

City of Joondalup

Environment Plan 2007 – 2011



Our Strategic Position:

“To provide ongoing environmental leadership to the community to ensure the City retains its natural environmental assets and preserves them for future generations to enjoy.

The City of Joondalup will achieve this goal through integrated planning and working in partnership with the community, key stakeholders and relevant agencies.”

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Introduction

Through this Environment Plan 2007-2011, the City of Joondalup commits itself to achieving environmentally sustainable goals in keeping with its responsibilities as a progressive local government. Partnerships with the community are an essential element in encouraging change at a household-level and as such, the City acknowledges the important role that residents will play in the effective implementation of this Plan.

The City also recognises that climate change, caused by greenhouse gas emissions associated with human activity, is having a significant impact on the local environment. The Plan has been developed with the intention of coordinating a local response to an international concern. This principle of 'acting locally' by 'thinking globally' provides the basis for the Plan's development.



As the second largest local government in Western Australia, the City is responsible for a significant and diverse array of natural and built environments. With over 17km^s of coastline, 204 hectares of natural bushland, 490 hectares of reticulated parks and 116 hectares of dry parks, the City recognises its role in implementing strategies that aim to preserve and sustain the region's ecological systems and biodiversity, in partnership with other spheres of government.

This plan identifies 5 key areas of environmental action to be addressed by the City, including land; water; air quality; biodiversity; and waste management, together with clear objective/s for each area:

1. Land Objective

- To incorporate environmental considerations into major land approval and planning processes and to use external networks for establishing management and monitoring processes.

2. Water Objectives

- To enhance effective water management as well as monitoring and testing processes to achieve a high quality of natural water resources.
- To conduct community awareness programs to ensure sustainable water usage.
- To ensure that effective storm water management processes are established and developed for the City's sustainable future.

3. Biodiversity Objective:

- To ensure the effective protection and maintenance of the City's biodiversity.

4. Air Quality Objective:

- To continue to reduce greenhouse gas emissions and to monitor air quality within the City.

5. Waste Management:

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

This 4 year Plan will address each of the key areas in turn and identify the actions necessary to achieve the objective/s, the stage of progress to date, estimated timeframes for completion and key performance indicators against which the City's performance can be measured.

Following the description of the City's objectives and proposed actions for each of the 5 key areas, information is provided concerning State and Federal Government responsibilities, ongoing activities and new initiatives. This is provided because environmental issues can rarely be addressed by one sphere of government alone. Further, while the City has the mandate and resources to take action on some matters, others are clearly the responsibility of State and Federal Government Departments who are better resourced to undertake such actions.

The major purpose of the Plan is to provide direction and focus for the City's environmental actions. To ensure this clarity of direction, it is important that the actions within the Plan are not subject to constant change, or that new actions are added on a regular basis. This said, it is not intended that the Plan be inflexible or unable to be changed. If this were the case, the City would be incapable of adapting to new developments in environmental management that may be of particular significance to the City. To facilitate a review of the Plan's direction, the Plan will be subject to a minor review in two years.

Internal drivers for the development of an Environment Plan can be found in the City's Sustainability Policy 5-4 and in two outcomes identified in the current Strategic Plan 2003 – 2008. Namely:

- The City of Joondalup is environmentally responsible in its activities.
- The City of Joondalup efficiently and effectively manages waste.

The City's Strategic Plan builds capacity for Elected Members to lead on environmental matters by committing the City to projects and initiatives that aim to achieve environmental sustainability. The City's Sustainability Policy supports the Strategic Plan by providing principles and guidance on approaches to effective implementation.

Externally, the recent international response to climate change has provided a further impetus for environmental planning at the local level.

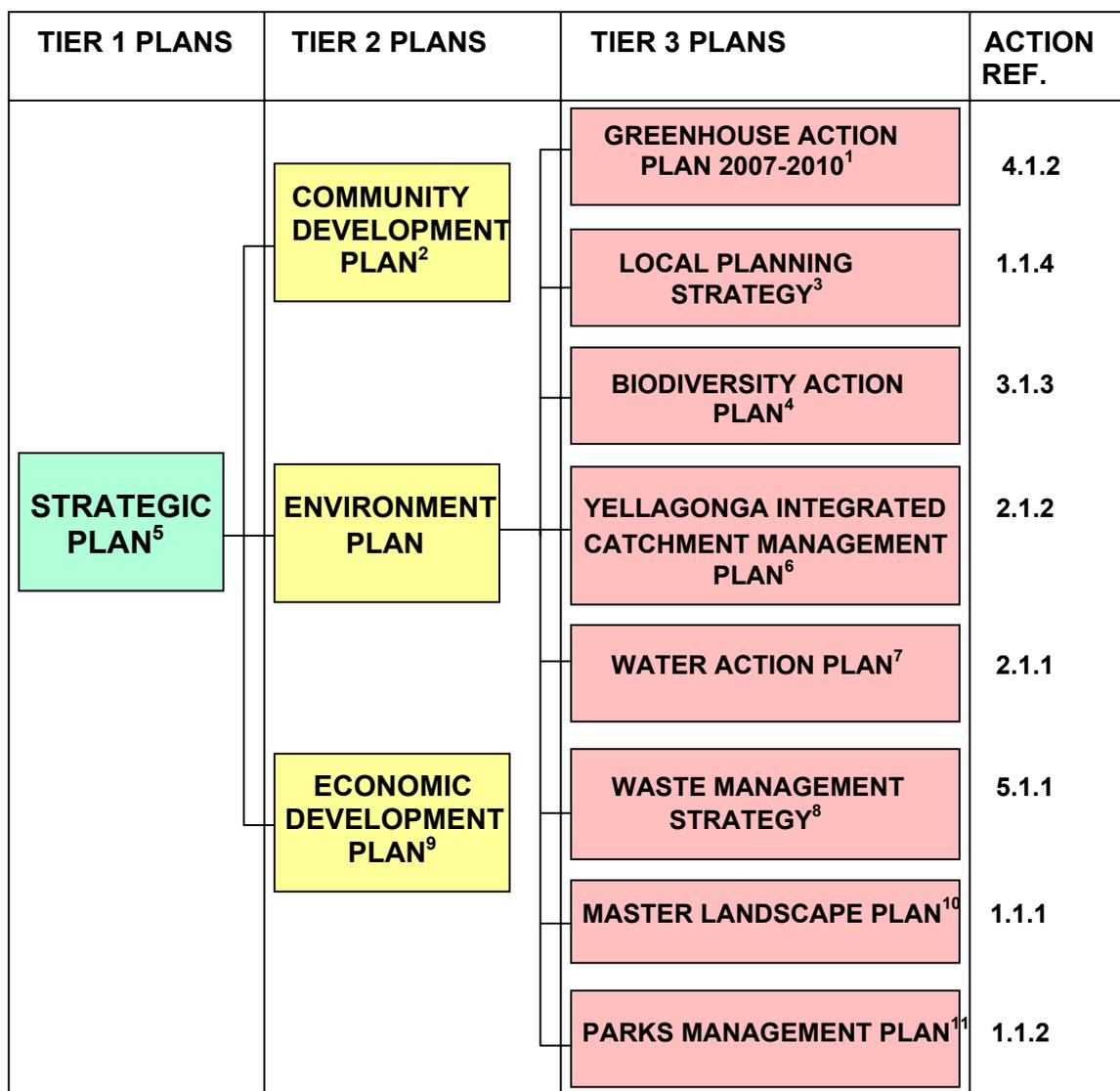
The City's Strategic Position on the Environment

Strategic Position:

To provide ongoing environmental leadership to the community to ensure the City retains its natural environmental assets and preserves them for future generations to enjoy.

The City of Joondalup will achieve this goal through integrated planning and working in partnership with the community, key stakeholders and relevant agencies.

The following chart shows how this Environment Plan fits into the City’s planning framework.



Sustainability Policy

The City’s Sustainability Policy 5-4 will guide implementation of the Plan. The policy states:

In carrying out its functions as a Local Government the City of Joondalup will use its best endeavours to meet the needs of current and future generations through an integration of environmental protection, social advancement and economic prosperity.

In achieving this, the following guiding principles will be incorporated into the development of policies and strategies:

- 1 Due for review in 2008.
- 2 Due for review in 2007.
- 3 Currently in development.
- 4 Currently in development, formal endorsement anticipated for 2008.
- 5 Under review, due for implementation 2008.
- 6 Currently in development.
- 7 Currently in development.
- 8 Due for review in 2008.
- 9 Recently endorsed.
- 10 Currently in development.
- 11 Currently in development.

1 Management, planning and development decisions will be based on an integration of economic, environmental and social/cultural considerations.

2 Avoidance of the risk of serious or irreversible environmental damage will not be postponed because of a lack of full, scientific knowledge (the 'precautionary principle').

3 An understanding of the effects that local activities have on the community, the nation and the world.

4 Development of a strong, growing and diversified economy that enhances the capacity to protect the environment.

5 Policy measures will encourage voluntary, cost effective achievement of environmental goals and responses to environmental problems.

6 Acknowledgement will be made of the need for community consultation and participation in decision making to achieve a cooperative response to environmental, economic and community issues.

To achieve these guiding principles, the City will:

1 Adopt a best practice approach to policy development and implementation, based on the overarching principle of Sustainable Development (integrating the economic, social, cultural and environmental dimensions) and ensure that this overarching principle is recognised in all policies developed by the City.

2 Assess its own activities on the basis of minimising adverse environmental impacts while effectively delivering services to the community, particularly in decisions affecting development, planning, economic development programs and capital works.

3 Establish and enforce local laws in order to control activities that may have adverse environmental, social, cultural or economic impacts.

4 Act to raise awareness and understanding of the community and other stakeholders by seeking more effective arrangements and outcomes, engaging in effective public participation processes and supporting community involvement in sustainable activities.

5 Show leadership and community influence by demonstrating commitment and the benefits of improved sustainable practices.

6 Recognise and acknowledge the importance of effective community engagement in the policy development and decision-making process.



Melaleuca cardiophylla



Kennedia coccinea

Underlying Assumptions Behind the City of Joondalup Environment Plan

Four assumptions underpin the actions and strategies contained in the focus area tables of the City of Joondalup Environment Plan.

Partnerships

1. To build partnerships, where appropriate, that will assist in achieving effective resource utilisation and information sharing.

Education

2. To increase the community's understanding and awareness of environmental issues that affect the City and may impact on the lifestyles of residents.

Regular Reviews

3. To conduct regular reviews of existing City Plans and the actions and strategies identified in this Plan.

Effective Implementation

4. To ensure that City plans, strategies and actions continually enhance the City's environmental position by being realistic and achievable.¹

¹ This will be supported through the development of an internal corporate portal for staff that allows easy access to relevant strategic and operational documents.

1.0 LAND

Objective

To incorporate environmental considerations into major land approval and planning processes and to use external networks for establishing management and monitoring processes.

The main focus in this area will be to ensure that policies and planning processes relating to land management include environmental considerations in the future. To support these review and planning processes, it will be necessary to develop consolidated guidelines and awareness programs that pursue environmentally sustainable building designs in accordance with relevant legislation.

In the City of Joondalup there is a wide diversity of natural and built environments including; wetlands; coastal foreshore reserves; residential areas; light industrial and commercial precincts; and dry and reticulated parks. All of these areas contribute to the City's overall environmental sustainability and require effective monitoring and management to maintain a high level of natural asset protection, which is supported by the valuable contribution of Friends Groups. The City will continue to communicate and engage with these community groups in the future for the benefit of the environment.

There are a range of environmental initiatives affecting land which are being promoted outside of Local Government and for which the City of Joondalup at best, has a supporting role. One such State Government initiated issue is the management of contaminated sites. Here, the City will act as a reference point for residents concerned with such issues so they may be directed to the appropriate State Government departments.

The State Government is also considering a 'BASIX' toolkit that would be used by builders and architects to calculate water and energy performances in housing with the aim of supporting environmentally sustainable building processes. The City of Joondalup will have a significant role to play in such a system, should the State Government decide to implement it.

Previous Achievements

Since 2003, the City has received several environmental awards, including two WA Environment Awards and a finalist position in the Australia-wide Banksia Awards. Such recognitions come mainly in light of the City's successful Coastal Foreshore Natural Areas Management Plan, which sought to comprehensively report on the conditions of coastal vegetation and dunes and to outline an optimum framework for coastal foreshore management and maintenance. There are still objectives of the Plan that are yet to be fully implemented due to limited resources. In light of the Plan's national recognition for innovation and success, the City has sought Federal Government funding to ensure that all of the objectives are fulfilled. Continued funding drives for this project will be a priority for the City in the near future.

The City of Joondalup has also initiated a process for incorporating numerous reserves, (highlighted as areas of significance under the State's "Bush Forever" Strategy), into Schedule 5 of the City's District Planning Scheme No.2 to ensure their effective protection.

1.1 Action and Strategies Table

Action Reference	Action/Strategy	Current Stage	Key Performance Indicators
	Major Actions		
1.1.1	<ul style="list-style-type: none"> Develop a comprehensive Landscape Master Plan that incorporates environmental aspects.¹ 	Development	A Landscape Master Plan is developed by Sept 2007.
1.1.2	<ul style="list-style-type: none"> Develop a generic Parks Management Plan for the City.² 	Development	A Parks Management Plan is developed by Dec 2007.
1.1.3	<ul style="list-style-type: none"> Develop individual Parks Management Plans in accordance with the generic Parks Management Plan.³ 	Development	Individual Plans developed by July 2008.
1.1.4	<ul style="list-style-type: none"> Develop a Local Planning Strategy for the City that is cognisant of environmental issues. 	Development	Local Planning Strategy finalised and approved in 2008.
1.1.5	<ul style="list-style-type: none"> Develop guidelines and awareness programs that pursue environmentally sustainable building designs in accordance with relevant legislation. 	Development	Guidelines and awareness programs continually developed over the 4 years covered by this Plan in keeping with State Government initiatives.
1.1.6	<ul style="list-style-type: none"> Undertake a review of planning policies with a view to incorporating sustainability in statements. 	Review	Review undertaken as part of Policy Review process
1.1.7	<ul style="list-style-type: none"> Lobby the State Government to enhance the identification and monitoring of acid sulphate soils. 	Lobby	Increased monitoring of acid sulphate soils undertaken and reported annually.
	Other Actions		
1.1.8	<ul style="list-style-type: none"> Ensure protection of the City's reserves by placing relevant reserves within Schedule 5 of the City's District Planning Scheme No.2. 	Implementation	Schedule 5 implementation progress reported annually

1 Document of strategic nature that sets out the landscaping requirements of the City, specifically verge planting of native species. It also refers to the development of Management Plans that feed back into the Landscape Master Plan (eg: Parks Management Plans, etc.)

2 Sets out a schedule and hierarchy for the development of plans for public areas, ie: reserves, parks, etc., according to their significance.

3 Referred to in the City's "Reserves, Parks and Recreation Grounds" Policy 6-1.

1.1.9	<ul style="list-style-type: none"> • Work constructively with Friends Groups to protect, preserve and enhance significant bushland and coastal reserves within the City. 	Ongoing	Degree to which Friends Groups are engaged.
1.2.0	<ul style="list-style-type: none"> • Provide comments to federal, state and regional agencies on environmental issues as opportunities present themselves. 	Ongoing	Submissions and comments are of a high quality.
1.2.1	<ul style="list-style-type: none"> • Seek funding for the full implementation of the Coastal Foreshores Natural Areas Management Plan. 	Lobby	Communications with Federal/State Governments continue until funding sourced.



1.2 Federal/State/Local Objectives Concerning Land

Level of Government	Environment Strategies/Plans	Relevant Objectives	Further Reference	Sub Plans
Federal	Building Code of Australia National Strategy for the Conservation of Australia's Biological Diversity 1996	Provides a uniform set of technical provisions for energy efficiency in building construction. Protects biological diversity from threatening processes and activities.	Available only through purchase. For more information: http://www.abcb.gov.au/ See: http://www.deh.gov.au/biodiversity/publications/strategy/goal.html	Not Applicable
State	WA "Bush Forever" Strategy 2000 Residential Design Code 2002 State Coastal Statement of Planning Policy 2.6 Network City: Community Planning Strategy for Perth and Peel 2004 "Hope for the Future" The WA State Sustainability Strategy 2003 Metropolitan Region Scheme	Identifies regionally significant bushland to be retained and protected forever. Provides for solar access in residential building designs. Ensures the sustainable use and development of coastal areas. Highlights key elements of planning for the future of Perth, incorporating environment and heritage aspects. Aims to provide a strategy for reducing the ecological footprint of settlements through designing and building sustainably. Protects areas for parks and recreation.	See: http://www.planning.wa.gov.au/publications/bushforever/ See: http://www.wapc.wa.gov.au/Publications/37.aspx See: http://www.wapc.wa.gov.au/Publications/139.aspx See: http://www.wapc.wa.gov.au/Publications/273.aspx See: http://www.sustainability.dp.wa.gov.au/docs/Strategy.htm Only maps available online. See: http://www.wapc.wa.gov.au/Region+schemes/Metropolitan+Region+Scheme/default.aspx	Liveable Neighbourhoods Sustainable Cities Initiative 2000
Regional or Local partnerships	The Swan Region Strategy for Natural Resource Management 2004	To promote the sustainable use and management of natural resources in the Swan Region by incorporating environmental risk assessment into land use planning processes.	See: http://www.wrc.wa.gov.au/swanavon/pages/stratdoc.html	Not Applicable
Level of Government	Strategic Plan	Relevant Objectives	Relevant Strategies	Sub Plans
City of Joondalup	Strategic Plan 2003 – 2008	2.0 – Caring for the Environment 2.1 – To plan and manage our natural resources to ensure environmental sustainability 3.0 – City Development 3.1 – To develop and maintain the City of Joondalup's assets and built environment.	2.1.1 – Maintain and protect natural assets to retain biodiversity. 3.1.1 – Plan the timely design, development, upgrade and maintenance of the City's infrastructure. 3.1.2 – Facilitate the safe design, construction and approval of all buildings and facilities within the City of Joondalup. 3.1.3 – Create and maintain parklands that incorporate nature and cultural activities accessible to residents and visitors.	Environment Plan 2007 District Planning Scheme No. 2 2000 Coastal Foreshore Natural Areas Management Plan 2002 Burns Beach Foreshore Management Plan 2006

2.0 WATER

Objectives

To enhance effective water management, monitoring and testing processes to achieve a high level of water quality and address water quantity decline.

To conduct education and awareness programs to ensure sustainable water usage.

To ensure that effective stormwater management processes are established and developed for the City's sustainable future.

The City of Joondalup contains significant natural water resources in the form of large wetlands (Yellagonga Regional Park) and groundwater (Gnangara Mound) and abuts the Indian Ocean. The urban activity that occurs above and adjacent to these water bodies impacts heavily on the water's quality and can have significant effects on public health and the ecologies contained within the water systems.



The water concerns that currently plague Australia as a nation require effective implementation strategies and plans at all levels of government, including Local Government, to ensure that water levels and quality remain acceptable. The City of Joondalup acknowledges this need and its participation in the ICLEI (International Council for Local Environmental Initiatives) Water Campaign is the City's first step in an ongoing commitment to implement best practice water management processes. Initiatives to incorporate water-sensitive urban design principles into the City's planning strategies are also an environmental commitment for the future.

Other issues such as stormwater management and groundwater monitoring are given a high priority status in this Environment Plan to ensure consistent high quality water resource management.

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.

Catchment: How local governments can work with other local governments and stakeholders in the catchment to achieve long-term improvements in water quality.

The Water Campaign will support the City to:

- Improve environmental performance by using best practice management approaches in the areas of open space, construction and waste collection.
- Save money through the installation of water efficient devices in City buildings.
- Influence the community through the promotion of water sensitive urban design.
- Change community consumption patterns through influence and community education.
- Demonstrate leadership to the community and amongst other local governments through the sustainable management of water resources.
- Access an extensive peer network of participants from across Australia.
- Protect local water bodies from contaminants entering through drainage systems (ie: Yellagonga Regional Park wetlands).

COASTAL WATERS:

The City is home to some 17km of popular coastline. Many recreational activities occur daily on the land surrounding this coastline, which consequently impact on the ocean's water quality. It is the City's responsibility to manage and control these activities, ensuring the ocean bodies are sufficiently protected from the negative external impacts.

Not only does recreational activity have an impact on coastal waters, but the secondary treated wastewater that is gravity-fed into the ocean from the Beenyup Treatment Plant, has additional affects on water quality and the marine life inhabiting these areas. As such, the City recognises the importance of obtaining water-testing results from the key government agencies responsible for monitoring ocean water quality. This is to ensure the City is informed of the current conditions of the oceans that are situated within its borders.

The costal foreshore areas of the City of Joondalup contain a number of stormwater outfalls. In order to ensure that discharged stormwater entering these areas is of an acceptable quality, the City needs to ensure that coastal outfall are enhanced.

FRESHWATERS:

LAKES

The City of Joondalup is also blessed with significant natural freshwater areas. The City's major freshwater bodies are located within the Yellagonga Regional Park and are vested in the Department of Environment and Conservation for management.

WETLANDS

Wetlands are areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods of time during the year, including during the growing season.

The City's wetland system includes Lake Joondalup, Lake Goollellal and the Beenyup and Walluburnup Swamps. The land surrounding these wetlands is reserved in the Metropolitan Region Scheme for "Parks and Recreation", a mechanism used to protect the

area from urban development. The wetlands provide a wide variety of ecosystems, resulting in a very high conservation value for the Park.

Management activities the City undertakes within the Park include: stormwater outfall projects, Integrated Catchment Management Planning and consideration of a Yellagonga Environment Centre.

GROUNDWATER

The City of Joondalup is situated above the Perth Metropolitan Area's major drinking water resource, the Gnangara Mound. The Mound is classified into three categorical areas from Priority 1 to Priority 3 (Priority 1 seeking to "avoid" harmful activities from polluting the groundwater resource, Priority 2 seeking to "prevent increased risk" of existing human activities and Priority 3 seeking to "manage" existing human activities).

The area of the Mound on which the City of Joondalup is located is classified as Priority 3, due to the extensive residential, commercial and light industrial developments that exist over the water resource. As such, all land-use activities in the area are subject to State Government regulation or risk management guidance to ensure that the quality of the subsurface water resource is not adversely affected.

DRINKING WATER:

The City's drinking water is supplied from the Perth Integrated Water Supply System that draws from both surface and groundwater sources. Up to 60% of Perth's water supply is extracted from the Gnangara Mound, an aquifer that flows beneath the City of Joondalup and extends from Gingin in the north to the Swan River in the south. The City's water supply is 100% treated groundwater.

The water supplied to the City of Joondalup is treated at the Wanneroo Groundwater Treatment Plant. Groundwater is extracted from nearby bores, treated and then stored in regional reservoirs and released into the integrated system for residential use.

The treatment, supply and quality of drinking water is the responsibility of the Water Corporation. The Department of Water protects the actual water resources used to supply public drinking water.

Previous Achievements

The City of Joondalup has had much success with the introduction of its Great Gardens Workshops focusing on creating water efficient gardens and minimising fertiliser use. Strong community participation in the workshops has helped to effectively inform residents of sustainable ways of maintaining their gardens through native flora planting and water wise methods.

The ongoing implementation of the City's Yellagonga Regional Park Management Plan, in partnership with the former Department of Conservation and Land Management and the City of Wanneroo, has created an effective framework for wetland management. The Plan will provide a basis for the Yellagonga Integrated Catchment Management Plan, due for completion and implementation in 2008, and will highlight the need for developing water sensitive design techniques on land adjacent to the Park.

Further to this, the City is developing and implementing state-of-the-art technologies for ensuring effective drainage of stormwater into the lakes and wetland systems in the Yellagonga Regional Park. The device referred to as a "Gross Pollutant Trap" is designed to safely catch and remove some of the contaminant material contained in stormwater. If not removed, contaminants can have long-term negative impacts on the vegetation and species that inhabit the lake and wetland systems.

2.1 Actions and Strategies Table

Action Reference	Action/Strategy	Current Stage	Key Performance Indicators
	Major Actions		
2.1.1	<ul style="list-style-type: none"> Participate in the ICLEI Water Campaign for the purposes of developing an overarching strategy for water usage and management.¹ 	Implementation	Milestones are achieved inline with Water Campaign Program.
2.1.2	<ul style="list-style-type: none"> Develop and implement a Yellagonga Integrated Catchment Management Plan to ensure the effective overall management of the water body, in partnership with the City of Wanneroo, Department of Environment and Conservation and the Swan Catchment Council. 	Development	Yellagonga Integrated Catchment Management Plan developed by Dec 2008.
2.1.3	<ul style="list-style-type: none"> Develop a standardised method of testing the City's freshwater bodies through partnerships with key government agencies and universities to monitor changes in the quality of freshwater areas.² 	Development	An alliance is formed and a testing method agreed by Dec 2007.
2.1.4	<ul style="list-style-type: none"> Develop a standardised method of testing the City's ocean bodies through partnerships with key government agencies to monitor changes in the quality of saltwater areas, and remedy any problems identified.³ 	Development	Alliance is formed and system is agreed by Dec 2007.
2.1.5	<ul style="list-style-type: none"> Continue to enhance stormwater outfalls and sumps across the City to protect both environmentally sensitive areas and public health.⁴ 	Implementation	Capital Works Program to include stormwater improvements annually.
	Other Actions		
2.1.6	<ul style="list-style-type: none"> Continue the implementation of the City's Groundwater Operating Strategy. 	Implementation	Report progress annually.
2.1.7	<ul style="list-style-type: none"> Implement State "Water Wise" programs that pertain to the City's water issues. 	Implementation	Two Water Wise Programs delivered annually.

2.1.8	<ul style="list-style-type: none"> In conjunction with building codes, develop guidelines for “Water Wise” products to be incorporated into public and private building development (eg: dual-flush toilets and waterless urinals). 	Development	Guidelines are developed by July 2008.
2.1.9	<ul style="list-style-type: none"> Continue to maintain existing stormwater infrastructure through the City’s Maintenance Program and regular Road Sweeping Program. 	Implementation	Maintenance Program to include stormwater management annually.
2.2.0	<ul style="list-style-type: none"> Develop an awareness campaign that informs the community about the effects of contaminants entering the City’s water bodies and groundwater.¹ 	Development	Awareness campaign developed by Dec 2007.
2.2.1	<ul style="list-style-type: none"> Ensure the City obtains results of groundwater monitoring undertaken by the Water Corporation. 	Ongoing	Results are reported annually.
2.2.2	<ul style="list-style-type: none"> Ensure that appropriate information systems for water quality management, data collection, monitoring and reporting are in place and accessible to the community. 	Development	Water quality information is reported annually.
2.2.3	<ul style="list-style-type: none"> Develop community information sources and awareness campaigns to assist the community and developers in installing safe, approved greywater systems and rainwater collection tanks within the City.² 	Development	Awareness campaign developed and implemented during the 4-year outlook of the Plan.



Mullaloo Beach

2.2 Federal/State/Local Objectives Concerning Water

Level of Government	Environment Strategies/Plans	Relevant Objectives	Further Reference	Sub Plans
Federal	National Water Initiative 2006 National Water Quality Management Strategy 1994 ICLEI Water Campaign 2003	To improve water management across the country through reform, planning, accounting, monitoring and knowledge. To manage Australia's water bodies in an environmentally sustainable way through policy, process and guideline development. National program to assist Local Governments in managing their water resources by reducing use and improving quality.	See: http://www.dpmc.gov.au/water_reform/nwi.cfm See: http://www.deh.gov.au/water/quality/nwqms/index.html See: http://www.alga.asn.au/policy/environment/water/iclei.php	Not Applicable
State	State Water Strategy 2003	To modernise the state's water resource management through efficiency, advancement, innovation, planning and protection.	See: http://dows.lincdigital.com.au/statewaterstrategy.asp	Not Applicable
Regional or Local partnerships	The Swan Region Strategy for Natural Resource Management 2004	To promote the sustainable use and management of natural resources in the Swan Region by developing partnerships for testing water quality, preparing Local Action Plans and developing environmental requirements in major Local Government documents.	See: http://www.wrc.wa.gov.au/swanavon/pages/stratdoc.html	Not Applicable
Level of Government	Strategic Plan	Relevant Objectives	Relevant Strategies	Sub Plans
City of Joondalup	Strategic Plan 2003 - 2008	2.0 – Caring for the Environment 2.1 – To plan and manage our natural resources to ensure environmental sustainability.	2.1.2 – Further develop environmentally effective and energy efficient programs. 2.1.3 – Develop a coordinated environmental framework, including community education.	Environment Plan 2007 ICLEI Water Campaign 2007



3.0 BIODIVERSITY

Objective

To ensure the effective protection and maintenance of the City’s biodiversity.

The City of Joondalup boasts large areas of bushland that are of approved state significance due to their inclusion in the WA “Bush Forever Strategy”. These areas are considered as having a considerable biodiversity value and require ongoing rehabilitation, maintenance and monitoring to ensure their continued sustainability.

Biodiversity is the number and variety of organisms within one region, including the variability within and between species and within and between ecosystems. The City of Joondalup is committed to conserving its current biodiversity and seeks to further improve upon areas where biodiversity may be increased through innovative environmental projects. Examples of projects under consideration include; educational signage on biodiversity to be erected along the City’s coastal foreshores for the community to gain a greater understanding of the area’s biological ecosystems; a native tree planting program on the City’s streets to be included in the City’s Landscape Master Plan and; a feasibility study for the potential development of a native animal sanctuary in the Craigie Bushland.



Some of the weed control, disease management and pest management are important components of effective coastal management, due to the high degree of impact that introduced species have on native flora and fauna. Increases in soil erosion, changes to soil nutrient status and losses in genetic/species diversity are some of these major impacts of human settlement.

Weeds and pests currently requiring management by the City include but are not limited to:

Coastal

Moderate rated weeds:

Dune Arctotheca
Sea Rocket
Dune Spinach

Mild rated weeds:

Dune Onion Weed

High rated weeds:

Rose Pelargonium

Diseases of concern:

Honey Fungus

Pests of concern:

European Rabbit

Wetlands

Major weeds:

Perennial Veldt Grass
Wild Oats
Two-leaf Cape Tulip
Bridal Creeper
Puncture Vine
Spanish Cane
Geraldton Carnation Weed
Sandbur (Poaceae)
Florence Fennel
Japanese Pepper

Pests of concern:

The City is responsible for assisting to manage/control nomadic pets (cats and dogs), foxes, European bees, feral birds, midge/mosquito levels and introduced and hybrid ducks under the Yellagonga Regional Park Management Plan.



Previous Achievements

The City of Joondalup has successfully completed a survey and assessment of bushlands within its boundaries, prioritising each through a ratings system that adheres to the principles identified by the Perth Biodiversity Project. These assessments will be used as the base information for developing the City's Biodiversity Action Plan under the auspices of the ICLEI Local Action for Biodiversity Project. The City was formally invited to participate in the project, along with 30 other Cities worldwide who have a proven record in implementing sustainably focused initiatives.

The "Adopt-a-Coastline" Program has run very successfully since 2000 with up to 4000 community participants involved in its initiatives. The Program forms a component of the curriculum for schools in the City of Joondalup area and involves teaching students about coastal processes, revegetation and biodiversity. Students and community members are also actively involved in rehabilitation processes in the form of native planting and weed control.

As previously mentioned in the focus area of Land, the City has had much recognition of its Coastal Foreshore Natural Areas Management Plan. In terms of biodiversity, the Plan seeks to conserve the biological ecosystems contained in the coastal foreshore reserves of the City through best management practices. Community involvement and strong Council commitment has seen the continuing implementation of the Plan with fervour and enthusiasm, highlighting the importance the City places on conserving biodiversity.



3.1 Actions and Strategies Table

Action Reference	Action/Strategy	Current Stage	Key Performance Indicators
	Major Actions		
3.1.1	<ul style="list-style-type: none"> Review and evaluate and implement the City's Coastal Foreshore Management Plan inline with State Coastal Planning Policies. 	Review	A schedule for review approved by June 2008.
3.1.2	<ul style="list-style-type: none"> Develop and implement a native tree-planting and management program within the City.¹ 	Development	Plan developed in line with Landscape Master Plan by Oct 2007.
3.1.3	<ul style="list-style-type: none"> Achieve formal endorsement of the City's 10 Year Biodiversity Action Plan and Framework – ICLEI. 	Development	Biodiversity Plan developed and endorsed by June 2008.
3.1.4	<ul style="list-style-type: none"> Undertake an awareness program to educate the public of the weeds that threaten the City's biodiversity. 	Development	Awareness program developed and implemented by June 2009.
	Other Actions		
3.1.5	<ul style="list-style-type: none"> Continue assessment of the City's bushlands under the principles outlined by the Perth Biodiversity Project. 	Review	A schedule for assessment approved by Jul 2007.
3.1.6	<ul style="list-style-type: none"> Continue implementation of the "Adopt-a- Coastline" Program.² 	Implementation	Progress reported annually.
3.1.7	<ul style="list-style-type: none"> Develop a project to erect educational signs along the City's coastal foreshore reserves to improve the community's understanding of coastal biodiversity. 	Development	Signage Plan developed and implemented by Dec 2009.
3.1.8	<ul style="list-style-type: none"> Undertake a feasibility study for the development of a native animal sanctuary in the Craigie Bushland. 	Development	Feasibility study undertaken by Dec 2007.
3.1.9	<ul style="list-style-type: none"> Consideration be given to the reduction of herbicide use in weed control activities at the City. 	Review	Issue resolved by Dec 2008.

3.2 Federal/State/Local Objectives Concerning Biodiversity

Level of Government	Environment Strategies/Plans	Relevant Objectives	Further Reference	Sub Plans
Federal	National Strategy for the Conservation of Australia's Biological Diversity 1996	Protects biological diversity from threatening processes and activities, and provides for pollution control, rehabilitation, environmental assessment and community awareness.	See: http://www.deh.gov.au/biodiversity/publications/strategy/index.html	Not Applicable
State	WA "Bush Forever" Strategy 2000	Identifies regionally significant bushland to be retained and protected forever.	See: http://www.planning.wa.gov.au/publications/bushforever/	Not Applicable
Regional or Local partnerships	National Local Government Biodiversity Strategy 1998 The Swan Region Strategy for Natural Resource Management 2004	To develop local awareness and education campaigns, utilise Local Government resources and encourage regional partnerships and planning for biodiversity conservation. To promote the sustainable use and management of natural resources in the Swan Region by updating Local Government plans in association with the Department of Planning and Infrastructure.	See: http://www.alga.asn.au/publications/Bio_diversity_strategy_Executive_summary.pdf See: http://www.wrc.wa.gov.au/swanavon/pages/stratdoc.html	Perth Biodiversity Project 1999
Level of Government	Strategic Plan	Relevant Objectives	Relevant Strategies	Sub Plans
City of Joondalup	Strategic Plan 2003 - 2008	2. – Caring for the Environment 2.1 - To plan and manage our natural resources to ensure environmental sustainability	2.1.1 – Maintain and protect natural assets to retain biodiversity. 2.1.2 – Further develop environmentally effective and energy-efficient programs.	Environment Plan 2007 Biodiversity Plan 2007 Coastal Foreshore Natural Areas Management Plan 2002

4.0 AIR QUALITY

Objective

To continue to reduce greenhouse gas emissions and to monitor air quality within the City.

Whilst the City of Joondalup acknowledges its role in contributing to cleaner air within its borders, it is recognised that this cannot be achieved acting alone. A consolidated effort by all businesses and the broader community is required to ensure that air quality remains sustainable and that human health and our environment is protected by reducing greenhouse gas emissions.

As the City continues to incorporate eco-friendly practices into its organisational operations, further support will be provided to the community to educate residents about energy efficiency through program developments.

Building designs, transportation modes, planting vegetation and lighting all have an impact on greenhouse gas emissions. Continued monitoring of emissions and the development of innovative solutions are therefore vital to protect the City's natural environment.

One such innovative solution is the commitment to offset carbon emissions through an externally managed tree-planting program. The City will commit to offset the CO₂ emissions it produces by outsourcing the tree-planting program to an organisation that specialises in carbon sequestration. This will ensure that offsets are accurately calculated, that records are correctly kept for auditing purposes and that maintenance and monitoring procedures are sufficient.

Previous Achievements

Since the City of Joondalup's participation in the ICLEI – Local Governments for Sustainability Cities Climate Protection Campaign began in 1999; it has achieved the first five milestones of the program. An inventory and forecast of Council and community greenhouse gas emissions has been produced, a reduction target for the corporate and community sectors of the City has been set, a Local Action Plan for greenhouse gas reduction has been developed and the strategies set by the Plan to reach its determined targets have been implemented. The City is currently reviewing the Plan to set new targets.

The City is also developing a Green Transport Plan for the purposes of minimising staff reliance on single occupant car usage. The Plan will seek to outline strategies for increasing the use of alternative forms of transport that are eco-friendly and to increase the use of public transport through better facilitation of existing services. Projects in partnership with the Department for Planning and Infrastructure will also be implemented by the City with the aim of increasing public awareness and participation in "TravelSmart" programs. "TravelSmart" seeks to reduce road congestion, contribute to cleaner air and to recognise the health benefits of incidental exercise, such as walking or cycling. Local Governments assist in the program's implementation by applying it at a local level.

After the highly successful pilot program run in April 2006, the City has secured additional federal funding to continue its EcoBusiness Program in 2007. The Program is a partnership between the Cities of Joondalup, Wanneroo and Stirling that offers free energy and resource assessments to interested businesses with the aim of increasing energy and resource efficiency and decreasing carbon emissions.

4.1 Actions and Strategies Table

Action Reference	Action/Strategy	Current Stage	Key Performance Indicators
	Major Actions		
4.1.1	<ul style="list-style-type: none"> Continue participation in the ICLEI (International Council for Local Environmental Initiatives) Cities for Climate Protection Plus Program. 	Implementation	Achieve CCP Plus Milestones inline with the Greenhouse Action Plan.
4.1.2	<ul style="list-style-type: none"> Continue implementation of the City's Greenhouse Action Plan. 	Implementation	Achieve targets set in the Greenhouse Action Plan.
4.1.3	<ul style="list-style-type: none"> Implement the City's Green Transport Plan, as a formal aspect of the TravelSmart Workplace program. 	Implementation	Green Transport Plan approved and implementation commenced by Dec 2007.
4.1.4	<ul style="list-style-type: none"> In conjunction with the Department for Planning and Infrastructure, implement the TravelSmart Household program. 	Implementation	20 000 households contacted by Aug 2007.
4.1.5	<ul style="list-style-type: none"> Introduce the TravelSmart to School program within Joondalup primary schools. 	Implementation	Program implemented by Dec 2008.
	Other Actions		
4.1.6	<ul style="list-style-type: none"> Continue implementing community awareness programs that encourage the reduction of Greenhouse gas emissions. 	Implementation	Awareness programs implemented during 5-year outlook of the Plan.
4.1.7	<ul style="list-style-type: none"> Investigate opportunities for the City to work with Main Roads, Public Transport Authority, Department for Planning and Infrastructure, Department of Environment and Conservation and other organisations, to develop further initiatives. 	Ongoing	The City to report annually on initiatives.



4.2 Federal/State/Local Objectives Concerning Air Quality

Level of Government	Environment Strategies/Plans	Relevant Objectives	Further Reference	Sub Plans
Federal	National Greenhouse Strategy 1998 Cities for Climate Protection Australia 1999	For all governments to participate in arrangements designed to facilitate implementation, monitoring and reporting of outcomes: limit emissions, foster knowledge and create foundations for change. A commitment to reduce Greenhouse gas emissions to 8 per cent above 1990 levels by 2020. Implemented on a Local Government level.	See: http://www.greenhouse.gov.au/government/ngs/pubs/ngs.pdf See: http://www.greenhouse.gov.au/local/ccp/index.html	Local Greenhouse Action 2004
State	WA Greenhouse Strategy 2004 Perth Air Quality Management Plan 2000	To ensure the state's industry and community can contribute to reducing global Greenhouse gas emissions and effectively respond to any opportunities and challenges generated by climate change. Based on leadership, research and public and industry engagement. To ensure that clean air is achieved and maintained throughout the Perth metropolitan region over 30 years. Achieved through education, monitoring, planning and energy efficient building.	See: http://portal.environment.wa.gov.au/pls/portal/docs/PA GE/DOE_ADMIN/GREENHOUSE_REPOSITORY/GR EENHOUSE_STRATEGY_001.PDF Only Implementation Plan available online. See: http://portal.environment.wa.gov.au/pls/portal/docs/PA GE/DOE_ADMIN/TECH_REPORTS_REPOSITORY/T AB1019688/SUMMARY.DF	Implementing the Perth Air Quality Management Plan 2002
Regional or Local partnerships	The Swan Region Strategy for Natural Resource Management 2004	To promote the sustainable use and management of natural resources in the Swan Region by supporting the Perth Air Quality Management Plan and increasing community participation in air quality programs.	See: http://www.wrc.wa.gov.au/swanavon/pages/stratdoc.html	Not Applicable
Level of Government	Strategic Plan	Relevant Objectives	Relevant Strategies	Sub Plans
City of Joondalup	Strategic Plan 2003 - 2008	1.4 – To work with the community to enhance safety and security in a healthy environment. 2. – Caring for the Environment 2.1 – To plan and manage our natural resources to ensure environmental sustainability. 3.4 – To provide integrated transport to meet local and regional needs.	1.4.2 – Contribute to the protection of human health. 2.1.2 – Further develop environmentally effective and energy-efficient programs. 2.1.3 – Develop a coordinated environmental framework, including community education. 3.4.1 – Advocate and facilitate the creation of transport linkages.	Environment Plan 2007 Greenhouse Action Plan 2006 Green Transport Plan 2007

5.0 Waste Management

Objective

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



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 City of Joondalup has responded to the challenge of the State's commitment to prevent 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 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 is achievable through the recovery of organic waste (food scraps, etc) and recyclable materials for treatment and conversion into product or energy. 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.

Previous Achievements

As a member of the Mindarie Regional Council, the City of Joondalup has been involved in the utilisation of "green power" technology at the Tamala Park landfill site. The 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 4000 households and offset thousands of tonnes of greenhouse gases.

In 2005, the City adopted Waste Management Strategy that aims to address the issues outlined in the State's "Towards Zero Waste" Strategy and to meet community expectations. After an extensive community consultation process the adopted Strategy included a universal recycling bin program and a landfill diversion target. Recycling bins have recently been delivered to all households which is expected to significantly increase recycling rates.

Bulk rubbish collection services and green waste collection services continue to take place at nine monthly intervals for the City's residents to ensure that these forms of waste are collected effectively. Green waste is mulched and sold as product.

5.1 Actions and Strategies Table

Action Reference	Action/Strategy	Current Stage	Key Performance Indicators
5.1.1	<ul style="list-style-type: none"> Continue the implementation of the City's Waste Management Strategy 2005 through the development of associated action plans to ensure that strategies are achieved and reported. 	Implementation	Progress reported annually.
5.1.2	<ul style="list-style-type: none"> Continue to provide an effective kerbside recycling service. 	Ongoing	Achieve a customer service satisfaction rating in excess of 70%.
5.1.3	<ul style="list-style-type: none"> Review the Waste Management Strategy 2005. 	Review	Review undertaken by Dec 2008.
5.1.4	<ul style="list-style-type: none"> Develop an awareness program, including a point of reference website that provides information on all of the City's waste management activities, for the community. 	Development	Awareness program and website developed by Dec 2007 and updated as necessary thereafter.
5.1.5	<ul style="list-style-type: none"> Ensure the City's policies relating to waste management are continually reviewed and updated. 	Review	Policies reviewed annually.
5.1.6	<ul style="list-style-type: none"> To actively participate in the Resource Recovery Facility and to support the Mindarie Regional Council in the facility's management. 	Ongoing	Membership is renewed annually.



5.2 Federal/State/Local Objectives Concerning Waste Management

Level of Government	Environment Strategies/Plans	Relevant Objectives	Further Reference	Sub Plans
Federal	National Packaging Covenant 2005	The establishment of a framework for the effective life cycle management of consumer packaging and paper products that will be delivered through a collaborative approach between all sectors of the packaging supply chain, consumers, collectors, preprocessors and all spheres of government.	See: http://www.deh.gov.au/settlements/waste/covenant/index.html	National Environment Protection Measure 2005 – 2010
State	<p>"Towards Zero Waste by 2020" Strategy 2004</p> <p>Draft Waste Avoidance and Resource Recovery Bill 2006</p> <p>"Hope for the Future" The WA State Sustainability Strategy 2003</p>	<p>A commitment to sustainable waste management by aiming towards zero waste by 2020 through prevention, resource recovery and integration.</p> <p>To reduce waste and manage it as a resource.</p> <p>Aims to provide a strategy for reducing the ecological footprint of settlements and enhancing the quality of life.</p>	<p>Not available online, but for more information, see: http://www.wasig.curtin.edu.au/wasig/wasigresources/2000/waste2020.pdf</p> <p>See: http://www.zerowastewa.com.au/documents/warr_bill_greencopy.pdf</p> <p>See: http://www.sustainability.dpc.wa.gov.au/docs/Strategy.htm</p>	Strategic Direction for Waste Management in WA 2004
Regional or Local partnerships	Mindarie Regional Council Strategic Plan 2002 – 2007	To provide effective, cost efficient and environmentally sound waste and other resource management services for the benefit of the region.	See: http://www.mrc.wa.gov.au/pdf/strat_plan_a.pdf	Not Applicable
Level of Government	Strategic Plan	Relevant Objectives	Relevant Strategies	Sub Plans
City of Joondalup	Strategic Plan 2003-2008	<p>2. – Caring for the Environment</p> <p>2.2 – To manage waste effectively and efficiently in alignment with environmentally sustainable principles.</p>	<p>2.2.1 – Further develop and implement recycling strategies.</p> <p>2.2.2 – Plan for the development of waste management.</p>	<p>Environment Plan 2007</p> <p>Waste Management Strategy 2005</p>

Review Schedule and Reporting Mechanism for the Environment Plan

Review of the Environment Plan

The Environment Plan will be updated annually to take into consideration the evolving nature of environmental systems. It will also include any new strategic directions from State and Federal Governments that require effective implementation at a Local Government level.

In light of the City's current Strategic Plan review, the first Environment Plan update shall be scheduled for 2008 to remain aligned with overall strategic developments within the City. The first major review of the Plan will be scheduled for 2010 and will involve more extensive considerations of the Plan's overall structure, aims, objectives and purpose.

Reporting against the Environment Plan

A reporting mechanism will be developed that represents a quasi State of Environment Report for the City of Joondalup. This will include information that is collected on the implementation of this Plan's actions. The report will be produced annually. It is anticipated that the first State of Environment Report for the City of Joondalup will be available in 2008.

Key City Environmental Project – Yellagonga Environment Centre

The Yellagonga Regional Park covers an area of 1400 hectares and forms a natural border between the Cities of Joondalup and Wanneroo. It is much larger than other significant parks within the Perth metropolitan region - Kings Park covers 400 hectares and Bold Park covers 437 hectares. The Park is a major environmental landmark for the north metropolitan region.

On 30 November 2005, the City of Joondalup and the City of Wanneroo brought together over 100 people at a “Visioning Workshop for an Environment Centre”. The participants included representatives from indigenous and friends groups, as well as community members, politicians and representatives from both Councils. The objective of the workshop was to gather community aspirations with respect to a centre, including the type of centre, what the centre would do and its most suitable location. The community overwhelmingly agreed that a centre should be established and used as a place where the combined local knowledge of environmental, cultural and historical matters is kept and shared.

A feasibility study has just been finalised which identifies Lot 1 on Lakeside Drive in Joondalup as an appropriate site for an environment centre. The study also proposes that this environment centre be considerably different from all other environment centres in the Perth metropolitan area. To achieve this, the study proposes that the centre include cultural and heritage interpretation, cultural performing facilities and commercial aspects such as research incubators, souvenir shops and cafes. The indicative cost for construction of such a centre at the Lot 1 site overlooking Lake Joondalup in the Yellagonga Regional Park, is 4.5 million dollars.

A Yellagonga Regional Park Environment Centre will enhance Joondalup’s ability to be environmentally sustainable and will represent a pinnacle for environmental achievement within the City’s Environment Plan. Should the Councils of the two Cities support the construction of an environment centre at Lot 1 to the scale envisaged in the feasibility study, the City will seek significant funding support from Commonwealth and State Government partners to facilitate its construction.

TABLE OF ANALYSIS OF COMMENTS FROM SUSTAINABILITY ADVISORY COMMITTEE		
No.	Comment – Page references relate to original Draft.	Officers Response/actions – Page references relate to Revised Document
1	The diagram on page 5 should show the linkages between the 2 nd tier plans;	The diagram has been modified
2	The Plan should suggest that the Mindarie Regional Council (MRC) redirect profits from selling 'green power' to sustainability projects	This is a policy matter for the MRC and is not appropriate for insertion into the Plan. City of Joondalup Elected Members who have position on the MRC should raise this directly with the MRC
3	Consider deleting the text 'golf courses' from the description of the City's natural and built environments on page 8	Completed
5	The Plan should further highlight the importance of traffic on environmental issues (page 22 &23);	Actions have been adjusted on page 22 to achieve this.
6	Re-word the first objective on page 12 so that effective water management addresses water quantity decline as well as water quality	Para 1 page 11 has been adjusted
7	On page 15 provide an explanation of the priority 3 protection of the Gnangara mound and the relationship between local water pollutants and the quality of groundwater	New "Groundwater" subheading and text inserted on page 13.
8	The Plan should further discuss the Mindarie Resource Recovery Facility (page 25) and consider including a specific action for it on (page 26);	Expanded para 3 on page 27 A specific action 5.1.5 addresses this comment
9	The Plan should discuss the need for effective stormwater outflow programs for the coast as well as for Yellagonga Regional Park (page 13);	New para 7 on page 12 inserted.
10	Insert the word 'implement' into the first action on page 20 so that it reads "Review, evaluate and implement	Completed
11	Insert the word 'implement' into the second action on page 20 so that it reads "Develop and implement	Completed
12	Move the box on page 4 titled "The City's Strategic Position on the Environment" to page 1	Replaced Strategic Plan vision with Environment Plan vision on page 1. Kept box on page 4 aswell.
13	The Plan should reflect the words 'environmental stewardship' throughout the document	Not included due to lack of context for specific inclusion.
14	The action referring to the Landscape Master Plan on page 9 should be given more prominence and its relationship to environmental issues i.e. planting of natives on verges, should be highlighted	Native planting on verges inserted into footnote of 1 st action.
15	The Plan should be consistent when quoting the length of the coastline (either 16km or 17km);	Para 3 on page 2 changed to 17kms.
16	The State of the Environment Report referred to on page 27 should be released annually and should coincide with the release of the City's Annual Report	Already refers to an annual release and the intention is to release Report in concurrence with Annual Report.
17	The introduction to the Plan should explain how the City's Strategic Plan drives the Environment Plan	New para introduced on page 3 after para 8.
18	The Plan should include an action on page 26 that reflects the City's implementation of yellow waste	Action 5.1.2 introduced, reflects ongoing provision of

ATTACHMENT 2

	bins to the community as part of the City's zero waste strategy	kerbside recycling service. KPI corresponds to Waste Management Strategy KPI.
19	The Plan needs to focus on and encourage grass roots action at a household level;	Sentence inserted in para 1 on page 2.
20	The Plan needs to build the capacity of the community to engage in environmental issues as this is not done well at present;	The City is limited in its ability to engage the community, other than education campaigns, which already form many actions within the Plan.
21	Note the importance of the action on page 10 "Seek funding for the full implementation of the Coastal Foreshores Natural Areas Management Plan";	Already stated/highlighted in previous achievements on page 7.
22	Include an action on page 15 to "Develop an effective program to manage stormwater"	The City's Capital Works Program deals with this. KPI for Action 2.1.5 refers.

TABLE OF ANALYSIS OF COMMENTS FROM CONSERVATION ADVISORY COMMITTEE		
No.	<u>Comment</u> - Page references relate to original Draft.	<u>Officers Response/actions</u> - Page references relate to Revised Document
1	Request the words 'social advancement" (3 rd paragraph) be amended to read "social sustainability" Request rewording of point 2	Cannot be changed as it is directly quoted from the City's Sustainability Policy. As above.
2	Action and Strategies Table - page 9, 2 nd dot point – REQUESTS the words 'and coastal reserves' to be added to read: " <i>Work constructively with Friends Groups to protect, preserve and enhance significant bushland <u>and coastal reserves</u> within the City</i> " - page 10, REQUESTS the entire section to be replaced with the following: <ul style="list-style-type: none"> o full implementation of coastal foreshore natural areas management plan o full funding of appropriate levels of care and maintenance of natural areas 	Completed The City can only allocate funds to such projects if budgeted. Fully implementing the Plan without external grants will depend on Council agreeing to provide such funds, which currently, it has not. It is more appropriate to "actively" seek funding from state/federal governments than to make statements that will commit unallocated Council funds to expensive projects. As above.
3	Water page 12 REQUESTS the word 'community' be deleted from the 2 nd paragraph and be amended to read: <i>"To conduct community education and awareness programs to ensure sustainable water usage"</i> REQUESTS that the picture currently shown is replaced with a picture of a rainwater tank	Completed Completed.
4	Wetlands page 14 REQUESTS reference make to Lake Joondalup and Lake Goollellal in 2 nd paragraph to read as follows: <i>"The City's wetland system includes Lake Joondalup, Lake Goollellal and the Beenyup and Walluburnup Swamps ..."</i>	Completed
5	Drinking Water page 14 REQUESTS that the figure of 80% (1 st paragraph) be amended to 60%, and that the final sentence in that	Completed

	<p>paragraph be amended as follows:</p> <p>“Due to low dam levels The City’s current water supply is 100% treated groundwater.” However, ordinarily, it may be a mixture of both surface and groundwater resources.</p> <p>REQUESTS the words “and quality of drinking water” be added to the 3rd paragraph to read:</p> <p>“The treatment, and supply and quality of drinking water of groundwater is the responsibility of the Water Corporation while drinking water quality assessments are performed by the Department of Water. The Department of Water protects the actual water resources used to supply public drinking water.”</p> <p>REQUESTS the third paragraph under “Previous Achievements” be amended to read:</p> <p>“Further to this, the City has is developed developing and implementing state-of-the-art technologies for ensuring effective drainage of stormwater into the lakes and wetland systems in the Yellagonga Regional Park. The device referred to as a “Gross Pollutant Trap” is designed to safely catch and remove <u>all some</u> of the insoluble contaminants material contained in stormwater. If not removed, contaminants can have long-term negative impacts on the vegetation and species that inhabit the lake and wetland systems.</p>	<p>Completed</p> <p>Completed</p>
6	<p>Actions and Strategies Table – page 15</p> <p>REQUESTS that dot point 4 (Major Actions) be amended to read:</p> <p>“Develop a standardised method of testing the City’s ocean bodies through partnerships with key government agencies to monitor changes in the quality of saltwater areas and remedy any problems identified.</p> <p>REQUESTS that dot point 5 (Major Actions) be amended to read:</p> <p>“Continue to enhance stormwater outfalls and sumps across the City to protect environmentally sensitive areas and public health”</p> <p>REQUESTS that under Key Performance Indicators column, the 1st dot point under Other Actions be amended as follows:</p> <p>“Report against progress annually”</p> <p>REQUESTS that dot point 1 (page 16) be amended to read:</p> <p>“Develop an awareness campaign that informs the community about the effects of turf clippings contaminants entering the City’s water bodies and groundwater.”</p>	<p>Completed</p> <p>Completed</p> <p>Completed</p> <p>Completed</p> <p>Completed</p>

	<p>REQUESTS that dot point 4 (page 16) be amended to read:</p> <p><i>“Develop community information sources and awareness campaigns to assist the community and developers in installing <u>safe, approved</u> greywater systems and rainwater collection tanks within the City.</i></p>	
7	<p>Biodiversity (page 18)</p> <p>REQUESTS that paragraph 4 be amended as follows:</p> <p><i>“Weeds and pests currently requiring management by the City include <u>including but not limited to:</u>”</i></p> <p>REQUESTS that “Pests of Concern” include foxes, European bees, feral birds;</p> <p>REQUESTS that ‘Weeds of Concern’ include “Japanese Pepper”</p> <p>REQUESTS that the common names be used</p>	<p>Completed</p> <p>Completed</p> <p>Completed</p> <p>Completed</p>
8	<p>Actions and Strategies Table (page 20)</p> <p>REQUESTS that dot point 2 (Major Actions) be amended to read:</p> <p><i>“Develop a native tree-planting <u>and</u> management program within the City.”</i></p> <p>REQUESTS that an additional dot point 5 (Other Actions) be added to read:</p> <p><i>“Development and implementation of a herbicide reduction plan”</i></p> <p>REQUESTS that an additional dot point 4 (Major Actions) be included to read:</p> <p>Action/Strategy - Undertake an awareness program to educate the public of the weeds that threaten the City’s biodiversity. Current Stage – Development Key Performance Indicators – Onground weed control to be carried out by the City’s natural area management team.</p>	<p>Completed</p> <p>Completed</p> <p>Action incorporated but KPI changed as suggested KPI did not effectively measure completion of the Action.</p>
9	<p>Actions and Strategies Table (page 26)</p> <p>REQUESTS why picture depicted displays graffiti on the bin and also why the staff member is lifting it (occupational health and safety hazard);</p> <p>REQUESTS an additional dot point to be included to read:</p> <p><i>“Improve hazardous waste collection”</i></p>	<p>Completed</p> <p>This Action forms part of the City Waste Management Strategy, Action 5.1.3 refers.</p>