



TOWN OF
VICTORIA PARK

environmental plan 2013 - 2018



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Executive Summary

There are a diverse range of community and land use considerations that can impact upon, and therefore need to be considered within, the management of the environment. These considerations include a growing population from 32,433 to 45,756 by 2031 (Town of Victoria Park, *Strategic Community Plan 2013-2028*) a rapidly developing food industry, residential, industrial, retail and technology/university precincts, and Crown Perth complex. The Town is also home to numerous parks, active and passive recreation reserves and natural areas, as well as the Swan River.

The Town is committed to protecting and enhancing its environment, showing leadership through best practice environmental management as well as promoting growth and development within defined environmental parameters. It acknowledges the role it plays within the wider ecological area of the Swan Region and to the sustainable use and management of the region's natural resources.

The *Town of Victoria Park Environmental Plan* (the Plan) will be the main strategic document directing environmental management for the Town over the next five years.

Consultation with Town of Victoria Park staff, members of the Community Environmental Working Group (CEWG) and the wider community has played a key role in the development of the Plan. Guided by the Town of Victoria Park *Strategic Community Plan 2013-2028*, the actions in the *Environmental Plan* are organised into the five focus areas which have been identified as being the general areas of concern for the Town and the Town's community. The Town has formulated high-level objectives for each of these focus areas, and a list of more specific actions that the Town will implement in order to achieve the objectives.

These environmental focus areas include:

- Climate change adaptation and greenhouse protection;
- Water management;
- Land management;
- Natural areas and biodiversity; and
- Solid waste management.

Each new action has been assigned a timeframe, responsible officer and an estimated budget cost. Timeframes have been classified as immediate (to be completed in 2013/14), short term (2014/15), medium term (2015/16-2016/17) or long term (2016/17-2017/18).

Acknowledgements

The Town of Victoria Park would like to thank all those involved in the development of the *Environmental Plan 2013-18*.

Special thanks to internal staff and members of the Community Environmental Working Group for the valuable contribution made, and to those who provided submissions during the public consultation period.



environmental plan 2013 - 2018



Albany Hwy café strip

1.0 Introduction

The Town is strategically located four kilometres from the Perth CBD, forming the eastern gateway to the city. Close to Perth Airport, the Town has within its boundary Curtin University, Crown Perth, Belmont Park Race Course, the proposed Major Stadium, the Perth Football Club, a significant length of the Swan River and the Albany Highway main street.

The Victoria Park Roads Board was proclaimed on 20 July 1894; the area was declared the Municipality of Victoria Park on 30 April 1897. However on 18 November 1917 the Municipality was dissolved with all By-Laws and Regulations of the Victoria Park Municipal Council repealed and replaced by those of the City of Perth.

On 1 July 1994, as a result of the Carr/Fardon Report, the State Government enacted the *City of Perth Restructuring Act 1993* and the Town of Victoria Park, as we know it today, was proclaimed a Town in its own right.

Demographics

Area	17.9 square kilometres
Suburbs and Localities	Bentley (part), Burswood, Carlisle, East Victoria Park, Kensington (part), Lathlain, St James (part), Victoria Park and Welshpool (part)
Distance from Perth CBD	4 kilometres
Rateable Properties	16,184
Area of Parks and Reserves	126.3 hectares
Length of Sealed Roads	174.9 kilometres
Population	32,433
Median Age	34 years
Number of Electors	18,699
Number of Wards	2
Number of Elected Members	Mayor plus eight Councillors

Key population characteristics following the 2011 census include:

- 81.8% of the population is aged 20 years and over.
- 22.2% of the population is aged 55 years and over.
- 40.7% of the population was born overseas.

Language

23.5% of the population speak a language other than English at home.

The most common languages other than English spoken at home were Mandarin (1,104), Italian (597), Cantonese (dialect) (578), Indonesian (481) and Arabic (338).

Income

The median individual weekly income is \$692 and the average household size is 2.18 people.

Population Change and Growth

The population of the Town is expected to grow to 45,756 by 2031 representing a 64% increase. A significant proportion of the population increase will come as a result of in-fill development, new developments at The Peninsula, Belmont Park Race Course, Burswood Station East and West precincts, the Causeway Precinct, and the Technology Precinct including Curtin University. The growth in population will have a great impact on how activities and services across the Town are delivered.

The Town's community has traditionally seen itself as a diverse working class suburb of Perth. In recent times it has been the subject of on-going redevelopment within its residential areas and is increasingly being sought as a destination for residential, commercial and leisure pursuits, with a thriving café culture and increasing investment in mixed-use development within the Albany Highway main street, the Causeway precinct and the Burswood Peninsula.

Demographic-Age Distribution

The Town of Victoria Park has a high population of young adults and more young and middle-aged adults have moved to the region since 2001. Young adults between 20 and 34 years represent the largest population demographic and the 2011 median age of Victoria Park community was 34 years. The Town also has an even distribution of both female and male residents.

Socioeconomic Indexes for Areas (SEIFA) Index

The Town of Victoria Park SEIFA Index of Disadvantage measures the relative level of socioeconomic disadvantage based on a range of Census characteristics. It provides a general view of the relative level of disadvantage in one area compared to others. The index is derived from attributes that reflect disadvantage such as low income, low educational attainment, high unemployment, and jobs in relatively unskilled occupations. A higher score on the index means a lower level of disadvantage. A lower score on the index means a higher level of disadvantage.

The Town of Victoria Park scores 1,020.6 on the SEIFA index of disadvantage, compared to 1031 for Greater Perth, 1021 for Western Australia and 1002 for Australia.

Since 1994 the Town has successfully focussed on improving infrastructure, developing community and improving business prosperity to the point that Victoria Park is an exemplar of Local Government.

Unique natural features located within the Town of Victoria Park include the Swan River foreshore, McCallum Park/Taylor Reserve, Kensington Bushland (a listed Bush Forever site) and G.O. Edwards Park. In addition, the positioning of the Town as a gateway to Perth and the combination of land uses located in close proximity to the natural environment are significant considerations in environmental management.

Through the development of this *Environmental Plan*, the Town recognises its responsibility to maintain and protect 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 as well as promoting growth and development within defined environmental parameters. It acknowledges the role it plays within the wider ecological area of the Swan Region and to the sustainable use and management of the region’s natural resources.

1.1 Community Perception

The importance of the environment is reflected within the Town’s community.

In mid-2010 a community perception survey was undertaken as part of the development of the Town of Victoria Park *Plan for the Future 2011-2026*. The natural environment, in an importance scale out of 10, was rated 8.7 out of 10, with a satisfaction rating of 69% satisfaction rating.

In a subsequent community perception survey during 2012, satisfaction remained relatively static, at 66%.

As the natural environment has a high level of perceived importance and lower levels of satisfaction, this represents a significant, ‘hot issue’ for Council. This requires Council to invest resources and effort into the natural environment to improve performance and perceived levels of satisfaction.

1.2 Consultation / Development Process

The following diagram outlines the stages involved in the development of the *Environmental Plan*.



2.0 Purpose and Scope of the *Environmental Plan*

The *Western Australian 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 Town of Victoria Park *Environmental Plan*, the definition of 'environment' expands on this to include:

*The natural aspects of air, water, land, biodiversity, flora, fauna, the human beings
that act upon and interact with these elements and associated social
and cultural values applied to these natural environmental aspects.*

The Town of Victoria Park *Environmental Plan* (the Plan) will be the main strategic document directing environmental management by the Town over the next five years. The purpose of the Plan is to identify environmental focus areas and associated actions that the Town will aim to implement.

Drawn from, and guided by, the Town of Victoria Park *Strategic Community Plan 2013-2028*, each focus area for improvement has been chosen as a priority for the Town's environment.

These environmental focus areas and their relevant objectives are detailed below:

Climate change adaptation and greenhouse protection

- To promote the efficient use of energy and a reduction in greenhouse gas emissions.
- To conduct community awareness programs to effect climate change action.

Water management

- To protect and enhance surface and groundwater resources to achieve a high quality of natural water resources.
- To conduct community awareness programs to ensure sustainable water usage.
- To ensure that stormwater is managed effectively.

Land management

- To incorporate environmental considerations into land approval and planning processes.

Natural areas and biodiversity

- To ensure the effective maintenance, protection and enhancement of the Town's biodiversity.

Solid waste management

- To implement strategies and projects that aim to reduce the creation of waste, sustainably dispose of it and efficiently manage its recovery.

The objectives aim to effect greater management of natural areas, reduce the pollution entering our environment, improve surface and ground water quality, reduce water use and reduce solid waste going to landfill. Achieving these objectives will involve risk mitigation or minimization arising from Council activities, businesses and the community.

The Town views the role of the community as vital in achieving its environmental objectives. Throughout the life of this Plan there are opportunities for the Town to educate and engage the community.



G.O. Edwards Park

3.0 Future Challenges for the Town of Victoria Park

The Town of Victoria Park *Environmental Plan* represents an inaugural strategic guidance document for the Town's future environmental management. This is significant, as it means that:

- Future environmental programs will not be undertaken in an ad hoc fashion, but instead as part of a broader, holistic approach;
- Individual initiatives will be undertaken as part of a broader, collective plan and associated objectives;
- Robust project business cases and justification for budgets, particularly for significant long-term projects, can be submitted to Council; and
- Stronger submissions can be made to funding bodies to receive grant funding.

The principle of 'sustainability' invites us to think about the impacts of our actions and lifestyle choices now, to take responsibility for these and to take ownership of the legacy we will leave future generations. It is a critical recognition that the way traditional systems interact with the environment will not leave the necessary systems intact for future generations to meet their basic needs.

It is therefore incumbent on us to protect and improve our natural environment.

Behaviour change is therefore the most significant challenge regarding the environment. In order to reach positive environmental outcomes and objectives under the *Environmental Plan*, attitudinal as well as systems change may be required, both within the Council and within the community. Such systems change includes recognising that the environment is as equally an important consideration as those of economics and social.



Planting on Shepperton Rd

4.0 Town of Victoria Park Strategic Community Plan 2013-2028

In June 2013 a new *Strategic Plan* for the Town was adopted by Council. The Town of Victoria Park *Strategic Community Plan 2013-2028* sets out the most important directions for the Town, particularly in adopting an innovative program structure that focuses our efforts on achieving outcomes for the community that will ultimately improve the Town's quality of life.

It focuses on the achievement of outcomes, in particular projects that will both positively position the Town for the future and positively impact the present population's quality of life.

The Town of Victoria Park *Strategic Community Plan 2013-2028* comprises five program areas. Environmental activity is encompassed under the 'Renew Life' program, the objectives of which are:

1. Ensure parks and natural areas are provided to the best standard;
2. Ensure residents have safe, clean and attractive streetscapes;
3. Effectively manage, maintain and renew the Town's assets; and
4. Provide leadership on environmental, transport and infrastructure solutions.

The Environmental Plan is created under this last objective, supports the other objectives of the Town of Victoria Park *Strategic Community Plan 2013-2028*, and provides the means by which progress on the actions of the *Strategic Plan* can be reported.



Town of Victoria Park Administration Building

5.0 Guiding Documents

There are numerous forms of legislation, policies and strategies and agreements at various levels of control that are linked to environmental management. Being at the third tier of Government in Australia, Local Government must consider many different requirements including State, Federal and International policies and legislation.

Relevant Commonwealth and State policies, Legislation and Strategies, and International Treaties and Agreements, are listed in Appendix 1.

Policies, strategies and plans developed by the Town of Victoria Park that are relevant to environmental management within the Town are listed below.

- Town of Victoria Park *Plan for the Future 2011-2026*
- Town of Victoria Park *Strategic Community Plan 2013-2033*
- *Corporate Priorities 2007/08-2011/12*
- Town of Victoria Park *Greenhouse Gas Reduction Strategy (2003)*
- *Strategic Waste Minimisation Plan 2008-2013*
- *Storm Water Management Plan (draft in progress)*
- Town of Victoria Park *Remnant Bushland Management Plan (2004)*
- *Kensington Bushland Protection Study (2005)*
- *Sustainability Framework (draft in progress)*
- *Community Environmental Working Group – Work Plan (2013)*
- *WALGA Climate Change Declaration (2012)*



Albany Hwy

6.0 Key Stakeholders for the Town of Victoria Park

As environmental issues are not limited to Local Government boundaries, 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:

- Residents and ratepayers;
- The Elected Members of the Council;
- Local businesses;
- State Government departments, including the Department of Parks and Wildlife (DPAW), Department of Environmental Regulation (DER), Department of Water (DoW), Department of Planning/West Australian Planning Commission, Swan River Trust, Water Corporation, Main Roads WA;
- Mindarie Regional Council (MRC);
- Neighbouring Local Governments and Regional Councils (e.g. Mindarie Regional Council, Eastern Metropolitan Regional Council);
- Environmental and 'Friends of' groups, including Perth Region NRM, South East Regional Centre for Urban Landcare and Two Rivers Catchment Group, Friends of GO Edwards, Friends of Kensington Bushland; Friends of Hill View Bushland;
- Local Indigenous communities;
- The Western Australian Local Government Association (WALGA);
- International Council for Local Environmental Initiatives (ICLEI);
- Registered environmental volunteers and general community members; and
- Staff of the Town of Victoria Park.

7.1 Community Environmental Working Group

The Community Environmental Working Group (CEWG) – formerly the Community Environmental Advisory Committee – plays a key role in facilitating integration of environmental considerations into the core business of the Town, and serves as the direct reporting link to Council.

The role of CEWG is to represent the community and provide input relating to environmental matters and community environmental education.

In accordance with the Town's environmental management and sustainability agendas, CEWG has assisted the Town by:

- Engaging and involving the community in environmental programs;
- Developing and implementing community education campaigns relating to local environmental issues; and
- Providing comment on key environmental policies, documents, reports and programs produced by the Town from a community perspective.

The Committee comprises elected members, Town of Victoria Park officers, local Friends groups, and individual community members.

7.2 Responsible Business Units

In 2009 the Town adopted a visionary and unique, to Local Government, program-based administrative structure to guide it over the next five years, which will be progressively reviewed. The five program areas focus on outcomes that will benefit the Town.

As mentioned in part 4.0 the Renew Life Program has primary responsibility for coordinating environmental management within the Town.

The Town's environmental staff are situated within the Park Life sub-Program of Renew Life. The focus of this program is the renewal of all Town assets to ensure they are sustained for future generations. Park Life has overall responsibility for the Town's *Environmental Plan*, as well as environmental restoration projects, the maintenance of natural areas and organisation of environmental events and education programs.

Environmental management may also be linked with the functions of other departments within the Town, as listed below:

- **Community Life**

The Community Life program will focus on the development of a healthy community and strong neighbourhoods and build on the high level of diversity within the Town

- **Business Life**

The Business life program will provide support and infrastructure to ensure that the Town can accommodate growth to achieve its goals.

There will be a focus on the economic sustainability of the Town.

- **Built Life**

The Built Life Program will promote the development of a high quality, sustainable built environment in the Town, by facilitating innovation in design and neighbourhood planning, and striving for excellence in the built environment.

- **Future Life**

Future Life will develop and implement policies and procedures to ensure the appropriate development of the Town to ensure future demands are met.



Burswood

7.3 Environmental Policy

Whilst the Town of Victoria Park has always been proactive and supportive of the environmental enhancement activities, to date there has been no *Environment Policy* adopted. Such a policy would guide the Town’s business decisions, and outline the Council’s commitment to the development, implementation and continual review of the *Environmental Plan*.

To this end, it is recommended that this policy be developed and implemented.

7.3.1 Action Plan – New Actions

Action	Responsible Officer	Timeframe for implementation	Estimated Budget Cost	Key Performance Indicators
7.3.1.1 Prepare an <i>Environmental Policy</i> that is complementary to the development, implementation and review of the <i>Environmental Plan</i>	Environmental Officer	2013/14	Officer time	<i>Environmental Policy</i> is developed by June 2014



Schools planting program

8.0 Underlying Assumptions Behind the *Environmental Plan*

Four assumptions underpin the actions and strategies contained in the focus areas of the Town of Victoria Park *Environmental Plan*.

Partnerships / Relationships

To build partnerships, where appropriate, that will assist in achieving effective resource utilisation, completion of environmental actions and information sharing.

Education and Participation

To increase the community's capacity to appreciate and respond appropriately to environmental issues in the Town.

Regular Reviews

To conduct regular reviews of existing Town plans and the actions and strategies identified in this Plan to ensure relevance and continuous improvement.

Effective Implementation

To ensure that Town plans, strategies and actions continually enhance the Town's environmental position by being realistic and achievable.



9.0 Managing the Environment

Guided by the Town of Victoria Park *Strategic Community Plan 2013-2028*, the actions in the *Environmental Plan* are organised into the five focus areas. These focus areas have been identified as being the general areas of concern for the Town and the Town's community.

The Town has formulated high-level objectives for each of these focus areas, and a list of more specific actions that the Town will implement in order to achieve the objectives.

These environmental focus areas include:

- Climate change adaptation and greenhouse protection;
- Water management;
- Land management;
- Natural areas and biodiversity; and
- Solid waste management.

Actions associated with these focus areas are broken into 'continuing actions' (those actions which the Town has undertaken in the past and will continue to do so) and 'new actions'.

Each 'new action' has been assigned a timeframe, responsible officer and an estimated budget cost. Timeframes have been classified as:

- Immediate (to be completed in 2013/14)
- Short term (2014/15)
- Medium term (2015/16-2016/17)
- Long term (2016/17-2017/18).

The estimated costs for each action are presented at the end of each focus area section. This does not include 'ongoing actions' which are currently being undertaken and are included in existing budgets.

A significant but unquantified cost is related to officer time, which involves not only the activities of Environment staff, but also those identified as responsible officers.

9.1 Climate Change Adaptation and Greenhouse Protection

9.1.1 Objectives

- To promote the efficient use of energy and a reduction in greenhouse gas emissions
- To conduct community awareness programs to effect climate change action.

9.1.2 Enhanced Greenhouse Gas Effect

The 'enhanced greenhouse effect' (EGE) is a result of the high levels of greenhouse gases, such as carbon dioxide and methane, that are being released and accumulating in Earth's atmosphere. Much like the action of a greenhouse, this is inhibiting the release of heat from the atmosphere. The result is warming of the planet.

9.1.3 Climate Change

The current evidence suggests that the world's climate is changing. It is now widely accepted that human activities are contributing to global warming and climate change, which can produce significant physical effects.

Some of the effects from climate change are already happening; some are inevitable and will become more severe if humans do not modify their behaviour.

Since 1950 Australia has experienced a warming of 0.4 to 0.7°C, with more heatwaves, an increase in the intensity of droughts, extreme weather events and less rainfall in the South-West of Western Australia (*Intergovernmental Panel on Climate Change, 2013*). Australia is already experiencing impacts from recent climate change with increasing stresses on water supply and agriculture, and is expected to face more severe extreme events with more intense and frequent heatwaves, droughts, floods and storm surges.

The Town of Victoria Park recognises the significance of human-induced climate change, and acknowledges that mitigation and adaptation actions need to be undertaken to ensure the Town is well positioned to respond to the predicted impacts of climate change.

9.1.4 Previous Activity and Achievements

9.1.4.1 Reduction in Greenhouse Pollution

Greenhouse gas emissions can stem from several sources related to the Town's operations. These include energy use associated with Council buildings, streetlights, water pumping, Council fleet vehicles and plant emissions, as well as the breakdown of waste resulting in methane generation.

In the past the Town of Victoria Park has been involved in the International Council for Local Environmental Initiatives' (ICLEI) *Cities for Climate Protection (CCP) Program*, having achieved Milestones One – Five. Under this program, an inventory and forecast of Council and community greenhouse gas emissions had been produced; a reduction target for the corporate and community sectors of the Town has been set; a *Local Action Plan* for greenhouse gas reduction had been developed (the *Greenhouse Gas Reduction Strategy 2003*); and many of the strategies set by the Plan to reach its determined targets implemented.

Some of the major actions and associated greenhouse gas reductions achieved by the Town through the CCP program are outlined in Table 1.

Table 1: Major actions and associated greenhouse gas reductions achieved through the CCP program the Town of Victoria Park

Action	Annual Greenhouse Gas Savings (CO ²)
Mulching Street Tree Clippings	1592 Tonne
Carbon Neutral Biosequestration for Fleet*	174 Tonne
Purchasing of 10% Green Power for the Administration Building, Aqualife, Library and Depot	80 Tonne
Changing to LCD Screens/activating Energy Star	30 Tonne
Installation of timers on appliances	13 Tonne
Down-sizing some fleet vehicles from 6cyl to 4cyl	4 Tonne
Changing to Metal Halide globes on new streetlights:	1 Tonne

***Biosequestration – this saving is unable to be recognised by CCP as the methodology used to calculate by Carbon Neutral is not currently accepted by the AGO.**

Unquantifiable savings include:

- Staff Multi-riders (free for company travel and lunchtime use)
- Staff Pool Bikes (available for use for short trips rather than the car)
- TravelSmart Cycle 100 program – earn a free bike from the Town
- Motion Sensors for turning lights on and off in some office areas
- Upgrading reticulation bores to more efficient models
- Undertaking energy audits of office buildings

Our Community Greenhouse Abatement actions have been:

- The Save Water & Power Program
- TravelSmart Walking School Bus
- Cost Price Composters and Worm farms
- TravelSmart Households
- Living Smart Program

The completion of CCP provided a valuable indicator of how the Town was progressing towards our reduction goal to cut greenhouse gas emissions by 25% of 1996 levels, by 2010.

The 2005 re-inventory of the Town's corporate and 2001 re-inventory of community greenhouse gas emissions showed overall increases of 24% (corporate) and 4.5% (community), respectively, in CO² emissions within the Town. Whilst this was not the trend towards decrease that was hoped for, the Town has been in a state of growth for many years, and had the Town not undertaken the actions it had, the emissions would likely have been significantly higher.

Whilst not all of the actions have been implemented, the Town has nonetheless made progress in emissions abatement.

The Council continues with its commitment to achieve further abatement. In 2009/10 the Town joined the WALGA Emissions Reporting Platform, provided by Greensense Climate Change Consulting; not only filling the gaps left behind by the de-funding of the CCP Program, but also providing a basis for future reporting with regards to compliance with the National Greenhouse Emissions Reporting System (NGERS).

However, there are further opportunities for the Town to address climate change adaptation and greenhouse protection. These include:

- Commitment to formal emissions reporting (e.g. annually using data from the emissions reporting platform); and
- Development of a new carbon emissions reduction strategy.

In the interest of promoting active, sustainable travel, the Town is establishing a further *TravelSmart Workplace Program*.

9.1.4.2 Energy Management

The Town sources its energy from a combination of suppliers, including Western Power, Alinta and (more recently) Perth Energy, which includes renewable energy sources. A solar hot water system is used for heating pool water at Aqualife. The Town is also investigating the installation of solar thermal systems in further facilities in future.

The Town works in partnership with the *Switch Your Thinking!* (SYT!) program to deliver staff and community education and awareness initiatives, implement measures that aims to save energy, water and operating costs, and reduce greenhouse gas emissions. Recent initiatives have included the energy-saving Greenlight Schools program, Switched on Staff program and the Rewards for Residents Scheme, which offers discounts to residents on a range of sustainable products.

Other community programs with a focus on energy reduction for which the Town has been engaged have included the Local Centres Program, Living Smart, the Energy Actions program and the provision of home energy audits, and events such as the Green Skills workshop series.

Staff energy reduction initiatives driven within the Town have included a staff manual, energy conservation presentations, and energy audits of some high consuming facilities such as the Administration building, Leisurelife and Aqualife, with associated retrofitting.

The Town should continue to undertake energy audits on high use facilities, and associated energy efficiency retrofits.

9.1.4.3 Fleet

To date the Town has been involved on an annual basis with the Carbon Neutral Program to offset carbon dioxide emissions from the Town's light vehicle fleet. This offset has primarily been derived through native tree planting within Western Australia.

Carbon emissions from a fleet can account for up to 40% of the entire greenhouse emissions for local councils. There is therefore significant potential to reduce carbon emissions through implementation of fleet related actions.



Albany Highway, Victoria Park

9.1.5 Continuing Actions

Action	Responsible Officer	Timeframe for implementation
9.1.5.1 Continue to participate in 'Men of the Trees' Carbon Neutral program to offset carbon emissions from Council's light vehicle fleet.	Environmental Officer	2013/14
9.1.5.2 Continue to participate in the <i>Emissions Reporting Platform</i> for Local Government hosted by Greensense	Environmental Officer	2013/14
9.1.5.3 Continue to participate in the <i>Switch Your Thinking!</i> Program.	Environmental Officer	2013/14
9.1.5.4 Continue to promote cycling as an alternative method of transport, including providing bicycles for staff use; and encouraging cycling within the Town.	Transport Officer	2013/14
9.1.5.5 Continue to encourage energy efficiency of residents and businesses through Switch Your Thinking! Program, community information sessions and advertising in local media.	Environmental Officer	2014/15
9.1.5.6 Continue to undertake energy audits on high use facilities, and associated energy efficiency retrofits.	Environmental Officer	2015/16

9.1.6 New Actions

Action	Responsible Officer	Timeframe for implementation
9.1.6.1 Develop/implement <i>TravelSmart Workplace Program</i>	Traffic/Transport Officer – Street Life	2013/14
9.1.6.2 Develop a green purchasing policy which encourages purchase of the most suitable product with the least possible impact on the environment*.	Environmental Officer; Business Unit Manager – Fleet; Business Unit Manager - Assets; Business Unit Manager – Finance	2013/14
9.1.6.3 Review the <i>Greenhouse Gas Reduction Strategy 2003</i> and identify any relevant actions that remain incomplete.	Environmental Officer	2013/14
9.1.6.4 Investigate new energy efficient technology when replacing assets such as lights, HVAC systems and pumps.	Environmental Officer; Business Unit Manager – Assets	2013/14
9.1.6.5 Promote the use of electric vehicles, particularly scooters, rather than conventionally-fuelled vehicles	Transport Officer; Environmental Officer	2013/14
9.1.6.6 Development of a new <i>Carbon Emissions Reduction Strategy</i> .	Environmental Officer	2014/15
9.1.6.7 Actively investigate and engage in development of a <i>Climate Change Adaptation Strategy</i> .	Environmental Officer	2014/15
9.1.6.8 Purchase a percentage of renewable energy for street lighting and highest electricity consuming buildings.	Business Unit Manager – Assets; Environmental Officer	2014/15

Estimated Budget Cost	Key Performance Indicators
\$6,000	Subscription renewed annually. Trees (as calculated by Carbon Neutral) planted to offset vehicle emissions each year.
\$3,500; Officer time	Subscription renewed annually. Progress reported annually.
\$5,000; Officer time	'Switched On Staff', 'Switched on Recycling' and Rewards For Residents Programs delivered by June 2014.
\$9,500 (as part of TravelSmart Workplace); Officer time	Progress reported annually.
TBC; Officer time	Switch Your Thinking/Community information sessions held. Local media distributed. Progress reported annually.
\$3,500; Officer time	Energy Audits completed for each identified high consuming site by June 2016.

Estimated Budget Cost	Key Performance Indicators
\$9,500; Officer time	<i>TravelSmart Workplace</i> integrated into Town by June 2014.
Officer time	<i>Green Purchasing Policy</i> is developed by June 2014.
Officer time	<i>CCP Local Action Plan</i> reviewed by June 2014 and remaining actions to be implemented identified.
Officer time	Energy efficient technology installed in Council facilities and community centres
Officer time	Number of promotional/training sessions undertaken.
TBC; Officer time	<i>Carbon Emissions Reduction Strategy</i> developed by June 2015.
Officer time	<i>Climate Change Adaptation Strategy</i> developed June 2015.
TBC Within existing building maintenance budgets	The Town utilises at least 15% renewable energy in street lighting and high-use community facilities.

***The Town currently has no sustainable (green) purchasing policy. Whilst an explicit policy requirement is made that Rainforest timbers shall not be used in any construction or building project undertaken wholly or jointly by the Town (Policy BLDG3), there is no green purchasing policy which encourages purchase of the most suitable product with the least possible impact on the environment.**

Due to accounting for a significant proportion of the Town's emissions, such a policy should be inclusive of fleet vehicles. Council fleet vehicles with a minimum 3 star rating in the Australian Government's *Green Vehicle Guide* should also be selected, where possible, taking into account the 'greenhouse' rating to minimise CO² emissions.



SLOW LAPPING LANE

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← → ← → ← → ← →

Thank you for keeping left

Aqualife Centre

FAST LAPPING LANE

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Thank you for keeping left

Aqualife Centre



Solar-heated pool, Aqualife



Swan River

9.2 Water Management

9.2.1 Objectives

- To protect, conserve and enhance surface and groundwater resources to achieve high quality natural water resources.
- To conduct community awareness programs to ensure sustainable water usage.
- To ensure that stormwater is managed effectively.

The Town of Victoria Park contains some significant water resources in the form of the Swan and Canning River system, groundwater resources and a lake system (in the form of G.O. Edwards Park). The urban activity that occurs adjacent to such water bodies impacts heavily on water quality, which can have significant effects on the ecologies contained within the water systems, as well as public health.

Trending declines in rainfall in the South-West of WA and subsequent water shortages are other issues which are a concern for the Town.

The Town of Victoria Park acknowledges the need to address these issues, primarily through its participation in the ICLEI (International Council for Local Environmental Initiatives) Water Campaign, as well as other initiatives, stormwater management, groundwater licensing and monitoring.

9.2.2 Previous Activity and Achievements

9.2.2.1 ICLEI Water Campaign

The ICLEI Water Campaign is a voluntary program run by the International Council for Local Environmental Initiatives (ICLEI) for Local Governments. The program assists local governments to manage their freshwater resources by reducing use and improving quality.

To participate in the program, councils must adopt a resolution, enforcing their commitment to complete the program's five performance milestones.

The milestones are:

1. Complete an inventory of water consumption and a water quality practices gap analysis.
2. Set goals to improve water management.
3. Develop a local action plan.
4. Implement the local action plan.
5. Complete a second inventory and report on progress.

Within each milestone, there are three modules for local governments to undertake. The modules look at:

- Corporate:** What local governments can control within their own operations.
- Community:** What local governments can influence in the community through land use planning, regulation and education.

The Town of Victoria Park joined the Water Campaign in 2005. It has completed Milestone One (inventory of water consumption and water quality), Milestone Two (Goal setting) and Three (*Local Action Plan*).

9.2.2.2 Stormwater Management Plan

Twenty-six major catchments have been identified within the Town of Victoria Park.

The Town has primarily sandy soils, has no major surface drainage lines and much of the area is internally drained, mainly to small sumps or compensating basins. There is little runoff from vegetated areas and runoff from roofs is typically infiltrated on-site, so the Town's drainage system has been developed to accommodate stormwater derived mainly from road reserves.

Development of drainage infrastructure in the past has primarily focussed on managing the threat of flooding. Management of water quality and adoption of improved stormwater drainage and management systems are increasingly becoming important and the Town needs to address these changes.

In order to minimise damage to the environment, the Town is investigating improved stormwater management practices. These practices aim to protect and enhance the Town's natural environment and to ensure protection of the ecological values of important environments that receive stormwater.

The Town has a *Stormwater Management Plan*, which outlines strategies for improving the water quality in our drains that eventually ends up in the Swan River.

The strategies included in the plan are:

- Planning and land use initiatives to address the effects of land development and land use on water quality (conditions for new developments etc.);
- Operations and land management such as waste collection and street sweeping reviewed to ensure that the best possible management is in place to protect our stormwater quality;
- Raising the awareness of the impacts that the community and business/industry has on local water quality; and
- Upgrading of stormwater infrastructure (kerbs, swales, constructed wetlands etc.).

9.2.2.3 Stormwater Monitoring

Complimentary to the *Stormwater Management Plan*, an extensive (three year) stormwater quality monitoring project was completed in 2009 in partnership with Department of Water and the South East Regional Centre for Urban Landcare (SERCUL).

The Town will be progressively implementing the recommendations stemming from this stormwater quality monitoring.

9.2.2.4 Stormwater Runoff Containment Policy

The Town has also developed a *Stormwater Runoff Containment Policy*, which requires that all stormwater falling on private land shall be contained within that land by means of a drainage system capable of effectively preventing the discharge of runoff onto adjacent private or public property.

Where there is concern regarding the pollution of the stormwater generated on such a property, the stormwater must be adequately treated and retained on site.

9.2.2.5 Freshwaters

River system / foreshore

The Swan-Canning River system passes through the Town. Several stretches of associated foreshore that occur within the Town include McCallum Park/Taylor Reserve, Belmont Park, Burswood Park and Balbuk Way.

Please refer to section 9.4 – Natural Areas and Biodiversity for information on these respective foreshore areas and future management considerations.

Lakes

The Town's major freshwater body is G.O. Edwards Park Lake. Located within G.O. Edwards Park, Burswood, the lake is some 30 years old, having been constructed upon the site of a former uncontrolled landfill in the 1970s as part of the 150 year celebrations for the State.

The site is now zoned 'Parks and Recreation' being occupied by parkland comprising the lake and approximately 10 hectares of open space, including large expanses of irrigated turf, some native garden beds and stands of mature trees. The lake has two islands and is understood to be fed by a groundwater source providing a year-round water supply.

Unlike many of Perth's ephemeral urban wetlands which dry out during summer, the lake at G.O. Edwards Park maintains a fairly constant water level throughout the year, even though water from it is used for irrigation. This, together with the fact that groundwater is suspected to be carrying nutrients into the system, is a major contributing factor causing algae outbreaks in this lake, including the presence of toxic blue-green algae. Water quality must be managed during the summer when outbreaks of algal blooms occur.

Phoslock Applications

In recent years the Town has seasonally applied Phoslock to G.O. Edwards Lake, in an effort to bind nutrients in the water column and reduce the instance and/or severity of algal blooms. This has worked successfully to date.

Longer term, more holistic solutions to prevent algal blooms will be explored through the *Water Quality Improvement Plan*.

Water Quality Improvement Plan

A *Water Quality Improvement Plan* (WQIP) has been developed to identify the characteristics and current condition of the site, determine potential causes of poor water quality and develop a 'toolbox' of actions including Water Sensitive Urban Design (WSUD) 'Best Management Practices' (BMPs) that would be suitable and viable for consideration at G.O. Edwards Park.

Concept Plan

Complimentary to the WQIP, a landscape concept plan to enhance the G.O. Edwards community park is in development. The intent of the landscape design is to protect the natural environment and existing function of spaces, whilst taking into account the opinions, needs and requirements of the local council, various stakeholders, the community and local school groups.



Sprinkler dripper system

9.2.2.6 Irrigation

- The majority of irrigation for Public Open Space is sourced from groundwater or stormwater. The Town coordinates the irrigation systems remotely, as well as on-site. There are less than five small neighbourhood parks where scheme water is used to irrigate the turf twice weekly as a maximum. Bore water is used instead to irrigate the rest of the reserves, with the exception of Taylor Reserve and McCallum Park, which are irrigated using reclaimed stormwater.
- In 2007/08 the Town developed a *Water Conservation Plan*, a requirement through the Department of Water (DoW) that will help the Town conserve groundwater and improve water use efficiency so that public open space can be managed under the drier and warmer conditions we are experiencing with climate change.
- In complying with the DoW's groundwater bore licence, the Town undertakes monthly monitoring of abstraction rates for bores with flow meters and annual water quality testing for nutrients, pH and salinity.
- When establishing new plants, the Town uses Terracottem, a soil conditioner that is designed to improve the water and nutrient retention capacity, reducing the need for irrigation.
- In an effort to reduce the risk of nutrient leaching to the river system, the Town does not apply fertiliser on foreshore reserves, unless it is slow release, and the fertiliser regime is minimal.
- Wetting agents, and fertilisers with Grosorb are used to maximise the water available to the turf, and to reduce water usage and leaching.
- Hydrozoning on Harold Rossiter Reserve. Hydrozoning is the practice of establishing separate areas or zones to receive different amounts of water. By splitting the dedicated zones up irrigation can be arranged on a 'micro' level, resulting in the park as a whole utilising less water while still providing great amenity for all its many users. Hydrozoning can be roughly expected to drop annual water usage for a reserve by about 20% (Hydrozoning fact sheet, DoW 2007).

9.2.3 Continuing Actions

Action	Responsible Officer	Timeframe for implementation
9.2.3.1 Continue to participate in the ICLEI Water Campaign.	Environmental Officer	2013/14
9.2.3.2 Continue to undertake and pursue sustainable irrigation practices.	Business Unit Manager – Parks	2013/14
9.2.3.3 Implement the <i>Stormwater Management Plan</i> .	Business Unit Manager – Street Improvement; Environmental Officer	2013/14

9.2.4 New Actions

Action	Responsible Officer	Timeframe for implementation
9.2.4.1 Encourage schools to participate in the Water Corporation's <i>Waterwise Schools</i> program.	Environmental Officer	2014/15
9.2.4.2 Conduct an annual review of scheme water consumption in Council buildings and facilities, through data from Water Corporation, and investigate changes in annual water use of >15% for each facility.	Environmental Officer; Business Unit Manager – Assets	2014/15
9.2.4.3 Participate in the Water Corporation's <i>Waterwise Council Program</i> .	Environmental Officer; Business Unit Manager – Assets	2014/15
9.2.4.4 Consider promoting the re-use of grey water within the Town (e.g. through application rebates)	Environmental Officer; Environmental Health Officers	2014/15
9.2.4.5 Conduct a water audit of one high scheme water consuming site (as identified through the Water Campaign) each year from 2013/14.	Environmental Officer; Business Unit Manager – Assets	2015/16-2016/17
9.2.4.6 Create passive reserves and landscaped areas with waterwise plant species that have a low water requirement.	Environmental Officer; Business Unit Manager – Parks	2016/17-2017/18
9.2.4.7 Reduce the amount of irrigated turf area throughout the Town and replace with local native plants with low water requirements.	Environmental Officer; Business Unit Manager – Parks	2016/17-2017/18
9.2.4.8 As the need arises, replace all old, inefficient water consuming fittings within Council owned or managed facilities (e.g. single flush toilets) with water efficient, Water Efficiency Labelling Standard (WELS) rated fittings.	Business Unit Manager – Assets	2016/17-2017/18
9.2.4.9 Implement planned Natural Areas and Friends of G.O. Edwards actions.	Environmental Officer; Business Unit Manager – Parks	2016/17-2017/18
9.4.2.10 Implement the <i>GO Edwards Concept Plan</i> and <i>Water Quality Improvement Plan</i> with the development of a Detailed Design.	Environmental Officer; Business Unit Manager – Parks	As per GO Edwards Concept Plan and Water Quality Improvement Plan

Estimated Budget Cost	Key Performance Indicators
\$15,500	Water Action Plan adopted by Council; Actions start to be implemented by June 2013/14. Progress reported annually.
Officer time	Progress reported annually.
Within existing Street Life budget	Actions within the Stormwater Management Plan implemented by June 2018. Progress reported annually.

Estimated Budget Cost	Key Performance Indicators
Officer time	All schools engaged in the Waterwise Schools program by June 2015.
Officer time	Progress reported annually.
Officer time	Town of Victoria Park engaged in the Water Council Program by June 2015.
\$120/application; Officer time	Residents installing greywater systems within the Town.
Officer time	Water Audits completed for each identified high consuming site by June 2016.
TBC Within existing Park Life budget; Officer time	Progress reported annually.
TBC Within existing Park Life budget; Officer time	Progress reported annually.
TBC Within existing building maintenance budgets	Water efficient fittings installed within Council buildings and community facilities.
TBC Within existing Park Life budget; Officer time	Progress reported annually.
GO Edwards Water Quality Improvement Plan total investment = \$375,000; GO Edwards Detailed Design = \$30,000	Progress reported annually.

9.3 Land Management

9.3.1 Objective

- To incorporate environmental considerations into land approval and planning processes.

In the Town of Victoria Park there is a diversity of natural and built environments including: lakes; bushland; foreshore reserves; residential areas; commercial precincts; and, dry and reticulated parks. All of these areas contribute to the Town's overall environment.

The Town must respond appropriately to the predicted continued rapid population growth, and associated increase in population density. This represents challenges such as fragmentation of natural areas and loss of biodiversity.

The Town has responsibility to ensure that these land uses can exist in harmony – that development of land will have a minimal negative impact on the natural immediate environment. It recognises the importance of ensuring that environmental issues are considered in the land use planning and development control process. In this way, the Town can minimise the environmental impacts of the built environment.

9.3.2 Previous Activity and Achievements

The Town of Victoria Park is currently involved in the following activities and projects to progress toward achieving objectives:

- Prevent removal and/or damage to street trees when conducting Council construction works through modification of design.
- For new developments, plans are checked prior to the issue of a building licence to ensure the retention of street trees wherever possible, and if required, a replacement tree installed.
- The Town's *Design Guidelines for Developments with Buildings Above Three Storeys* provide a planning and design framework for any development incorporating buildings above three storeys, and seek high quality designs that include environmentally sensitive design principles.

Note: The scale of developments that typically occur within the Town are generally small. Consequently, there has been little avenue for incorporation of water sensitive urban design principles and best practice management initiatives. Council is bound by the requirements of the Building Code of Australia.

- Provide copies of 'Grow Local Plants' and 'Your Street Verge: Sustainable Landscaping Guide' brochures to residents to encourage the establishment of local, native plants.
- Scheduling installation of street trees in new developments to occur after building construction has been completed, to avoid issues with removal/damage.
- Respond to water quality issues such as unauthorised discharges, disposal of liquid waste and erosion/sedimentation, utilising the *Environmental Protection (Unauthorised Discharges) Regulations 2004* and *Health Local Law 2003*.

There are also a range of environmental initiatives affecting land which are being promoted outside of Local Government and for which the Town of Victoria Park has a supporting and management role. Such State Government initiated issues include the management of contaminated sites and acid sulfate soils.

9.3.2.1 Contaminated Sites

Under the *Contaminated Sites Act 2003*, any known or suspected contaminated sites are to be reported to the Department of Environment Regulation (Formerly Department of Environment and Conservation) by the owner, occupier, person who caused the contamination, or contaminated sites auditor. The identification of sites will require an investigation into a range of issues related to past history and land use activities undertaken at the site.

Local governments are responsible for identifying and reporting contaminated sites for all land they own or control, including crown land vested with the Council. The classification of sites will be undertaken by the Department of Environment Regulation (DER) based on seven classifications related to risk posed to human health and/or the environment, namely:

- report not substantiated;
- possibly contaminated – investigation required;
- not contaminated – unrestricted use;
- contaminated – restricted use;
- contaminated – remediation required;
- remediated for restricted use; and
- decontaminated.

The Town of Victoria Park has initiated investigations of contaminated sites for land held under freehold title or under its control. These sites, their status, and the proposed future planning for these sites, are outlined below:

Kent St (Kent St Sandpit)

The site was declared a contaminated site by the DER in 2009, and to date the Town has undertaken several site investigations. The Town shall be undertaking further investigation in order to have the classification of the site changed.

The Town wishes to convert Kent St Sandpit to a revegetated, passive public open space, as per the recommendation of the *Kensington Bushland Protection Study* (see section 9.4 Natural Areas and Biodiversity).

The opportunity exists for this site to be a substantial asset to the community. Increased passive public open space will reduce the demand on Kensington Bushland and provide space for remnant vegetation.

George St Reserve

Located adjacent to Kensington PCYC/Harold Rossiter Reserve/Kensington Bushland/Kent St sandpit, George Street Reserve was declared a contaminated site in 2007 and a contaminated site investigation was undertaken by the Town in 2009. Subsequent to the investigation, the site was reclassified to 'Contaminated – Restricted Use' by the then Department of Environment and Conservation.

A revegetation concept plan has been endorsed by the Council which will see the reserve cultivated into bush land, and integrated with the reserve with the adjoining 'Bush Forever' bush land of Kensington Bushland.

GO Edwards Park

As identified in section 9.2 Water Management, G.O. Edwards Park was constructed upon the site of a former uncontrolled landfill in the 1970s. The pollutants contained within the landfill material may be influencing lake water quality.



Swan River – aerial view

9.3.2.2 Acid Sulfate Soils

Acid Sulfate Soils (ASS) are soils and sediments that contain iron sulfides. They occur naturally in Western Australia and are harmless when left in a waterlogged, undisturbed environment.

However, when exposed to air, through drainage or excavation, the iron sulfides in the soil react with oxygen and water to produce iron compounds and sulfuric acid. This acid can release other substances, including heavy metals, from the soil and into the surrounding environment and waterways.

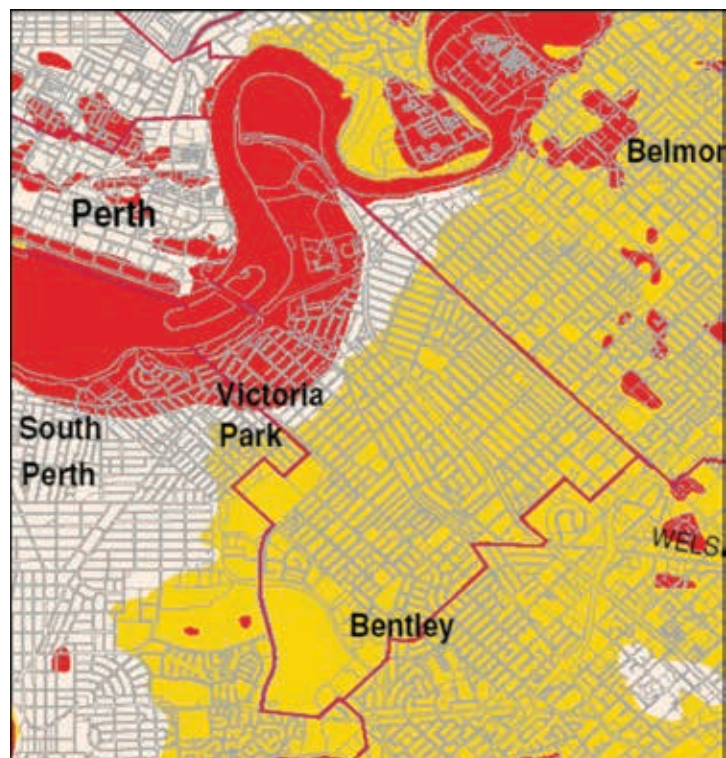
Off-site impacts include:

- fish kills;
- damage to fisheries and aquaculture industries;
- harm to tourist resources such as fishing grounds, swimming areas and recreational waterways; and
- 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 are widespread in low-lying coastal areas of Western Australia. Potentially, ASS comprise a significant proportion of land within the Town district. According to mapping undertaken by the then Department of Environment and Conservation, much of the Town sits on land with high-moderate risk of ASS (See figure 1 below).

Figure 1 – Map of Acid Sulfate Soils within the Town of Victoria Park





It is necessary for the Town to 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 DER have a number of guiding documents on the management of ASS, including:

- *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 sulfate 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
- *Treatment and Management of Soils and Water in Acid Sulfate Soil Landscapes*, which provides technical and procedural advice to avoid environmental harm and to assist in achieving best practice environmental management in areas underlain by ASS.

The Town gives due consideration to the above guidance, and must continue to do so. The risk of exposure of actual or potential ASS is considered for all developments. For subdivision, strata and individual developments in high risk areas where excavation is proposed, an ASS self-assessment form is required by the Town to be submitted to the DER before any site works are commenced. Where the self-assessment requires a management plan to be submitted, all site works are to be carried out in accordance with the approved management plan.

With respect to development undertaken by the Town itself, in most cases this does not involve deep excavation, which generally means that disturbance of ASS is avoided.

9.3.3 Continuing Actions

Action	Responsible Officer	Timeframe for implementation
9.3.3.1 Prevent removal and/or damage to street trees when conducting Council construction works through modification of design.	Business Unit Manager – Parks; Business Unit Manager – Street Improvement	2013/14
9.3.3.2 For new developments, check plans prior to the issue of planning approval, and schedule installation of street trees in new developments to occur after building construction has been completed, to ensure the retention of street trees wherever possible.	Business Unit Manager – Parks; Business Unit Manager – Planning	2013/14
9.3.3.3 Make available copies of 'Grow Local Plants' and 'Your Street Verge: Sustainable Landscaping Guide' brochures to residents to encourage the establishment of local, native plants.	Business Unit Manager – Parks ; Environmental Officer; Park Life Technical Officer	2013/14
9.3.3.4 Respond to water quality issues such as unauthorised discharges, disposal of liquid waste and erosion/sedimentation, utilising the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> and <i>Health Local Law 2003</i> .	Business Unit Manager – Health	2013/14
9.3.3.5 Develop guidelines for on-site sustainable landscaping, road reserves and parklands	Business Unit Manager – Parks ; Environmental Officer; Park Life Technical Officer	2014/15

Estimated Budget Cost**Key Performance Indicators**

Officer time

Street trees retained in all Council construction.

Officer time

Street trees retained in all developments.

Officer time

Brochures placed on Town website by June 2014.

Officer time

Progress reported annually.

Officer time

Guidelines developed by June 2015.

9.3.4 New Actions

Action	Responsible Officer	Timeframe for implementation
9.3.4.1 Undertake detailed site investigation on Kent St Sandpit in order to change the classification of the site (to 'Contaminated – Restricted Use') and enable conversion to passive recreation	Environmental Officer; Business Unit Manager – Parks; Executive Manager Parks	2014/15
9.3.4.2 Integrate the EMRC/Swan River Trust (2008) <i>Guidelines for Managing Small to Medium-Size Industry</i> into Town planning and procedures.*	Environmental Officer; Business Unit Manager – Planning	2015/16-2016/17
9.3.4.3 Integrate the EMRC/Swan River Trust (2008) <i>Erosion and Sediment Control Local Planning Policy and Guidelines</i> into Town planning and procedures **	Environmental Officer; Business Unit Manager –Planning	2015/16
9.3.4.4 Implement DER recommendations regarding the Kent St Sandpit.	Environmental Officer; Business Unit Manager – Parks	2015/16-2016/17
9.3.4.5 Convert Kent St Sandpit to a revegetated, passive public open space.	Environmental Officer; Business Unit Manager – Parks	2016/17-2017/18
9.3.4.6 Implement <i>George St Reserve Concept Plan</i>	Environmental Officer; Business Unit Manager – Parks	2016/17-2017/18
9.3.4.7 Consider the establishment of a Business Environmental Assessment Project and recognition program for businesses demonstrating 'best practice'	Environmental Officer	2016/17-2017/18

*** Small to medium-size industries within the Town have the potential to contaminate water resources through litter water discharge, surface runoff or accidental spills of hazardous chemicals. These guidelines address Best Management Practices for light industry to ensure that risks to stormwater and receiving water quality are minimised.**

**** The control of erosion is important to prevent sediment entering surface water runoff. As well as filling river pools, sediment carries with it nutrients such as phosphorous. This guideline outlines soil conservation and site management techniques should be employed wherever there is soil disturbance and potential for erosion such as road and building construction.**

Estimated Budget Cost

Key Performance Indicators

TBC Within existing Park Life budget; Officer time	Classification of the site changed to 'Contaminated – Restricted Use'
Officer time	Guidelines integrated into Town planning and procedures by June 2016.
Officer time	Guidelines integrated into Town planning and procedures by June 2016.
TBC – Within existing Park Life budget; Officer time	Recommendations implemented by June 2017 (pending change of classification of Kent St Sandpit by DER to 'Contaminated – Restricted Use').
TBC Within existing Park Life budget	Conversion completed by June 2017.
\$478,000; Officer time	<i>George St Reserve Concept Plan</i> implementation Stage 5-6 completed by June 2017.
\$5,000; Officer time	Number of audits completed as part of the Business Environmental Assessment Project



Banksia

9.4 Natural Areas and Biodiversity

9.4.1 Objective

- To ensure the effective maintenance, protection and enhancement of the Town's biodiversity.

Biodiversity is the number and variety of organisms within one region, including the variability within and between species and within and between ecosystems. The Town of Victoria Park is committed to conserving its current biodiversity and seeks to further improve upon areas where biodiversity may be increased through innovative environmental projects.

9.4.2 The Natural Environment

9.4.2.1 Geomorphology and soils

The majority of the Town of Victoria Park is located within the Bassendean Dune System of the Swan Coastal Plain. There are also areas of Spearwood Dune System, River Terraces and River Floodplains.

9.4.2.2 Vegetation Communities

Within the Town of Victoria Park there are three vegetation complexes; the Bassendean the Swan and the Vasse. The majority of the Town is located within the Bassendean Vegetation Complex.

The Bassendean System stretches discontinuously for the whole length of the Swan Coastal Plain from Moore River to Dunsborough. The vegetation varies from Jarrah (*Eucalyptus marginata*), Sheoak (*Allocasuarina* sp.) and Banksia sp. woodland; *Melaleuca* sp. (Paperbark and Honey Myrtle) low woodland; to sedge lands on the moister sites. It is generally covered by low woodland dominated by Banksia, Pricklybark (*Eucalyptus todtiana*) and Christmas Tree (*Nuytsia floribunda*), with a dense understorey. Woollybush (*Adenanthos* sp.) is also a characteristic shrub of the Bassendean sands.

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



Kensington Bushland

Bushland

The Town of Victoria Park covers 17.62 km², of which 100ha is zoned as parks, with 22.4ha as bushland.

The Town of Victoria Park has largely been cleared for urbanisation and only contains two small bushland reserves, with the remaining sites with indigenous flora largely consisting of individual trees or small stands on roadsides, parks and sumps. 39 sites in the Town have been identified as containing some remnant native vegetation including:

- Four bushland sites;
- Nine parks;
- Nine street trees; and
- 17 sumps.

The remaining vegetation is an ecologically and culturally valuable asset to the Town of Victoria Park. Remnant vegetation in both bushland blocks and single trees can provide various resources for a number of fauna species, and can also be a seed source for future rehabilitation sites.

Bushland sites that occur within the Town of Victoria Park include: Kensington Bushland; the Kent Street Sand Quarry; Kensington PCYC site and Hillview Community Bushland. All the sites are located in Parks and Recreation Reserves identified in *Town Planning Scheme No. 1*. Each of these reserves are described in detail within the *Remnant Vegetation Management Plan* (Town of Victoria Park, 2004).

Kensington Bushland

Kensington Bushland Reserve is a 9ha bushland remnant in the Town of Victoria Park, Perth, Western Australia.

The reserve is the best-preserved remnant urban bushland between the Swan and Canning Rivers, and is recognised by the State Government as a 'Bush Forever' site. Much of the bushland has been rated as being in very good to excellent condition.

Kensington Bushland is a typical jarrah-banksia woodland on Bassendean Sand, in that the canopy is dominated by just a few species, particularly *Eucalyptus marginata*, *E. todtiana*, *Banksia attenuata*, *B. ilicifolia*, *B. menziesii*, *Nuytsia floribunda* and *Allocasuarina fraseriana*. The greatest species diversity is in the understorey, with in excess of 150 native species, including 19 species of orchid.

9.4.2.3 Fauna

The opportunities for native animals to survive in Victoria Park are diminished by the degree of land clearing and presence of predators and competitors such as cats, foxes, rats and mice. The small size of the remaining bushland affects the amount of resources available to native animals but links between remnants facilitate migration that can increase the effective size of remnants and provide refuges during incidents such as fire.

The remaining bushland areas of the municipality provide a variety of food and shelter resources for birds, reptiles, amphibians and some mammals (e.g. bats, possums and introduced mammals). Scattered trees can also provide these resources, particularly for birds due to their high level of mobility. Different areas will provide resources for different species, such as wetter areas providing more resources for amphibians.

Long-necked Turtles (*Chelodina oblonga*) are one of the native reptiles surviving in the Town of Victoria Park. Long-necked Turtles are found at G.O. Edwards Park, as well as many permanent freshwater and seasonal swamps throughout the Perth region.

9.4.2.4 Foreshore

There are several stretches of foreshore found within the Town, including:

McCallum Park / Taylor Reserve

McCallum Park and Taylor Reserve form part of the passive recreation precinct extending along the Swan River foreshore from Burswood Park development through to the South Perth Esplanade. The park contributes significantly to the overall aesthetic statement formed by Eastern Gateway to the City of Perth.

The only River foreshore the Town currently holds the management for is located between the Causeway and the Department of Water buildings at the end of Ellam Street.

McCallum Park and Taylor Reserve provide recreation and leisure opportunities to a catchment area greater than the Town of Victoria Park. The Swan River foreshore is a natural attraction of the Town and neighbouring Councils, and the park therefore plays a significant role in attracting tourists to the Town. The park attracts large number of visitors during the staging of organised public events.

Balbuk Way

The Balbuk Way foreshore area covers the area of the Swan River foreshore from just north of the Goodwood Park boat ramp to just north of the boundary of the Belmont Race Course foreshore. Balbuk Way is a valuable recreational area for the local community and regional users.

Other areas of foreshore that occur within the Town that are currently vested with other authorities include Burswood Park and Burswood Peninsula.

Burswood Park / Burswood Peninsula

Burswood Park is another significant passive recreation reserve extending along the Swan River foreshore. This is managed by the Burswood Park Board.

Located within Belmont Park and managed by the Belmont Park Racecourse, Burswood Peninsula is a degraded stretch of foreshore with little/no access to the community.

9.4.2.5 Pressures

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

- **Development**

Victoria Park is a rapidly developing area, which places increasing strain on local biodiversity and natural areas. With the scarcity of natural areas in a sea of urbanisation, this can easily lead to isolation of the remaining 'natural' areas, unless the Town's longer-term development plans look to maintaining and reinforcing links between these bushland/parkland.

- **Clearing and fragmentation**

Clearing across landscapes directly impacts on ecosystems with a direct loss of plant and animal species and destruction of habitat (SWAEI, 2006), and also leads 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 have a considerable impact in natural areas due to the potential to chase and harass native animals. Domestic cats are also known to affect wildlife populations when left to roam in natural areas.

- **Spread of pathogens**

Dieback (*Phytophthora cinnamomi*) is the most widely known pathogen of WA's bushland. Often introduced in mud or dirt from vehicles or equipment, the pathogen spreads through the soil via groundwater flow. Dieback is not known to be present in bushland within the Town of Victoria Park. Management measures must be maintained in order to minimise the risk of dieback spread into Victoria Park's bushland, as infection would severely reduce the conservation, scientific and educational value of these natural areas.

- **Human access**

With the urbanisation of Victoria Park, human access to natural areas through vehicles, bikes or pedestrians – particularly if uncontrolled – can be potential problems within natural areas. Vehicles in bushland can cause significant damage to landscapes through physical removal of 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.

- **Litter**

The effects of litter are widespread. Litter pollutes our environment, including our waterways – particularly after rain, where it risks getting flushed into these systems. Litter can also exist in the environment for long periods of time before degrading, thus the negative effects can be sustained.

- **Fire**

Fire has been significant in shaping the distribution and composition of much of Australia's native plants and animals.

However, whilst many flora and fauna have adaptations to enable them to regenerate naturally after fire, this is a disturbance that can increase weed invasion, leading to increased pressure on survival of native plants and animals.

9.4.3 Previous Activity and Achievements – Bushland

The Town has developed a *Remnant Native Vegetation Policy*, which guides the management of native remnant vegetation on any land owned by, vested in, or managed by the Town.

9.4.3.1 Remnant Vegetation Management Plan

In 2002, Council resolved to develop the *Remnant Vegetation Management Plan* for remnant native vegetation within the Town to ensure that it is protected and enhanced for the benefit of future generations.

Guiding the management and enhancement of the Town's remnant vegetation, 55 recommendations are identified in the *Management Plan* for staged implementation over several years including specific recommendations relating to individual projects and general recommendations for ongoing long-term management and protection of remnant native vegetation in the Town.

To date, management of the bushland areas and on ground works have been guided by the actions contained in the Plan, which have included signage, fencing, path upgrading, weed control, revegetation, fire and dieback management, flora and fauna surveying.

To date, the actions completed under this have included:

- Records including planting schedules, project mapping, a weed control calendar and maintenance schedules have been undertaken by the Natural Area's Team Leader.
- The Town has used the GIS (Intramaps) to monitor and control Caltrop in laneways, verges and vacant lots throughout the Town. The next priority should be the development of a GIS monitoring system for weeds and vegetation condition for ongoing monitoring and assessment of the Town's remnant bushland.
- An extensive species survey has been undertaken for Kensington Bushland. A more comprehensive survey of other natural areas, in particular for Hillview Bushland, will benefit any future rehabilitation works.
- Since 2009, all revegetation works for natural areas have utilised local site specific species sourced from provenance seed. Vegetation variation within bushland has been taken into account when planting out new project areas.
- Undertaking seed collection within the Town and use local provenance in revegetation wherever possible, particularly adjacent to bushland areas. To achieve this, most seed has been collected from Kensington Bushland. This limited seed source places limits of the extent of any future rehabilitation works and the diversity of future plantings. Therefore the Town should endeavour to identify more seed collection sites for natural rehabilitation.
- Liaise with school and community groups to maximise opportunities for education and participation in management. The Town of Victoria Park has actively involved and promoted the activities of the Friends of Kensington Bushland on key projects and maintenance days at Kensington Bushland, including the annual 'Grab-a-Gladdy Day'.
- Control access to Kensington Bushland through formal paths, access tracks and fences. Fencing and pathway installation are a proposed objective for Hillview bushland.
- Regularly prune along tracks to encourage the use of paths and discourage limbs being broken off plants.
- Undertake dieback assessment if suspicions arise of dieback infestations.

9.4.3.2 Kensington Bushland

In 2005 a study investigating the impacts of future uses of Council and private land surrounding the Kensington bushland was undertaken. The *Kensington Bushland Protection Study* makes several recommendations relating to future land uses of the surrounding areas, with the aim of maximising the long term protection of the bushland.

The Town's Natural Areas team with the support of the community have successfully implemented a number of key recommendations from the *Kensington Bushland Protection Study*, namely:

- Protect and revegetate the remnant vegetation on the Police and Citizens Youth Centre.
- Kensington Bushland Gap/Pathway. Restricting the number of trails through remnant vegetation areas by rehabilitating minor trails and providing set shared path for access between Kent St and George St.
- Harold Rossiter Buffer zones restorations. Infill plant the area between Harold Rossiter Park and the Kensington Bushland using local native species; (Ecologia 2005).
- Kent St, Etwell and Baron-Hay Crt verge restoration. Restoring the buffer between Kent St and the Kent St Sand Pit. (Ecologia 2005).

The primary ecological objectives of these projects and ongoing maintenance have been to increase the overall area of bushland and reduce its fragmentation, while providing access for the community to enjoy. Also by increasing the size of the management area surrounding remnant bushland, it provides a buffer protection from wind-borne weeds invading and degrading areas of higher conservation value.

The Friends of Kensington Bushland have also completed a 'virtual herbarium' for the bushland containing information on the flora species found in the reserve.

Provenance seed is collected from the Kensington Bushland and is used to propagate local native plants for revegetation projects within the Town.

A *Dieback Management Plan* and a *Bushfire Management/Recovery Plan* have also been developed for the site.

9.4.3.3 Sustainable Landscaping Policy and Strategy

In an effort to increase the use of native plants in parks and sumps and protect existing remnant vegetation in these areas. The Town has a *Sustainable Landscaping Policy and Strategy*. Projects that have commenced that fall under the *Sustainable Landscaping Strategy* are a demonstration garden and a street verge treatments guide ('*Your Street Verge Guide*').

Complimentary to this are improvements in Council's own landscaping practices and management of parks and streetscapes (to minimise the environmental impact from water and fertiliser use and increase biodiversity), as well as educating the community on these issues/encouraging them to adopt these practices on private property throughout the Town.

The Town's *Treeplan* also guides the management of trees within the public domain. It provided an effective framework in which to manage a hierarchy of trees, and includes informed and planned decision making rather than implementing reactive and ad-hoc initiatives.

The Town is now developing a new *Street Tree Master Plan* that will provide a structured basis on which to learn from past and current street tree management strategies as well as providing a sound platform on which to base future management of trees in the Town.

In partnership with our valued volunteers and other stakeholders, such as Two River Catchment Group, the Town has rehabilitated pockets of remnant bushland that have been reserved and restored ecological and biodiversity values. Some ecological restoration on drainage reserves and sumps under management of the Town has also been undertaken, to enhance biodiversity values.

The Town also has a dedicated Natural Areas Team Leader.

9.4.3.4 George Street Reserve

George Street Reserve is 27026m² of Crown Land and which is managed by the Town of Victoria Park. It is located adjacent to Kensington PCYC/Harold Rossiter Reserve/Kent St sandpit and Kensington Bushland (a Bush Forever site). It is currently an open space which is not a designated active recreation reserve and has no irrigation system in place. The site is contaminated from previous use as an uncontrolled landfill for a short period of time.

A contaminated site investigation was undertaken by the Town in 2009. Subsequent to the investigation, the site was reclassified to 'Contaminated – Restricted Use' by the then Department of Environment and Conservation.

It is anticipated that the George St Reserve will be cultivated into bush land, and integrated with the reserve with the adjoining Bush Forever bush land of Kensington Bushland (see attached for description of Kensington Bushland). The cultivation will be of local provenance stock, similar native plants to that which grows in the remnant bushland.

The Town plans to revegetate the site over the next 11 years and integrate this with the adjoining 'Bush Forever' bush land of Kensington Bushland.

This forms part of a staged 11 year plan for George St Reserve, together with Swan Coastal Plain and Bassendean Sands demonstration gardens, community education signage and a limestone walking trail.

9.4.3.5 Hill View Bushland

Hill View Bushland is a low Banksia woodland over a low heathland. The species composition is significantly different to Kensington Bushland due to its high elevation in the landscape. The bushland notably has fewer trees, yet is still highly diverse with over 60 species surveyed including the high priority taxa *Dodonaea hackettiana*.

As well as supporting its own ecosystem, the Hill View Community Bushland offers a feeding patch for native birds.

Hill View bushland has unfortunately seen canopy decline over the last 10 years. This site is in need of great attention to increase the quality and value of the vegetation on site.

Major projects that have been undertaken within this bushland include:

- As per the *Remnant Revegetation Management Plan*, the Natural Areas team has planted seedlings in bare areas, including near the entrances off Berwick Street and the northern corner of the reserve, as well as along tracks that should no longer be used.
- Undertaken ongoing weed control.
- A community art project jointly run by Community Arts Network, the Perth City Council, the National Trust, and the Friends group.
- Installation of bollards and edge planting to protect the vegetation, as well as some rehabilitation planting. The Friends group has planted thousands of plants and has a continuous protective role in rubbish removal, informal monitoring, and co-management with the Town of Victoria Park.

In recent years the Natural Areas team efforts have focused on weed control but in 2011 over 2000 provenance seedlings were planted in the degraded areas.

The primary use of the site in future will be for the conservation of flora and fauna. However it is expected that the local community will continue to make considerable use of it for passive recreation, children's education and pleasure, cultural events, adult learning about its history, ecology, and aesthetics, and other related activities. It already functions as a bridge between Aboriginal and non-aboriginal cultures.

The Town, with the Friends Group, is undertaking continuous enhancement planting at Hill View.



9.4.3.6 Community events

The Town of Victoria Park and its friends groups have run a number of community events in recent years to improve the amenity and environmental value of natural areas, and to encourage the use of native plants in gardens, including Great Gardens workshops and “Grab-a-Gladdy (Gladioli)” days, participation in tree planting days such as National Tree Day and staff tree planting days

Other actions undertaken by the Town include:

- Supporting ‘Friends of’ Groups of natural areas by providing equipment, advice and additional resources, as appropriate.
- Working with the Swan River Trust in developing and implementing a ‘River Protection Strategy’ for the Swan and Canning River System.
- Limiting use of herbicides near waterways to those recommended as safe for frogs and aquatic life.

9.4.4 Continuing Future Actions – Bushland

Action	Responsible Officer	Timeframe for implementation
9.4.4.1 Continue ongoing weed control within Hill View Bushland.	Environmental Officer; Business Unit Manager – Parks	2013/14
9.4.4.2 Continue to encourage residents to adopt fertilise-wise and waterwise gardening practices by organising garden demonstrations and workshops, such as Great Gardens, and providing information at community events.	Environmental Officer	2014/15
9.4.4.3 Continue to work in partnership with City of Belmont to implement the management plan for the Balbuk Way foreshore area.	Environmental Officer; Business Unit Manager – Parks	2014/15
9.4.4.4 As per the <i>Remnant Vegetation Management Plan</i> and the <i>Kensington Bushland Protection Study</i> , continue the ongoing program of revegetation/restoration for natural areas within the Town of Victoria Park.	Environmental Officer; Business Unit Manager – Parks	2015/16 – 2016/17

9.4.5 New Actions – Bushland

Action	Responsible Officer	Timeframe for implementation
9.4.5.1 Implement the <i>Dieback Hygiene Plan for Kensington and Hill View</i> ; Develop dieback and disease management protocols.	Environmental Officer; Business Unit Manager – Parks	2014/15
9.4.5.2 Pending DER ruling regarding the classification of the site, restore and revegetate the area surrounding Kent Street Sand Pit with provenance seed.	Business Unit Manager – Parks	2014/15
9.4.5.3 Develop and implement the <i>Street Tree Management Plan</i> .	Business Unit Manager – Parks	2014/15
9.4.5.4 Introduce an ongoing feral animal control program within Kensington Bushland. The primary focus should be on the eradication of rabbit and fox populations.	Business Unit Manager – Parks	2014/15
9.4.5.5 Undertake winter contract targeted weed control program for Veldt grass, Fumaria, Gladioli, Black Flag and other invasive broad leaf weeds.	Business Unit Manager – Parks	2014/15
9.4.5.6 Review the <i>Hill View Bushland Management Plan</i> and the <i>Kensington Bushland Protection Study</i> .	Environmental Officer; Business Unit Manager – Parks	2014/15
9.4.5.7 Develop a <i>Town Greening Plan*</i> .	Environmental Officer; Business Unit Manager – Parks	2014/15

Estimated Budget Cost	Key Performance Indicators
Within existing Park Life budget; Officer time;	Progress reported annually.
Within existing Park Life budget; Officer time	Workshops such as Great Gardens held by June 2015.
TBC; Officer Time	Progress reported annually.
Within existing Park Life budget; Officer time	Progress reported annually.

Estimated Budget Cost	Key Performance Indicators
TBC Within existing Park Life budget; Officer time	Protocols developed by June 2015.
\$10,000	Revegetation complete June 2015.
Officer time	Plan developed by June 2015.
TBC	Progress reported annually.
TBC	Progress reported annually.
Officer time	Review complete by June 2015.
Officer time	Street Tree Master Plan October 2013 - 2014

Action	Responsible Officer	Timeframe for implementation
9.4.5.8 With the gradual increase of buffer zone restoration in areas surrounding Kensington Bushland, prepare a review of the existing <i>Fire Management Plan</i> .	Environmental Officer; Business Unit Manager – Parks	2014/15
9.4.5.9 Identify further seed collection sites for natural rehabilitation. The current provenance seed collection places limits of the extent of any future rehabilitation works and the diversity of future plantings.	Environmental Officer; Business Unit Manager – Parks	2014/15
9.4.5.10 Re-surface the main diagonal track within Hill View Bushland with crushed limestone to its present width, and prune only to this width. Maintaining this width minimises the disturbance of this small and degraded reserve.	Environmental Officer; Business Unit Manager – Parks	2015/16-2016/17
9.4.5.11 Develop a GIS monitoring system for weeds and vegetation condition for ongoing monitoring and assessment of the Town's remnant bushland.	Environmental Officer; Business Unit Manager – Parks; Senior GIS Analyst	2015/16-2016/17
9.4.5.12 Implement the 11 year <i>Concept Plan for George St Reserve</i> .	Environmental Officer; Business Unit Manager – Parks	2016/17-2017/18

*** Our street trees, parks and natural areas play a major role in making our streetscapes look green, cool and encourage people to enjoy the amenity of the neighbourhood.**

These assets:

- **provide central hubs for people to gather and recreate;**
- **have a positive effect on health generally; and**
- **encourage more people to interact and build a strong sense of community.**

The value of maintaining and enhancing the remaining natural habitat amongst such an urbanised environment in the Town of Victoria Park cannot be overstressed. The importance of maintaining a pattern of interlinking habitat features in the landscape is being recognised by Council through the aforementioned activities, strategies and plans.

To solidify this recognition, there is a need to develop a comprehensive, holistic greening Town plan. The plan will need to explore sustainable street tree and parks management and improvement strategies.

Estimated Budget Cost**Key Performance Indicators**

Officer time

Review complete by June 2056.

Officer time

Review complete by June

TBC

Works complete by June 2016.

Officer time

System in place by June 2016.

\$478,000;
Officer time*George St Reserve Concept Plan* implementation Stage 5-6
completed by June 2017.

9.4.6 Previous Activity and Achievements – River Foreshore

9.4.6.1 McCallum Park/Taylor Reserve

In 2001/02 a management plan and associated *Landscape Concept Plan* was developed. The Town has progressively implemented recommendations of the *Concept Plan*. A review of the *Landscape Concept Plan* will form part of a holistic *Foreshore Access and Management Plan* (see section 9.4.7 New Actions). This project will be a major Swan River activation strategy in Victoria Park.

9.4.6.2 Balbuk Way

Balbuk Way is used heavily as a skiing area as well as other passive recreational uses such as fishing, cycling and walking. Due to the minimal carrying capacity of the reserve and pressure on the area, it is becoming degraded and requires proactive management to improve the site as a recreational destination.

The management of the foreshore area is jointly vested with the Town of Victoria Park and the City of Belmont.

In partnership with the City of Belmont, the Town has developed a management plan for the Balbuk Way foreshore area.

9.4.6.3 Burswood Peninsula/Belmont Park

Located within Belmont Park and managed by the Belmont Park Racecourse, Burswood Peninsula is a degraded stretch of foreshore with little/no access available to the community.

There is a multi-billion dollar development proposed by the owners of land around Belmont Park Racecourse.

There is also the Perth Major Stadium proposed to be developed on land formerly under the management of the Burswood Park Board.

Both developments afford the opportunity for sustainable design practices, and enhanced foreshore environment, and community access.

9.4.7 New Actions – River Foreshore

The Town's connection to the river by land places a special need on management of water quality, vegetation, fauna and physical access to the foreshore. The Town does not have access to all parts of the foreshore due to private or government ownership and jurisdiction but it is critical that access is not only maintained but enhanced. To ensure consistency in management and equitable access for the community the Town will be developing a holistic *Foreshore Access/Management Plan*, in consultation with appropriate stakeholders.

Currently, hard-walling of the riverbank occurs along the foreshores of McCallum Park and Taylor Reserve. However, under the forthcoming *Foreshore Access/Management Plan*, rather than maintaining the traditional focus of repairing this hard walling, it is envisaged that soft engineering foreshore management approaches and the creation of environmentally beneficial habitat and nutrient stripping could be applied.

Reference shall be made to the Swan River Trust Foreshore Assessment, in conjunction with the Trust's *Best Management Practice Manual*.

Action	Responsible Officer	Timeframe for implementation	Estimated Budget Cost	Key Performance Indicators
9.4.7.1 Develop a holistic <i>Foreshore Access/Management Plan</i>	Environmental Officer	2013/14	Officer time; Consultant \$85,000	Plan developed by June 2014.

9.5 Solid Waste Management

9.5.1 Objective

- To develop and implement strategies and projects that aim to reduce the creation of waste, sustainably dispose of it and, where relevant, efficiently manage its recovery.

Waste management is a critical consideration for the Town, particularly with an anticipated growing population. Waste Management and recovery of resources is an important element of environmentally sustainable practices and has a significant profile due to the State Government's *Towards Zero Waste Strategy*, released in 2004.

The Town has responded to the challenge of the State's commitment to minimise the creation of waste; recover, retreat and reuse waste efficiently; and dispose of waste responsibly.

Initiatives, such as the creation of regional partnerships through the Mindarie Regional Council (MRC) to develop a Resource Recovery Facility, have received considerable community support. Resource recovery describes the activities involved in extracting resources from landfill-destined waste. This technically sophisticated waste treatment plant will deliver a 20% reduction in the total amount of waste sent to landfill each year, and create some 30,000 tonnes of compost from 100,000 tonnes of household waste.

Extracting reusable materials at the Facility should see a diversion of up to 80% of all landfill-destined waste, significantly reducing the region's net waste production.

9.5.2 Waste Services Summary and Previous Achievements

As a member of the MRC, the Town of Victoria Park has been involved in the utilisation of 'green power' technology at the Tamala Park landfill site. This technology extracts gas from the landfill and converts it into electricity for export into the power grid for Perth. It is anticipated that this renewable energy technology will eventually generate sufficient electricity to light and power around 4,000 households and offset thousands of tonnes of greenhouse gases.

Until recently the Town was guided by the Mindarie Regional Council's *Strategic Waste Minimisation Plan 2008-2013*, which aimed to address the issues outlined in the State's *Towards Zero Waste Strategy* and to meet community expectations.

In 2008, the Town developed a stand-alone *Waste Minimisation Strategy*, which engenders new service requirements for the Town.

Sanitation Services – Residential rubbish and recycling collections

Weekly kerbside collection for general household wastes.

Greenwaste Services

Kerbside residential collections, four times per annum.

Bulk Waste Services

Kerbside residential collections, two times per annum.

Hazardous Household Wastes (HHW) and Asbestos Days

The Town in conjunction with Mindarie Regional Council runs drop off days twice a year at the Town Depot.

The following materials are collected:

- Asbestos products (no more than six sheets)
- Pesticides
- Paint cans
- Fluorescent globes
- Used oil
- Pharmaceuticals
- Cleaning solvents
- Car and household batteries
- Gas bottles

Waste Education

The Town is collaborating with the MRC to increase waste education services available in the Town. This has included membership to the MRC Waste Education Strategy Steering Group (WESSG), an upcoming proposal to participate in the Earth Carers community engagement model, development of waste education materials with WESSG and the Keep Australia Beautiful Council.

The Town is also part of the MRC Earth Carers program. This program aims to target individual behavioural change in adults and includes a focus on children's waste education (Earth Carer Kids).

Other actions include:

- Recycling of Council's waste materials including organic waste (through a worm farm), mobile phones, paper, cardboard, fluorescent lights, batteries.
- Providing collection facilities for the MRC dry cell battery and light globe recycling, and Planet Ark's mobile phone recycling.
- Providing cost price composters and worm farms, as well as running community workshops on how to effectively use these.
- Responding 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.
- Using the Town's street tree prunings as mulch for landscaping and environmental restoration projects.
- Recycling road asphalt removed from construction sites for use in road construction.



Compacted plastics ready for recycling

9.5.3 Continuing Actions

Action	Responsible Officer	Timeframe for implementation
9.5.3.1 Recycling of Council's waste materials including organic waste (through a worm farm), paper and cardboard.	Environmental Officer	Ongoing
9.5.3.2 Providing collection facilities for the MRC dry cell battery and light globe recycling, and Planet Ark's mobile phone recycling.	Environmental Officer	Ongoing
9.5.3.3 Responding to issues of littering and illegal dumping. This includes resourcing and training of officers to monitor and prosecute illegal dumping offenders.	Business Unit Manager – Street Operations; Ranger Services	Ongoing
9.5.3.4 Using the Town's street tree prunings as mulch for landscaping and environmental restoration projects.	Business Unit Manager – Parks	Ongoing

9.5.4 New Actions

Action	Responsible Officer	Timeframe for implementation
9.5.4.1 Investigate feasibility of establishing an e-Waste (televisions and computer equipment) collection service (e.g. engage contractors to undertake several collections/year).	Business Unit Manager – Operations; Environmental Officer	2013/14
9.5.4.2 Advocating and supporting the State Government and MRC to increase waste education services.	Business Unit Manager – Street Life; Environmental Officer	2013/14
9.5.4.3 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.	Environmental Officer	2014/15
9.5.4.4 Develop Waste Education on a local scale as a key project of the CEWG.	Business Unit Manager – Operations; Environmental Officer	2014/15
9.5.4.5 Advocate the State Government and MRC to investigate the possibility of additional grades of plastic to be recycled.	Business Unit Manager – Operations; Environmental Officer	2014/15
9.5.4.6 Advocate for a Reverse Vending Machine (RVM) in Western Australia. An RVM is designed to provide a closed loop recycling solution. This means that a container accepted into an RVM will find its way back into a consumer's hand as another product.	Business Unit Manager – Operations; Environmental Officer	2014/15
9.5.4.7 Investigate the feasibility of what other materials within the waste stream can be recycled.	Business Unit Manager – Operations	2015/16-2016/17

Estimated Budget Cost	Key Performance Indicators
Officer time	Materials recycled. Staff engaged in worm farm composting.
Officer time	Recycling collection facilities promoted and utilised.
Officer time	More officers (three) trained by June 2014 to monitor and prosecute illegal dumping offenders.
Officer time	Progress reported annually.

Estimated Budget Cost	Key Performance Indicators
Officer time	Feasibility and determination made by June 2014.
Officer time	Town of Victoria Park submission made to State Government and MRC by June 2014.
Officer time	Workshop and Awareness-raising program developed by June 2015 and updated as necessary thereafter.
TBC Officer time	As above.
Officer time	Town of Victoria Park submission made to State Government and MRC by June 2015.
Officer time	Town of Victoria Park submission made to State Government and MRC by June 2015.
Officer time	Feasibility and determination made by June 2016.

10.0 Monitoring and Review

Aligning with the Town of Victoria Park *Strategic Community Plan 2013-2028*, and utilising the Continuous Improvement Wheel (Figure 2, below), it is anticipated that the *Environmental Plan* will be reviewed and updated annually, with the first review to occur in June 2014. Major reasons for this 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;
- Some of the strategic projects (e.g. the development of Town's proposed *Environment Policy*) may necessitate a review of the Plan to ensure effective implementation;
- Consideration must be given to the evolving nature of environmental systems; and
- Consideration must be given to any new strategic directions from State and Federal Governments that require effective implementation at a Local Government level.

The Town's Environment Officer, with advice from the Community Environmental Working Group (CEWG), is the main officer responsible for overseeing the implementation of this Plan.

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

It is intended that ongoing review of this Plan will be undertaken at the same time as future reviews of the Town of Victoria Park *Strategic Community Plan 2013-2028* to ensure currency and consistency.

Figure 2 – The Continuous Improvement Wheel will form the basis for review of the Town of Victoria Park Environmental Plan 2013-2018



10.1 Promoting actions

It is important to recognise that the Town cannot effect environmental action in isolation. The Town needs to work with its residents, businesses, industry, community groups, stakeholders, and with other levels of government in order to achieve the objectives of this Plan.

If the Town is to promote change in the community, it must lead by example. Elected Members must be cognisant of the need to act sustainably, and must play an active role in guiding the Town's environmental agenda.

The Town must also ensure that its officers are aware of environmental impacts, initiatives and technologies within their field of operation, and must act in an environmentally sustainable manner.

This *Environmental Plan* recognises that providing information and engaging the local community, Council and staff within environmental initiatives and projects is an important tool in developing a culture of environmental awareness and positive behaviour change. 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 our responsibilities are.



appendices

11.0 Appendices – Relevant Policy and Legislation

11.1 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).

International Treaties and Agreements

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)

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)

Federal Legislation and Policies

Environmental Protection and Biodiversity Conservation Act 1999

National Strategy for the Conservation of Australia's Biological Diversity 1996

National Objectives and Targets for Biodiversity Conservation 2001-2005

Commonwealth Ozone Protection and Synthetic Greenhouse Gas Management Act 1989

National Greenhouse Strategy 1998

National Pollution Inventory

National Action Plan for Salinity and Water Quality (now Caring for our Country)

National Water Quality Management Strategy 1992

National Local Government Biodiversity Strategy 1999

National Weeds Strategy 1997

Threat Abatement Plan for *Phytophthora Cinnamomi* 2007

State Legislation and Policy

Environmental Protection Act 1986

Contaminated Sites Act 2003

Conservation and Land Management Act 1984

Soil and Land Conservation Act 1945

Wildlife Conservation Act 1950

Health Act 1911

State Legislation and Policy (continued)

Local Government Act 1995

Metropolitan Region Town Planning Scheme Act, 1958

Planning and Development Act 2005

Agriculture and Related Resources Protection Act 1976

Metropolitan Sewage and Drainage Act 1909

Draft Waste Avoidance and Resource Recovery Bill 2006

State Greenhouse Strategy 2004

Environmental Protection (ozone depletion) Policy 2000

EPA Guidance Statement for minimising greenhouse gas emissions 2002

Perth Metropolitan Transport Strategy 1995-2029

Proposed Framework for Managing Acid Sulfate Soils 2003

Environmental Protection (Unauthorised Discharge) Regulations 2004

Statement of Planning Policy 2.9 Water Resources, 2006

Surface Water Management Framework 2004

Wetlands Conservation Policy 1997

Foreshore Policy 2001

State Water Quality Strategy 2003

Bush Forever 2002

Environmental Protection (Clearing Native Vegetation) Regulations 2004

WA Weed Plan 2001

State Planning Policy 1 State Planning Framework Policy 2006

State Planning Policy 2 Environment and Natural Resources 2003

State Planning Policy 2.8 Draft Bushland Policy for the Perth Metropolitan Region 2004

Strategic Direction for Waste Management in WA 2003

State Sustainability Strategy 2003

Aboriginal Heritage Act 1972

Native Title Act 1993

Forest Management Plan 2004-2013

Regional Policies and Strategies

Perth Air Quality Management Plan 2000

Perth Biodiversity Project 2004

Perth Metropolitan Transport Strategy 1995

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

State Environmental Bills and Proposed Legislation

Water Resources Legislation Amendment Bill 2006

Biodiversity Conservation Bill (to replace Wildlife Conservation Act)

Water Services Act 2012



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*This information is available in an alternative format
to people with a disability on request to 9311 8111*