



**Town of Victoria  
Park  
Environment Plan  
(FY 2023-2028)**

## Table of Contents

Acknowledgement of the Town of Victoria Park's Traditional Owners	3
Executive Summary	3
1. Introduction	5
2. Purpose of Town of Victoria Park Environment Plan (FY 2023-2028)	6
3. Key Drivers, Informing Documents and Stakeholders	7
3.1 Drivers	7
3.2 Key Informing Documents	11
3.3 Key Stakeholders for the Town of Victoria Park	11
4. Scope and Objectives of the Environment Plan	17
4.1 Objectives	17
5. Focus Areas and Actions of the Environment Plan	20
5.1 CLIMATE CHANGE	20
5.1.1 Climate Change – Pressures	20
5.1.2 Climate Change – What have we done?	21
5.1.3 Climate Change – Future Actions	23
5.2 WATER MANAGEMENT	28
5.2.1 Water Management – Pressures	28
5.2.2 Water Management – Current State	29
5.2.3 Water Management – What have we done?	29
5.2.4 Water Management – Future Actions	31
5.3 LAND USE AND BUILT ENVIRONMENT	35
5.3.1 Land Use and Built Environment – Pressures	35
5.3.2 Land Use and Built Environment – What have we done?	37
5.3.3 Land Use and Built Environment – Future Actions	39
5.4 NATURAL AREAS AND BIODIVERSITY	42
5.4.1 Vegetation Communities	42
5.4.2 Bushland	42
5.4.3 Foreshore	43
5.4.4 Fauna	43
5.4.5 Natural Areas and Biodiversity – Pressures	44
5.4.6 Natural Areas and Biodiversity – What have we done?	44
5.4.7 Natural Areas and Biodiversity – Nature-Positive Approach	47
5.4.8 Natural Areas and Biodiversity – Future Actions	48

5.5	WASTE MANAGEMENT	53
5.5.2	Waste Management – What have we done?	54
5.5.3	Waste Management – Future Actions	57
6.	Monitoring and Review	61
7.	Appendices	63
7.1	Appendix 1 – Relevant Policy and Legislation	63
7.2	Appendix 2 – Cities Power Partnership	68
7.3	Appendix 3 – Acid Sulfate Soil Guidance	70
7.4	Appendix 4 – Pressures on the Natural Environment	71

## Acknowledgement of the Town of Victoria Park's Traditional Owners

The Town acknowledges the traditional custodians of this land, the Whadjuk people of the Noongar nation. We pay respect to past, present and emerging Leaders their continuing cultural heritage, beliefs, and relationship with the land on which the Town is built.

The intimate relationship Traditional owners have with Country, and their role in caring for and maintaining Country for thousands of years, provides us with the guiding wisdom required to protect and maintain the ecosystems that lie within our jurisdiction and beyond.

We thank them for the contribution made to life in the Town of Victoria Park and to this region.

## Executive Summary

There are a diverse range of often conflicting community and land use considerations that must be addressed when managing the environment within the municipality of the Town of Victoria Park. These considerations include:

- Population which is projected to increase from the current 35,000 to 75,000 people by 2050 Strategic Community Plan 2017 – 2032)
- Belmont Park Precinct Development
- Lathlain precinct development
- Crown Entertainment Complex
- Optus Stadium
- A rapidly expanding food industry, residential, industrial, retail and technology/university precincts
- Numerous parks and recreation reserves.

The Town of Victoria Park Environment Plan (FY 2023-2028) has five focus areas that align with the Town of Victoria Parks Community Strategic Plan 2022-2023, seven of the United Nations Sustainable Development Goals (SDGs) and the International Union for the Conservation of Nature (IUCN) Nature Positive Approach. The five focus areas are

1. Climate Change
2. Water Management
3. Land Use and Built Environment
4. Natural Areas and Biodiversity
5. Waste Management.

Each focus area has its own section outlining the Town's objectives, a table of action plans with KPI's and a brief overview of what has been achieved to date. An opportunity for review and a continuous improvement cycle have also been built into the plan.

Through the development of the Town of Victoria Park Environment Plan (FY 2023-2028) , the Town recognises its responsibility to contribute to the maintenance and protection of the environment for the benefit of current and future generations. It is essential to recognise that the Town cannot affect environmental action in isolation. The Town needs to work collaboratively with all stakeholders to achieve the objectives of this Plan to implement change.

The Town of Victoria Park Environment Plan (FY 2023-2028) recognises that community engagement in environmental initiatives is an important tool in developing a culture of environmental awareness and positive behaviour change within the Town. Effective dialogue and information sharing not only connects the community with the Town's activities; it also promotes a shared sense of responsibility and community cohesiveness and helps everyone to understand what the municipality and its stakeholder responsibilities are.

Collaboration is critical if the Town is to achieve its aim of protecting and enhancing its environment, showing leadership through best practice environmental management, and promoting growth and development within defined environmental parameters. It acknowledges the role it plays within the wider ecological area of the Swan and Canning River system and to the sustainable use and management of the region's natural resources.

## 1. Introduction

The Town of Victoria Park is an inner-city municipality on the southern side of the Swan River, encompassing an area of 17.62 square kms. Bordered by the Cities of Perth, South Perth, Belmont and Canning, the boundaries of the Town include 6 kms of frontage to the Swan River on the north/west, Orrong Road on the north/east, Welshpool/Boundary/Manning Roads on the south/east and Berwick Street on the south/west.

Suburbs encompassed within the Town's municipality include Bentley, Burswood, Carlisle, Carlisle North, East Victoria Park, Lathlain, St James and Victoria Park.

There are a diverse range of community and land use considerations that must be addressed when managing the environment within the municipality of the Town of Victoria Park. These considerations include:

- The population is projected to increase from the current 35,000 to 75,000 people by 2050 Strategic Community Plan 2017 – 2032)
- Belmont Park Precinct Development
- Lathlain precinct development
- Crown Entertainment Complex
- Optus Stadium
- A rapidly expanding food industry, residential, industrial, retail and technology/university precincts
- Numerous parks and recreation reserves.

The Town of Victoria Park along with all Local Governments in Western Australia manage a variety of rich and diverse natural ecosystems. with the South Western corner of Western Australia is internationally recognised as one of the world's biodiversity hotspots which means there are over 1,500 flowering plant species found nowhere else in the world, but they are seriously under threat because less than 30% of the natural bushland remains.

The unique natural ecological communities located within the Town include the Swan River foreshore, Kensington Bushland (a listed Bush Forever site) and Hillview Bushland. It is vital the Town does all it can to protect and enhance these natural ecosystems especially in light of its proximity to the CBD and the environmental pressures posed by residential, commercial and industrial land uses.

Through the development of the Town of Victoria Park Environment Plan (FY 2023-2028) (hereafter referred to as the 'Environment Plan') , the Town recognises its responsibility to contribute to the maintenance and protection of the quality of the environment for the benefit of current and future generations, to the full extent of the powers and influence of the Town.

The Town is committed to protecting and enhancing its environment, showing leadership through best practice environmental management, and promoting growth and development within defined environmental parameters. It recognises the role it

plays within the wider ecological area of the Swan and Canning River systems and to the sustainable management of the region's natural resources.

### **Town of Victoria Park Environmental Plan 2013 - 2018**

The Town's previous Environment Plan (Environmental Plan 2013-2018) was developed as a strategic document to guide the Town's environmental management activities.

Given that the Environmental Plan 2013-2018 had reached the end of its life and that the Town has a dedicated Environmental mission under the *Strategic Community Plan 2022 – 2032* (see section 3), a new guiding document was required.

## **2. Purpose of Town of Victoria Park Environment Plan (FY 2023-2028)**

The Commonwealth Environmental Protection Act (1986) defines 'environment' as:

*...living things, their physical, biological and social surroundings, and interactions between all of these.*

For the purpose of the Environment Plan, the definition of 'environment' was expanded to include:

.....living things (flora, fauna and humans), their physical environment (air, water and soil); their biological environment (biodiversity and all living things); the social environment (cultural, economic, historical); and how these factors interact with one another.

Environmental management in a built-up environment must be a compromise between conservation of the natural environment as well as the social, economic and cultural needs of the community.

It is important therefore that environmental considerations and sustainable development are understood and integrated into every aspect of the Town's core business, including, planning, building, economic development, infrastructure management, community development, and assets management.

The Environment Plan will be the main informing document directing environmental management by the Town. The purpose of this plan is to identify environmental focus areas and associated actions the Town aims to implement over the next five years.

## 3. Key Drivers, Informing Documents and Stakeholders

### 3.1 Drivers

Current climate change models predict that globally, mean maximum city temperatures could increase by as much as 8°C over the next few decades. Increasing surface temperatures and extreme weather events are reducing urban liveability, compounding human inequity, and threatening infrastructure and biodiversity (Lancet Planet Health 2021).

In light of the environmental, social and economic costs of climate change and its associated challenges, decision makers within the Town of Victoria Park need to think strategically about integrating environmental management with adaptation and mitigation strategies to build resilience, improve liveability and mental well-being as well as conserving its natural assets and public open space.

Therefore, the key driving documents for the Town of Victoria Park Environment Plan (FY 2023-2028) are The Strategic Community Plan 2022-2032, the United Nations Sustainable Development Goals (SDGs) and the International Union for the Conservation of Nature (IUCN) Nature Positive Approach discussed in section 5.4.8.

#### 3.1.1 Town of Victoria Park Strategic Community Plan 2022 – 2032

The Strategic Community Plan 2022-2032 is the principal document reflecting our community's long-term vision, values, aspirations and priorities.

The purpose of the Strategic Community Plan 2022-2032 is to sustainably serve, empower and connect community.

This Plan sets out the most important directions for the Town, particularly in adopting an innovative program structure that focuses the organisation's efforts to deliver the outcomes for the community that will ultimately improve the Town's quality of life.

The Environmental Mission of the *Strategic Community Plan 2022 – 2032* is:

***To promote sustainable, liveable, healthy and green places for everyone.***

As part of this Mission, the *Strategic Community Plan 2022 – 2032* contains several Community Priorities:

- EN1 Protecting and enhancing the natural environment.
- EN2 Facilitating the reduction of waste.
- EN3 Enhancing and enabling liveability through planning, urban design and development.
- EN4 Increasing and improving public open spaces.
- EN5 Providing facilities that are well-built and well-maintained.
- EN6 Improving how people get around the Town.



These Community Priorities have informed the focus areas of the Environment Plan (see section 4). This Plan is also aligned with the United Nations Sustainable Development Goals.

### **3.1.2 United Nations Sustainable Development Goals**

The United Nations Sustainable Development Goals (SDGs) advocate for ending poverty, protecting the planet and ensuring all people enjoy peace and prosperity.

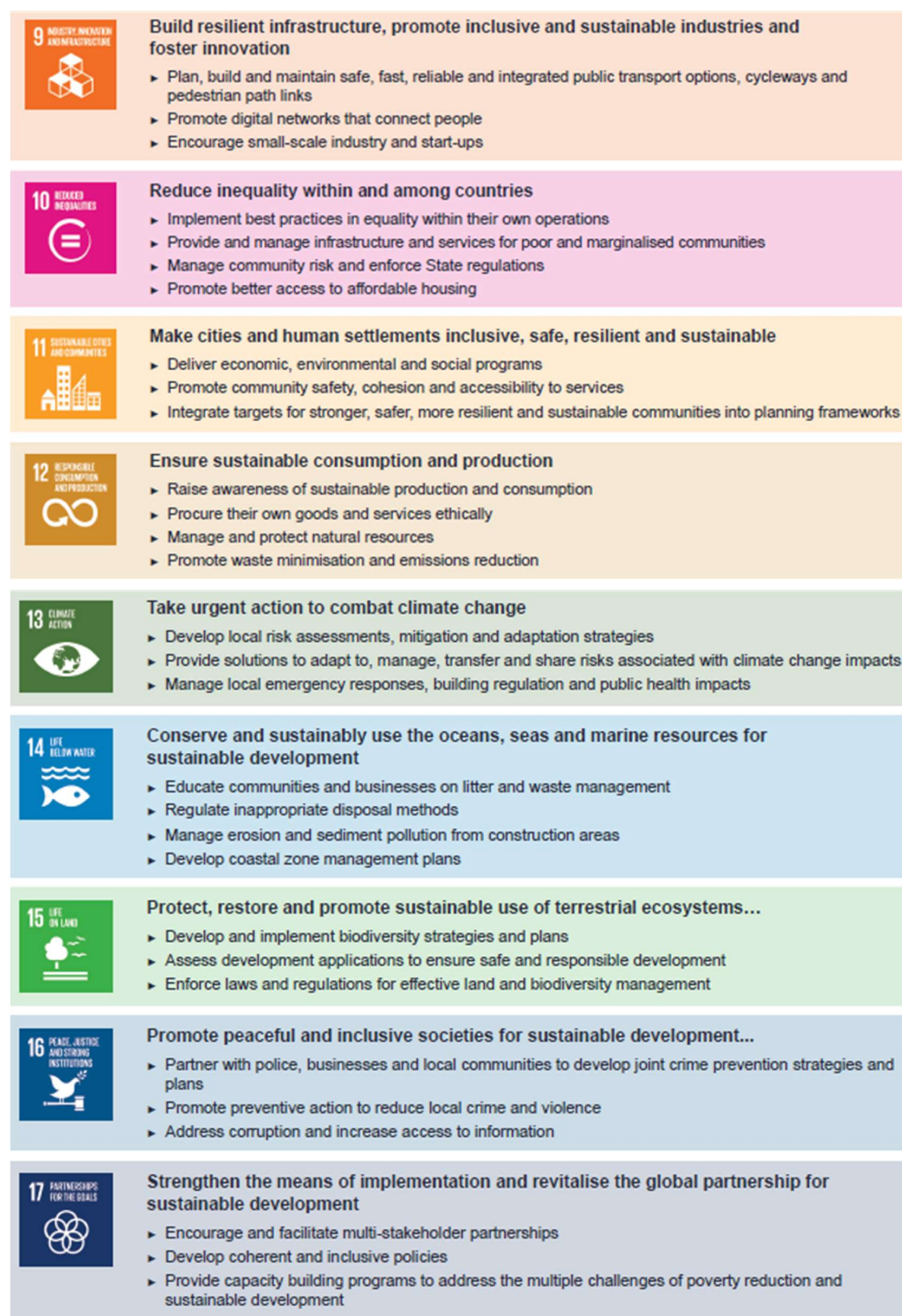
The SDGs listed below, were agreed to, and adopted by, the United Nations member states, including Australia, in September 2015 as part of the 2030 Agenda for Sustainable Development. Seventeen goals apply to all countries in an attempt to improve global well being by promoting action on climate change, economic inequality, innovation, sustainable consumption, peace and justice.

These seventeen goals, together with examples of how Local Government can contribute (drawn from the *Integrating Sustainable Development Goals into Local Government Strategic Planning Processes - A How to Guide* (State of NSW and Department of Planning, Industry and Environment, 2020), are outlined in Figure 1.

The SDGs are being applied at a Federal, State and local government level across the country and internationally.

By providing an international framework for consideration of sustainability matters, these SDGs provide the ideal platform with which to inform the objectives of the Environment Plan .

	<p><b>End poverty in all its forms everywhere</b></p> <ul style="list-style-type: none"> <li>▶ Identify and assist those in need through policies, programs and services</li> <li>▶ Address homelessness and vulnerability through community safety plans and housing strategies</li> <li>▶ Collaborate and advocate for economic development and support job creation</li> </ul>
	<p><b>End hunger, achieve food security and improved nutrition and promote sustainable agriculture</b></p> <ul style="list-style-type: none"> <li>▶ Create supportive environments for health and wellbeing</li> <li>▶ Implement effective land management policies to influence food production and security</li> <li>▶ Promote local food chains and farmers markets</li> </ul>
	<p><b>Ensure healthy lives and promote wellbeing for all</b></p> <ul style="list-style-type: none"> <li>▶ Enforce laws and regulations for public health protection</li> <li>▶ Plan local neighbourhoods to promote health and wellbeing</li> <li>▶ Protect and promote the health of communities through social, sporting, mental health, environment and safety programs</li> </ul>
	<p><b>Ensure inclusive and equitable quality education and promote lifelong learning opportunities</b></p> <ul style="list-style-type: none"> <li>▶ Provide kindergartens, pre-schools and library facilities</li> <li>▶ Provide children and youth services and identify vulnerable communities</li> <li>▶ Integrate technical and vocational training programs into local economic development strategies</li> </ul>
	<p><b>Achieve gender equality and empower women and girls</b></p> <ul style="list-style-type: none"> <li>▶ Deliver, partner and lead gender equality initiatives</li> <li>▶ Consult with women on gender-specific needs and interest to inform policy, programs and budget plans</li> <li>▶ Promote the prevention of violence against women in their communities</li> </ul>
	<p><b>Ensure availability and sustainable management of water and sanitation for all</b></p> <ul style="list-style-type: none"> <li>▶ Provide water and sewer services to local communities</li> <li>▶ Promote water management and water conservation</li> <li>▶ Improve water quality through environmental protection and waste management programs</li> </ul>
	<p><b>Ensure access to affordable, reliable, sustainable and modern energy for all</b></p> <ul style="list-style-type: none"> <li>▶ Set local targets to reduce greenhouse gas emissions</li> <li>▶ Adopt energy efficiency and renewable energy technologies</li> <li>▶ Implementing transport and urban planning policies</li> </ul>
	<p><b>Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work</b></p> <ul style="list-style-type: none"> <li>▶ Prepare local economic development strategies</li> <li>▶ Invest in civic infrastructure</li> <li>▶ Encourage a placed-based approach to achieving economic prosperity</li> </ul>



**Figure 1 – United Nations Sustainable Development Goals and How Local Governments Can Contribute**

### 3.2 Key Informing Documents

There are three tiers of Government in Australia, all of which impact environmental management at a municipal level. International, federal, state and local government s legislation, policies, strategies, and agreements must be considered, but its is r Local Government decision making that will have the quickest and most dramatic effect on the community.

Relevant Commonwealth and State policies, legislation and international treaties and agreements are listed in Appendix 1.

The Town of Victoria Park's policies, strategies, and plans relevant to environmental management within the Town are listed in Table 1.

### 3.3 Key Stakeholders for the Town of Victoria Park

Environmental issues are not limited to Local Government boundaries so partnerships with external stakeholders are critical for the Town of Victoria Park to achieve positive environmental outcomes.

Some of the key stakeholders identified for environmental management in the Town of Victoria Park include (but are not limited to):

1. Community – our community has a role in environmental management, as environmental issues within the Town require a local understanding of resources, problems and suitable mechanisms to manage those problems. Our community includes:
  - Residents and Ratepayers.
  - Landowners.
  - Local business owners and operators (e.g. Rewards for Business; Plastic Free Business program).
  - Registered volunteers (e.g. Adopt-A-Spot program).
  - Environmental and 'Friends Of' groups, including Friends of Jirdarup Bushland (e.g. revegetation, weed control, community education and advocacy for the Jirdarup Bushland Precinct).
  - Local Indigenous communities (e.g. crucial knowledge sharing and ensuring appropriate cultural consideration in Town operations).
  - Community groups, including local schools (e.g. Waterwise School program).
  - River user groups, such as the WA Water Ski Association.
  - Visitors, such as workers, shoppers, diners and facility users.
2. Government – environmentally, the various tiers of Government – Federal, State and Local – deliver policies, practices and programs to ensure that our natural assets are protected and enhanced now and into the future.

They include:

- Federal Government departments, such as Department of Agriculture, Water and the Environment.
  - State Government departments, including the Department of Biodiversity, Conservation and Attractions, Department of Water and Environmental Regulation, Department of Planning/ Western Australian Planning Commission, Main Roads.
  - Western and Eastern Metropolitan Regional Council (WMRC and EMRC)
  - Mandarie Regional Council (MRC)
  - Western Australian Local Government Association (WALGA) and associated network groups.
  - Neighbouring Local Governments.
3. Utility providers such as Water Corporation and Western Power. These providers must comply with environmental obligations and work to reduce their operational environmental impact.
4. Perth Region NRM - provides solutions to mitigate the environmental impact of climate change, population growth and unsustainable land and water management practices.
5. Other stakeholders include:
- Planning and development industry and peak groups, such as the Property Council, Urban Development Institute of Australia, Planning Institute of Australia,
  - Engineering industry groups, such as Institute of Public Works Engineers Australia).
  - Environment groups, such as Urban Bushland Council, Perth Region NRM, Conservation Volunteers Australia, Landcare Australia.

**Table 1 - Town of Victoria Park's policies, strategies, and plans relevant to environmental management within the Town**

<b>Guiding Document</b>	<b>Relevance to the Environment Plan</b>
<b>Town Planning Scheme No.1</b>	<p>Town Planning Scheme No. 1 contains several environmental objectives:</p> <ul style="list-style-type: none"> <li><i>a. to protect and enhance the health, safety and general welfare of the Town's inhabitants and the social, physical and cultural environment of the Town;</i></li> <li><i>b. to ensure the use and development of land is managed in an effective and efficient manner within a flexible framework which ... can respond readily to change;</i></li> <li><i>c. to co-ordinate and ensure that development is carried out in an efficient and environmentally responsible manner which -</i> <ul style="list-style-type: none"> <li><i>(i) makes optimum use of the Town's growing infrastructure and resources</i></li> <li><i>(ii) promotes an energy efficient environment; and</i></li> <li><i>(iii) respects the natural environment.</i></li> </ul> </li> </ul>
<b>Local Planning Policies</b>	<p>There are several Local Planning Policies that specifically address aspects of the natural environment:</p> <ul style="list-style-type: none"> <li>• TREE PLANTING AND RETENTION – This encourages (but does not mandate) the retention of existing trees with a high Halliwell score, the provision of new trees and the protection of existing street trees associated with some residential and non-residential development, not already subject to provisions for deep soil zones and tree planting under SPP 7.3 R-Codes – Apartments and mixed-use.</li> <li>• DESIGN OF BUILDINGS OVER THREE (3) STORIES – includes performance criteria relating to Ecologically Sustainable Development to limit non-renewable resource use and greenhouse gases, solar orientation, collection of recyclables, bike parking, and micro-climate within communal areas.</li> <li>• CLIMATE CONTROL (ENERGY EFFICIENCY) – aims to achieve energy-conscious site design, building design and materials choice.</li> </ul> <p>The provisions of these policies informed the Land Use and Built Environment objectives of the Environment Plan.</p>

Guiding Document	Relevance to the Environment Plan
<b>Local Planning Strategy (in draft)</b>	<p>This sets the strategic direction for urban planning and development for the next 10 to 15 years. The <i>Local Planning Strategy</i> will shape how the Town grows to accommodate more residents and visitors as well as the quality and character of neighbourhoods and commercial areas. The <i>Local Planning Strategy</i> will provide the basis for a new <i>Local Planning Scheme No.2</i> and the delivery of strategic planning projects over the next 5 years.</p> <p>The development of the <i>Local Planning Strategy</i> has directly informed the planning-oriented actions and objectives within the Environment Plan , ensuring planning decisions consider environmental impacts and outcomes and ecologically sustainable development.</p>
<b>Kensington Bushland Management Plan; Hillview Bushland Management Plan</b>	<p>These plans assess current and future risks and pressures to develop management strategies and recommendations for the protection and enhancement of these bushlands. The implementation of these plans directly contributes to the objectives of the Natural Areas and Biodiversity focus area.</p> <p>Refer to section 5.4 Natural Areas and Biodiversity.</p>
<b>Parks and Recreation Asset Management Plan</b>	<p>This Plan refers to future drivers that may influence demand on the provision of recreation-based services. Environmentally, there will be increased demand for more sustainable recreation assets and maintenance techniques including, but not limited to, the use of drought-tolerant vegetation and water wise irrigation strategies. As such, the implementation of the Parks and Recreation Asset Management Plan helps facilitate key elements of the Environment Plan , sustainable resource use and climate change resilience.</p>
<b>Property Asset Management Plan</b>	<p>This Plan refers to future drivers that may influence the provision of property-based services including the implementation of energy and water-saving tactics as well as protection of assets from the impacts of climate change. As such, implementation of the Property Asset Management Plan helps facilitate key elements of the Environment Plan , including sustainable resource use and the reduction of the Town’s emissions.</p>

Guiding Document	Relevance to the Environment Plan
<b>Public Open Space Strategy</b>	<p>The Town's <i>Public Open Space Strategy</i> is intrinsically linked to the land use, natural area management and biodiversity aspects of the Environment Plan as it:</p> <ul style="list-style-type: none"> <li>• Confirms the continued preservation and protection of valued bushland reserves and Swan River foreshore;</li> <li>• Recommends improving the environmental performance of parks to minimise resource impacts (water, weeds etc.) thereby improving biodiversity and conservation value.</li> </ul>
<b>Strategic Waste Management Plan</b>	<p>The implementation of the Strategic Waste Management Plan sets the strategic waste management direction and proposes actions for the Town. As such, this is directly reflected in the Waste focus area of the Environment Plan . Refer to Section 5.5 Waste Management.</p>
<b>Urban Forest Strategy</b>	<p>The Urban Forest Strategy frames the tree diversity, tree canopy and biodiversity considerations under the Environment Plan . It is the major mechanism to increasing and enhancing these and, in so doing, it improves soil, air and water quality, ambient heat and human health. Refer section 5.4 Natural Areas and Biodiversity.</p>
<b>WALGA Declaration on Climate Change and the Town of Victoria Park Climate Emergency Plan</b>	<p>Local Governments from across Western Australia, including the Town of Victoria Park, have committed to WALGA's Climate Change Declaration that demonstrates their acknowledgment of the impacts of climate change and their commitment to developing locally appropriate mitigation and adaptation strategies to manage climate change.</p> <p>In 2018 the Town formally declared a Climate Emergency and subsequently developed a Climate Emergency Plan with the aim of achieving net zero carbon emissions for the Town organisationally by 2030.</p>



<b>Guiding Document</b>	<b>Relevance to the Environment Plan</b>
<b>Waterwise Council Action Plan</b>	This is the main strategic document directing water management by the Town. The purpose of the Waterwise Council Action Plan is to identify focus areas and associated actions the Town will implement to improve water quality and conservation. The implementation of this Plan will enable the Town to meet the Water Management objectives of the Environment Plan to protect and enhance surface and groundwater resources and their sustainable utilisation. Refer to section 5.2 Water Management.
<b>Integrated Transport Strategy</b>	The Integrated Transport Strategy (ITS) sets the strategic direction for managing the Town's transport network. The Strategy aims to create more streets for people, provide key connections to vibrant local centres and support the Town as a livable inner-city community. Complimentary to the Environment Plan and the Climate Emergency Plan, more sustainable transport modes explored under the ITS will help reduce carbon emissions and make for a healthier environment.

## 4. Scope and Objectives of the Environment Plan

As mentioned in section 3, the Community Priorities identified under the Town's *Strategic Community Plan 2022 – 2032* have informed the focus areas of the Environment Plan. These focus areas, together with the Community Priorities with which they align, are:

1. Climate Change (EN1, EN2, EN3, EN5, EN6).
2. Water Management (EN1, EN3, EN4, EN5).
3. Land Use and Built Environment (EN1, EN3, EN4).
4. Natural Areas and Biodiversity (EN1, EN3, EN4).
5. Waste Management (EN2).

These focus areas seem to also align with seven of the 17 United Nations Sustainable Development Goals (SDGs). The seven SDGs include 6, 7, 9, 11, 12, 13 and 15 (see section 3).

The objectives of the Environment Plan (below) give due regard to how the Town can contribute to the Sustainable Development Goals (SDGs), as drawn from the *Integrating Sustainable Development Goals into Local Government Strategic Planning Processes - A How to Guide* (State of NSW and Department of Planning, Industry and Environment, 2020).

### 4.1 Objectives






Each of the five focus areas outlined above has a series of objectives and associated actions (section 5) that aim to affect greater management of natural areas, reduce our emissions, improve surface and ground water quality, conserve water use, manage land sustainably and reduce solid waste entering landfill.

The objectives of the Environment Plan, and the main SDGs and associated targets with which they align, are outlined in Table 2.

NOTE: It is acknowledged that whilst air quality is not explicitly addressed within this Plan, the Town's role in the protection of air quality involves responding to complaints regarding dust, visible smoke and odour, in accordance with the Environmental Protection Unauthorised Discharges Regulations 2004. Air quality is also considered in the purchase of vehicle fleet and plant.

The Department of Water and Environmental Regulation is the responsible authority for the management of air quality in Western Australia, implementing an extensive Air Quality Management program. As such, any incident that negatively impacts the Town's air quality should be reported to the Department of Water and Environmental Regulation.

**Table 2 - Objectives of the Environment Plan and the Sustainable Development Goals (SDG) and to which they relate**

Focus Area	Climate Change	Water Management	Land Use and Built Environment	Natural Areas and Biodiversity	Waste Management
<b>Objectives</b>	<p>Reduce greenhouse gas emissions to achieve net zero carbon emissions by 2030.</p> <p>Empower our community to take action on climate change action.</p>	<p>Protect and enhance surface and groundwater resources to achieve a high quality of natural water resources, thereby creating a healthier environment for our plants, animals and humans.</p> <p>Utilise water resources in a sustainable manner.</p> <p>Promote water management and water conservation.</p>	<p>To ensure planning decisions consider environmental impacts and outcomes.</p> <p>To encourage ecologically sustainable development to reduce greenhouse gas emissions, energy and water consumption, and increase local biodiversity.</p>	<p>Adopt a nature-positive approach, so that nature is protected, restored and renewed.</p> <p>Develop and implement biodiversity strategies and plans.</p>	<p>To encourage and implement projects and initiatives that reduce waste production including greenhouse gases.</p> <p>To facilitate and implement projects and initiatives that aim to divert waste from landfill through avoidance, reduction, repair, repurposing, reuse or recycling.</p>
<b>SDG</b>					

<p><b>SDG Targets</b></p>	<p>Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries Integrate climate change measures into national policies, strategies and planning Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.</p> <p>By 2030, double the global rate of improvement in energy efficiency.</p>	<p>By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials.</p> <p>By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity</p> <p>By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.</p> <p>By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes</p>	<p>By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels.</p> <p>By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels.</p>	<p>Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity.</p>	<p>By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.</p>
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## 5. Focus Areas and Actions of the Environment Plan

Each of the five focus areas has a list of actions. Each action is numbered and has been assigned a timeframe, responsible service area and, where possible, an estimated cost when a new budget is required.

### 5.1 CLIMATE CHANGE

#### 5.1.1 Climate Change – Pressures

The burning of fossil fuels (coal, oil and natural gas) to generate the energy needed to run buildings, homes, cars, business and industry, also creates greenhouse gas emissions. The concentration of greenhouse gases in the atmosphere has increased and resulted in global warming and climate change.

It is widely accepted that these greenhouse gas emissions are negatively impacting the physical, social and economic environment. The impact of climate change will continue to increase if human induced causes are not addressed.

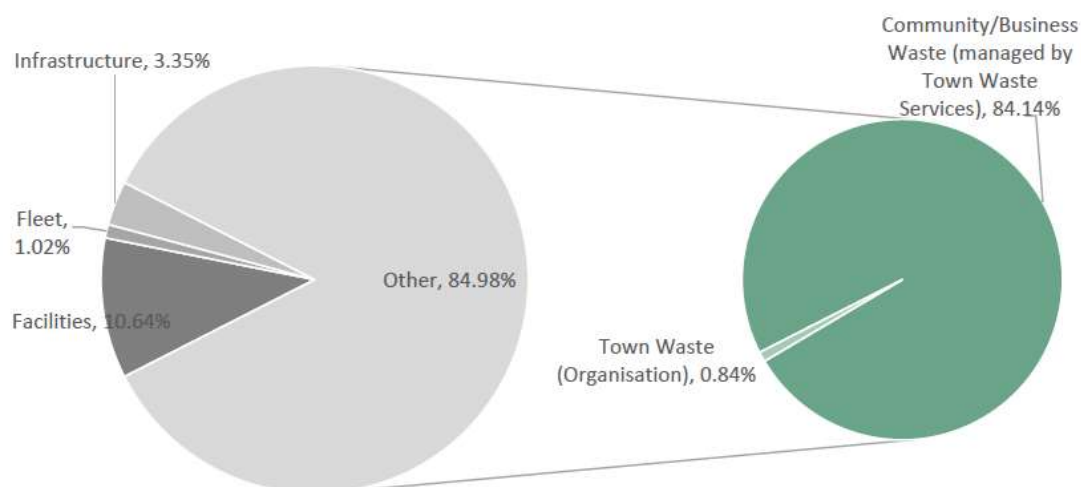
Since 1950 Australia has experienced a warming of 0.4 to 0.7°C, with more frequent heatwaves, increased intensity of droughts and extreme weather events such as storms and flooding. Climate change has also contributed to a reduced and more unpredictable average rainfall in the South-West of Western Australia (AECOM (2016) Climate Change Adaptation Plan).

Locally, the impacts associated with human induced climate change on the municipality of Victoria Park include:

- Higher risk of bushfire events during summer;
- More consecutive hot days and heat waves;
- Lower average rainfall;
- Increased intensity of storms and extreme weather events; Increased risks to major infrastructure from natural events such as floods, storms, and heat waves. These impacts may potentially disrupt transport and utility infrastructure and cause damage to private and public assets;
- Watercourse damage, drought, acid sulfate soils and potential flooding;
- Loss of biodiversity especially remnant flora and fauna located within the Town's bushland reserves;
- Increased urban heat island effect in poorly designed areas which predominantly impact the socially and economically disadvantaged, the very young and the elderly.

Inclusive of scope 1, 2 and 3 emissions across various sources (mainly electricity, gas, fuel – petrol and diesel, tonnes of waste), organisationally the Town of Victoria Park emitted 23,799 tonnes CO<sub>2</sub>-e per annum in 2020. The total emissions breakdown by percentage is illustrated in Figure 2.

The Town recognises the need to demonstrate leadership as a local government to reduce carbon emissions within the region and reduce the adverse impacts of climate change for its residents and the associated environment.



**Figure 2 – Total organisational emissions for the Town of Victoria Park**

(Source: *Town of Victoria Park Climate Emergency Plan* (AECOM 2021).

### 5.1.2 Climate Change – What have we done?

In 2018 Council formally declared a state of Climate Emergency. In recognition of the current state of climate emergency that we now face and the need to move beyond 'adaptation' to 'mitigation', both at the corporate level and for our community, the Town developed a Climate Emergency Plan (2021) that:

- Sets a net zero carbon target for emissions generated by the Town of Victoria Park organisation by 2030.
- Identifies actions that the Town of Victoria Park can undertake to reach this target.
- Provides guidance to our community and business sectors that wish to reduce their own carbon emissions.

Some of the achievements and quantifiable outcomes since the implementation of the Climate Emergency Plan include:

- **Power Purchase Agreement - WALGA Energy Project.**

In 2022 the Town joined a multi-government Power Purchase Agreement.

By sourcing green energy through Western Power, the Town has eight of its highest energy-consuming facilities powered by 100% natural power sourced from Albany Wind Farm, Collgar Wind Farm and Emu Downs Wind Farm.

The Town of Victoria Park is estimated to have saved collectively \$110,166 since the project commencement, saving 792 Tonnes of carbon emissions.

- Garden Organics bin system commenced in 2022/23. Since its inception, an estimated 1,550 tonnes of organics has been diverted from landfill.
- 100kW solar systems installed on the Administration and Aqualife buildings.
- Two electric vehicles purchased in 2022/23 and another three to be purchased in FY2023/24.
- Since 2004 the Town has offset emissions from the Town's light vehicle fleet. This offset has been derived through native tree planting within the Yarra-Yarra Biodiversity Corridor in southwest Western Australia. To date, the Town has offset more than 5,000 tonnes of carbon emissions.
- Progressive facility, street and park lighting conversions to LED or other energy efficient technology.
- The Cities Power Partnership (CPP), which calls on Councils and communities to take steps towards a sustainable, non-polluting energy future by joining the program, seeks to incentivise councils to increase renewable energy and energy efficiency, improve transport and engage in advocacy. For information on actions undertaken under the CPP, refer to Appendix 2.
- Provision of free energy advice and home audits service to our community and businesses.
- Established an energy monitoring/quality management system for council buildings.
- Community workshops on the value of tree retention, urban farming, and sustainable landscaping and electric vehicles.
- Reusable nappy rebate and workshop program established.
- Established a home composting program for residents.
- EV charging stations have been installed in the basement of the Administration Building. Additional chargers are anticipated to be installed at Aqualife and Leisurelife in the near future.

### 5.1.3 Climate Change – Future Actions



#### *Objectives*

- Reduce greenhouse gas emissions by achieving net zero carbon emissions by 2030.
- Empower our community to act on climate change action.

To address the pressures and achieve the climate change objectives, the following strategic environmental initiatives will be undertaken.



Action	SDGs	Responsible Area	Timeframe for implementation	Estimated Cost	Key Performance Indicators
<p>Implement the Climate Emergency Plan*.  <a href="https://www.victoriapark.wa.gov.au/Around-town/Environment/Climate-Emergency-Plan">https://www.victoriapark.wa.gov.au/Around-town/Environment/Climate-Emergency-Plan</a></p> <p>* The Climate Emergency Plan identifies eight priority areas and associated actions. These include:</p> <ul style="list-style-type: none"> <li>• Embed a low carbon culture into the decision-making framework.</li> <li>• Reduce the emissions of all Town of Victoria Park facilities and assets through better energy management and energy efficiency measures.</li> <li>• Reduce the emissions generated from the Town of Victoria Park waste through better waste management and education.</li> <li>• Switch to low carbon or renewable fuels and energy for the Town of Victoria Park's fleet and facilities.</li> <li>• Respond to immediate climate change impacts, improving the resilience of the Town and its people. Most notably, this addresses actions to respond to impacts such as heat waves and flooding.</li> </ul> <p>Example initiatives drawn from the Climate Emergency Plan are listed below.</p>	7, 9, 11, 13	Whole of Town	Beyond 2027/28	As per existing Climate Emergency Plan budget (\$8.5M)	Climate Emergency Plan Implemented June 2030. Organisational carbon emissions reduced to net zero by 2030.
1. Continue to offset carbon emissions from the Town's fleet.	13	Environment; Fleet	Ongoing	\$10,000	Number of trees planted annually. Tonnage of vehicle emissions offset annually.

<b>Action</b>	<b>SDGs</b>	<b>Responsible Area</b>	<b>Timeframe for implementation</b>	<b>Estimated Cost</b>	<b>Key Performance Indicators</b>
2. Continue to participate in the Switch Your Thinking! Program. This should have a focus on community education initiatives to encourage energy efficiency of residents and businesses.	13	Environment	Ongoing	\$5,000	Two x Switch Programs delivered by June each year.
3. Continue to undertake energy audits on high use facilities and associated energy efficiency retrofits. Identify ways to improve the environmental sustainability of Town facilities.	7, 13	Environment; Assets	Ongoing	As per Climate Emergency Plan	One energy audit of a high consuming facility undertaken annually.
4. Continue to implement the Integrated Transport Strategy (ITS)	13	Place Planning; Street Improvement	Ongoing	As per ITS implementation budget	Integrated Transport Strategy implemented by June 2032.
5. Undertake Climate Impact Reporting.	13	Environment	Ongoing	\$15,000	Climate impact report produced annually.
6. Promote alternative forms of passive transport such as walking, cycling and the use of public transport to our community.	13	Environment; Fleet; Street Improvement	2023/24	Officer time	Progress reported annually.
7. Conduct a feasibility assessment for the installation of a Microgrid within the Town	7,13	Environment	2024/25	Officer time	Investigation of microgrid feasibility undertaken, conclusion on feasibility reached.
8. Investigate the opportunity to provide an incentive-based mechanism for businesses to reduce their waste footprint, including a recognition/reward program for businesses that are using energy efficient and sustainable practices.	7,13	Environment	2024/25	Officer time	Investigation of incentivisation mechanisms to business waste footprint undertaken, conclusion on feasibility reached.

Action	SDGs	Responsible Area	Timeframe for implementation	Estimated Cost	Key Performance Indicators
9. Transition 20% of all light fleet vehicles to electric by 2025, if price projections continue to meet affordability parameters.	9,11, 13	Fleet	2024/25	As per Climate Emergency Plan budget	20% of light fleet vehicles transitioned to electric by 2025.
10. Continue to implement the Urban Forest Strategy to mitigate urban heat island effects on the Town's community.	13	Senior Place Leader (Urban Forest)	2025/26	As per Urban Forest Strategy	Number of trees planted annually. Urban heat mapping undertaken annually.
<p>11. Continue to action the pledges made under the Cities Power Partnership:</p> <ol style="list-style-type: none"> <li>1. Install renewable energy (solar PV and battery storage) on council buildings.</li> <li>2. Ensure Council fleet purchases meet strict greenhouse gas emissions requirements and support the uptake of electric vehicles. As directed by the CEP, the Town is transitioning 20% of all light vehicles to electric by 2025.</li> <li>3. Encourage sustainable transport use (public transport, walking and cycling) through Council transport planning and design. This includes implementation of the Town's Bike Plan, which outlines a five-year action plan for specific improvements to the cycle network and environment.</li> <li>4. Providing for adequate cycle lanes (both space and connectivity) in road design and supporting cyclists by providing parking and end-of-ride facilities.</li> <li>5. Roll out energy-efficient lighting particularly street lighting across the municipality.</li> </ol>	7, 9, 11, 13	Environment; Fleet; Assets; Street Improvement	2025/26	As per Climate Emergency Plan	At least three actions in accordance with the Cities Power Partnership pledges implemented annually.

<b>Action</b>	<b>SDGs</b>	<b>Responsible Area</b>	<b>Timeframe for implementation</b>	<b>Estimated Cost</b>	<b>Key Performance Indicators</b>
12. Install voltage optimiser systems at Aqualife, Administration and Leisurelife facilities*^.	7, 9, 11, 13	Assets; Leisure Facilities Operations Manager	2026/27	Leisurelife - size 150kVA – \$29,094  Administration – 178kVA – \$32,256  Aqualife – 300kVA – \$45,148	Voltage optimiser systems installed at Aqualife and Leisurelife by June 2027.
13. Install additional solar thermal heating for the pool water at the Aqualife centre and the hot water for showers at the Leisurelife centre^.	7, 9, 11, 13	Assets; Leisure Facilities	2026/27	TBC	Solar thermal heating installed at Aqualife and Leisurelife by June 2027.
14. Install photovoltaic system at Depot, Library and Leisurelife^.	7, 9, 11, 13	Assets Leisure Facilities Library Depot	2027/28	TBC	Photovoltaic system at Leisurelife, Administration, Depot and Library by June 2028.

\* A voltage optimisation unit for Town facilities would improve the performance of the overall loads in the buildings. Equipment manufacturers suggest the technology can reduce electricity consumption and carbon emissions by an average of 12-15%. Voltage optimisers reduce the energy consumption of the building and, due to lower, more stable voltage, reduce maintenance requirements and extend the life of the equipment.

^ The implementation of these actions will be guided by future master planning that will be occurring for the Library and Leisurelife as part of the MacMillan Master Plan, which will see the renewal of these facilities.

## 5.2 WATER MANAGEMENT

The Town relies heavily on both scheme and groundwater resources. Scheme water is used within the Town's buildings and facilities while irrigation of parks and reserves managed by the Town is largely sourced from groundwater.

Water resources are an integral component of the natural environment. Water provides the basis for all forms of life; supports biodiversity and provides important habitats. Ecosystem health is dependent upon sufficient water within the environment to support its biodiversity and habitats.

Water available to the natural environment has diminished due to extraction for human consumption and the impacts of a drying climate. As water becomes less readily available it is vital water resources are managed responsibly to maintain ecosystem viability.

Similarly, maintaining high water quality is essential for ecosystem and human health. Poor water quality will adversely affect biodiversity health by causing toxic algal blooms, reduced reproduction rates and death of flora and fauna.

As such, the Town of Victoria Park recognises the importance of sustainable and responsible use of water within its operations and facilities, and the need to promote water conservation, water efficiency and water quality to the community.

### 5.2.1 Water Management – Pressures

#### *Increased Provision of Services and Facilities*

The population of the Town is expected to grow exponentially in the next thirty years. By 2036, it is estimated that the Town's population will be 56,000. By 2050, it is possible that the Town's population will exceed 100,000. An increase in population will result in an increased demand on Council water and other services. This challenges the Town to apply the lens of sustainable thinking and take steps to use water resources in a responsible manner while maintaining the delivery of high quality services and facilities for the community. To achieve this, the Town aims to improve both water conservation and efficiency.

#### *Reduced Water Availability*

Reduced stream inflow has affected water availability for the Perth Metropolitan Area and has led to increased pressure on groundwater resources. The region's reliance on groundwater has resulted in more stringent management and monitoring of groundwater use by the State Government. It has meant large users such as the local government sector have had to adapt and significantly reduce groundwater use. Innovative solutions including the use of grey water, wicking beds and drought tolerant plant species are incorporated into infrastructure planning.

#### *Pollutants*

The Town of Victoria Park is responsible for the management and maintenance of the artificial wetland G.O. Edwards Park, as well as Taylor Reserve, McCallum Park and Balbuk Way which front the Swan and Canning River systems, Poor water quality

resulting from stormwater flowing directly into these waterbodies, surface runoff and litter lead to excessive nutrient loads, heavy metal build up and hydrocarbons, all of which impact ecosystem health. Excessive nutrients cause toxic algal blooms and reduced oxygen availability. This combined with heavy metals and hydrocarbons contribute to animal deaths and disease, all of which impact human health and the aesthetic appeal of these reserves.

### **Stormwater**

The majority of the Town is located on sandy infertile Bassendean soils which are water resistant for much of the year. Water runoff especially following the first winter rains is a challenge both in terms of water volume and contaminants. Being an older suburb, much of the area's natural drainage has been modified to underground pipes which drain into small sumps and compensating basins. Twenty-six major catchments have been identified within the Town, and contaminants are high because most of the runoff comes directly from road reserves.

Extreme weather events are becoming more frequent with a warming climate so improved stormwater drainage and filtration are critical to the management of water quality if healthy ecosystems and public health are to be maintained.

The Town is looking to modify suitable sumps to mimic a more natural drainage system planted with vegetation that will filter contaminated sediments before they enter the groundwater.

### **5.2.2 Water Management – Current State**

The Town, like most Local Governments, manage and lease a wide range of buildings and facilities. Building functions range from administrative facilities to community halls, childcare centres, aquatic parks and open spaces. The top three water consuming functional categories within the Town are Swimming Pools (47%), Public Open Space (19%) and Recreation Centres (10%).

#### Corporate Water Consumption

In 2020/2021 the Town's total corporate water usage (scheme and groundwater) was 480,434kL, decreasing from 2019/20 consumption of 513,572kL.

#### Community Water Consumption

In 2020/21 the community water usage (residential, commercial and education) was:

- Scheme: 4,305,054kL, decreasing from 4,315,452kL in 2019/20.
- Groundwater: 4,643,893kL, slightly increasing from 4,585,893kL in 2019/20.

### **5.2.3 Water Management – What have we done?**

Sustainable water management is crucial for local government to operate effectively. The Town of Victoria Park recognises water is a scarce and valuable resource, so it has been participating in the Department of Water and Environmental Regulation (DWER)/Water Corporation Waterwise Council Program since 2015.

This program establishes a cooperative working relationship to improve water use efficiency in local government and their communities. The Town's progression toward sustainable water management since starting this program are listed below:

- Aqualife Centre endorsed as a Waterwise Aquatic Centre since 2016.
- Awarded and maintained Gold Waterwise Council status since 2017.
- Water Conservation Policy developed.
- Urban Forest Strategy developed.
- G.O. Edwards Park Water Quality Improvement Plan (WQIP) and associated staged renovations of G.O. Edwards Park.
- Water Sensitive Urban Design installations including permeable paving on Albany Hwy in 2019/20 plus the installation of permeable paving and wicking beds for the Archer St upgrade in 2022.
- Launch of the Micro Parks and Green Basins Program in 2021.
- Water audits completed for high use sites: Administration, Aqualife, Leisurelife and Depot.
- Ongoing program of retrofitting facilities with water efficient fittings, such as installation of flow restrictors and water efficient shower roses in Aqualife change rooms, and timed shower on the pool deck.
- Waterwise reticulation and landscaping upgrades including Waterwise plants and Hydrozoning at Fletcher Park, Carlisle Reserve, Fraser Park, Shepperton Road, Asquith Reserve, Devenish Reserve, State St Reserve and Harold Rossiter Park.
- Ongoing community programs such as Adopt a Verge Program and sustainable gardening workshops.
- Addition of waterwise standard practices, including:
  - Use of soil conditioner when establishing new plants to improve water and nutrient retention.
  - Fertiliser is not applied on foreshore reserves to reduce leaching of nutrients into the Swan River.
  - Dual flush toilets installed as standard in Council and community buildings.

- **Creation of a Waterwise Council Action Plan in 2021.**

The Waterwise Council Action Plan guides water management to 2025 and has the following water efficiency goals:

**Corporate Water Management Goals**

- Maintain corporate potable water use within 5% of 2020 levels for the next 5 years.
- Increase integration of Water Sensitive Urban Design (WSUD) in infrastructure projects.
- Prepare and implement plans to reduce groundwater abstraction under every licence by 10% by 2030
- Increase the use of alternative water sources used in Council facilities.

**Community Water Management Goals**

- Continue to reduce community per capita water consumption to below 110kL per annum by 2025.
- Increase community education about groundwater and responsible groundwater use.
- Assist the community to reduce garden bore use.

- Assist the community to increase use of alternative water sources (rainwater, grey water).

#### 5.2.4 Water Management – Future Actions



##### ***Objectives***

- Protect and enhance surface and groundwater resources to achieve a high quality of natural water resources, thereby creating a healthier environment for our plants, animals and humans.
- Utilise water resources in a sustainable manner.
- Promote water management and water conservation.

In order to address the pressures, improve the condition of the Town's water resources and achieve the water management objectives, the following strategic environmental initiatives will be undertaken.



<b>Action</b>	<b>SDG</b>	<b>Responsible Area</b>	<b>Timeframe for implementation</b>	<b>Estimated Cost</b>	<b>Key Performance Indicators</b>
15. Continue to encourage schools to participate in the Water Corporation's Waterwise Schools program.	6	Environment	Ongoing	Officer time	Increase in the number of schools participating in the Waterwise Schools program.
16. Continue to participate in the Water Corporation's Waterwise Program.	6	Environment	Ongoing	Officer time	Progress reported annually.
17. As the need arises, replace all old, inefficient water-consuming fittings within Council owned or managed facilities (e.g. single flush toilets) with Water Efficiency Labelling Standard (WELS) rated fittings.	6,15	Assets	Ongoing	As per Asset Management Plans	Number of water efficiency upgrades within Town facilities.
18. Continue to reduce the amount of irrigated turf area throughout the Town and replace it with local native plants with low water requirements.	6,15	Parks; Natural Areas	Ongoing	TBC	Progress reported annually.
19. Integration of Water Sensitive Urban Design (WSUD) in infrastructure projects (e.g. swales, infiltration basins, permeable paving).	6,15	Environment; Street Improvement;	Ongoing	TBC	One new WSUD project within the Town each year.
20. Continue to create passive reserves and landscaped areas with waterwise plant species that have a low water requirement.	6,15	Parks; Natural Areas	Ongoing	TBC	Progress reported annually.
21. Provide education and possible incentivisation to residents on grey water systems and rainwater tank installation.	6,11	Environment	2023/24	Officer time	Educational material made available June 2024.

Action	SDG	Responsible Area	Timeframe for implementation	Estimated Cost	Key Performance Indicators
22. Improve the water quality of the Towns drainage system by undertaking an asset condition audit along with foreshore areas and review the requirements to improve gross pollutant trapping capability.	6	Environment; Street Improvement; Place Planning	2024/25	Officer time	Asset condition audit for drainage assets undertaken June 2024.
23. Develop a catchment water quality program that monitors the health of the receiving water bodies and provides education to our community and business on the importance of reducing pollution and keeping contaminants out of stormwater.	6	Environment	2024/25	TBC	Catchment water quality program developed June 2025.
24. Implement the Waterwise Council Action Plan.	6	Water Team	2025/26	Officer time	Waterwise Council Action Plan implemented by June 2026.
25. Develop a Stormwater Management Strategy to improve flood management, stormwater re-use and recharge to improve water quality of the Swan and and Canning River systems and their catchments.	6	Environment, Street Improvement, Place Planning	2025/26	TBC	Stormwater Management Strategy developed by June 2025.
26. Prepare plans to reduce groundwater abstraction under every licence by 10% by 2030	6	Parks	2025/26	\$20,000	Plans to reduce groundwater abstraction under every licence by 10% by 2030.

<b>Action</b>	<b>SDG</b>	<b>Responsible Area</b>	<b>Timeframe for implementation</b>	<b>Estimated Cost</b>	<b>Key Performance Indicators</b>
27. Investigate the feasibility of alternative water sources for Town facilities.	6	Environment	2025/26	\$20,000	Feasibility of alternative water sources for Tiwn facilities determined June 2026.

## 5.3 LAND USE AND BUILT ENVIRONMENT

### 5.3.1 Land Use and Built Environment – Pressures

#### *Population Growth*

The Town must respond appropriately to the predicted population growth and the associated increase in population density which will place increased demand on resources, fragmentation of natural areas and loss of biodiversity.

The Town is responsible for ensuring these land uses exist in harmony so increased infrastructure and development has minimal negative impact on the immediate natural environment. The Town recognises the importance of ensuring environmental issues are considered in the land use planning and development control process.

There is an opportunity to enhance the Town's leadership in land management and environmental planning to build greater long-term resilience and higher standards of environmental performance into infrastructure, buildings, neighbourhoods and urban systems.

#### *Contaminated Sites*

Contamination, means having a substance present in or on that land, water or site at above background concentrations which presents, or has the potential to present, a risk of harm to human health, the environment or any environmental value (Contaminated Sites Act, 2003).

Under the Contaminated Sites Act 2003, any known or suspected contaminated sites are to be reported to the Department of Water and Environmental Regulation (DWER) by the owner, occupier or person who caused the contamination or contaminated sites auditor. Identifying sites requires an investigation into past history and land use activities undertaken at the site.

The Town is responsible for identifying and reporting contaminated sites for all land they own or control, including crown land vested with the Council.

#### *Acid Sulfate Soils*

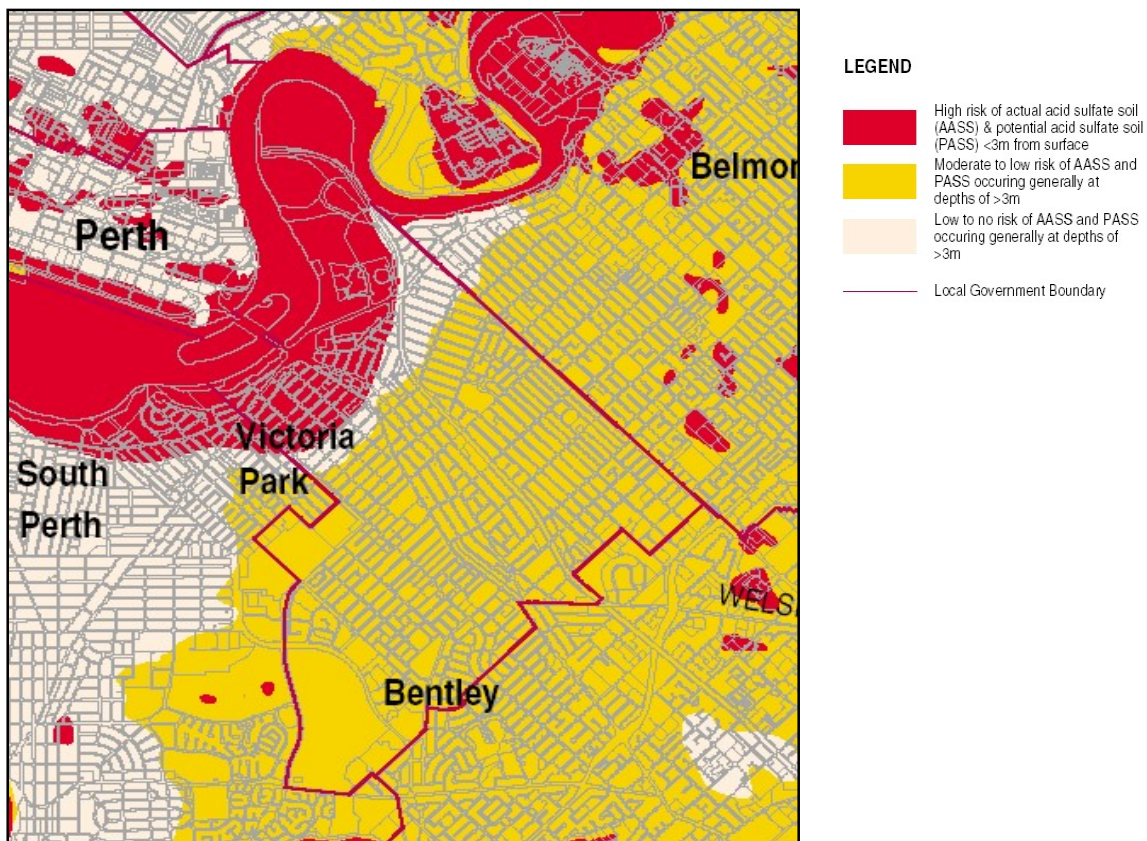
Acid Sulfate Soils (ASS) are soils or sediments containing iron sulfides such as pyrite. Common in South-Western Australia, iron sulfide containing soils occur under long-term water-logged conditions found in estuaries, wetlands and shallow groundwater in deep sands. When disturbed by drainage, lowering of water-tables or excavation, oxidation of the sulfides creates sulphuric acid which can trigger a range of flow-on effects, including:

- Leaching of metals including aluminium, iron, manganese and arsenic
- Acidification of groundwater, wetlands and waterways
- Formation of black ooze like mud which deoxygenates water when disturbed, resulting in fish kills.
- Loss of vegetation due to soil acidification

- Damage to fisheries and aquaculture industries.
- Harm to tourist resources such as fishing grounds, swimming areas and recreational waterways.
- Damage to infrastructure - corrosion of concrete and steel pipes, building foundations and bridges.
- Activities with the potential to disturb ASS must be managed carefully to avoid environmental harm.

ASS is widespread in low-lying coastal areas of Western Australia. Potential acid sulfate soils (i.e. soils that have the potential to become acidic), comprise a significant proportion of land within the Town. According to mapping undertaken by DWER, much of the Town sits on land with a high-moderate risk of ASS (see Figure 3).

In most cases, development by the Town itself does not involve deep excavation, so disturbance of ASS is generally avoided. However, the risk of exposure of actual or potential ASS must be considered for all developments. The Town must understand and utilise planning precautions to avoid expensive treatments, loss of value and potential litigation associated with damage caused. The Department of Planning and the DWER has several guiding documents to assist with the assessment and management of ASS (Appendix 3).



**Figure 3 - Map of Acid Sulfate Soils and Potential Acid Sulfate Soils within the Town of Victoria Park**

## ***Bushfire***

Bushfire in urban environments is a risk when bushland is in close proximity to residential, commercial or industrial property.

Kensington Bushland has been subject to fire in 1999, 2003 and, most recently, in 2016, where approximately 70% of the site was burnt.

### **5.3.2 Land Use and Built Environment – What have we done?**

#### ***Kent St Sand Pit***

Historically Kent Street Sand Pit was used as a sand quarry; for domestic landfill; and for the storage of building materials, construction and road sweeping waste.

Investigations and remedial works have allowed this contaminated site to be used for revegetation and passive recreational purposes.

Working in collaboration with community, Curtin University and industry stakeholders, the Town aims to undertake international best practice to restore this heavily degraded site to Banksia Woodland. Vegetative restoration will be combined with cultural restoration, inclusive of yarning spaces, to make this site a significant environmental and cultural heritage asset for the Town. All inclusion access, a wheelchair *Phytophthora* cleaning station and viewing platforms, will make this site an important asset the Town and community can showcase to international tourists and scholars.

#### ***George St Reserve***

A former landfill site located adjacent to Kent St Sandpit and Kensington Bushland. In 2011 Council resolved that George St Reserve would be cultivated into bushland and integrated with the adjoining Kensington Bushland.

This site has since been revegetated with local provenance species found within the Kensington Bushland and other native plants.

#### ***G.O. Edwards Park***

This former landfill site that was converted to a park and artificial wetland in the 1970s. Water quality and associated eutrophication of the lake has fluctuated over many years.

The Town developed a Water Quality Improvement Plan whereby it undertook staged works to improve water quality of the lake. Deep-rooted wetland vegetation and aquatic plants were planted in and around the lake to provide shading, habitat, sediment stabilisation and filtration. A swale system was installed to remove gross pollutants and the installation of an aeration system improved oxygen availability for flora and fauna, thereby reducing disease and death.

#### ***Town Sumps***

Sumps receive run-off from roads and surrounding catchments through stormwater drainage. As such, the potential for contamination from rubbish, hydrocarbons, heavy metals and nutrients is significant, making sumps unsightly, smelly and a potential public health hazard. In addition, contaminated stormwater may enter the water table

from these sumps, potentially impacting water quality of the Swan and Canning River systems and associated local wetlands.

Under the Urban Forest Strategy (section 5.4 Natural Areas and Biodiversity) the Town has developed a sumps vegetation program in collaboration with local community groups, State Government agencies, SERCUL, and other stakeholders.

Implementing a more natural drainage system into the Towns catchment will not only improve drainage, revegetation with wetland species such as paperbarks (Melaleucas), reeds and sedges filters contaminants, bind soils, provides habitat and has a cooling effect on the local environment

(<https://www.watercorporation.com.au/Our-water/Sustainability-and-innovation/Drainage-for-liveability>).

### ***Bushfire Response***

In response to the increased risk of fire as a result of a warming and drying climate, the Town has integrated bushfire management into the environmental management plans for both the Jirdarup Bushland Precinct and Hillview Bushland. The Town also recognises the urgency to develop Fire Management Plans for these sites.

A Memorandum of Understanding (MoU) has been established with Kensington Secondary School to manage land adjacent to Jirdarup Bushland Precinct to reduce the immediate fire risk.

#### **Development Controls**

- Incorporate environmentally sensitive design principles for any development incorporating buildings above three storeys under The Town's *Design Guidelines for Developments with Buildings Above Three Stories*.
- Establishment of Local Planning Policy 39 - Tree Planting and Retention. This requires the provision of planting and retention of trees on private land and the associated street verge with the development of privately owned land in the Town. The intent of the policy is to increase tree density and canopy cover, such as Tree Protection Zones, to benefit residents and the Town's urban ecosystems.
- Development plans are checked before the issue of planning approval, to protect existing trees where possible and implement the installation of street trees in new developments once construction is completed. Failure to adhere to these standards will result in the applicant being charged for the subsequent replacement of a street tree anywhere in the Council area.
- Street Improvement officers and the Parks Technical Officer are collectively involved with street alignments being modified to prevent damage to trees.
- The Town supplies and plants one or more street trees, at no charge, on the road verge adjacent to a private property upon the request of the owner or tenant of that property.

### 5.3.3 Land Use and Built Environment – Future Actions



#### *Objectives*

- To ensure planning decisions consider environmental impacts and outcomes.
- To encourage ecologically sustainable development to reduce greenhouse gas emissions, energy and water consumption, and increase local biodiversity.

In order to address the land use pressures in a built environment the following strategic environmental initiatives will be undertaken.



Action	SDG	Responsible Area	Timeframe for implementation	Estimated Cost	Key Performance Indicators
28. Prevent removal and/ or damage to street trees when conducting Council construction works through modification of design.	9, 11	Parks; Planning	Ongoing	Officer time	No street trees removed in construction works.
29. Development plans are checked before the issue of planning approval to: a. protect existing trees where possible; and b. ensure the installation of new street trees in new developments once building construction is completed.	9, 11	Parks; Planning	Ongoing	Officer time	Number of street trees retained or installed in all developments annually
30. Integrate environmental considerations into the statutory development approvals processes, so that all construction, including that conducted by the Town, be inclusive of its impact on flora and fauna.	9,11	Planning	2023/24	Officer time	Environmental considerations integrated into statutory development approvals process June 2024.
31. Advocate for, and provide community education on sustainable development options.	9,11	Environment; Planning	2023/24	Officer time	Sustainable development options education materials developed June 2024.
32. Investigate the feasibility of incentivising green roofs.	9,11	Environment; Planning	2023/24	Officer time	Feasibility of incentivising green roofs investigated June 2024.
33. Expand the implementation of the Urban Forest Strategy to include: <ul style="list-style-type: none"> <li>• Dedicated community education and awareness campaigns regarding the importance of tree protection.</li> <li>• Investigate the value of incentive schemes and the like to preserve existing trees on private land.</li> <li>• Integrate native vegetation into public open space, notably passive recreation parks/reserves and sumps.</li> </ul>	9,11	Urban Forest Strategy Implementation Working Group	2025/26	As per Urban Forest Strategy	Urban Forest Strategy implemented June 2026

<b>Action</b>	<b>SDG</b>	<b>Responsible Area</b>	<b>Timeframe for implementation</b>	<b>Estimated Cost</b>	<b>Key Performance Indicators</b>
34. Undertake Banksia Woodland restoration of Kent St Sand Pit	9,11	Environment; Urban Ecosystems; Parks	2027/28	\$1.6M	Staged conversion completed by June 2028; Outcomes will be monitored in accordance with world's best practice for ecological restoration

## 5.4 NATURAL AREAS AND BIODIVERSITY

Biodiversity is the variety of all living things; the different plants, animals and microorganisms, the genetic information they contain and the ecosystems they form. (What is biodiversity? - The Australian Museum, 2023)

### 5.4.1 Vegetation Communities

Three vegetation complexes exist within the Town, these being Bassendean, Swan and Vasse. The majority of the Town is located within the Bassendean Vegetation Complex.

The Bassendean vegetation complex varies from Jarrah (*Eucalyptus marginata*), Marri (*Corymbia calophylla*), Sheoak (*Allocasuarina fraseriana*) and Banksia (*Banksia attenuata* and *Banksia menziesii*) woodland to Paperbark (*Melaleuca preissiana*) and Honey Myrtle (*Melaleuca scabra*) low woodland to sedge and *Melaleuca* damplands on seasonally wetter sites. It is generally covered by low woodland dominated by Banksias, Pricklybark (*Eucalyptus todtiana*) and Christmas Trees (*Nuytsia floribunda*), with a dense understorey. Woollybush (*Adenanthos cygnorum*) and grass trees (*Xanthorrhoea preissii*) are also a characteristic shrub species of Bassendean sands.

The high level of species diversity found growing on these sands is of ecological importance for the overall biodiversity of the area.

### 5.4.2 Bushland

Remnant vegetation is an ecologically and culturally valuable asset to the Town, providing a valuable seed source for revegetation as well as food and habitat for native flora including vulnerable Black Cockatoo species.

Only two small remnant bushland reserves remain within the Town, these being Kensington Bushland and Hillview Bushland. Any other remnant native vegetation is limited to individual trees or small stands on roadsides, parks and sumps. All the sites are located in Parks and Recreation Reserves identified in the Town Planning Scheme.

#### ***Kensington Bushland***

Kensington Bushland, is a 9ha bushland remnant located west of Kent Street Senior High School, and lies on the north side of Kent Street. Designated as "Bush Forever Site 48" by the Government of Western Australia in 2000, this reserve typifies Jarrah-Banksia Woodland on Bassendean sand is rated as being in very good to excellent condition.

The canopy is dominated by Jarrah (*Eucalyptus marginata*), Prickly bark (*E. todtiana*), *Banksia attenuata*, *B. ilicifolia*, *B. menziesii*, Christmas tree (*Nuytsia floribunda*) and Sheoak (*Allocasuarina fraseriana*). The greatest species diversity is in the understorey, with more than 150 native species, including 19 species of orchid. The bushland is also home to 62 species of birds, as well as 14 species of reptiles.

The site is maintained by the Town of Victoria Park in collaboration with The Friends of Jirdarup Bushland. As mentioned above, the Town is currently working in collaboration with the Friends of Jirdarup, Wadjuk Noongar Elders, and site restoration experts from Curtin University, to undertake international best practice Banksia Woodland restoration of the adjacent Kent St Sand Pit. This vegetative and cultural restoration projects will enhance the Kensington Bushland reserve.

### **Hillview Bushland**

The Hillview Bushland is a remnant 1ha Banksia Woodland that contains 83 plant species, including the WA Christmas tree (*Nuytsia floribunda*) and the Holly-leaved Banksia (*Banksia ilicifolia*) which are facing local extinction. These important remnant species amongst others, are under threat because the Hillview Bushland has suffered canopy decline and weed invasion over the last 15 years. The Town and its community have focused their efforts to rehabilitate and maintain the site to improve the health and abundance of native vegetation and its associated fauna.

### **5.4.3 Foreshore**

The Town's connection to the river by land places a special need for the management of water quality, vegetation, fauna and physical access to the foreshore.

Several foreshore areas that exist within Victoria Park include:

- Balbuk (named after Aboriginal Resistance Fighter Fanny Balbuk) Way foreshore.
- Belmont Park foreshore.
- Burswood foreshore.
- Burswood Peninsula.
- Taylor Reserve/McCallum Park.

The Town is currently responsible for the management of Taylor Reserve, McCallum Park and Balbuk Way which comprise 2.5kms of the 6.3kms of foreshore area within its municipality.

### **5.4.4 Fauna**

Jirdarup Bushland Precinct, Hillview bushland reserves and with isolated pockets of remnant vegetation within the municipality provide important food and habitat for birds, reptiles, amphibians and mammals including micro-bats. While not spotted in recent years, both bushland reserves have the potential to support native Quenda (*Isodon fusciventer*) which is a priority 4 (threatened) species. (Eco Logical Australia 2018, Kensington Bushland Management Plan).

Near-threatened Long-necked Turtles (*Chelodina oblonga*) are found in G.O. Edwards Park lake, and vulnerable Black cockatoos forage throughout the area (including at both Harold Rossiter Park and Jirdarup Bushland Precinct). The large trees at Harold Rossiter Park are a major roost for Forest Red-Tailed Black Cockatoos and in recent years the Great Cocky Count has registered 200-300 birds at this site.

### 5.4.5 Natural Areas and Biodiversity – Pressures

Local Governments in Western Australia manage a variety of rich and diverse natural ecosystems, with the south-west of the state being one of the world's internationally recognised biodiversity hotspots. As mentioned previously, biodiversity hotspots are defined as both biologically rich and deeply threatened by human actions and climate change (<https://kids.earth.org/climate-change/biodiversity-hotspots-explained-to-kids/?gclid=CjwKCAiAh9qdBhAOEiwAvxl0k-vQWhL>)

The threats to Australia's biodiversity are clearly identified in the 2021 Australia State of the Environment Report, which states that climate change, habitat loss and degradation, and invasive species are the key threats to Australia's biodiversity.

Climate change and extreme weather events are becoming increasingly important as direct drivers of changes in biodiversity. Australian ecosystems and associated species are expected to continue to change substantially in response.

Habitat loss and degradation and invasive species result in persistent and sometimes irreversible impacts on biodiversity across almost all areas of Australia. Many Australian ecosystems are experiencing cumulative and compounding pressures, leading to ecosystem collapse characterised by loss of key defining features and functions.

The report also indicates that further extinctions of Australian species over the next two decades can be expected unless current management effort and investment are substantially increased. Conservation actions are linked to reduced rates of decline for threatened Australian plants, mammals and birds, but they have not been sufficient to reverse declines overall.

Major pressures on the natural environment within the Town of Victoria Park itself include:

- Climate change.
- Development.
- Clearing and fragmentation.
- Weeds.
- Domestic and feral animals (such as cats, unleashed dogs and rabbits).
- Spread of dieback, such as that caused by *Phytophthora* species and *Polyhagus* Shot Hole Borer.
- Uncontrolled access resulting in trampling and rubbish dumping

Further exploration of these pressures can be found in Appendix 4.

### 5.4.6 Natural Areas and Biodiversity – What have we done?

#### **Dieback**

The Town has a Dieback Management Procedures and Protocols to provide specific guidelines regarding the management of *Phytophthora cinnamomi* and other dieback species throughout the Town of Victoria Park.

Dieback boot wash stations and signage have been installed at Kensington Bushland.

Whilst not caused by *Phytophthora cinnamomi*, several Jarrah trees within Kensington Bushland died as a result of the pathogen *P.multivora*. A subsequent investigation and phosphite stem injection program was undertaken in 2022 in all Jarrah and Banksias within the area. It will be important that the Town continue to implement its Dieback Protocols and Procedures in an effort to contain and limit the spread of Phytophthora species generally.

Polyphagus Shot Hole Borer (PSHB), a beetle native to Southeast Asia which tunnels into trunks, stems and branches and can cause dieback in susceptible trees, has been found within the Town. Parks staff and contractors have subsequently undertaken training sessions to be able to identify and manage PSHB, in accordance with Department of Primary Industries and Regional Development guidance. Public education on PSHB has also been undertaken and should continue.

### **Remnant Vegetation Management**

The Town has a Remnant Vegetation Policy which provides for management of remnant native vegetation within the Towns municipality.

This policy may be viewed at:

<https://www.victoriapark.wa.gov.au/About-Council/Policy-library/Policy-254-Remnant-native-vegetation>

### **Kensington Bushland**

In 2018 the Town developed the Kensington Bushland Management Plan (the third such plan for the site), which provided management strategies and recommendations for the protection and enhancement of the bushland. This is now due for review.

Under this plan the Town has undertaken revegetation in surrounding parcels of land including enhancement of the buffer zone of Harold Rossiter Reserve and revegetation of the George St Reserve. Verge revegetation along Kent St, Etwell St, and Baron-Hay Crt has restored the buffer between Kent St and the Kent St Sand Pit.

Given the limited remnant vegetation within the Towns municipality, the Town has established a provenance seed collection agreement with the City of South Perth to collect from several of their sites. City of South Perth also assists with the propagation of tube stock at their nursery for Town plantings.

Invasive weeds have been controlled by targeting the priority species, particularly perennial veldt grass (*Ehrharta calycina*), Fumaria (*Fumaria capreolata*), Gladioli (*Gladiolus caryophyllaceus*) and Black Flag (*Ferraria crispa*). This has included a combination of chemical and hand weeding in conjunction with Friends of Jirdarup Bushland and broader community.

In 2015, a Jirdarup Bushland Precinct was declared, encompassing the area of Kensington Bushland, George Street Reserve and the Kent Street Sandpit. The creation of the Precinct recognised that these three areas do not function

independently from each other and that they are all linked to provide a valuable natural asset in need of protection.

The Town works with the Friends of Jirdarup Bushland, who have brought about positive environmental outcomes for the precinct, through significant manual weeding efforts, revegetation, advocacy as well as community education and engagement.

### ***Hillview Bushland***

The primary use of the reserve is the conservation of remnant flora and fauna. As such, the Hillview Bushland Management Plan was developed to identify current and future risks at the site and develop management strategies and recommendations to counter these impacts.

Protective infrastructure such as formalising pathways to reduce informal access and vegetation trampling, rehabilitation planting and weed control have been undertaken to protect threatened remnant vegetation.

A restoration plan for the site is currently in development.

### ***Adopt-a-Verge***

The Town encourages verge landscaping that is sustainable, water-wise, aesthetically pleasing and reflects the natural heritage of the Town.

The Adopt-a-Verge program is a rebate program that encourages neighbours to transform street verges into wildlife corridors by planting street verges with native plants. This also reduces water consumption, improves biodiversity, sequesters carbon and has a cooling effect.

### ***Urban Forest Strategy***

The Town of Victoria Park's Urban Forest Strategy (UFS) aims to contribute to the health and wellbeing of our community to provide a sustainable, liveable city.

The Town adopted the UFS as a result of a community-initiated and community-driven process that identified the need to expand and better manage trees on both public and private land within the municipality. This is guided by the six strategic outcomes listed below:

- Planting and protecting sufficient trees to achieve a 20% canopy target.
- Maximising community involvement and collaboration, including a volunteer urban forester's network that can be mobilised for a mass-planting and stewardship program.
- Increasing tree diversity that favours local endemic and West Australian species that also support wildlife.
- Maintaining a high standard of tree health.
- Improving soil and water quality.
- Improving the urban ecosystem. The UFS will increase habitat and migration corridors for fauna. The flow on effect will be increased biodiversity and a reduction in heat islands, both of which are critical in our drying climate.

Prior to the dedicated Urban Forest program, tree canopy above 3m in height covered 12.3% (or 2,214,000m<sup>2</sup>) of the Town. A canopy cover of 3,600,000m<sup>2</sup> is required to achieve the 20% target mentioned above

The Town's Urban Forest programs to date have planted 11,865 trees and 169,241 shrubs.

### ***McCallum Park/Taylor Reserve***

River edge works have been undertaken to incorporate revegetation with riparian natives, gentle grading to the river edge and boulders to the river edge to stop erosion from boating and jet ski activities.

## **5.4.7 Natural Areas and Biodiveristy – Nature-Positive Approach**

According to the United Nations, 1 million species globally are threatened with extinction (Leaders Forum, 2022).

Like climate change, biodiversity loss is a global issue requiring a global response. The International Union for the Conservation of Nature (IUCN) has established a Global Biodiversity Framework (GBF) to halt biodiversity loss by 2030 and is calling on the world to adopt a 'nature-positive' approach to put nature on the path to recovery.

The IUCN's *Towards an IUCN nature-positive approach: a working paper* states that a 'nature-positive' future means that we, as a global society, halt and reverse the loss of nature measured from its current status, reducing future negative impacts alongside restoring and renewing nature, to put both living and non-living nature measurably on the path to recovery.

The GBF is made up of 4 global 2050 goals and 23 global 2030 targets, including:

- Ensure at least 30% of degraded terrestrial, inland water, coastal and marine ecosystems are under effective restoration.
- Ensure at least 30% of terrestrial, inland water, coastal and marine areas are effectively conserved and managed.
- Reduce the rates of introduction and establishment of other known or potential invasive alien species by at least 50%, by 2030
- Reduce pollution risks and impacts of pollution from all sources to prevent harmful impacts on biodiversity.
- Minimise the impact of climate change and ocean acidification on biodiversity.
- Mainstream biodiversity into decision-making across government and business.

To view the GBF goals and targets in full, visit:

[https://www.dcceew.gov.au/environment/biodiversity/international/un-convention-biological-diversity/global-biodiversity-framework#:~:text=The%20newly%20adopted%20framework%20will,reduce%20extinction%20risk%20\(Goal%20A\)](https://www.dcceew.gov.au/environment/biodiversity/international/un-convention-biological-diversity/global-biodiversity-framework#:~:text=The%20newly%20adopted%20framework%20will,reduce%20extinction%20risk%20(Goal%20A))



Local Governments must take a nature-positive approach and enhance their contribution to the Global Biodiversity Framework (GBF). The *Plan of Action on Subnational Governments, Cities and Other Local Authorities for Biodiversity under the Convention on Biological Diversity (2021-2030)* provides guidance to supporting parties including Local Government in implementing the GBF.

Actions include:

- **Development and implementation of biodiversity strategies and action plans reflecting the involvement of subnational governments, cities and other local authorities**
- **Communication, education and public awareness.** Support subnational governments, cities and other local authorities in developing inclusive and action-oriented communication, education and public awareness, public access to information and participation initiatives at the subnational and local levels, reconnecting nature and people in and around cities and regions.
- **Assessment and improved information for decision-making.** The use of the Singapore Index on Cities' Biodiversity as a self-assessment tool for city and local governments to benchmark and monitor the progress of their biodiversity conservation efforts against their own individual baselines;
- **Monitoring and reporting.** Use of online commitment and reporting platforms where subnational governments can report on, and track progress against their commitments to contributing to the implementation of the GBF and national biodiversity strategies and action plans.

Due consideration of the above has been made in the formulation of actions in section 5.4.8.

#### 5.4.8 Natural Areas and Biodiversity – Future Actions



##### **Objectives**

- Adopt a nature-positive approach, so that nature is protected, restored and renewed.
- Develop and implement biodiversity strategies and plans.

In order to address the pressures and achieve the natural areas and biodiversity objectives, the following strategic environmental initiatives will be undertaken.

<b>Action</b>	<b>SDG</b>	<b>Responsible Area</b>	<b>Timeframe for implementation</b>	<b>Estimated Cost</b>	<b>Key Performance Indicators</b>
35. Continue ongoing weed control within Hillview Bushland and Jirdarup Bushland Precinct	15	Urban Ecosystems	Ongoing	As per existing Urban Ecosystems budget	Priority weeds are removed annually.
36. Encourage residents to adopt fertilise-wise and waterwise gardening practices by organising garden demonstrations and workshops and providing information at community events.	15	Environment	Ongoing	\$5,000	3 x Workshop held annually.
37. Continue to implement the dieback and disease management protocols for Jirdarup Bushland Precinct and Hillview Bushland, as well as the recommendations of the 2022 investigation into Jarrah deaths; continue to undertake staff training for PSHB and associated public education.	15	Environment; Urban Ecosystems; Parks	Ongoing	Officer time	Dieback management actions implemented annually.
38. Through the Urban Forest Strategy, and in accordance with the Public Open Space Strategy, continue to create green corridors/linkages between natural areas to allow migration of fauna.	15	Senior Place Leader (Urban Forest)	Ongoing	As per Urban Forest Strategy	Number of trees planted annually.
39. Review the Kensington Bushland Management Plan. This will be inclusive of the Jirdarup Bushland Precinct.	15	Urban Ecosystems; Environment	2023/24	\$15,000	Kensington Bushland Management Plan reviewed and updated by June 2024.
40. Develop a Restoration Plan for Hillview Bushland and for the Kent St Sand Pit.	15	Urban Ecosystems; Environment	2023/24	\$10,000	Hillview Bushland Restoration Plan and Kent St Sand Pit Restoration Plan developed June 2024.

<b>Action</b>	<b>SDG</b>	<b>Responsible Area</b>	<b>Timeframe for implementation</b>	<b>Estimated Cost</b>	<b>Key Performance Indicators</b>
41. Develop an organisational Biodiversity Policy to gain organisational commitment to a nature positive approach.	15	Environment	2023/24	Officer time	Biodiversity Policy developed by June 2024.
42. Develop a Biodiversity Strategy for the Town to recreate and accelerate the recovery of the Town ecosystems.	15	Environment; Urban Ecosystems; Place Planning; Parks	2023/24	Officer time	Biodiversity Strategy developed by June 2024.
43. Commission advice on a best-practice response to rabbit infestations in natural areas.	15	Environment; Urban Ecosystems	2023/24	TBC	Best-practice response to rabbit infestations sought by June 2024.
44. Evaluate the effectiveness of the 2022-2024 hand weeding project within the Jirdarup Bushland Precinct in the context of the Integrated Weed Management Strategy.	15	Urban Ecosystems	2024/25	\$5,000	Effectiveness of the 2022-2024 hand weeding project within the Jirdarup Bushland Precinct by June 2025.
45. Prepare fire management plans for Hillview Bushland the Jirdarup Bushland Precinct.	15	Environment; Urban Ecosystems; Parks	2024/25	\$15,000	Fire management plans completed by June 2025.
46. Develop inclusive action-oriented communication, education and public awareness that encourages reconnection of nature and people.	15	Environment	2024/25	Officer time	Communications and education material developed by June 2025.

Action	SDG	Responsible Area	Timeframe for implementation	Estimated Cost	Key Performance Indicators
47. Investigate the feasibility of formally incorporating the bushland area adjacent PCYC into the broader Jirdarup Bushland Precinct.	15	Environment; Urban Ecosystems; Place Planning	2024/25	Officer time	Feasibility of formally incorporating the bushland area adjacent to PCYC into the broader Jirdarup Bushland Precinct investigated June 2025.
48. Review the effectiveness of dog control activities within the Jirdarup Bushland precinct and Harold Rossiter Reserve and implement a dog owner behaviour change campaign.	15	Parking and Rangers; Environment; Urban Ecosystems; Place Planning; Parks	2024/25	TBC	Effectiveness of dog control activities within the Jirdarup Bushland precinct and Harold Rossiter Reserve reviewed; Dog owner behaviour change campaign implemented.
49. Implement the Hillview Bushland Management Plan.	15	Environment; Urban Ecosystems	2024/25	\$69,000	Hillview Bushland Management Plan implemented by June 2025.

<b>Action</b>	<b>SDG</b>	<b>Responsible Area</b>	<b>Timeframe for implementation</b>	<b>Estimated Cost</b>	<b>Key Performance Indicators</b>
50. Investigate suitable international tools for the Town to benchmark, monitor and report on the progress of our biodiversity conservation efforts.	15	Environment	2024/25	Officer time	International tools for the Town to benchmark, monitor and report on the progress of our biodiversity conservation efforts investigated June 2025.
51. Partner with other Councils within the South-East Corridor Council Alliance Catchment through the 'Restore our Rivers' program to create biodiversity corridors within the region.	15	Environment; CEO Office	2027/28	TBC	Biodiversity corridor created within the South-East Corridor June 2028.

## 5.5 WASTE MANAGEMENT

The Town is responsible for managing waste created by households and provides separate rubbish, recycling and verge collection services. The Town is a member of the Mindarie Regional Council (MRC), who process the waste collected through their waste processing facilities, including the Tamala Park Landfill Facility.

The Town provides a range waste management services:

- Kerbside Waste Collection, including wet cell batteries and used motor oil - Weekly;
- Kerbside Recycling Collection – Fortnightly;
- Garden Organics Collection – Fortnightly;
- Verge side Bulk Waste Collection – Twice per year;
- Verge side Greenwaste Collection – Three times per year;
- Hazardous Household Waste drop-off – Once per year; and,
- Dry cell battery and fluorescent globe drop-off – Permanent opportunity.

### 5.5.1 Waste Management – Pressures

The population of the Town of Victoria Park is expected to increase significantly in the next thirty years. If consumption patterns and the associated generation of waste remain at current levels, there will be considerable pressure on the Town's resources to deal with waste disposal.

Waste entering landfill results in the loss of valuable resources that can be reused, repurposed and recycled as well as generating unacceptable amounts of greenhouse gases (GHG). In 2019, 85% of the Town's GHG emissions were generated from waste entering landfill. In its endeavour to achieve net zero carbon emissions by 2030 it is critical that the Town's focus be on more sustainable waste management practices.

As such the Town of Victoria Park is committed to the delivery of best practice waste management services to the community in a social, environmental and financially sustainable manner, whilst striving to achieve the targets set in the State Government Waste Avoidance and Recovery Strategy 2030.

Within the Town, waste management is everyone's business, including individuals, households, neighbourhoods, community groups, schools, local businesses and the Town. Working in partnership, with the Town taking the lead, sustainable waste management practices are achievable for all stakeholders.

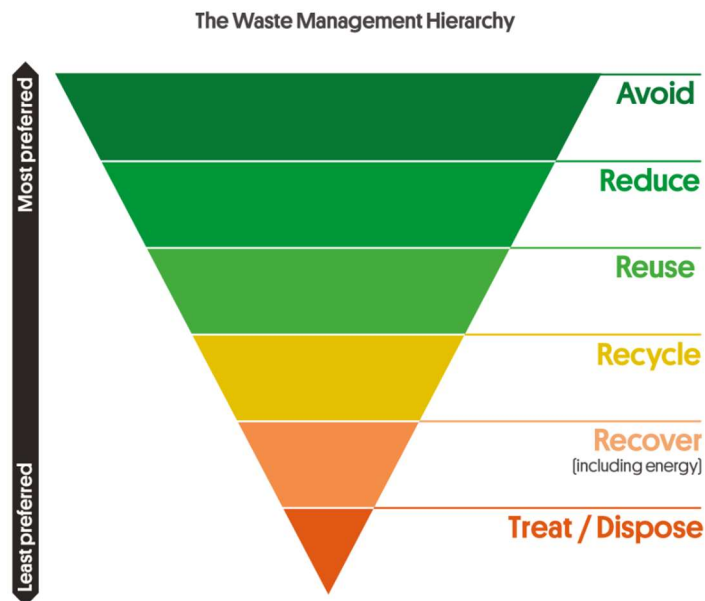
Sustainable waste management is an ongoing and evolving journey. It requires community education, acceptance and engagement, self-reflection and continuous improvement from all stakeholders if the Town is to become a leader in providing an economically, environmentally and socially sustainable, low-waste, circular economy (Figure 4). This can only be achieved if there is a greater focus on waste avoidance and improved waste hierarchy options (Figure 5) to minimise waste entering landfill.



A circular economy builds on long-standing sustainability concepts, including life cycle thinking and resource efficiency, and it complements the waste hierarchy. A circular economy refers to the flow of both materials and energy – it moves away from the linear ‘take, make, use and dispose’ model to one which keeps materials and energy circulating in the economy for as long as possible.

This presents opportunities for increased local recycling activity. Local solutions create local jobs and minimise the costs and impacts of unnecessary transport.

**Figure 4: The circular economy**



**Figure 5: The waste management hierarchy**

### 5.5.2 Waste Management – What have we done?

The *Strategic Waste Minimisation Plan 2008-2013* was first developed in 2008 and updated in 2018. Informed by the *West Australian Waste Avoidance and Resource Recovery Strategy 2030* (which sets waste management targets through to 2030), the revised *Strategic Waste Management Plan (2018-2023)* has reviewed the Town’s

progress since 2008 and set the strategic waste management direction and proposed actions for the Town. Moving forward, a new Strategic Waste Management Plan is being prepared. Not only will it align with the *West Australian Waste Avoidance and Resource Recovery Strategy 2030* it will also align with the Town's CEP goal of reaching net zero emissions by 2030.

The Town's waste management objectives are also guided by annual Action Plans which focuses on the highest priority strategies, as well as:

- Community needs and aspirations
- Environmental considerations, especially in terms of it zero emissions targets
- Financial implications

As such, the Town:

- Continued active involvement with the MRC in assessing large scale waste diversion options, including waste to energy, bulk waste recycling and green waste processing
- Provided collection facilities for dry cell batteries, light globes, mobile phone and printer cartridge recycling. The Town currently installing containers for change cages in ten local parks and investigating the provision of aerosol can collection points.
- Responded to issues of littering and illegal dumping. This has been primarily through the Keep Australia Beautiful Illegal dumping and litter prevention program. Included in the program has been a *Help Stop Illegal Dumping Guide for Apartment and Strata Building Managers and Residents*.
- Is using the Town's street tree pruning's as mulch for landscaping and environmental restoration projects.
- Recycles road asphalt removed from construction sites for use in road construction.
- Introduced a third bin service, which came into effect in August 2022. This service is for garden organic waste such as weeds, garden clippings, small branches/sticks, leaves. Food organics will be introduced by 2025 in alignment with the State's waste management vision.
- Delivered a range of waste education programs to our community. Some of these programs are outlined below.

### **Garage Sale Trail**

Garage Sale Trail is an award-winning grassroots waste education campaign and champion of the REUSE movement. It is one national day of simultaneous garage sales that makes sustainability fun and creative, promoting community connections, stimulating local economies and repurposing preloved good to keep them out of landfill. The Garage Sale Trail is a not-for-profit organisation that works with local and



state governments to implement the Garage Sale Trail program within their communities.

### ***Community Workshops***

The Town runs workshops for both community and staff, including strategic waste direction, waste processing and management, and raising awareness of the importance of diverting organic waste from landfill (e.g. Waste Less course, Container Deposit Scheme Information Session and Where Does My Waste Go?).

### ***Waste Rebate – Bokashi buckets, Compost Bins and Worm Farms***

Residents can opt in for a \$100 rebate on a Bokashi bucket, compost bin or worm farm, provided participants attend a training course and participate in data collection to monitor how much organic waste they are diverting from land fill. After eight weeks of composting residents are then invited to attend another workshop at the community garden where they will learn how to use their compost to grow food. This data and a series of survey questions are currently being analysed to determine the success of the initiative and where it needs to be improved. The results of this data collection will be used compiled into a report.

The Town is also investigating how commercial composting can be used in the hospitality and aged care industries, along with the viability of a city farm type initiative to supply local produce grown from this compost. The Town is also looking at how it can develop a community led reuse shop similar to the Lions Shed in Margaret River and the Tip recycle shop in Balcatta.

### ***Adopt-a-Spot***

The Adopt-a-Spot program is a community led volunteering venture where local communities can reduce litter and contribute to a healthier, safer and cleaner environment.

Adopters agree to look after a site for two years, and Keep Australia Beautiful Council of WA (KABWA) provides clean up tools, an adoption certificate, volunteer insurance and safety information.

### ***Plastic-free Vic Park***

The Town has made changes to the types of disposable items that can be used at its own events, in Town facilities and for market stalls held on Town land. A ban has been applied on the use, sale or distribution of single-use plastic and polystyrene at:

- All Council buildings (except those buildings which are, or may become, subject to a lease or licence permitting the use of the building for commercial tenancy or residential occupancy).
- All Council-run events.
- All market stalls held on Council land. This includes stands or booths where goods are sold at a market or event.

The phasing out single-use plastics and polystyrene products will:

- Reduce the volume of plastics being disposed to landfill or ending up as litter in our community.

- Help to reduce the degradation of the Australian marine environment, including the Swan River.
- Reduce the impacts on the Town’s environment and human health.
- Reduce the carbon emissions associated with creating plastic from non-renewable oil resources.



### 5.5.3 Waste Management – Future Actions



#### *Objectives*

- To encourage and implement projects and initiatives that aim to reduce waste production.
- To facilitate and implement projects and initiatives that aim to divert waste from landfill through avoidance, reduction, repair, repurposing, reuse or recycling.

In order to address the pressures and achieve the waste management objectives, the following strategic environmental initiatives will be undertaken.

<b>Action</b>	<b>SDG</b>	<b>Responsible Area</b>	<b>Timeframe for implementation</b>	<b>Estimated Cost</b>	<b>Key Performance Indicators</b>
52. Continue to provide collection facilities for recyclable materials, such as dry cell batteries, light globes, mobile phones and printer cartridge recycling, as well as other processable materials (e.g. masks, plastic lids).	12	Environment	Ongoing	\$4,500	Collection facilities are used and emptied with regularity.
53. Continue to use the Town's street tree prunings as mulch for landscaping and environmental restoration projects.	12	Parks	Ongoing	Officer time	Town street tree prunings used as mulch.
54. Continue to enforce the Plastic Free Vic Park ban.	12	Environment	Ongoing	Officer time	Plastic Free Vic Park ban being upheld in Town events, facilities and market stalls and Town land.
55. Continue community waste-oriented education programs, such as the Garage Sale Trail.	12	Environment	Ongoing	\$11,000	Minimum two waste – oriented events held each year.
56. Continue to encourage local businesses to implement plastic-free alternatives.	12	Environment	Ongoing	Officer time	Number of businesses engaged in plastic-free programs.
In accordance with the Town of Victoria Park's <i>Strategic Waste Management Plan 2018 to 2023</i> :					
57. Continue to provide compost bins, worm farms and bokashi buckets to our community and run workshops for both community and staff on how to effectively use worm farms, bokashi buckets and composting, and raise awareness of the importance of diverting organic waste from landfill generally.	12	Project Management	2023/24	\$5,000	Number of compost bins, worm farms and bokashi buckets to our community; number of people attending workshops.

Action	SDG	Responsible Area	Timeframe for implementation	Estimated Cost	Key Performance Indicators
58. Increase community education about the proper use of the three-bin system, as well as other relevant waste topics.	12	Project Management; Environment; Waste	2023/24	\$2,000	Waste education program developed June 2024.
59. Encourage schools to participate in the Waste Authority's Wastewise Schools program.	12	Water team	2023/24	Officer time (cost of program is covered under Water Corporation)	Three new schools participating in the Wastewise Schools program.
60. Investigate the feasibility of the Town installing container collection points in our facilities and in public spaces for community use, as well as points for use at events. If container points are used at events, there could be opportunity for these points to be made available to community groups at events (e.g. through Expression of Interest process).	12	Environment; Waste; Community Development	2023/24	Officer time	Feasibility of container collection points installed in our facilities and in public spaces for community use investigated, as well as points for use at events investigated by June 2024.
61. As per the Waste Avoidance and Resource Recovery Strategy 2030, Town to introduce food organics to the municipal waste stream by 2025.	12	Waste	2024/25	TBC	Food and garden organics bin implemented by June 2025.
62. Optimise community involvement in local small-scale recycling solutions and initiatives.	12	Technical Services; Waste; Environment	2024/25	TBC	Community-oriented, small-scale initiatives integrated into Town recycling processes by June 2025.

Action	KPI	Responsible Area	Timeframe for implementation	Estimated Cost	Key Performance Indicators
63. Using implementation tools forthcoming from the <i>Waste Avoidance and Resource Recovery Strategy 2030</i> , identify local, fit-for purpose solutions that support a move towards becoming a circular economy.	12	Waste; Environment	2025/26	TBC	Local circular economy options outlined in section 5.5.2 will be implemented by December 2025.
64. Work with the collection contractors to increase the range of materials that can be recycled.	12	Technical Services; Waste; Environment	2025/26	Officer time	Recycling stream expanded by June 2026.
65. Investigate the feasibility of a reuse shop in partnership with other Councils.	12	Technical Services; Waste	2025/26	Officer time	Feasibility of a reuse shop investigated by June 2025.
66. Investigate the feasibility of installing filtered water bottle refill stations at major public places.	12	Environment; Assets	2025/26	Officer time	Feasibility of installing water bottle refill stations at major public places determined by June 2026.

## 6. Monitoring and Review

Environmental management in a built-up environment must be a compromise between conservation of the natural environment as well as the social, economic and cultural needs of the community. This Environment Plan aims to reach this compromise to achieve best practice environmental management that considers the Towns Strategic Community Plan 2022-2032, the United Nations SDG's and the IUCN's nature positive approach.

The Environment Plan will be reviewed annually. Major reasons for this annual review include:

- Some of the projects included in this Plan will require more detailed costing. An annual review will ensure it reflects current funding and expenditure requirements.
- Consideration must be given to the evolving nature of environmental systems.
- Consideration must be given to any new strategic directions from State and Federal Governments that require effective implementation at a Local Government level.
- To be effective, any environmental plan must have a continuous improvement cycle built into it. An annual review will allow reflection upon and adaptation of the proposed actions.

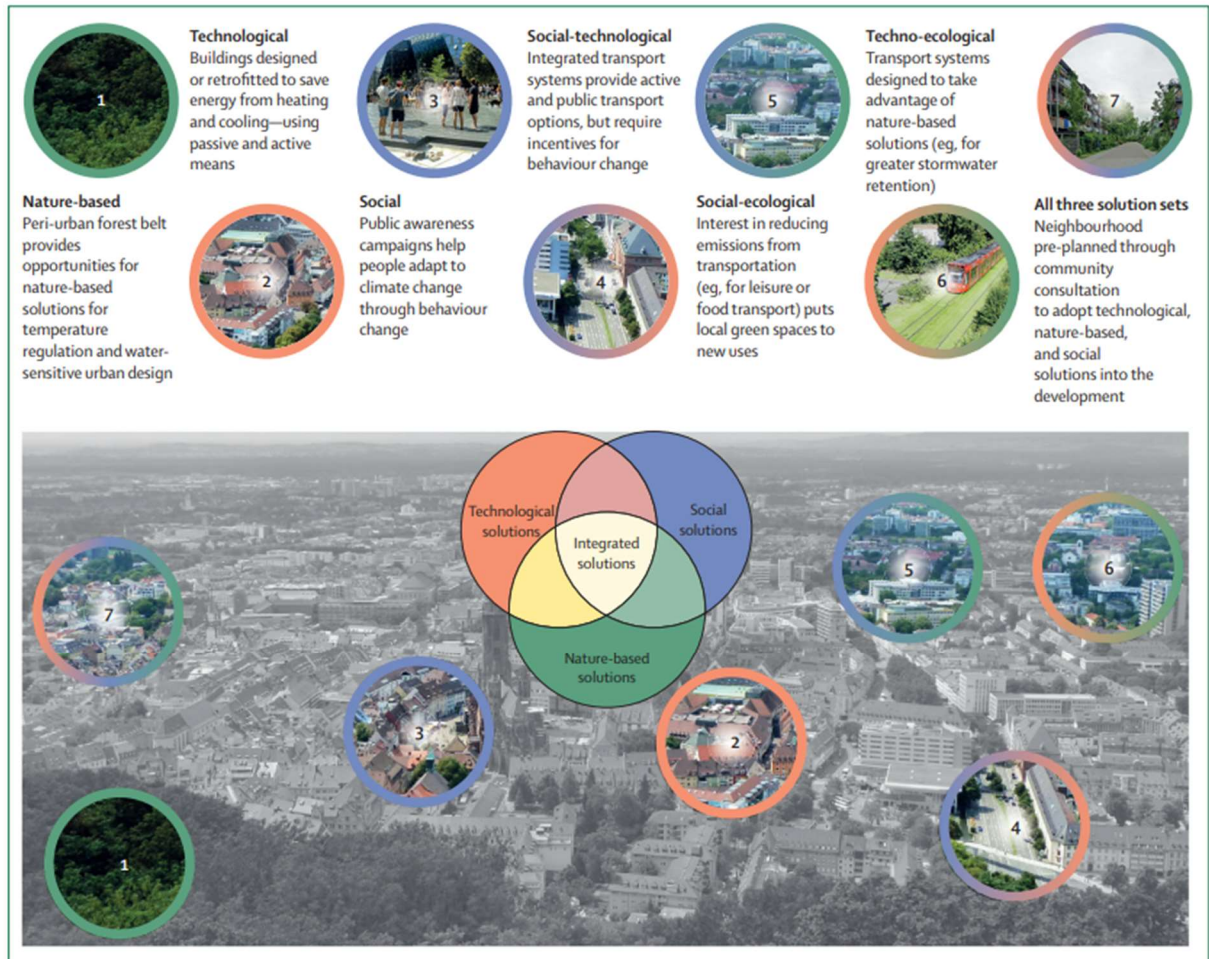
Implementation and monitoring of progress of the Environment Plan will be assisted by the development of an implementation/action plan. This will breakdown the actions into steps or milestones and will expand on the timeframe and identify potential partners.

Monitoring will be based on a review of the actions relative to the overarching objectives and the achievement of the Key Performance Indicators for each action. This will include feedback from all stakeholders, including residents, businesses, community groups, Town staff and other levels of government. Any changes or adjustments will be reported to Council, reviewed in light of feedback then implemented through the action plan.

Annual progress reports on the implementation of the Plan will be prepared and presented to Council.

### 6.1 Promoting actions

It is essential to recognise that the Town cannot affect environmental action in isolation. The Town needs to work collaboratively with all stakeholders to achieve the objectives of this Plan to implement change. Figure 6 below illustrates how change can be effective through stakeholder engagement and collaboration. It also illustrates how this collaborative approach aligns with the United Nations SDG's and the IUCN's nature positive approach.



**Figure 6: How stakeholder engagement aids an integrated approach to improve the social, economic and environmental outcomes for the community**

The Environment Plan recognises that community engagement in environmental initiatives is an important tool in developing a culture of environmental awareness and positive behaviour change within the Town. Effective dialogue and information sharing not only connects the community with the Town’s activities; it also promotes a shared sense of responsibility and community cohesiveness and helps everyone to understand what the municipality and its stakeholder responsibilities are.

## 7. Appendices

### 7.1 Appendix 1 – Relevant Policy and Legislation

Below is a matrix Identifying Relevant Acts of Parliament or Policies that affect, either directly or indirectly, environmental issues (Shaded areas represent this issue is affected by the associated Act or Policy).

	Biodiversity	Waste	Water Resources	Energy Efficiency and Greenhouse Gas Reduction	The Built Environment	Air Quality	Community Participation and Environmental Awareness
<b>International Treaties and Agreements</b>							
United Nations Framework Convention on Climate Change (Kyoto Protocol)							
Asia-Pacific Partnership on Clean Development and Climate Change							
Montreal Protocol on Substances that Deplete the Ozone Layer 1989							
Japan Australia Migratory Birds Agreement (Australian Treaty Series 1981 No 6)							
China Australia Migratory Birds Agreement (Australian Treaty Series 1988 No 22)							



	<b>Biodiversity</b>	<b>Waste</b>	<b>Water Resources</b>	<b>Energy Efficiency and Greenhouse Gas Reduction</b>	<b>The Built Environment</b>	<b>Air Quality</b>	<b>Community Participation and Environmental Awareness</b>
UN Convention on Biological Diversity 1992							
UN Conference on Environment and Development, Conventions and Agreements							
Convention on Wetlands (Ramsar)							
Convention on the conservation of migratory species of wild animals (Bonn Convention)							
2030 Agenda for Sustainable Development (and Sustainable Development Goals)							
<b>Federal Legislation</b>							
Environmental Protection and Biodiversity Conservation Act 1999							
Ozone Protection and Synthetic Greenhouse Gas Management Legislation Amendment Act 2017							
<b>State Legislation and Policy</b>							
Environmental Protection Act 1986							
Contaminated Sites Act 2003							
Conservation and Land Management Act 1984							
Soil and Land Conservation Act 1945							

	<b>Biodiversity</b>	<b>Waste</b>	<b>Water Resources</b>	<b>Energy Efficiency and Greenhouse Gas Reduction</b>	<b>The Built Environment</b>	<b>Air Quality</b>	<b>Community Participation and Environmental Awareness</b>
Biodiversity Conservation Act 2016							
Health Act 1911							
Local Government Act 1995							
Planning and Development Act 2005							
Agriculture and Related Resources Protection Act 1976							
Metropolitan Sewage and Drainage Act 1909							
Waste Avoidance and Resource Recovery Amendment (Container Deposit) Act 2019							
Environmental Protection (ozone depletion) Policy 2000							
Environmental Protection (Unauthorised Discharge) Regulations 2004							
Statement of Planning Policy 2.9 Water Resources, 2006							
Wetlands conservation policy 1997							
Bush Forever 2002							
Environmental Protection (Clearing Native Vegetation) Regulations 2004							
State Planning Policy 1 State Planning Framework Policy 2006							

	<b>Biodiversity</b>	<b>Waste</b>	<b>Water Resources</b>	<b>Energy Efficiency and Greenhouse Gas Reduction</b>	<b>The Built Environment</b>	<b>Air Quality</b>	<b>Community Participation and Environmental Awareness</b>
State Planning Policy 2 Environment and Natural Resources 2003							
State Planning Policy 2.7 Public Drinking Water Source 2003							
State Planning Policy 2.9 Water Resources 2006							
State Planning Policy 2.8 Bushland Policy for the Perth Metropolitan Region 2004							
State Planning Policy 3.1 Residential Design Codes 2005							
State Planning Policy 3.4 Natural Hazards and Disasters 2006							
State Planning Policy 3.7 Planning in Bushfire Prone Areas 2015							
Aboriginal Heritage Act 1972							
Native Title Act 1993							
Biosecurity and Agricultural Management Act 2007							
Planning and Development (Local Planning Schemes) Regulations 2015							
<b>Regional Strategies</b>							
Perth Air Quality Management Plan 2000							

	<b>Biodiversity</b>	<b>Waste</b>	<b>Water Resources</b>	<b>Energy Efficiency and Greenhouse Gas Reduction</b>	<b>The Built Environment</b>	<b>Air Quality</b>	<b>Community Participation and Environmental Awareness</b>
Perth Biodiversity Project 2004							
Perth Metropolitan transport strategy 1995							
Network City: Community Planning Strategy for Perth and Peel 2004							
Network City: Community Planning Strategy for Perth and Peel 2004							
Swan Region Strategy for Natural Resource Management (NRM) 2004							
Healthy Rivers Action Plan 2007							
Swan and Canning Rivers Foreshore Assessment and Management Strategy 2008							

## 7.2 Appendix 2 – Cities Power Partnership

The Cities Power Partnership (CPP) calls on Councils and communities to take steps towards a sustainable, non-polluting energy future by joining the program. The CPP seeks to incentivise councils to increase renewable energy and energy efficiency, improve transport and engage in advocacy.

Members of the partnership will also be given access to a national knowledge hub, buddied with cities to knowledge share, visited by domestic and international experts, connected with community energy groups and celebrated at events with other local leaders. Councils will also have potentially exclusive access to small grants and renewable energy incentives as they become available.

As part of the program, the Town must select five key actions from the partnership pledge ranging from renewable energy, efficiency, transport and advocacy. Actions complete thus far include:

1. **Ensuring Council fleet purchases meet strict greenhouse gas emissions requirements and support the uptake of electric vehicles.** Greenhouse gas emissions are currently considered in purchases. The Town also offsets carbon from fleet vehicle emissions through the Carbon Neutral planting program.
2. **Encourage sustainable transport use (public transport, walking and cycling) through Council transport planning and design.** Substantial savings in transport energy use can be achieved by designing more compact cities with access to high quality public and active transport services and facilities. The Town has implemented a fleet of electric bikes for staff commuting that supplement reliance on the Town's vehicle fleet. Additionally, the Town has accommodated bike parking and bike repair stations.

The City of South Perth and Town of Victoria Park have adopted the state's first joint bike plan, aiming to set out the long-term vision for a strategic cycling network covering both local government areas, in line with the State Government's Perth and Peel 3.5million Transport Plan.

The City of South Perth and Town of Victoria Park Joint Bike Plan outlines a five-year action plan for specific improvements to the cycle network and environment for each local government to further investigate and implement. A total of 13 key infrastructure projects are proposed for delivery.

The Town has recently installed an electric vehicle charging station at the administration building and purchased two electric vehicles.

3. **Public lighting can use a large proportion of an LG's energy budget - roll out energy-efficient lighting (particularly street lighting) across the municipality.**

The Focus of the Town in recent years has been on efficient street lighting for the Town (with the advent of changes to lighting standards from Western Power). A

staged conversion of street lighting has been undertaken on some Town owned street lighting and now with Western Power Street lighting with the release of LED range of luminaires. This range is designed to fit onto the various different types of existing poles and arms around the Town without any additional costs or time restraints.

### 7.3 Appendix 3 – Acid Sulfate Soil Guidance

The Department of Planning and the DWER have a number of guiding documents to assist with the assessment and management of ASS:

- Planning Bulletin 64/2009 Acid Sulfate Soils (Department of Planning), which provides advice and guidance on matters that should be taken into account in the rezoning, subdivision and development of land that contains acid sulphate soils;  
  
Acid Sulfate Soils Planning Guidelines (Department of Planning), which outline the range of matters which need to be addressed at various stages of the planning process; and
- Identification and investigation of acid sulphate soils and acidic landscapes (DWER), which provide practical guidance in relation to the minimum level of investigation required to:
  - Identify the presence or the absence of acid sulphate soil (ASS) in areas likely to be disturbed by a proposed development or other project; and, if present
  - Define the nature and extent of ASS and the amount of existing and potential acidity it contains to determine appropriate management measures.
- Treatment and Management of Soils and Water in Acid Sulfate Soil Landscapes (DWER), which provide technical and procedural advice to avoid environmental harm and to assist in achieving best practice environmental management in areas underlain by ASS.

Visit:

<https://www.der.wa.gov.au/your-environment/acid-sulfate-soils>

## 7.4 Appendix 4 – Pressures on the Natural Environment

Major pressures on the natural environment within the Town of Victoria Park are:

- **Development**

Victoria Park is a very urbanised area, which places strain on local biodiversity and already fragmented natural areas. The Town must look to establish ecological/green corridors wherever possible to allow linkages between these areas.

- **Clearing and fragmentation**

Clearing across landscapes directly impacts ecosystems with a direct loss of plant and animal species and destruction of habitat (SWAEI, 2006), leading to habitat fragmentation. Within fragmented landscapes, ecosystems face additional degradation due to the often small and irregular pockets remaining.

'Edge effects', such as weed invasion, are more pronounced on the edges of bushland, and the smaller the area, the greater the effect. Fragmentation reduces the quality of habitat for individual species and isolates the species that live in an area. The ability of native animals and plants to disperse across landscapes is affected, as is the ability of populations to re-colonise areas after a disturbance. This generally results in the continuing loss of species across the wider landscape long after land is initially cleared.

- **Weeds**

Weed invasion within the Town of Victoria Park's natural areas varies to a great degree depending on past usage, past and present disturbance factors, fire frequency and surrounding land use. Weeds are a major issue for the natural areas and can become established through natural dispersal mechanisms such as being carried by the wind or via birds. Weeds can also become established wherever the environment is disturbed or altered, such as access for people, vehicles and animals or from landscaped environments.

- **Domestic and feral animals**

Some domestic animals, particularly unleashed dogs, can considerably impact natural areas due to the potential for unleashed animals to chase and harass native animals. Domestic cats are also known to affect wildlife populations when left to roam in natural areas.

Rabbit population outbreaks are also a serious threat to the ecology and biodiversity of bushland areas. Under the Biosecurity and Agricultural Management Act 2007, rabbits are a declared pest.

- **Spread of dieback**

Phytophthora Dieback is the name used to describe the plant disease caused by the Oomycete *Phytophthora cinnamomi*. There are many species of



Phytophthora, but *P. cinnamomi* causes the most severe and widespread damage to native vegetation.

Phytophthora Dieback spends its entire life in the soil. It attacks the roots of plants and causes them to rot. This kills the plant by stopping the uptake of water and nutrients.

Phytophthora Dieback is found all around the Perth metropolitan area, causing disease in our native banksia woodlands and jarrah forests as well as affecting plants in private and public gardens and streetscapes. Up to 40% or 2,300 species of native plants in the southwest of WA are susceptible to Phytophthora Dieback.

The introduction of the pathogen results in dramatically altered plant communities that have a greater susceptibility to additional threats such as invasive weeds. These changes result in the loss of plant habitats which provide food and shelter for marsupials, birds, reptiles and insects.

The pathogen can survive within plant roots and soil during the dry soil conditions commonly experienced during the summer months via special survival spores.

Consequently, once in an area, it is unlikely to disappear irrespective of the absence of susceptible plant species.

It is human activity that causes the most significant, rapid and widespread distribution of this pathogen. Road construction, earthmoving, driving vehicles on bush roads, and stock movement can contribute significantly to Phytophthora Dieback's spread.

- **Polyphagus Shot Hole Borer**

Polyphagous Shot Hole Borer (PSHB), is a beetle native to Southeast Asia. The beetle attacks a wide range of plants by tunnelling into trunks, stems and branches.

PSHB has a symbiotic relationship with a *Fusarium* fungus, farming it inside the tree as a food source for the beetle and its larvae. In susceptible trees, the fungus kills vascular tissue causing *Fusarium* dieback and tree death.

Establishment of this pest in WA would have significant impact on amenity trees, native vegetation, and the fruit and nut tree industries.

- **Uncontrolled access**

With the urbanisation of Victoria Park, uncontrolled access to natural areas through vehicles, bikes or pedestrians can be potential problems within natural areas. Vehicles in bushland can cause significant damage to landscapes through physical removal of the remaining vegetation, soil compaction, introduction of dieback, soil disturbance. Other impacts include disturbance to fauna such as ground-nesting birds. Uncontrolled pedestrian movement within natural areas can trample fragile vegetation, disturb the soil

surface, and leave the area prone to erosion. In addition to physical damage and loss of biodiversity resulting from excessive tracking, there is a significant reduction in the aesthetic value of landscapes where access is uncontrolled.