> physically unsound and/or beyond rehabilitation, immediate action required	8 - 9

The condition profile of natural area infrastructure is shown in Figure 2.

**Figure 1: Asset Condition Profile – Natural Area Infrastructure**



Condition	Replacement Cost (\$)
Excellent	4,106,952
Good	3,926,889
Fair	4,298,493
Poor	256,617
<b>Grand Total</b>	<b>12,588,951</b>

Responsibility sits across different City business units at each stage of a natural area assets life cycle. A summary for each activity undertaken during the life of a natural area asset and the relevant service unit(s) responsible, is detailed in Table 14 below

**Table 4: Responsibility for natural area asset Life cycle stages**

Lifecycle Stage		Responsibility - Infrastructure	Responsibility – Native vegetation
Create / Build	Determination of need	Collaboration between Asset Planning (AP) and Tree and Conservation Maintenance (TCM) for City built assets	Not applicable.
		Note: depending on the type of asset, other relevant City Service Units will be involved in the planning stages, e.g. Asset Maintenance (AM), Community Safety and Emergency Management (CSEM), Facilities Planning (FP), Place Management (PM) etc.	
		Strategic Land Use Planning and Environment (SLUPE) and/or Land Development (LD) for NA parks resulting from development of new subdivisions (Developers).	
	Construction of asset	Infrastructure Capital Works (ICW) or TCM, managing external contractors for City built assets	Not applicable.
		LD for NA parks resulting from development of new subdivisions (Developers).	
Operate / Maintain	Planning of maintenance requirements	Collaboration between TCM and AM (Engineering and/or Building) for City maintained natural area assets	TCM
		Collaboration between SLUPE or LD and relevant City service units for the review and endorsement of a Developers Environmental Management Plan (EMP) for Developer maintained natural area assets	
	Maintaining assets	TCM or AM (Engineering and/or Building), managing external contractors for City maintained assets	TCM, managing external contractors for City maintained assets
		LD liaising with, and managing the Developer (as required), for Developer maintained natural area assets (until assets are handed over to the City)	
Renew	Planning of renewal requirements	AP	Collaboration between AP and TCM
	Construction of renewal projects	ICW or TCM, managing external contractors	



Lifecycle Stage		Responsibility - Infrastructure	Responsibility – Native vegetation
Dispose	Disposal planning	Collaboration between AP and TCM	Collaboration between Property Services (PS) and other relevant City Service Units  Note: although the relinquishment of a NA park is unlikely to occur, it should be noted that these assets are not owned by the City, they are Crown Land with City of Wanneroo management orders. Therefore, in certain instances, it may be necessary for the City to relinquish the management of these assets.
	Disposal of asset(s)	ICW or TCM, managing external contractors	PS
Overall Asset Management		ICW or TCM managing external contractors	PS

Lifecycle management for the City’s natural area park assets covered by this NAAMP will be discussed separately in further detail below.

#### Native vegetation assets

Native vegetation assets are maintained by the City with the focus of perpetual management. Integral to the maintenance and long-term management of native vegetation is vegetation extent, type and condition data, without which, effective natural area conservation management could not occur. The assessment and monitoring of changes to vegetation condition over time, enables comparisons and evaluations of the effectiveness of the City’s maintenance and management techniques, the instigation of adaptive management processes and detection of impacts of threatening processes, such as frequent fire, erosion, climate change and disease. Surveying for the extent, type and condition of native vegetation – Refer Improvement Action 4.

#### Infrastructure assets

Natural Areas assets are maintained by the City throughout their useful life and their performance and condition are monitored to ensure that they deliver a satisfactory service to the community at an appropriate cost. In addition to age, varying factors, including usage, climatic conditions and vandalism, can contribute to the decline in the useful life of infrastructure assets within the City’s NA parks. Infrastructure asset condition inspections / audits / assessments – Refer Improvement Action 10, 11, 12 and 13.

Coastal proximity is a factor to consider in NA park infrastructure asset lifecycle management, especially the effect on useful life. Infrastructure assets in proximity to coastal conditions will need to be constructed to a higher standard (including materials), due to accelerated deterioration as a result of coastal factors. Currently at the City, no standard distance measurement(s) for quantifying the effects of coastal proximity exists across the City’s various asset classes. Investigation, definition and agreement of the coastal proximity factor for all

City asset classes for both new / upgraded / renewed infrastructure assets and the implications of asset maintenance and management – Refer Improvement Action 14.

Responsibilities need to be further defined and clarified for specific natural area assets, e.g. gazebo upgrades - Refer Improvement Action 2

#### **5.4 Operational and Maintenance Planning**

Operations and maintenance is the regular on-going work that is necessary to keep assets at an acceptable level of service, including instances where portions of the asset fail and need immediate repair to make the asset operational again. Maintenance includes reactive, planned and cyclic maintenance work activities.

The responsibility for maintenance of natural area park assets sits with Parks & Conservation Management service unit, specifically the Tree and Conservation Maintenance (TCM) sub unit. Maintenance works are carried out by both internal City employees and City engaged contractors. In some instances, the City is increasing the utilisation of contractors for maintenance works due to:

- Space constraints within Ashby Operations Depot, preventing growth in team and storage of necessary equipment and vehicles needed to service all City managed natural area parks.
- Specialised maintenance requirements of technical infrastructure assets that are being handed over to the City.
- Specialised maintenance requirements of native vegetation assets, including weed management, rehabilitation works etc.
- The extent of the City. Travel for internal crews from the Ashby Operations Depot to the City's outlying suburbs (i.e. Two Rocks) cuts into the time available to maintain the City's natural area parks.

##### **5.4.1 Maintenance tasks and programmes**

Assessment and prioritisation of reactive maintenance is undertaken by the City's TCM team using experience and judgement. Maintenance tasks and activities associated with the maintenance of natural area park assets are both numerous and varied. While a large proportion of TCM task procedures are documented, integration of these activities with a dedicated system is currently lacking.

Current maintenance expenditure levels are considered inadequate to meet certain key service levels, such as response times.

Both maintenance items above will be improved, and evaluated in conjunction with, the development of the Natural Area Maintenance Management Plan (NAMMP) - Refer Improvement Action 19.

While the City currently has various maintenance programs and emergency response mechanisms for natural area park assets, including the 2019 Conservation Maintenance Work Practice Manual, it is recommended to develop and document a formal NAMMP detailing the maintenance, inspection and preventative maintenance activities that are required to meet the agreed levels of service to ensure that natural area assets meet their full potential. Some examples of what will be included in the NAMMP are:

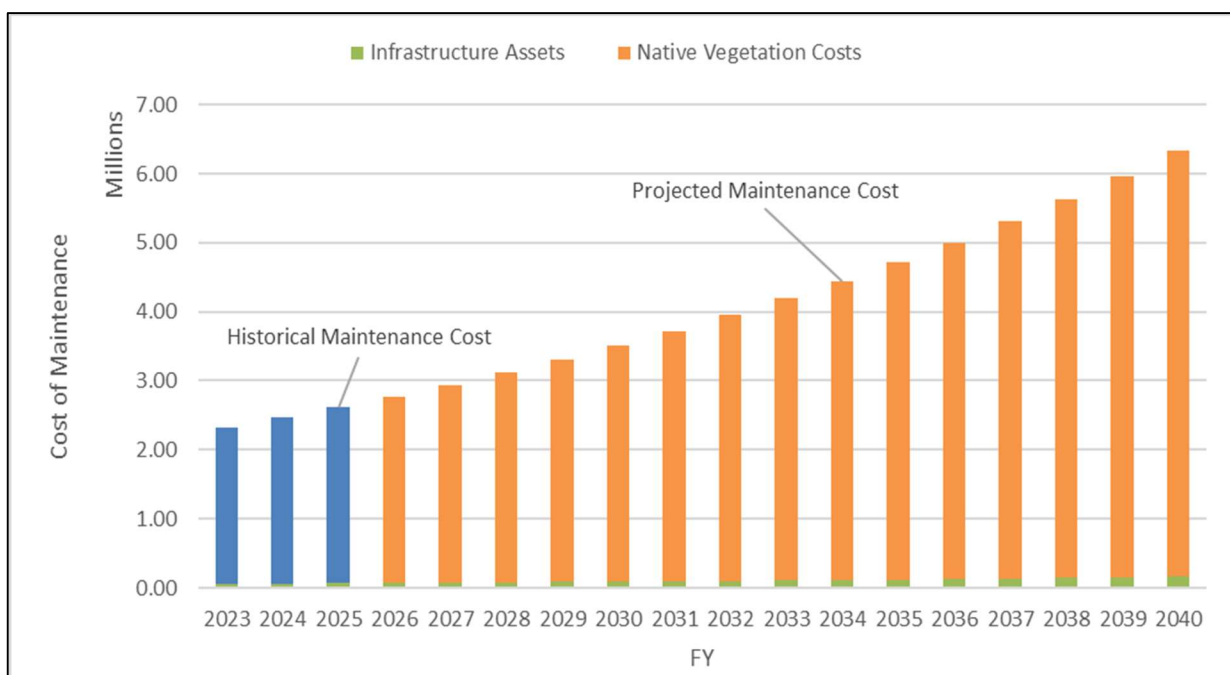
- Asset audits and inspections (infrastructure and native vegetation);
- Community event management;
- EMVAT maintenance clearances, pruning, weed management activities;

- Fauna management;
- Fire mitigation and management;
- Management and maintenance of Aboriginal and European sites of cultural significance;
- Native vegetation pruning and removal (if necessary);
- Natural area infrastructure assets hazard intervention levels and risk assessment;
- Natural area park equipment cleaning and maintenance (e.g. drink fountains and pest equipment);
- Natural area park furniture and structures cleaning and maintenance (e.g. gazebo's, fencing, gates, bench seats, signs etc);
- Nursery services including, seed collection and propagation;
- Pathogen management;
- Pest management;
- Rehabilitation activities including, site preparation and stabilisation, planting, watering etc;
- Waste management;
- Weed management program, including woody weed removal;
- Works procedures;
- Works schedules.

The City's work order and complaints recording system does not provide adequate information on maintenance work types, costs and identification of asset on which the maintenance is carried out. This is a key barrier for maintenance planning and for asset life-cycle costing, with this information needed to identify optimum renewal intervention levels for the renewal of assets. The AMIS (which is in development and testing phase) will assist in addressing shortcomings.

Using historical maintenance expenditures as the baseline/reference level, future operational and maintenance expenditure are forecasted as shown in Figure 3.

**Figure 3: Forecast of Operations and Maintenance Costs.**



## **5.5 Renewal**

### **5.5.1 Native Vegetation Assets**

The City has an annual native vegetation rehabilitation (renewal) program in the long term Capital Works Program to progressively rehabilitate and revegetate native vegetation assets within City managed natural area parks that are presenting impacts of threatening processes or have reached a poor or degraded level of vegetation condition. Project costs are dependent on vegetation condition of the proposed project site, impacts of threatening processes (climate change, frequent fires etc) in addition to site specific factors including: grades, vandalism, accessibility etc.

In lieu of up to date and complete vegetation condition scale data for all City managed natural area parks, rehabilitation projects are planned via collaborations of relevant City Service units, ongoing maintenance requirements, similar works located in proximity to a proposed rehabilitation project (economies of scale and greater ecological outcomes) and community and relevant stakeholder requests and concerns (including friends groups). The receipt of accurate vegetation condition data will assist in informing future rehabilitation priorities and programs.

### **5.5.2 Infrastructure Assets**

The City has an annual natural area infrastructure asset renewal program in the long term Capital Works Program to progressively renew or replace natural area infrastructure assets that have reached the end of their useful life. Allowances are made to the total renewal costs to consider improved accessibility and functionality of natural area infrastructure assets.

The long term renewal demand requirement is derived from predictions made using available infrastructure asset condition data and expected useful life of assets using the City's self-developed renewal spreadsheets. Once the AMIS is implemented, it will be used for renewals modelling.

The useful lives of each natural area infrastructure asset component, deterioration rate factors and the corresponding intervention condition level (which is an agreed trigger point at which a renewal of the asset component will be required) used in the renewal prediction model and evaluations are as shown in Appendix A.

The annual infrastructure asset renewal program is developed and prioritised based on the following criteria:

- the overall age and/or condition of the assets and its components:
- the ongoing maintenance demand:
- works being aligned where possible by location or locality (to take advantage of cost efficiencies through economies of scale): and
- community and relevant stakeholder requests and concerns.

Infrastructure assets identified for renewal in the following year's budget are re-inspected to verify the accuracy of their remaining useful life estimate and to confirm if the asset is in fact due for renewal, or if they can continue to provide adequate service prior to renewal.

### **5.5.3 Natural Area Assets – renewal responsibility and specifications**

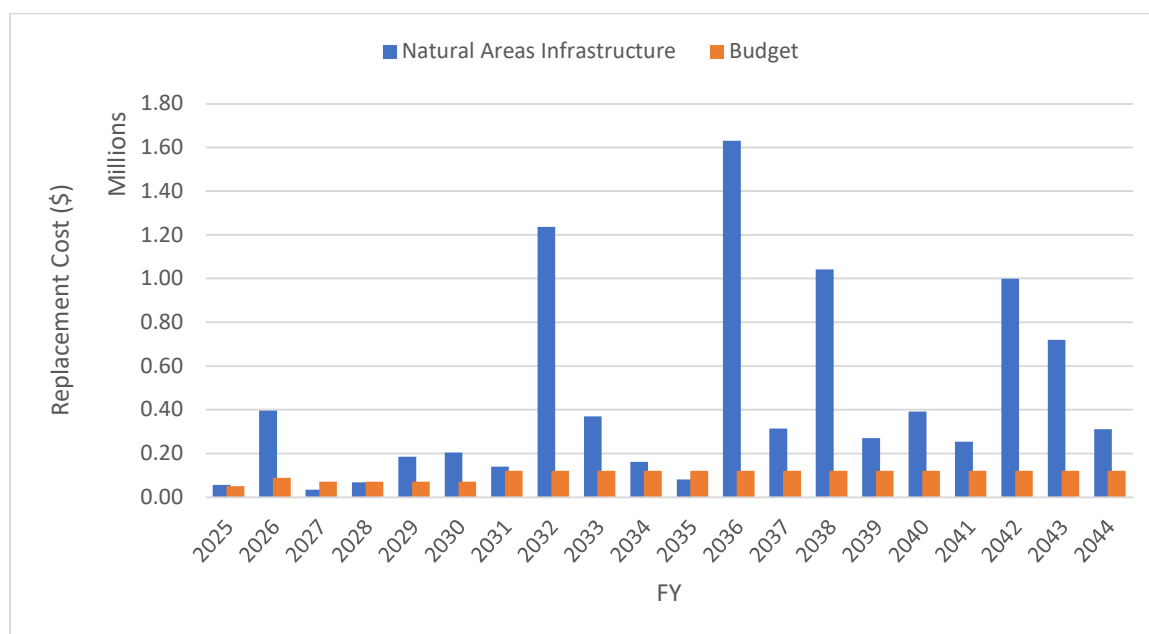
The responsibility for the programming of renewals of both native vegetation and infrastructure assets within natural area parks lies with Asset Planning. Construction of renewal works is project managed by Infrastructure Capital Works (ICW) with physical work predominantly undertaken by external contractors.

The suite of documents being prepared by Community Facilities will develop design guidelines and specifications to inform the planning and design of open space (natural area parks) and community buildings within the City. It will involve the development of evidence based standards that will provide the City with justified benchmarks and other criteria in order to determine facility requirements into the future. These standards will influence the provision of all new infrastructure and will inform the asset management plans in terms of renewal, upgrades and maintenance.

#### 5.5.4 Renewal Forecast

The forecast for the renewal of natural area park infrastructure assets and the corresponding renewal funding allocation in the 20-year long term capital renewal budget is as shown in Figure 4 below.

**Figure 4: Natural Area Infrastructure Assets – Renewal Forecast v Budget.**



It is anticipated that there is sufficient budget allocated to meet the renewal demand at least in the first 5 years. Asset conditions are being verified to ensure that the renewal demand prediction are accurate. The budget requirements will be reviewed following the verification exercise.

The useful lives of the infrastructure considered in this plan is as shown in Table 15

**Table 15: Useful Lives of Infrastructure Assets**

Asset Category	Useful life
Conservation Signage	25 years
Fences	50 years
Gates	30 years
Access Tracks	25 years

The available data recorded indicates that the condition assessments are past due, therefore the condition used in the forecast may not be accurate. In instances where renewal funding requirements are low, it is proposed to transfer surplus funding requirements into renewal reserves until needed.

## **5.6 Creation / Acquisitions / Upgrades**

External factors drive the demand for new, upgraded or renewed natural area assets. The provision of natural area park assets occurs via the following ways:

- Gifted by developers in new subdivisions as/or within POS (NA parks).
- Required outcomes of conditioned environmental approval(s) due to assessments and decisions under applicable Environmental Law(s). Applications and assessments are instigated due significant impacts of projects or land developments on remnant vegetation and/or matters of national environmental significance.
- New, upgrade or renewal works by the City, for example;
  - Native vegetation assets: rehabilitation projects to improve vegetation condition and structure, increase vegetation cover and to address threatening processes etc.
  - Infrastructure assets: built or upgraded to improve accessibility for emergency and maintenance vehicles and personnel, passive recreation pursuits for community members, or to assist in providing education about, and protection to, native vegetation.

As a growth council, new NA park assets are gifted annually through new developments (primarily residential) as a result of State planning requirements for Public Open Space (POS). A further consequence of these new developments, is the significant impacts they have upon remnant vegetation and/or matters of national environmental significance, due to which initiates the condition(s) of further retention of remnant vegetation and complimentary infrastructure assets within NA parks. Generally, resulting in the over-provision of Nature POS within a development, i.e. over and above the State planning requirements for POS.

As defined in Table 16, Land Development (LD) is responsible for approving and managing the provision of new natural area park assets in development areas (i.e. POS gifted by Developers) and where an infrastructure asset is created, renewed or upgraded by the City, the areas primarily responsible are Asset Planning (AP), Tree and Conservation Maintenance (TCM) and Infrastructure Capital Works (ICW).

The City's capital works program includes the renewal, upgrade and provision of new natural area assets. This is driven by asset management data, external factors such as community requests (i.e. friends groups, bushcare groups), internal City requests (i.e. CSEM, FP, PM (including TCM)), State agency requests (i.e. DBCA, DFES) and/or endorsed plans such as those listed below (for further plan details see References in Section 10):

- Location specific Environmental Management Plans (e.g. CAMP / WMP / FMP);
- Yellagonga Integrated Catchment Management Plan (YICM)2021-2026
- Parks Service Levels (adopted in 2011) – see Table 15 (Section 4.5 above);
- Local Planning Policy 4.3 – Public Open Space (LPP 4.3) (adopted April 2021);
- Local and District Structure Plans;
- Strategic Community Plan (SCP); and Community Development Plan 2021/22-2025/26.

The City's LPP 4.3 defines Council's position on the planning, provision, location, design and development of POS. Specifically, part 2 of this policy outlines the design and provision requirements in section '3.4 Nature POS' for natural area parks, and Schedule 5 of the policy describes the compliance criteria required to attain minimum viability of a proposed natural area park (i.e. a scored assessment of size, shape, perimeter to area ratio, vegetation condition and connectivity). All plans submitted by Developers are reviewed against this policy to ensure compliance, in some instances an over-provision is deemed acceptable (i.e. in cases where assets have been conditioned as a part of assessments and decisions made under applicable Environmental Law(s)). In these cases, the City may need to budget for additional renewal in future years.

The City has a capital program of works for:

- new/upgrade of fencing and signage,
- new/upgrade of Emergency and Maintenance Vehicle Access Track's (EMVAT),
- native vegetation rehabilitation projects and
- renewal of infrastructure assets (e.g. fencing and gates, signage – park name sign and interpretative, EMVAT's, gazebos, bench seats, boardwalks and steps (non-coastal), bird nesting structures, pathways, lighting, drink fountains, walls and safety rails).

The capital program of works for natural area parks is instigated in a variety of ways, these are explained for key infrastructure asset types below.

#### **5.6.1 Access tracks – EMVAT's (ESL, Limestone and Sand)**

EMVAT's allow emergency and maintenance vehicles access to the City's natural area parks, these tracks also allow for passive recreation pursuits such as bushwalking and bird watching. The listing and programming of sand tracks upgraded to limestone, or the renewal of limestone tracks to ESL tracks in the capital works program, is subject to the following:

- Ease of emergency or maintenance vehicle access;
- Risk / safety issue being present;
- Bushfire risk rating of the Natural Area Park that the EMVAT is located.
- Request from internal or external stakeholder; and
- Presence of flora or fauna values within and along the proposed track's alignment.

Once the above factors are known, relevant stakeholders meet to discuss listing and prioritising tracks in the City's program of works. If works are subject to requiring an environmental application and assessment prior to commencement of works, these sites are delayed until the relevant assessments have been completed and decisions have been received.

#### **5.6.2 Park Structures - Fencing, Bollards and Gates**

Fencing, bollards and gates provide for managed access via designated access points for the communities passive recreational pursuits, ensuring the flora and fauna values of the natural area reserves are not negatively affected or impacted by unmanaged access. These types of infrastructure also assist in reducing, and preventing, unauthorised access from trail bikes and 4wd vehicles.

The listing and programming of fencing, bollards or gates in the capital works program, is subject to the following:

- Ease of access for emergency or maintenance vehicle;
- Risk / safety issue being present;
- Vandalism issue being present;
- Requirement to define access points and provide managed and safe access;
- Request from internal or external stakeholder; and
- Presence of flora or fauna values requiring protection

Once the above factors are known, relevant stakeholders meet to discuss listing and prioritising these assets in the City's program of works. If works are subject to requiring an environmental application and assessment prior to commencement of works, these sites are delayed until the relevant assessments have been completed and decisions have been received.

### **5.6.3 Park Structures - Signage - Park Name, Interpretative etc**

Signage provides opportunities for the City to convey Regulatory, Directional or Advisory information to NA park visitors to better inform recreational pursuits. Regulatory information advises NA park visitors of potential risks within the park and/or penalties for inappropriate NA park use. Directional Signage (generally a Park Name Sign) provides NA park users location information about the site they are visiting. Advisory or Informational signage (for example Interpretative Signage) provides park users specific information about the NA park they are visiting, including: flora and/or fauna values, historical land uses, heritage site information, threats to the park etc.

The listing and programming of signage works in the capital works program, is subject to the following:

- Requirement to provide directional or informative signage (City policy, management plan or condition of approval);
- Opportunities for education or citizen science;
- Presence of pedestrian access into, and throughout, the NA park;
- Presence of flora or fauna values;
- Request from internal or external stakeholder; and
- Stakeholder partnerships (schools, bushcare groups, DBCA etc).

Once the above factors are known, relevant stakeholders meet to discuss listing and prioritising signage requirements in the City's program of works. If works are subject to requiring an environmental application and assessment prior to commencement of works, these sites are delayed until the relevant assessments have been completed and decisions have been received.

The Access tracks and Park structures detailed above are all infrastructure assets that are subject the City's Project Management Framework (PMF) process requirements, as well as, the agreed Handover (HO) process between Infrastructure Capital Works (ICW) and Tree and Conservation Maintenance (TCM). This includes but is not limited to completion of relevant project documentation throughout the life of the project,

- a Practical Completion (PC) meeting following completion of construction works between the City and the Contractor;



- a Handover meeting prior to handing over the newly built, upgraded or renewed asset from ICW to TCM for ongoing day to day planned and reactive maintenance;
- Completion of handover memo and provision of relevant document from ICW to TCM; and
- Completion of Asset Records Sheets and provision of relevant document from ICW to AP to update and validate the City's asset database.

Following handover of the infrastructure asset to TCM, ongoing maintenance is required to be scheduled to ensure that the newly created, upgraded or renewed infrastructure asset(s) are maintained in accordance with their specific life cycle requirements. The handover of assets impacts and informs TCM's maintenance schedules, resourcing and funding requirements. Planned maintenance ensures that infrastructure assets do not fail or require early intervention for upgrade or renewal and ensures that the assets attain their useful age requirements.

#### **5.6.4 Native Vegetation - Revegetation/Rehabilitation**

Threatening process in bushland, coastal foreshore and wetland environments place pressure on flora and fauna values within natural area parks causing degradation.

Threatening process such as weed invasion, feral animals, the impact of increased fire regimes and climate change, pathogens, unrestricted access (trampling of vegetation) and vandalism etc result in negative impacts to native vegetation and cause the decline of vegetation from an acceptable condition to a degraded condition with a complete loss of ecological function. When this occurs, vegetation cover and species richness is lost with an increase in bare areas, thus resulting in further weed invasion. These degraded sites are a liability to the surrounding native vegetation, increasing pressure on the remainder of the natural area park.

Degraded locations are identified by City staff and mapped for consideration and prioritisation in the annual program of Capital Works (CW). Sites that contain key flora or fauna species are considered to be high priority, whereas in coastal foreshore environments sites that contain 'blowout's' are considered a higher priority than those that don't (blowouts can increase exponentially in size without intervention). Other considerations could include the support and/or presence of bushcare groups /community groups that may assist with ongoing management requirements.

Other revegetation sites, such as those resultant from conditions of environmental approval documents (known as 'environmental offset sites'), are selected due to their proximity to the native vegetation clearing site, large extents of vegetation in a degraded condition and ability to provide large-scale revegetation/rehabilitation opportunities. In addition to revegetation/rehabilitation with existing City natural area parks, there are instances when the City is required to procure new sites/land to vest as natural area parks or vest in State agencies for perpetual management. In the instance of an environmental offset site being a requirement, it is necessary for the City to comply with the conditions stipulated in the approval documentation and is subject to compliance activities and annual reporting regarding the progress and success of the revegetation/rehabilitation site(s).

Revegetation and rehabilitation projects detailed above are subject the City's Project Management Framework (PMF) process requirements, as well as, the agreed Handover (HO)

process between Infrastructure Capital Works (ICW) and Tree and Conservation Maintenance (TCM). This includes but is not limited to:

- completion of relevant project documentation throughout the life of the project;
- Monthly inspection meetings between ICW and the City’s contractor during the life of the project to discuss project progress, success to date and upcoming works;
- a Practical Completion (PC) meeting following completion of final revegetation/rehabilitation works between the City and the Contractor;
- a Handover meeting prior to handing over the revegetation/rehabilitation site from ICW to TCM for ongoing day to day planned and reactive maintenance at the end of the 2 year project cycle (generally held after June 30th);
- Completion of handover memo and provision of relevant document from ICW to TCM; and
- Completion of Asset Records Sheets and provision of relevant document from ICW to AP to update and validate the City’s asset database.

Following handover of the revegetation/rehabilitation site to TCM, ongoing maintenance is required to be scheduled to ensure that the revegetation/rehabilitation site is maintained in perpetuity. The handover of revegetation/rehabilitation assets impacts and informs TCM’s maintenance schedules, resourcing and funding requirements. Planned maintenance of these sites ensures that newly revegetated/rehabilitated assets do not fail or require early intervention for capital renewal and ensures that other degraded areas present within the City’s natural area parks can be programmed for renewal, instead of re-renewing the CW sites continually. The continual re-listing of previous revegetation sites in capital renewal projects prevents the City actioning threatening processes affecting natural area parks which if left, can increase the size of degraded areas considerably and negatively affect the flora and fauna values of the site, in addition to impacting NA park aesthetics.

### 5.6.5 Program of Works

Table 16 below, provides a snapshot of the types of works proposed within natural area parks and summarises the current City program of works.

**Table 5: Future years proposed works**

PR Number	Description	Comment	Responsibility
<b>Sub-Program: Environmental Offset</b>			
PR1006	New Sites for Environmental Offset Requirements	Native vegetation rehabilitation requirements and construction of new infrastructure assets within Mather Reserve, Neerabup and Mary Street Park, Wanneroo conditioned under Environmental Law(s) to enable the City’s development of the Neerabup Industrial Area, Neerabup.	Advocacy and Economic Development (AED) and Infrastructure Capital Works (ICW)
PR2088	Renewal site for Environmental Offset Various Requirements	Native vegetation rehabilitation requirements and construction of new infrastructure assets within Badgerup Reserve, Wanneroo conditioned under Environmental Law(s) to enable the City’s construction works on	Asset Planning(AP) and ICW

PR Number	Description	Comment	Responsibility
		various major roads (Ocean Reef Road, Hawkins Road, Brazier Road and Franklin Road).	
PR2089	Renewal site for Environmental Offset Requirements	Native vegetation rehabilitation requirements and construction of new infrastructure assets within Honeypossum and Boomerang Reserves, Banksia Grove conditioned under Environmental Law(s) to enable the City's construction works on various roads (Wesco Road and Hester Avenue).	AP and ICW
PR4178	Renew Site for Environmental Offset Old Yanchep Road	Native vegetation rehabilitation requirements and construction of new infrastructure assets within Badgerup Reserve, Wanneroo conditioned under Environmental Law(s) to enable the City's construction works on Old Yanchep Road, Neerabup/Pinjar.	AP and ICW
PR-EO903	Renewal Site for Environmental Offset Requirements	Native vegetation rehabilitation requirements and construction of new infrastructure assets at Flynn Drive. Offset site Wallangarra Reserve and Edgar Griffiths Park-PROPOSED Environmental Offset for the duplication of Flynn Drive	AP and ICW
PR-EO902	Renewal Site for Environmental Offset Requirements	Native vegetation rehabilitation requirements and construction of new infrastructure within Two Rock Beach Access Way - clearing permit and rehabilitation plan	AP and ICW
PR-4179	Renewal Site for Environmental Offset Requirements	Native vegetation rehabilitation requirements and construction of new infrastructure within Lake Joondalup, Yellagonga Regional Park New Board Walk – (Bird Hide)	AP and ICW
<b>Sub-Program: Conservation Reserves</b>			
PR1101	Recurring program, Upgrade fencing within conservation reserves	Upgrade fencing within bushland and wetland natural area parks under the City's management.	AP, Tree and Conservation Maintenance (TCM) & ICW
PR1567	Recurring program, Renew conservation reserves	Renew/restore bushland and wetland environments within natural area parks under the City's management.	AP, TCM and ICW
PR1680	Recurring program, Upgrade tracks	Upgrade sand tracks to crushed limestone tracks (EMVAT's) in natural area parks under the City's management on an agreed priority basis.	AP, Community Safety and Emergency Management

PR Number	Description	Comment	Responsibility
			(CSEM), TCM and ICW
PR2658	Recurring Program, Renew Natural Area Assets	Renewal of NA park structures as they reach the end of their useful life	AP and ICW
<b>Sub-Program: Foreshore Management</b>			
PR2016	Recurring program, Renew Foreshore	Restoration of dune environments within coastal foreshore reserves under the City's management, including: Mindarie, Quinns Rocks, Jindalee, Yanchep and Two Rocks.	AP, TCM and ICW
PR2017	Recurring program, Upgrade foreshore fencing at various locations	Upgrade fencing within coastal foreshore reserves under the City's management, including: Mindarie, Quinns Rocks, Jindalee, Yanchep and Two Rocks.	AP, TCM and ICW
PR-2672	Recurring Program, Upgrade Beach Accessways	Upgrade of beach accessways and surroundings.	EM
PR-4169	Renew breakwater infrastructure		EM
PR-4221	New fire access track	Undertake the design, construction and environmental revegetation works for a fire access track along the western boundary of properties 72-80 Capricorn Esplanade, Yanchep, including tie-ins and associated infrastructure. 2019/20 Feasibility / Concept Design and liaison with Yanchep Masterplan project 2020/21 Concept design 2021/22 Detailed design 2022/23 Revised detailed design & approvals, 2023/24 Civil construction & 1st Year Rehab 2024/25 2nd Year Rehab 2025/26 3rd Year Rehab	ICW
PR-4234	New beach accessway		EM
PR-4281	Construction of community recreation and amenity facilities at the Capricorn coastal node	City's contribution towards the construction of the asset by the developer in accordance with the YTR DCP	Developer
As issued	New works including EMVAT's, Fencing,	Following a project request from an internal or external stakeholder, AP investigates the proposal with relevant stakeholders,	Various natural area stakeholders

PR Number	Description	Comment	Responsibility
	Bird Hides, Signage etc.	undertaking any additional studies required. If the request is approved, the project proposal is finalised and programmed into the Capital Works programme.	including: AP, TCM, CSEM, ICW etc

### 5.6.6 Developer contributed assets

Annually, the amount of natural area assets received via developer contribution are low in comparison to the number received via the City's own capital works program. In comparison to the City's other asset types, only a small amount of natural areas assets are received via developer contribution (e.g. 1 to 2 natural area parks every few years, verses 1 to 3 passive parks received annually). Due to the minimal amount of natural area assets received via developer contribution on an annual basis, the City's capture and analysis of the developer contributed natural area parks and infrastructure assets data requires improvement. Improved capture of this data will enable the City to plan for anticipated growth, plan for expenditure within the operating and capital works budgets, undertake comprehensive asset lifecycle planning and assist with the prioritisation of asset upgrade and renewal works – Refer Improvement Action 15.

### 5.6.7 Improvements

Where development of new, upgraded or renewed assets is proposed (by either Developers or the City), the roles of all stakeholders to be documented to provide clarification of responsibilities - Refer Improvement Action 16. ie Develop a Stakeholder Engagement & Communication Matrix for new, upgrades or renewal of the natural area assets lifecycle.

During a Developers maintenance period for natural area parks, and to ensure compliance with the approved EMP, document procedures/processes to enable the City to ensure assets are adequately maintained to the City's satisfaction throughout the life of the asset prior to acceptance by the City. - Refer Improvement Action 17.

Lifecycle planning should be considered for new assets and major upgrade works. When the Developer constructs or the City plans new natural area assets, the costs associated with the assets should be reported to ensure good asset management. These include costs throughout the life of the asset: maintenance, renewal, replacement, disposal. This provides Council Members, and the City's leadership team a projects true costs - Refer Improvement Action 18.

## 5.7 Disposal

Disposal requirements are assessed on an individual case-by-case basis. Infrastructure asset disposal is mainly driven by the requirement to replace the asset as it reaches the end of its useful life. Native vegetation disposal (at a natural area park level), is generally driven by the Department of Planning, Lands and Heritage (DPLH) as the owners of Crown Land under the Land Administration Act 1997. As the City manages the land, the City has input into the process, however in some circumstances the land may be relinquished.

Natural area park assets are reported for financial purposes at the time of disposal. There is currently no scheduled plan developed for the disposal of natural area park assets. A needs investigation to be undertaken to determine if a disposal plan is required - Refer Improvement Action 20.

## 5.8 Standards and Specifications

The standards and guidelines used in building, maintaining and renewing assets based on the three types of environments found within the City's natural area parks are detailed in Table 17.

**Table 6: Standards and Guidelines**

Standards and Guidelines	Environments within the City's natural area parks		
	Bushland	Coastal Foreshore	Wetlands
Approved and endorsed Environmental Management Plans (EMP) for specific natural area parks (including, CAMP, FMP and WMP)	*	*	*
Australian Standards	*	*	*
Bushfire Risk Management Plan	*	*	*
Climate Change Adaptation & Mitigation Strategy 2020/21 – 2025/26	*	*	*
City Policy's (e.g. Pesticides Management Policy, Weed Management Policy etc)	*	*	*
City of Wanneroo Guidelines and Standard Drawings	*	*	*
Coastal Assets Policy		*	
Coastal Hazard Risk Management Adaption Plan (CHRMAP)		*	
Coastal Management Plan Part 1 (under review)		*	
Environmental Management Plan (EMP) Guidelines (including FMP guidelines)	*	*	*
Firebreak Location, Construction and Maintenance Guidelines (FESA)	*	*	*
Industry best practice management techniques for the management of natural areas	*	*	*
Local Biodiversity Plan 2018/19-2023/24	*	*	*
Local Government Biodiversity Planning Guidelines for the Perth Metropolitan Region (WALGA) 2004	*	*	*
Local Environmental Strategy 2019	*	*	*
Local Government Guidelines for Bushland Management (In the Perth and Coastal South-West Natural Resource Management Regions Western Australia)(WALGA) 2009	*	*	*
Local Government Guidelines for Subdivisional Development (IPWEA, 2016).	*	*	*
Local Planning Policy 1.1 – Conservation Reserves	*		*
Local Planning Policy 4.3 – Public Open Space (specifically, 'Nature POS').	*		*
Managing Phytophthora Dieback – Guidelines for Local Government (Dieback Working Group) 2000	*	*	*

Occupational Safety and Health Act 1984 (the OSH Act) and the Occupational Safety and Health Regulations 1996 (the OSH regulations)	*	*	*
State Planning Policy 2.6 – Coastal Planning		*	
Yellagonga Integrated Catchment Management Plan (currently under review)	*		*

TCM utilises the '2019 Conservation Maintenance Work Practice Manual' internal document to inform operational tasks and activities within natural area parks. During the development of the NAMMP (Refer Improvement Action 19), the work practice manual will be reviewed to ensure all procedures and maintenance activities for NA park assets (including inspection requirements, responsibilities etc) are described.

## 6. RISK MANAGEMENT

The City's Risk Management Policy provides details of the City's Risk Management Framework, procedures and processes for identifying, analysing, assessing and proactively managing risks.

An assessment of risks associated with service delivery from natural area park infrastructure assets has identified critical risks to the City in accordance with the City's Risk Assessment Criteria Matrix. The risks are summarised in Appendix G.

The risk assessment process identifies the following: credible risks:

- the likelihood of the risk event occurring:
- the consequences should the event occur:
- developing a risk rating:
- evaluating the risk: and
- developing a risk treatment plan for non-acceptable risks.

There are no critical risks identified in this plan, assessed as 'High' - items prioritised corrective action. Risks identified in this plan include those assessed as 'Moderate' - items requiring moderate corrective action and 'Low' – items requiring performance monitoring or corrective actions with a low priority rating subject to available resources.

### 6.1 Asset Criticality

Critical assets are those assets which have a high consequence of failure but not necessarily a high likelihood of failure. By identifying critical assets and critical failure modes, the City can target inspection activities, maintenance plans and capital expenditure plans at the appropriate time and level of importance. With the NAAMP, it is not the infrastructure that is assessed for criticality but the natural areas that have high environmental value. The infrastructure that are associated with these natural areas will have a high level of service compared to other areas.

A list of critical natural areas are included in Table 18.

**Table 7: Critical Natural Areas and the frequency of maintenance visits.**

Criticality of Conservation Area	Scheduled Visits
Very high priority	12 times a year
High	6 times a year
Medium High	4 times a year
Medium Low	3 times a year
Low – all contractors	3/year

Operational and maintenance activities target critical infrastructure assets to prevent failure and maintain service levels. Critical infrastructure asset failure modes and required operations and maintenance activities are detailed in Table 19. If a natural area infrastructure park asset becomes unsafe it will be secured until repair or renewal.



**Table 19: Critical Failure Mode and Risk Treatments**

Critical Assets	Critical Failure Mode	Risk Treatments
Infrastructure assets located within coastal areas	Shorter life span	Regular inspections during maintenance of the natural area park. Maintenance or renewal work if required
High / Raised structures	Collapse or partial collapse	Regular inspections during maintenance of the natural area park. Maintenance or renewal work if required, or if needed a consultant is commissioned to carry out a structural inspection to verify safety and maintenance/renewal required.

## 7. FINANCIAL SUMMARY

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

### 7.1 Financial Sustainability and Projections

There are two key indicators of sustainable service delivery that are considered in AM. The two indicators are the:

$$\text{Asset Renewal Funding Ratio (ARFR)} = \frac{\text{proposed renewal budget for the next 10 years}}{\text{proposed renewal demand for the next 10 years}}$$

$$\text{Lifecycle Funding Ratio (LFR)} = \frac{\text{proposed lifecycle budget for the next 10 years}}{\text{proposed lifecycle demand for the next 10 years}}$$

The ARFR is an important indicator and illustrates how the City will be performing over the next 10 years in terms of funding its renewals demand. An ARFR of 100% would mean that the City intends to fully fund its asset renewal demand over the next 10 years.

At this stage the proposed renewal budget is adequate to meet the forecast renewal demand illustrated in Figure 4 at least for the first five years. The asset condition of asset will be reviewed to ensure that the renewal spikes depicted can be quantified. It is therefore expected that the ARFR for natural area infrastructure would be in the order of 80%.

The LFR measure is a similar measure to the ARFR except that the LFR includes all lifecycle costs, inclusive of asset renewal requirement, operations and maintenance costs 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.

The City currently does not have an accurate way of forecasting its long-term operating and maintenance budgeting requirement. As part of the LTFP process a percentage allowance for inflation and growth is added to the current financial year operating and maintenance budget. At financial year end, the total actual expenditure is measured against budget to determine the adequacy of budget allowances. Therefore, at this stage the LFR is not able to be calculated.

### 7.2 Funding Strategy

The forecast renewal demand and maintenance requirements for this AM Plan is expected to be fully accommodated within the current long-term financial plan over the next 10 years.

### 7.3 Asset Valuation Forecasts

The value of natural area infrastructure assets covered by this AM Plan as at 30 June 2024 is summarised in Table 20. At this stage, it is not anticipated that there will be significant valuation movements forecasted in the next few years.

**Table 20: Value of Infrastructure Assets**

Natural Area Park Infrastructure Assets	Replacement Cost (\$)	Depreciated Replacement Cost (Fair Value)	Annual Depreciation
Conservation Signage	\$ 398,000	\$ 179,930	\$ 13,267
Fences & Gates	\$ 7,064,451	\$ 3,985,579	\$ 145,511
Access Tracks	\$ 5,126,500	\$ 2,819,672	\$ 170,883
<b>TOTAL</b>	<b>\$ 12,588,951</b>	<b>\$ 6,985,182</b>	<b>\$ 329,661</b>

**7.4 Key Assumptions Made in Financial Forecasts**

Key assumptions made in this AM Plan are:

- Future operation and maintenance budgets are assumed to be consistent and increase with expansion of natural areas and population growth.
- Forecasts have been made based on current asset databases and accurate rates for replacement cost.

**7.5 Forecast Reliability and Confidence**

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. The data confidence used is classified on a ‘A’-‘E’ level scale in accordance with Table 21.

**Table 21: Data Confidence Grading System**

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

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 22.

**Table 22: Data Confidence Assessment for Data used in AM Plan**

Data		Confidence Assessment	Comment
Demand drivers		C	Demand and growth projections is subject to rate of development experienced along the coastal corridor and East Wanneroo
Growth projections		C	
Acquisition forecast		C	
Operations & Maintenance forecast		C	More accurate budget planning needs improvement.
Renewal forecast	Asset values	B	Renewals have been based on condition assessment where available.
	Asset useful lives	C	Useful lives are based on professional judgement, experience and available industry data.
	Condition modelling	B	Modelling based on asset data
Disposal forecast		C	Based on known planned disposals

## **8. IMPROVEMENTS, MONITORING AND REVIEW**

### **8.1 Improvement Plan**

The improvement plan generated from this AM Plan targets the City's asset management of natural areas and is detailed in Table 23. All tasks aim at improving natural area asset management in the short and longer terms. The task outcomes will be measured and monitored over the next four years and progress reported on in the next NAAMP iteration.

### **8.2 Performance Monitoring**

It is intended that this AM Plan is a live document that is relevant and integral to the daily AM activities at the City. The AM Plan has a life of 4 years whereby a review will be undertaken following this period.

The annual and LTFP projections detailed in the AM Plan represents the state of assets at the time of AM Plan development. The asset data and lifecycle cost projections are stored separately in the City's Content Manager record system.

Until such time a full review of this AM Plan is undertaken, the core data included in this plan and the associated projections is located in **CM 25/#####\*** and will be updated annually as new versions to inform subsequent LTFPs and annual budget developments.

### **8.3 Performance Measures**

The effectiveness of the AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in the NAAMP are incorporated into the LTFP,
- The degree to which the 1–5-year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the NAAMP,
- The ARFR achieving the organisational target of 90 – 100%.
- Achieving the intended outcomes of the improvement plan.

**Table 23: Improvement Plan**

**Responsible Area Abbreviations:**  
 AM – Assets Maintenance, BM – Building Maintenance, BS – Business Systems, CD – Cultural Development, CF – Community Facilities, CIS - Customer & Information Services, CSEM - Community Safety and Emergency Management, GL – Governance and Legal, LD – Land Development, ICW – Infrastructure Capital Works, NAWG – Natural Area Working Group, PCM - Parks & Conservation Management, PM – Place Management, PS – Property Services, AP – Asset Planning, SLUPE – Strategic Land Use, Planning & Environment, TCM – Trees and Conservation Maintenance.

No	Task	Responsibility	Resources Required	Timeline	Progress Comment
1	<u>Native Vegetation Data Analysis</u> Complete GIS analysis of vegetation complex data for the City's natural area parks to allow comparison of the native vegetation within the City's natural area park to assist with retention, protection and management of natural areas in line with LBS strategies	AP, SLUPE and CIS	Internal	2030/35	<b>Action On- track</b> This action was due for completion as part of the 2020 NAAMP for June 2021. Due to resourcing challenges this completion timeframe is being extended to June 2026.
2	<u>Infrastructure asset data</u> Develop & Implement NA infrastructure asset condition assessments and validation of infrastructure data: <ul style="list-style-type: none"> <li>• Verify existing NA infrastructure asset data.</li> <li>• Condition rate natural area infrastructure park assets.</li> <li>• Define and confirm infrastructure assets to be covered within the PAMP and the NAAMP to ensure no duplications or 'missed' assets between these two</li> </ul>	AP with identified stakeholders.	Internal and External (consultants). Budget estimate for External Consultants: <ul style="list-style-type: none"> <li>• \$30K for NA parks infrastructure asset condition assessments.</li> </ul>	2021/22 develop program 2022/23 RFQ	<b>Action On-track and ongoing</b> Assets registers have been developed, each asset is then given a condition rating A five year program of data  validation and condition rating was developed 2021/22
4	<u>Develop a Standard of Maintenance for Natural Areas</u> <ol style="list-style-type: none"> <li>1. Scope what is required</li> <li>2. Develop a Reserves Priority List for Natural Areas</li> </ol>	AP and TCM with relevant stakeholders	Internal and External (environmental consultant)	1) 2021/22 2) 2022/23	<b>Commenced and On-going</b> <b>1. Not commenced</b> / no comment.

No	Task	Responsibility	Resources Required	Timeline	Progress Comment
	<p>3. Baseline survey data required for the City's natural area parks to inform planning and maintenance works – i.e. review of the flora and fauna for all reserves (137 currently)</p>		<p>Budget estimate for External Consultants:</p> <ul style="list-style-type: none"> <li>• \$20K for reserve priority list.</li> <li>• \$100K annually for baseline survey data.</li> </ul>	<p>Commencing 2022/23 and ongoing</p>	<p><b>2. Commenced and ongoing.</b> Note that TCM have developed a Priority List to assist with Maintenance priorities, however this is not a City-wide priority list.</p> <p>Review of LBP by SLUPE will result in a new priority rating system that could be applied to all City-managed Natural Area Parks, therefore Item 2 on hold.</p> <p><b>3. Commenced and On-going</b></p> <p>Baseline surveys commenced in 2023/2024 with Flora and Vegetation, Fauna and Black Cockatoo Habitat Surveys undertaken in the following reserves:</p> <p>Benmuni Park, WANNEROO  Franklin Park, JANDABUP  Landsdale Park, DARCH  Hepburn Park, LANDSDALE  Damian Park, JANDABUP</p>
5	<p>Performance Index Score (PIS)</p> <ul style="list-style-type: none"> <li>• Investigate the potential for targeted research on customer expectation and satisfaction for the City's natural areas, including: <ol style="list-style-type: none"> <li>1. Fire mitigation and prescription burning;</li> <li>2. Conservation and environmental management (including inclusions more clearly defined); and</li> </ol> </li> <li>• Specific service/reference for natural area parks. (Unclear if this subject is combined with 'Parks' but under the name 'reserves').</li> </ul>	<p>AP with relevant stakeholders</p>	<p>Internal</p>	<p>2024/25</p>	<p>This action is currently in progress and remains on track according to the latest status update.</p>

No	Task	Responsibility	Resources Required	Timeline	Progress Comment
6	<u>Customer Management System</u> <ul style="list-style-type: none"> <li>Monitor level of complaints through the Customer Management System</li> </ul>	CIS	New CRM solution CIS/AP	2024/25	This action is currently in progress and remains on track according to the latest status update.
7	<u>Technical Levels of Service</u> Further develop Technical Levels of Service for Natural Area Parks: <ul style="list-style-type: none"> <li>Define technical levels of service for native vegetation assets contained within Natural Area Parks.</li> <li>Define across the three (3) differing environmental areas (Bushland, Coastal/Foreshore and Wetland).</li> </ul>	AP and TCM	Internal AP / CF/ CSEM / ICW / TCM / AM	2024/25	This action is currently in progress and remains on track according to the latest status update.
8	<u>Community Facilities Provision Framework: Open Space and Community Buildings</u> <ul style="list-style-type: none"> <li>Develop the Community Facilities Provision Framework: Open Space and Community Buildings.</li> <li>Undertaking a hierarchy of documents, focusing on policies, strategies, design guidelines and specifications to inform the planning and design of its open space and community buildings.</li> <li>It will involve the development of evidence based standards that will provide the City with justified benchmarks and other criteria in order to determine facility requirements into the future. These standards will influence the provision of all new infrastructure and will inform the relevant asset management plans in terms of renewal, upgrades and maintenance.</li> </ul>	CF with identified stakeholders.	Internal & External Consultant	2022/23	CFPF Completed and went to Council in May/June 2024. This action is in progress but has experienced delays due to constrains in resourcing
9	<u>POS Service Levels</u> Review of City POS Maintenance service levels from 2011 (11/131671)	PCM (incorporating TCM)	Internal	2024/25	This action is currently in progress and remains on track according to the latest status update.



No	Task	Responsibility	Resources Required	Timeline	Progress Comment
10	<u>Asset Capture and Handover for New/Upgraded/Renewed Assets – ICW and TCM</u> Asset Capture Forms for TCM and ICW (interim requirements before AMIS brought 'online')	AP and TCM with CIS	Internal	2021/22	Due to resourcing issues this action has not commenced. Deadline extended from 2022 to 2030.
11	<u>TCM Asset Inspection / Audit</u> Review and investigate current TCM inspection/audit process to clarify if captured information can be utilised within AMIS system.	AP and TCM	Internal	November 2022.	Due to resourcing issues this action has not commenced. Deadline extended from 2022 to 2030.
12	<u>Infrastructure asset data – Coastal Foreshore Signage</u> <ul style="list-style-type: none"> <li>Beach Name Signs/Foreshore Reserve/Coastal Signs – i.e. blue sign plate on limestone plinth</li> </ul> Establish a procedure.	AP with identified stakeholders.	Internal	2025/2026	Due to resourcing issues this action has not commenced. Deadline extended from 2026 to 2030.
13	<u>Asset Capture Stakeholder Engagement &amp; Communication Matrix</u> Develop a Stakeholder Engagement & Communication Matrix for Asset Capture.	AP with identified Natural Area stakeholders	Internal	2025/2026	Due to resourcing issues this action has not commenced. Deadline extended from 2022/ 2030.
14	<u>Coastal Proximity</u> Impact of distance to coast on Natural Area - infrastructure Asset Life: <ul style="list-style-type: none"> <li>Investigate with other City Asset Classes and define City boundary/distance location(s) for the effect of coastal conditions on City infrastructure assets (and their life cycle).</li> <li>Develop specifications for new natural area park infrastructure assets and maintenance of existing infrastructure assets located within these defined boundaries.</li> </ul>	AP, AM, PCM, ICW, with relevant working groups	Internal	2021/2022	This priority will be delayed until further discussions and confirmation can be agreed.  Tentatively following the building guideline of: 0 - 300m - Coastal 1, 300m - 2km - Coast 2, 2+km Non-Coastal. Note that there may be a 3rd coastal zone introduced.
15	<u>Asset Capture – Developer to City</u> <ul style="list-style-type: none"> <li>Document the Natural Area 'Developer Asset Capture' process as a flow chart together with all undocumented processes.</li> </ul>	AP, LD and TCM	Internal	2022/2023	Due to resourcing issues this action has not commenced. Deadline extended from 2026 to 2030.

No	Task	Responsibility	Resources Required	Timeline	Progress Comment
16	<u>NA Infrastructure Assets – data capture</u> <ul style="list-style-type: none"> <li>Develop procedures, by agreement with all relevant stakeholders for recording all changes to natural area infrastructure assets implemented by different Service Units.</li> <li>Develop a Stakeholder Engagement &amp; Communication Matrix for new, upgrades or renewal of the natural area assets lifecycle.</li> </ul>	AP with identified Natural Area stakeholders	Internal	2021/22	Due to resourcing issues this action has not commenced. Deadline extended from 2026 to 2030. Improvement Action 10, 13 and 15 above.
17	<u>Developer Maintenance of NA park assets</u> <ul style="list-style-type: none"> <li>Investigate the feasibility of implementing procedures/ processes/ policy to enable the City to ensure natural area assets (infrastructure and native vegetation) are adequately maintained to the City's satisfaction prior to acceptance by the City.</li> <li>If deemed feasible, develop documentation by agreement with all relevant stakeholders that ensures natural area assets (infrastructure and native vegetation) are adequately maintained to the City's satisfaction prior to acceptance by the City.</li> </ul>	LD, CF AP with relevant stakeholders	Internal	2025/2026	Due to resourcing issues this action has not commenced. Deadline extended from 2026 to 2030.
18	<u>Asset Life cycle – City or Developer works</u> <ul style="list-style-type: none"> <li>Investigate the feasibility of implementing the requirement for a developer to provide the City with lifecycle costing plans and maintenance schedules</li> <li>Investigate the feasibility of the City implementing the requirement for all City proposed major infrastructure assets in NA parks provide lifecycle costing plans and maintenance schedules.</li> <li>The inclusion of detailed asset management supporting documentation will assist the City's decision making for a natural area park's asset provision.</li> </ul>	LD, CF, AM, ICW, AP with relevant stakeholders	Internal	2025/2026	Due to resourcing issues this action has not commenced. Deadline extended from 2026 to 2030.

No	Task	Responsibility	Resources Required	Timeline	Progress Comment
19	<u>Natural Areas Maintenance Management Plan</u> Develop a Natural Areas Maintenance Management Plan documenting the requirements for natural area asset maintenance (infrastructure and native vegetation).	TCM with relevant stakeholders including BM, AM, CSEM & AP.	Internal	2022/2023	Due to resourcing issues this action has not commenced. Deadline extended from 2026 to 2030.
20	<u>Asset Disposal Plan</u> <ul style="list-style-type: none"> <li>Needs investigation to determine if a Natural Area Park Asset Disposal Plan is required.</li> </ul>	AP	Internal	2025/2026	Due to resourcing issues this action has not commenced. Deadline extended from 2026 to 2030.
21	<u>Conservation Maintenance Work Practice Manual</u> <ul style="list-style-type: none"> <li>Review relevance of this document in line with the creation of the NAMMP. WPM may be fully incorporated into NAMMP and therefore no longer required.</li> <li>If deemed required, review and update the Conservation Maintenance Work Practice Manual to ensure procedures and maintenance activities for Natural Area park assets (including: inspection requirements, responsibilities etc) are clearly described.</li> </ul>	TCM	Internal	2022/2023, following NAMMP finalization.	NAMMP not commenced, therefore not known if CMWPM is still needed.
22	<u>Natural Area Language</u> All relevant stakeholders to agree on the City's preferred terms and language when communicating information regarding the City's natural areas. <ul style="list-style-type: none"> <li>i.e. varied language throughout the City currently exists and to avoid confusion moving forward, agreed terms and language should be determined (e.g. natural areas, natural area parks, reserves, nature POS etc)</li> </ul>	NAWG	Internal	2025/2026	Due to resourcing issues this action has not commenced. Deadline extended from 2026 to 2030.
23	<u>City Guidelines</u> Develop the following Guidelines for works within the City's Natural Areas (inclusive of NA parks and	AP and TCM with relevant stakeholders	Internal or External environmental consultants	2024/25	Commenced On going and on track.

No	Task	Responsibility	Resources Required	Timeline	Progress Comment
	<p>remnant pockets of native vegetation present throughout the City's POS) for adherence by both the City and the City's Contractor(s):</p> <ul style="list-style-type: none"> <li>• Feral Animal Management Guidelines</li> <li>• Disease and Pathogen Management Guidelines</li> <li>• Acid Sulphate Soils Guidelines</li> <li>• Revegetation Management Guidelines</li> </ul>		<p>Budget estimate for External Consultants:</p> <p>\$10K-30K per guideline, dependent on inclusion of public consultation requirements</p>		<p>The following guidelines were finalised in 2023/2024:</p> <ul style="list-style-type: none"> <li>•Revegetation Management Guidelines</li> <li>•Disease and Pathogen Management Guidelines.</li> </ul> <p>The remaining 2x guidelines will be finalised in 2024/2025:</p> <ul style="list-style-type: none"> <li>•Feral Animal Management Guidelines</li> <li>•Acid Sulphate Soils Guidelines</li> </ul>
24	<p><u>City Weed Strategy</u></p> <p>Creation of a weed strategy document for the City's Natural Area Parks. Inclusive of:</p> <ul style="list-style-type: none"> <li>• Development of a priority weed index via the review of relevant industry documentation;</li> <li>• Development of a natural area weed management site prioritisation using Multi-criteria analysis (include fire risk); and</li> </ul> <p>Review of industry best practice to create an internally supported weed management technique(s) guideline.</p>	AP with TCM	Internal	2025/2026	Due to resourcing issues this action has not commenced. Deadline extended from 2026 to 2030.
25	<p><u>Flora and Fauna Data - Developers</u></p> <ul style="list-style-type: none"> <li>• Investigate the implementation of an internal procedure / process / flowchart upon handover of new natural area parks that enables the collation of all flora and fauna data funded and obtained by Developers</li> <li>• Embed and link these EMP's, surveys, documents, conditions etc with the AMIS program</li> </ul>	LD, SLUPE, TCM with AP	Internal	2021/22	Due to resourcing issues this action has not commenced. Deadline extended from 2026 to 2030.

No	Task	Responsibility	Resources Required	Timeline	Progress Comment
26	<u>Fire Mitigation</u> <ul style="list-style-type: none"> <li>Investigate the procurement and use of fire mapping data and resources for fires occurring within the City's managed natural area parks (i.e. DFES, DPAW etc).</li> </ul>	CSEM, AP and other relevant stakeholders.	Internal	2021/2022 Ongoing	Commenced and Ongoing. Natural Areas Burn Matrix spreadsheet with data created 24/82045 refers. Annual stakeholder review of proposed burn program.
27	<u>Hazardous substances within natural area parks</u> <ul style="list-style-type: none"> <li>Document the City's "hazardous substances within natural area parks" process as a flow chart together with all relevant undocumented processes;</li> <li>Develop a Stakeholder Engagement &amp; Communication Matrix for hazardous substances within the City's natural area parks (including ACM);</li> <li>Develop procedures, by agreement with all relevant stakeholders, for documenting and communicating the requirements for hazardous substances within the City's natural area parks (including ACM);</li> <li>Communicate the approved process to internal stakeholders via the City's internal communication platforms (or similar).</li> </ul>	SLUPE (via the EMS Working Group) on liaison with relevant stakeholders	Internal	2023/24	Due to resourcing issues this action has not commenced. Deadline extended from 2026 to 2030.
28	<u>Seasonal Fauna and Flora Habitat Protection</u> Within City managed POS, the protection of known seasonal fauna and flora habitat sites located in proximity to, active recreation and facility areas and City scheduled maintenance or construction works: <ul style="list-style-type: none"> <li>Document the "protection of known seasonal fauna and flora habitat sites" process as a flow chart together with all relevant undocumented processes;</li> <li>Develop a Stakeholder Engagement &amp; Communication Matrix for the protection of known seasonal fauna and flora habitat sites;</li> </ul>	TCM with relevant stakeholders (including community / environmental groups that utilize the YRP).	Internal	Annually, as required	This action is in progress and is ongoing.

No	Task	Responsibility	Resources Required	Timeline	Progress Comment
	<ul style="list-style-type: none"> <li>• Develop procedures, by agreement with all relevant stakeholders, for documenting and communicating the requirements for the protection of known seasonal fauna and flora habitat sites;</li> <li>• Communicate the approved process to internal stakeholders via the City’s internal communication platforms (or similar).</li> </ul> <p>Examples include: <i>Merops ornatus</i> (Rainbow Bee Eater), <i>Chelodina colliei</i> (South-western snake-necked turtle) and Flora such as Orchids.</p>				
29	<p><u>Heritage</u> Following the completion of the Heritage consultancy works project by Cultural Development:</p> <ul style="list-style-type: none"> <li>• Review and update the Aboriginal Heritage legislation information and processes due to the enactment of the new 2020 Bill, including the new multi-levelled application process for both AP’s EPC requirements and TCM’s responsibilities due to maintenance activities occurring in proximity to these sites.</li> <li>• Review and update the European Heritage information and processes for both AP’s EPC requirements and TCM’s responsibilities due to maintenance activities occurring in proximity to these sites.</li> <li>• Dependant on GIS resources – mapping of Heritage (European and Aboriginal) and CoW Natural Area POS property boundaries and create a summarised table of NA POS sites that contain heritage sites (expand table in relevant heritage sections) to identify locations where CoW maintenance and ICW</li> </ul>	CD, CIS, AP and TCM with relevant stakeholders	External Consultant and Internal resourcing	2022/2023	Due to resourcing issues this action has not commenced. Deadline extended from 2026 to 2030.

No	Task	Responsibility	Resources Required	Timeline	Progress Comment
	<p>activities may need to be altered to meet heritage legislation/guidelines.</p> <ul style="list-style-type: none"> <li>For the City's Municipal Heritage Inventory, confirm if the City has a prioritised ranking of these Heritage Sites (High, Medium, Low or similar?), thus defining their maintenance requirements?</li> <li>Confirm if TCM should be maintaining the areas of NA parks surrounding these sites in line with this prioritised ranking system? i.e. should the frequency and no. of visitations / inspections be different dependant on the ranking?</li> </ul>				
30	<p><u>Flora collection in NA parks – External requests</u> External requests for collection of flora (seed and cutting material etc.) within City managed natural area parks:</p> <ul style="list-style-type: none"> <li>Document the Natural Area "External Flora Collection Requests" process as a flow chart together with all relevant undocumented processes;</li> <li>Develop a Stakeholder Engagement &amp; Communication Matrix for External Flora Collection Requests;</li> <li>Develop procedures, by agreement with all relevant stakeholders, for documenting, communicating and authorizing requirements for External Flora Collection Requests;</li> <li>Communicate approved 'External Flora Collection Requests' process to external stakeholders via the City's website.</li> </ul>	AP, TCM and GL with relevant stakeholders	Internal	2021/2022	Due to resourcing issues this action has not commenced. Deadline extended from 2022 to 2030.
31	<p><u>Scientific Research in NA parks – External requests</u> External requests to undertake scientific research</p>	AP, TCM and GL with relevant stakeholders	Internal	2021/2022	Due to resourcing issues this action has not commenced. Deadline extended from 2022 to 2030.

No	Task	Responsibility	Resources Required	Timeline	Progress Comment
	<p>and/or monitoring programs for flora and fauna within City managed natural area parks:</p> <ul style="list-style-type: none"> <li>• Document the Natural Area “Scientific Research and Monitoring Programs Requests” process as a flow chart together with all relevant undocumented processes;</li> <li>• Develop a Stakeholder Engagement &amp; Communication Matrix for External Scientific Research and Monitoring Programs Requests;</li> <li>• Develop procedures, by agreement with all relevant stakeholders, for documenting, communicating and authorizing requirements for Scientific Research and Monitoring Programs Requests;</li> <li>• Develop access and indemnity agreement template for External Scientific Research and Monitoring Programs Requests;</li> <li>• Communicate approved ‘Scientific Research and Monitoring Programs Requests’ process to external stakeholders via the City’s website.</li> </ul>				
32	<p><u>Online Forms</u> Investigate the creation and use of Online Forms to assist with AP workflow and processes: Examples on Intranet could include:</p> <ul style="list-style-type: none"> <li>• Requesting a Vegetation Assessment</li> <li>• Requesting a Flora and Fauna Survey or BC Habitat Survey</li> <li>• Requesting Fauna release into City NA parks</li> <li>• Requesting if a Clearing Permit (CP) is required</li> <li>• Collecting CP information from the PM</li> <li>• Examples on City website could include:</li> </ul>	AP and BS	Internal	2021/22 and 2022/23 (resource dependent)	Due to resourcing issues this action has not commenced. Deadline extended from 2022 to 2030.



No	Task	Responsibility	Resources Required	Timeline	Progress Comment
	<ul style="list-style-type: none"> <li>Requesting to undertake a research project within a City managed Natural Area</li> <li>Requesting to undertake seed or cutting collection within a City managed Natural Area</li> <li>Requesting Fauna release into City NA parks</li> </ul>				
33	<u>Development and works adjacent to existing City NA parks</u> Review existing process(es) for when external entities (e.g. Public Utilities, Developers, Government Agencies and Authorities etc) carry out works adjacent to City facilities prior to, during, and when completing works, ensuring City stakeholders inspect and sign off on reinstatement works. Ensure consistency with Application Signing by Landowner / Land Manager Management Procedure.	AP with PS and relevant stakeholders	Internal	2022/2023 (per BAMP timing)	<b>Not commenced – No progress update</b> NAAMP Action 33 is incorporated in the works the Building AM Plan (BAMP) is undertaking as part of Action 5-21 of the BAMP. The outcome of the BAMP Action will be incorporated to works adjacent to NA parks.
34	<u>Leased Areas and NA parks</u> City Leased Areas that contain Natural Area Parks and/or ‘pockets’ of remnant native vegetation: Review Leasing documents, roles and responsibilities, vegetation type and condition present and develop flowcharts, etc.	AP, PS, TCM and relevant stakeholders	Internal	2022/2023	Due to resourcing issues this action has not commenced. Deadline extended from 2023 to 2030.
35	<u>Infrastructure Asset Data – Signage Database</u> <ul style="list-style-type: none"> <li>Rationalise natural area park signage database</li> </ul>	AP with identified stakeholders.	Internal	2023/2024	Due to resourcing issues this action has not commenced. Deadline extended from 2024 to 2030.
36	<u>Infrastructure Asset Data – Signage Inspections</u> <ul style="list-style-type: none"> <li>Define signage inspection frequency (this should be agreed with relevant stakeholders) – may be impacted on by ‘priority’ of sign, ie BEN sign, or SLS risk sign? AND should also determine inspection requirements, clarify roles and responsibilities</li> </ul>	AP with identified stakeholders.	Internal	2023/2024	Due to resourcing issues this action has not commenced. Deadline extended from 2022 to 2030.
39	<u>EMP Guidelines</u>	SLUPE, LD and			FMP - Review commenced, delayed due to work priorities.

No	Task	Responsibility	Resources Required	Timeline	Progress Comment
	<ul style="list-style-type: none"> <li>To be updated as a result of relevant Improvement Actions (including: Levels of Service, Developer Flora and Fauna Data, Signage Standard, Provision of Signage Proofs (Name and Interpretative Signage etc)</li> </ul>	relevant stakeholders	Internal	2024/2025	EMP - Review scheduled pending resourcing.
40	<u>Native Title</u> <ul style="list-style-type: none"> <li>Review native title determination outcomes and how these outcomes impact the City's management of Natural Areas.</li> </ul>	AP, TCM and relevant stakeholders.	Internal	2022/2023	Due to resourcing issues this action has not commenced. Deadline extended from 2023 to 2030.
42	<u>Signage Standard</u> <ul style="list-style-type: none"> <li>Review, and if warranted develop a signage standard for natural area interpretative signage.</li> </ul>	AP, TCM, LD and relevant stakeholders	Internal	2022/2023	Due to resourcing issues this action has not commenced. Deadline extended from 2023 to 2030.

## 9. REFERENCES

### External References

- IPWEA International Infrastructure Management Manual (IIMM) 2020, IPWEA
- Vegetation of the Darling System. IN: DCE 1980 Atlas of Natural Resources, Darling System, Western Australia. Department of Conservation and Environment, Perth, Western Australia - Heddle EM, Loneragan OW and Havel JJ. (1980)..
- Bushland plant survey: a guide to plant community survey for the community (1994) - Keighery, B. Wildflower Society of Western Australia Inc.
- A guide to the assessment of applications to clear native vegetation : under Part V of the Environmental Protection Act 1986 (2007) - Department of Environment and Conservation (DEC)
- A Guide to Preparing Revegetation Plans for Clearing Permits under Part V of the Environmental Protection Act 1986 (2018) - Department of Water and Environmental Regulation (DWER)
- Liveable Neighbourhoods (2015) Operational Policy - WAPC
- Technical Guidance (2016) - Environmental Protection Authority (EPA)
- Population Forecast - City of Wanneroo Community Profile (.id population website - <http://profile.id.com.au/wanneroo/population>)

### Council Internal Documents

- Asset Management Policy ((CE03-06/23, CM: 16/106984)
- Asset Management Strategy 2024-2030 (CM: 16/279441)
- Strategic Community Plan (SCP) 2021-2031 (CM: 21/306831)
- Corporate Business Plan (CBP) 2022/23 - 2025/26 (CM: 24/317205)
- Long Term Financial Plan (LTFP) 2023/24–2042/43 (CM: 22/454666)
- City of Wanneroo Community Development Plan 2021/22 - 2025/26 (CM 22/366267)
- Bushfire Risk Management Plan 2019-2024 (CM 18/442763)
- Climate Change Adaptation and Mitigation Strategy 2020/21-2025/26 (PS01-05/21, CM: 21/135841)
- Coastal Hazard Risk Management Adaptation Plan Part 1 2018 (CM: 19/258820).
- Coastal Hazard Risk Management Adaptation Plan Part 2 2018 (CM: 19/258836).
- Coastal Management Plan Part 1 2012 (CM: 12/86957)
- Community Engagement Policy (CP03- 07/24, CM: 17/196922[v12])
- Economic Development Strategy 2022-2032. (CM: 23/331401)
- Environment Policy (PS05-10/22, CM: 19/225669[v2])
- Environmental Management Plan Guidelines 2019 (CM: 19/276786)
- Foreshore Management Plan Guidelines 2021 (CM 19/496543)
- Local Biodiversity Plan 2018/19-2023/24 (CM: 19/53215)
- Local Environment Strategy 2019 (CM: 19/102123)
- Local Planning Policy 1.1 Conservation Reserves (PS02-04/21, CM: 21/163930)
- Local Planning Policy 3.3 Fauna Management (PS02-03/20, CM:22/313410)
- Local Planning Policy 4.1: Wetlands (PS02-10/18, CM:18/498470[v2])

- Local Planning Policy 4.12 Heritage Places (PS04-08/16, CM: 22/308964)
- Local Planning Policy 4.13 Caves and Karstic Features (PS02-10/18, CM: 18/498418[v2])
- Local Planning Policy 4.21 Coastal Assets (CM22/306159)
- Local Planning Policy 4.3 Public Open Space (PS05-04/21, CM 21/171243)
- Local Planning Policy 4.8: Tree Preservation Policy (GS01-08/06, CM: 12/89797)
- Northern Coastal Growth Corridor - Community Facilities Plan (CM 20/394999)
- Parks (including Natural Area Parks) Service Levels (IN03-02, CM: 11/131671 and CM: 11/111905)
- Pathways Policy (AS03-10/24, CM: 16/34066(v6))
- Pesticide Management Policy (AS-04/19, CM: 16/299514)
- Street Tree Policy (AS02-12/18. CM: 18/550071)
- Yellagonga Integrated Catchment Management Plan 2021-2026 (CM: 22/75691)
- Wanneroo Liveability Survey - Baseline Report 2023 (CM: 24/12633)

## 10. Glossary of Terms

The following terms are used in this AM Plan and have been split between the following areas:

- General – terms specific to asset management.
- Natural Area – terms specific to the natural environment within the City.
- Natural Area Infrastructure –terms specific to built infrastructure which allows for recreational pursuits within natural areas and may assist in providing protection to natural areas within the City.

### 10.1 General

**Assets** are future economic benefits controlled by the City as a result of a past transaction or event whereby:

- Its value can be measured reliably, and;
- Its value must exceed a stated materiality threshold being \$5,000 or form part of a network asset group, and;
- It must be probable that future economic benefits of the asset will eventuate (i.e. the asset acquired supports the delivery of City's services to the community in line with its objectives).

**Asset condition assessment** The process of continuous or periodic inspection, assessment, measurement and interpretation of the resultant data to indicate the condition of a specific infrastructure asset so as to determine the need for some preventative or remedial action.

**Asset management** refers to the combination of management, financial, economic, engineering and other practices applied to assets from their planning, acquisition, operation, maintenance, replacement and disposal, to ensure that the assets meet the priorities of the

Strategic Community Plan with the objective of providing the required level of service in the most cost-effective manner.

**AM Information System or AMIS** refers to a dedicated AM Computer Software program and associated systems to support effective and efficient data management that is integrated with other key property and finance management software systems of the organisation.

the long term plan, activities, program, time scales and resources applied to specific individual major, critical assets or a grouping of assets to provide a defined level of service over the lifecycle of the asset. An AM Plan covering a grouping of assets (or asset classes) is referred also as an **Asset Class Plan**.

**AM Strategy** means a strategy or approach for asset management.

**Asset Sustainability Index** A ratio of infrastructure asset replacement expenditure relative to depreciation for a specific period, generally long term (whole of life) or medium term (10 years). It measures whether infrastructure assets are being replaced at the rate they are wearing out.

**Average annual asset consumption (AAAC)\*** The amount of a local government's asset base consumed during a year. This may be calculated by dividing the Depreciable Amount (DA) by the Useful Life and totalled for each and every asset OR by dividing the Fair Value (Depreciated Replacement Cost) by the Remaining Life and totalled for each and every asset in an infrastructure asset category or class.

**Building Asset Management Plan (BAMP)** refers to documented information that specifies the long term plan, activities, program, time scales and resources applied to specific individual major, critical assets or a grouping of assets to provide a defined level of service over the lifecycle of the asset (BAMP, 2021).

**Capital expenditure** Relatively large (material) expenditure, which has benefits, expected to last for more than 12 months. Capital expenditure includes renewal, expansion and upgrade. Where capital projects involve a combination of renewal, expansion and/or upgrade expenditures, the total project cost needs to be allocated accordingly.

**Capital funding** Funding to pay for capital expenditure.

**Capital grants** Monies received generally tied to the specific projects for which they are granted, which are often upgrade and/or expansion or new investment proposals.

**Coastal Infrastructure Asset Management Plan (CIAMP)** provides information on coastal infrastructure assets owned and maintained by the City, both now and into the future. (CIAMP, 2021).

**Cost of an asset** The amount of cash or cash equivalents paid or the fair value of the consideration given to acquire an asset at the time of its acquisition or construction, plus any costs necessary to place the asset into service. This includes one-off design and project management costs.

**Council** means the elected council (comprising Councillors) of the City. reporting date. The cost is measured by reference to the lowest cost at which the gross future economic benefits could be obtained in the normal course of business or the minimum

it would cost, to replace the existing asset with a technologically modern equivalent new asset (not a second hand one) with the APe economic benefits (gross service potential) allowing for any differences in the quantity and quality of output and in operating costs.

**Current replacement cost “As New” (CRC)** The current cost of replacing the original service potential of an existing asset, with a similar modern equivalent asset, i.e. the total cost of replacing an existing asset with an as NEW or similar asset expressed in current dollar values.

**Depreciable amount (DA)** The cost of an asset, or other amount substituted for its cost, less its residual value (AASB 116.6)

**Depreciated replacement cost (DRC)** The current replacement cost (CRC) of an asset less, where applicable, accumulated depreciation calculated on the basis of such cost to reflect the already consumed or expired future economic benefits of the asset

**Depreciation / amortisation** The systematic allocation of the depreciable amount (service potential) of an asset over its useful life.

**District Planning Scheme No. 2 (DPS2)** is a statutory document which provides the framework for the planning and development of land. DPS 2 sets out the way land is to be used and developed by classifying various land uses into appropriate zones, for example residential and commercial. DPS 2 also includes controls to ensure long-term planning objectives are achieved.

**Expenditure** The spending of money on goods and services. Expenditure includes recurrent and capital.

**Fair value** The amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties, in an arm’s length transaction.

**Infrastructure** comprises the asset sub-classes defined in section 5 of the AMS and Guidelines issued by the Department of Local Government..

**Level of Service** describes the outputs or objectives of the activity the City intends to deliver to the customer. Service levels usually relate to quality, quantity, reliability, responsiveness, statutory functional requirements, environment, acceptability and cost.

**Life Cycle** means the phases of activities that an asset goes through, including Identification of Need, acquisition, operation, maintenance, renewal or upgrade and disposal.

**Life Cycle Cost** The life cycle cost (LCC) is the total cost to provide the service over the represented by depreciation expense. The Life Cycle Cost does not indicate the funds required to provide the service in a particular year.

**Maintenance Management Plan (MMP or MP Plan)** refers to documented information that specifies the lifecycle activities and processes that are required on a day to day, periodical or annual basis to ensure the safe and intended function of the assets is maintained.

**Maintenance and renewal gap** Difference between estimated budgets and projected expenditures for maintenance and renewal of assets, totalled over a defined time (eg 5, 10 and 15 years).

**Maintenance and renewal sustainability index** Ratio of estimated budget to projected expenditure for maintenance and renewal of assets over a defined time (eg 5, 10 and 15 years).

**Maintenance expenditure** Recurrent expenditure, which is periodically or regularly required as part of the anticipated schedule of works required to ensure that the infrastructure asset achieves its useful life and provides the required level of service. It is expenditure, which was anticipated in determining the infrastructure asset's useful life.

**Management Order** is a statutory right to manage and control Crown land in accordance with the Management Order granted under the Land Administration Act, 1997. A reserve is Crown land that has been set aside for a particular purpose in the public interest, for example for natural area POS, reserve purposes include 'Passive Recreation and Conservation', 'Conservation'.

**Metropolitan Regional Scheme (MRS)** defines the future use of land and provides the legal basis for planning in the Perth metropolitan region, dividing it into broad zones and reservations.

**Nature POS** means land for which the primary function is the retention and ongoing management of indigenous flora and fauna. These sites may be modified from their original condition in line with best practice environmental management and to facilitate public access for recreational purposes (LPP 4.3 - POS).

**Operating expenditure** Recurrent expenditure, which is continuously required excluding maintenance and depreciation, eg power, fuel, staff, plant equipment, on-costs and overheads.

**Park Asset Management Plan (PAMP)** details how the City of Wanneroo (City) intends to develop a robust approach to Asset Management of the City's Parks to ensure the City can provide spaces which meet the needs of the community, especially as the population grows (PAMP, 2020).

**Public Open Space (POS)** means land used or intended for use for recreational purposes by the public and includes parks, public gardens, playgrounds and sports fields but does not include regional open space and foreshore reserves (Liveable Neighbourhoods, 2007).

**Rate of annual asset consumption** A measure of average annual consumption of assets (AAAC) expressed as a percentage of the depreciable amount (AAAC/DA). Depreciation may be used for AAAC.

**Rate of annual asset renewal** A measure of the rate at which assets are being renewed per annum expressed as a percentage of depreciable amount (capital renewal expenditure/DA).

**Rate of annual asset upgrade** A measure of the rate at which assets are being upgraded and expanded per annum expressed as a percentage of depreciable amount (capital upgrade/expansion expenditure/DA).

**Reactive maintenance** Unplanned repair work that carried out in response to service requests and management/supervisory directions.

**Restricted public open space** means those spaces that are constrained in way that restricts the use of the space for recreational purposes by the general public (e.g. wetlands, certain drainage swales, power easements, cultural heritage sites, significant topographical features) (LPP 4.3 - POS).

**Risk management** The application of a formal process to the range of possible values relating to key factors associated with a risk in order to determine the resultant ranges of outcomes and their probability of occurrence (refer also to ISO 31000).

**Service Levels** are defined in terms of:

- **Community service** levels relate to how the community perceives the service in terms of safety, quality, quantity, reliability, responsiveness, cost / efficiency and legislative compliance.
- Operational or technical measures of performance, termed '**Technical Levels of Service**' (or technical service levels), relate to the allocation of resources to service activities that Council undertakes to best achieve the desired community outcomes and demonstrate effective organisational performance.

**Stakeholders** are those people/sectors of the community that have an interest or reliance upon an asset and who may be affected by changes in the level of service of an asset.

**Stormwater Asset Management Plan (SWAMP)** provides information on stormwater assets owned and maintained by the City, both now and into the future. (SWAMP, 2021).

**Transport Infrastructure Asset Management Plan (TIAMP)** details how the City intends to operate and maintain the transport infrastructure network to achieve its strategic objectives (TIAMP, 2020).

**Unrestricted public open space** means those spaces that are free from constraints or encumbrances (e.g. wetlands, certain drainage swales, power easements, cultural heritage sites, significant topographical features) and are available at all times for recreational purposes by the general public. This includes conservation areas that are accessible by the public (LPP 4.3 - POS).

## 10.2 Natural Area

**Abiotic factors** refers to all the non-living factors present in an ecosystem, typically comprising physical and chemical components (e.g. climate, humidity, precipitation, wind, altitude, type of soil, light penetration, water depth, oxygen content, turbidity etc).

**Biotic factors** relate to all the living things in the ecosystem. More specifically, it includes all flora and fauna (e.g. plants, animals, fungi, bacteria etc).

**Bushland** is defined as land on which there is vegetation which is either a remainder of the natural vegetation of the land, or, if altered, is still representative of the structure and floristics of the natural vegetation, and provides the necessary habitat for native fauna.

**Bush Forever Policy** aims to ensure bushland protection and management issues are addressed and integrated with broader land use management and decision-making.

**Coastal (Foreshore)** the land and sea areas bordering the shoreline.



**Ecological Linkage** is a network of native vegetation that maintains some ecological functions of natural areas and counters the effects of habitat fragmentation (EPA, 2008).

**Regional Ecological Linkages** are a network of natural areas that provide “stepping stones” for species to migrate and disperse between patches of remnant vegetation (WALGA, 2021).

**Natural Area Maintenance** means regular ongoing day to day work, including the seasonal and annual tasks necessary to support and assist an ecosystems functionality and resilience to changing external pressures.

#### **Management Plans:**

- **CAMP – Conservation Area Management Plan** provides a framework and implementation plan for the management of designated conservation areas during construction, and provides detail on the ongoing maintenance activities to be undertaken.
- **FMP – Foreshore Management Plan** provide more detailed direction on management regimes, infrastructure requirements and approval processes for coastal areas within the boundary of the FMP.
- **WMP – Wetland Management Plan** details the rehabilitation measures and management responsibilities to maintain and enhance the health of wetlands and associated vegetation during and post construction.

**Regenerate/ion** means the re-establishment of vegetation from in-situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing mulch (DWER, 2018).

**Rehabilitation** means actively managing an area containing native vegetation in order to improve the ecological function of that area (DWER, 2018).

**Restoration** The return of a community to its pre-disturbance or natural state in terms of abiotic (non-living) conditions, community structure and species composition (English and Blythe 1999). <https://walga.asn.au/getattachment/6a447a85-3bc7-47be-8cfa-a5ff991ed428/20-PartB15-Restor-Rehab.pdf>

**Revegetate/ion** means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration, direct seeding and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area (DWER, 2018).

**Vegetation condition** means the rating given to native vegetation which refers to the impact of disturbance on each of the layers and the ability of the community to regenerate (Keighery 1994). The Keighery scale (1994) is used for the South West and Interzone Botanical Province (DWER, 2018).

**Wetlands** are areas that are permanently, seasonally or intermittently waterlogged or inundated with water. This water can be fresh or salty, flowing or still. Wetlands occur naturally however some may be artificially created (DBCA, 2021).

### 10.3 Natural Area Infrastructure

**Component** An individual part of an asset which contributes to the composition of the whole and can be separated from or attached to an asset or a system.

**Infrastructure assets** Physical assets of the entity or of another entity that contribute to meeting the public's need for access to major economic and social facilities and services, roads, drainage, footpaths and cycle ways. These are typically large, interconnected networks or portfolios of composite assets. The components of these assets may be separately maintained, renewed or replaced individually so that the required level and standard of service from the network of assets is continuously sustained. Generally the components and hence the assets have long lives. They are fixed in place and are often have no market value.

**Maintenance** means regular ongoing day-to-day work necessary to keep an infrastructure asset operating to achieve its optimum life expectancy.

**Renewal** means works to restore, rehabilitate or replace an infrastructure asset to its original capacity.

**Replacement** means the complete replacement of an infrastructure asset that has reached the end of its life, to provide a similar or agreed alternative, level of service.

**Replacement Cost** means the cost of replacing an existing asset with an identical new infrastructure asset.

**Upgrade** means enhancing an existing infrastructure asset to provide higher level of service and capacity.

**Whole of Life Cost** refers to the total cost of an infrastructure asset throughout its life cycle.

**Remaining life** The time remaining until an infrastructure asset ceases to provide the required service level or economic usefulness. Age plus remaining life is economic life.

**Renewal Expenditure** on an existing infrastructure asset, which returns the service potential or the life of the asset up to that which it had originally. It is periodically required expenditure, relatively large (material) in value compared with the value of the components or sub-components of the asset being renewed. As it reinstates existing service potential, it has no impact on revenue, but may reduce future operating and maintenance expenditure if completed at the optimum time, e.g. resurfacing or resheeting a material part of a road network, replacing a material section of a drainage network with pipes of the same capacity, resurfacing an oval. Where capital projects involve a combination of renewal, expansion and/or upgrade expenditures, the total project cost needs to be allocated accordingly.

**Residual value** The net amount which an entity expects to obtain for an infrastructure asset at the end of its useful life after deducting the expected costs of disposal.

**Sub-component** Smaller individual parts that make up a component part.

**Useful life (infrastructure)** either:

- a) the period over which an infrastructure asset is expected to be available for use by an entity, or

- b) the number of production or similar units expected to be obtained from the infrastructure asset by the entity.

It is estimated or expected time between placing the infrastructure asset into service and removing it from service, or the estimated period of time over which the future economic benefits embodied in a depreciable infrastructure asset, are expected to be consumed by the council. It is the same as the economic life.

## 11. Abbreviations

The following abbreviations are used in this AM Plan and have been split between the following areas:

- General abbreviations and other commonly used abbreviations.
- City of Wanneroo – abbreviations specific to the City, including relating to asset management at the City, City documentation and City Service units.
- Natural Area – abbreviations specific to the natural environment.

### 11.1 General

AM Plan – Asset Management Plan

AM Policy – Asset Management Policy

AM Strategy – Asset Management Strategy

AM Framework – Asset Management Framework

AMS – Asset Management System

AMIS – Asset Management Information System

CAPEX – Capital Expenditure

DAWE – Department of Agriculture, Water and Environment (Federal)

DFES – Department of Fire and Emergency Services (State)

DLGSCI – Department of Local Government, Sport and Cultural Industries

DPLH – Department of Planning Lands and Heritage (State)

DPS2 – District Planning Scheme No.2

DWER – Department of Water and Environment Regulation (State)

GIS – Geographical Information System

IIMM – International Infrastructure Management Manual

IPR – Integrated Planning Framework

IPWEA – Institute of Public Works Engineering Australia

LTFP – Long Term Financial Plan

MMS – Maintenance Management Plan

MRS – Metropolitan Regional Scheme

NA POS – Natural Area Public Open Space

OPEX – Operational Expenditure

PBP – Perth Biodiversity Project (WALGA)

POS – Public Open Space

WALGA – West Australian Local Government Association

WAPC – Western Australia Planning Commission (State)

### 11.2 City of Wanneroo

AMSG – Asset Management Steering Group

BAMP – Building Asset Management Plan

CAMP – Conservation Area Management Plan

CDP- Community Development Plan

CHRMAP – Coastal Hazard Risk Management and Adaptation Planning

CIAMP – Coastal Infrastructure Asset Management Plan

CMP – Coastal Management Plan

FMP – Foreshore Management Plan  
LBP – Local Biodiversity Plan  
LES – Local Environment Strategy  
NAIA Template - Natural Area Initial Assessment Template  
NAWG – Natural Area Working Group  
PAMP – Parks Asset Management Plan  
TIAMP – Transport Infrastructure Asset Management Plan  
WMP – Wetland Management Plan  
YICM – Yellagonga Integrated Catchment Management Plan

### **Service Units**

AM - Assets Maintenance  
AP - Asset Planning  
BM - Building Maintenance  
CD - Community Development  
CD - Cultural Development (Heritage)  
CFO - Community Facilities Operations  
CFP - Community Facilities Planning  
CIS - Customer & Information Services  
CP - Contracts and Procurement  
CS - Cultural Services  
CSEM - Community Safety and Emergency Management  
EM - Engineering Maintenance  
GL – Governance and Legal  
ICW - Infrastructure Capital Works  
LD - Land Development  
LS - Library Services  
PM - Parks Maintenance  
PS - Property Services  
SLUPE - Strategic Land Use Planning & Environment  
TCM - Trees and Conservation Maintenance  
WS - Waste Services

### **11.3 Natural Area**

ACM – Asbestos Containing Material  
ASS – Acid Sulphate Soils  
BAW – Beach Access Way  
BF – Bush Forever  
CCW – Conservation Category Wetland  
EMVAT – Emergency and Maintenance Vehicle Access Track  
ESA – Environmentally Sensitive Area  
ESL – Emulsion Stabilised Limestone  
MNES – Matters of National Environmental Significance (see *EPBC Act 1999*)  
PEC – Priority Ecological Community  
SCP - Swan Coastal Plain  
TEC – Threatened Ecological Community

## 12. APPENDIX A: LEGISLATIVE AND OTHER REQUIREMENTS

Title	Requirements / Description
<b>Local context (City of Wanneroo)</b>	
Community Development Plan 2021/22-2025/26	This new integrated Community Development Plan provides a holistic framework catering for all members of our community so that everyone who lives or works in the City can contribute, be active, feel secure and belong.
Asset Management Policy (2023)	This Policy defines the key principles and requirements which the City will apply to its planning and management, including long term financial sustainability, of assets to ensure that these are effective and safe to meet the needs of its community, customers and stakeholders.
Asset Management Strategy (2018)	The AM Strategy adds detail to the AM Policy, focusing on what the City plans to do to build its AM capability and capacity necessary to sustainably meet the challenges into the future. The AM Strategy sets out the high level AM objectives and outcomes to ensure that AM practises and the management of its assets is consistent with the AM Policy and are aligned to the SCP and CBP objectives. It also ensures that improvements also meet the requirements of the IPF and are in alignment with ISO 55001 asset management system standards.
Bushfire Risk Management Plan 2019-2024 (BRMP)	The BRMP is a strategic document that identifies assets at risk from bushfire and their priority for treatment. The Treatment Schedule sets out a broad program of coordinated multi-agency treatments to address risks identified in the BRMP. Government agencies and other land managers responsible for implementing treatments participate in developing the BRMP to ensure treatment strategies are collaborative and efficient, regardless of land tenure.
Cats Local Law (2023) and Dogs Local Law (2016)	Provide for the regulation, control and management of the keeping of animals within the City of Wanneroo. The effect of this local law is to establish the requirements with which owners and occupiers of land within the district must comply in order to keep animals and provides the means of enforcing the local law.
Coastal Hazard Risk Management Adaptation Plan Part 1 (2012) Part 2 – pending.	Part 1 of the CMP comprises a ‘data capture’ of the City’s coastline, describes a number of issues related to use of the coastline, documents existing and proposed facilities along the coast and discusses the potential ways in which known issues can be resolved. Part 2 of the CMP will follow the adoption of Part 1 and is intended to address previous commitments made in existing foreshore management plans, as well as the potential impacts of climate change, and future community needs, including recommendations for future coastal uses.
City of Wanneroo Local Government and Public Property Local Law (1999)	Provides the regulation, control, management and use of public property in the City
City of Wanneroo Safety Health and Wellbeing Policy (2023) and relevant Procedures	The Policy covers all occupational aspects of the City’s activities, business and operations.

Title	Requirements / Description
Climate Change Adaptation and Mitigation Strategy 2020/21-2025/26 (CCAMS)	The purpose of the CCAMS is to identify areas where the City and the community it represents, are exposed to the effects of climate change and provide risk management adaptation measures to reduce the risk, as well as to identify practical mitigation measures that would aid with the mitigation of the impacts of climate change.
Community Engagement Policy (2024)	The purpose of this Policy is to provide guiding principles for community engagement to ensure consistent, meaningful and best practice engagement is carried out within the City.
Environmental Management Plan Guidelines (2018) (EMP)	Applies to the following management plans: vegetation and fauna, conservation area, wetland, karstic features, dieback and revegetation. Outlines the format and content that the City requires for EMP's lodged with the City for approval, together with the assessment process the City will follow, in order to better streamline the EM) approval process and ensure consistent decision-making within the City.
Environment Policy (2022)	The purpose of this policy is to demonstrate the City's commitment to protecting and enhancing its natural environment and incorporating the principles of ecologically sustainable development throughout its operations and business activities to benefit current and future generations taking into account environmental, economic and social impacts (Triple Bottom Line).
Feral Animal Control Program	The feral animal control program aims to improve and protect biodiversity within the City with a focus on feral rabbits and foxes. The program is undertaken in line with relevant legislation and is carried out in strategically selected City-managed conservation areas.
Foreshore Management Plan Guidelines (2021)	Outlines the format and content that the City of Wanneroo requires for FMP's lodged with the City for approval, together with the assessment process the City will follow, in order to better streamline the FMP approval process and ensure consistent decision-making within the City.
Local Biodiversity Plan 2018/19-2023/24	Implementation of the Local Biodiversity Plan will help integrate biodiversity protection into land use planning, commit to ongoing action and new projects to improve biodiversity conservation.
Local Environment Strategy (LES) 2019	The LES sets out the high level framework for all of the City's strategic environmental planning initiatives and promotes a balance between growth and the protection and enhancement of the natural and built environments.
Local Government Insurance Scheme (LGIS)	Sets out City responsibilities for managing risks and liabilities including within natural areas under the care and control of the City.
Local Planning Policy 1.1 Conservation Reserves (2021)	The objectives of the Policy are to provide guidance on the classification of Public Open Space (POS) as 'Conservation' under District Planning Scheme No. 2 (DPS 2).
Local Planning Policy 3.3 Fauna Management (2022)	The objectives of the Policy are to ensure the effective management of macro-fauna by landowners and/or developers of land proposed for urban development and to avoid the unwanted impacts of displaced macro-fauna due to habitat disturbance. Macro fauna are defined as Kangaroo's and Emu's for the purposes of this policy.
Local Planning Policy 4.1: Wetlands (2022)	The objectives of the Policy are to ensure development within the City of Wanneroo appropriately protects and manages the environmental attributes of wetlands and also recognises the value and benefit of wetlands to the local environment and community.

Title	Requirements / Description
Local Planning Policy 4.12 Heritage Place (2016)	The objectives of the Policy are to provide an appropriate level of protection for heritage places identified on the City's Local Heritage Survey.
Local Planning Policy 4.13 Caves and Karstic Features (2018)	The objectives of the Policy are to conserve caves and significant karstic features for their geological, cultural and environmental values and to minimise risks to people and property in karst hazard areas.
Local Planning Policy 4.21 Coastal Assets (2022)	The purpose of the Policy is to Provide guidance to land developers, consultants, the community and contractors as to the type of permanent and temporary assets that the City will consider within the foreshore reserve and to guide the location of proposed assets relative to the projected onset of coastal processes as calculated in accordance with State Coastal Planning Policy 2.6 (SPP 2.6).
Local Planning Policy 4.3 Public Open Space (2021) (including Park Sign specification)	The policy provides for Council's position on the planning, provision, location, design, development and interim maintenance of Public Open Space (POS).
Local Planning Policy 4.8: Tree Preservation Policy (2006)	To provide a mechanism to protect significant trees of the City within the following specified areas: vacant land and bushland which will be subject to future development; and existing and proposed public open space reserves.
Pathway Policy (2024)	Provides direction to the provision of a safe and accessible pathway network to improve the walking and cycling environment to enable the community to walk and cycle for transport, health and recreation as well as reduce car dependency.
Pesticide Management Policy (2019)	The objective of the Policy is to ensure that the City meets its environmental, legal and community obligations for pesticide use on land it administers in a manner that is environmentally, socially and economically responsible. It also ensures that pesticides are applied in the City's parks, streetscapes and conservation reserves in accordance with the relevant state government Acts and guidelines and industry best practice. The Policy applies to the application of pesticides to all City managed land.
Site Erosion & Sand Drift Prevention Local Law (2016)	Provides for the regulation, control and management of site erosion, sand and dust on land within the district.
Economic Development Strategy (2022)	outlines the City's bold intentions for local economic development over the next ten years.
Strategic Community Plan 2017/18 – 2026/27	The City's long-term vision capturing the aspirations of the community and describing the City's objectives. It provides strategic guidance to the City regarding priority focus areas and direction and informs the City's Corporate Business Plan. This is also the key document for Council to track and report back to the community on progress. The Plan includes four pillars, one of which is 'Environment'. The aspiration identified for the Environment pillar is for 'A healthy and sustainable natural and built environment'.
Street Tree Policy (2018)	The objectives of the Policy are to Provide guidance for the care, control, management, protection and preservation of City trees; to increase the City's canopy cover; to enhance the amenity of the City's streetscapes and reserves through the planting of new trees and to define the circumstances under which the City's trees may be removed or pruned.



Title	Requirements / Description
Yellagonga Integrated Catchment Management Plan 2021-2026 (YICM)	The Plan is a collaborative approach between the Cities of Joondalup and Wanneroo that aims to monitor and improve the health of the Yellagonga wetlands and has been developed to ensure an integrated approach to the ongoing management of the Yellagonga Catchment. It provides a strategic direction for the implementation of key projects and aims to improve the ecological functions and overall health of Yellagonga Regional Park.
<b>National Context</b>	
<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i>	Protects areas and objects that are of particular significance to Aboriginal people.
Australian Accounting Standards Board	Accounting rules setting out City requirements for the financial reporting of assets.
Australian Standards	Local government duty of care to ensure that the minimum established industry standards are met.
<b>National Context cont.</b>	
Australia's Biodiversity and Climate Change. A strategic assessment of the vulnerability of Australia's biodiversity to climate change. Commonwealth of Australia (2009)	Is an assessment of the vulnerability of Australia's biodiversity to climate change, commissioned by the Australian Government to help increase our understanding of how to help Australia's rich biodiversity adapt to climate change.
Australia's Biodiversity Conservation Strategy 2010 – 2030, Commonwealth of Australia (2010)	The Strategy is a guiding framework for biodiversity conservation for all sectors - government, business and the community. The Strategy sets out priorities which will direct efforts to achieve healthy and resilient biodiversity and provide us with a basis for living sustainably.
Australia's Native Vegetation Framework, COAG (2012)	This Framework is a joint initiative of the Australian, state and territory governments and outlines a coordinated national approach to native vegetation management and provides a mechanism through which the native vegetation management commitments agreed to by all Australian governments can be progressed.
<i>Disability Discrimination Act 1992</i>	Provides protection against discrimination based on disability, in this case POS facilities.
<i>Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act 1999) and relevant Regulations 2000</i>	The EPBC Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places defined in the Act as matters of national environmental significance.  Regulates activities that are likely to have a significant impact on nationally protected matters, including bushfire management activities (firefighting and fire prevention) carried out by the City and other authorities, including fire and emergency services and individuals.  Establishes the National Heritage List which includes natural, indigenous and historical places on Commonwealth lands and waters or under Australian Government control that are of outstanding heritage value to the nation.
National Construction Code of Australia (NCC) and	Code of practice for providing safe buildings and developing and managing a uniform, national approach to building standards.

Title	Requirements / Description
Building Code of Australia (BCA)	
National Environmental Standard (Matters of National Environmental Significance) (2021)	Recommendations following independent review of the EPBC Act 1999 included the creation of NES, making existing rules under the EPBC Act 1999 clear. Implementation of the Standards by Commonwealth or State governments will ensure strong environmental protection will be provided to matters of national environmental significance regardless of the authorising entity.
Native Title Act 1993	Provides for the recognition and protection of native title.
Threat abatement plan for disease in natural ecosystems caused by <i>Phytophthora cinnamomi</i> , Commonwealth of Australia (2014)	This national threat abatement plan came into force on 31 January 2014 and addresses the key threatening process 'Dieback caused by the root-rot fungus <i>Phytophthora cinnamomi</i> , which is listed under the Commonwealth EPBC Act.
<b>International Context</b>	
Japan Australia Migratory Birds Agreement (Australia Treaty Series 1981 No.6) (JAMBA)	The JAMBA agreement lists terrestrial, water and shorebird species which migrate between Australia and Japan. The agreement requires the parties to protect migratory birds and includes provisions for cooperation on the conservation of threatened birds.
China Australia Birds Agreement (Australian Treaty Series 1988 No.22) (CAMBA)	The CAMBA agreement lists terrestrial, water and shorebird species which migrate between Australia and China. The agreement requires the parties to protect migratory birds.
Republic of Korea-Australia Migratory Bird Agreement 2007 (ROKAMBA)	The ROKAMBA formalises Australia's relationship with the Republic of Korea in respect to migratory bird conservation and provides a basis for collaboration on the protection of migratory shorebirds and their habitat.
The Convention on the Conservation of Migratory Species of Wild Animals (1983) (Bonn Convention)	Is an intergovernmental treaty that aims to conserve terrestrial, aquatic and avian migratory species throughout their range. Migratory species which are native to Australia and are included in the appendices to the Bonn Convention.
The Convention on Wetlands of International Importance (1971) (Ramsar Convention)	Is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. Australia currently has 65 wetlands of international importance listed under the Ramsar Conventions.