

State of the Environment Report

2022/23



Best practice sustainability and environmental management

The City aspires to be a global leader in environmental sustainability, working closely with the community to protect and enhance the natural environment and green urban spaces, address climate change and waste management while celebrating and showcasing its natural assets to the world.

The City's *Environment Plan 2014 – 2019* and other environmental programs, strategies, and policies are developed and implemented in partnership with key stakeholders and the community and focus on the sustainable use of natural resources, biodiversity conservation, waste management, energy and water efficiency and raising awareness of environmental issues within the City.

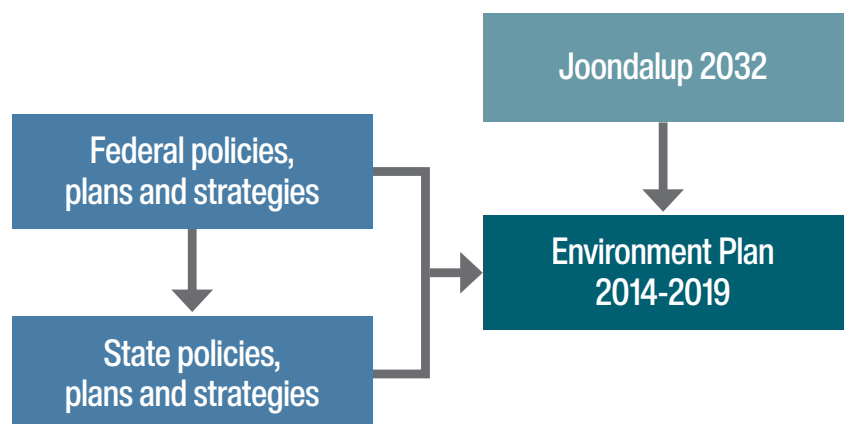
The City supports the community to undertake positive sustainable behaviours and be involved in the conservation of natural areas through education and active involvement in environmental and sustainability initiatives.

Overarching objective

To provide ongoing leadership in adaptive environmental management to ensure the sustainable use of natural resources and the conservation and enhancement of the City's natural assets for future generations.

Strategic planning context

The *Environment Plan 2014 – 2019* supports the City's *Strategic Community Plan 2022-2032 (Joondalup 2032)* and is informed by the key themes and outcomes of this Plan. Joondalup 2032 is the City's long-term strategic plan, outlining the City's commitment to achieving the vision and aspirations of the community and stakeholders in the region. A new Environment Strategy is being developed in 2023/24. The *Environment Plan 2014 – 2019* will continue to be implemented until the new Environment Strategy is finalised.



Acknowledgement of Traditional Custodians

The City of Joondalup acknowledges the Traditional Custodians of this land, the Whadjuk people of the Noongar nation. The City recognises the culture of the Noongar people and the unique contribution they make to the Joondalup region and Australia. We pay our respects to Elders past, present, and emerging, as well as all Aboriginal and Torres Strait Islander peoples.

Outcomes from Joondalup 2032 to guide the management of the local environment into the future include:

- Managed and protected
- Clean and sustainable
- Responsible and efficient
- Resilient and prepared

State of the Environment Report

The State of the Environment Report 2022/23 describes the initiatives taken to protect and enhance the City's natural environment and improve environmental sustainability during the past financial year. It provides a snapshot of the progress made in implementing actions and initiatives from within the City's *Environment Plan 2014 – 2019* as well as issue-specific plans (informing plans) across the areas of biodiversity, water, climate change, waste, and community engagement.

The City's environment services budget for 2022/23 was \$6.79m with 40.5 full time equivalent staff, including environmental planning and development, emergency management, environment organisational management, technical and consultancy services, waste management, litter collection and natural areas/buildings.¹



Biodiversity



Water



Climate Change



Community Involvement



Waste

¹As detailed in the City of Joondalup *Corporate Business Plan 2022 - 2026* for the environment net service cost including depreciation.

Joondalup 2032 sets out our strategic direction for the City for the next 10 years and includes the following environmental goal:

We have a beautiful natural environment which we care for and protect. We demonstrate best-practice in sustainability and environmental management. Our community is actively involved in conservation and sustainability initiatives and we share responsibility for preserving our natural assets for future generations.



Western Grey Kangaroo (*Macropus fuliginosus*) at Yellagonga Regional Park



Objective

To provide long-term protection and enhancement of the City's biodiversity through adaptive management and the delivery of targeted projects and programs.

This work is guided by the *Yellagonga Integrated Catchment Management Plan 2021 - 2026*, *Pathogen Management Plan 2018 - 2028*, *Bushfire Risk Management Plan 2018 - 2023*, *Weed Management Plan 2023 - 2033* and Natural Area Management Plans.

Key achievements

- Conducted flora surveys and vegetation condition assessments in Lilburne Park, Duncraig and Mullaloo Foreshore Reserve, Mullaloo.
- Undertook quenda monitoring in Craigie Bushland, in collaboration with Edith Cowan University.
- Implemented the Pathogen Treatment Program in 12 natural areas and parks and installed pathogen awareness signage in 19 natural areas.
- A total of 1,718 trees planted across the City in urban areas through the Leafy City Program and Winter Tree Planting Program.
- The *Weed Management Plan 2023 - 2033* was endorsed by Council in March 2023.
- Continued non-chemical treatment for the control of weeds in nominated locations including the use of steam and hot water and physical weed removal.
- Carried out mitigation works within Warwick Open Space Bushland (Warwick) funded by the Department of Fire and Emergency Services Mitigation Activity Fund Grants Program.
- Participated in the Western Australian Local Government Association (WALGA) Local Government Integrated Weed Management Working Group and Urban Forest Working Group.
- Strengthened relationships with organisations involved with conservation management including Birdlife WA, Wildflower Society of WA, Perth NRM, Edith Cowan University, University of Western Australia, Department of Water and Environmental Regulation and Department of Biodiversity, Conservation and Attractions.

Key performance indicators

- Natural areas protected within City reserves remains at 87.5% in 2022/23 - there was no change compared to 2021/22.



Natural areas protected within City reserves

87.5%

No change



Vegetation condition

Lilburne Park

% 'Good' or better (2018) **78.2%**

% 'Good' or better (2021) **87.7%**

Increase by **9.5%**



Vegetation condition

Mullaloo Foreshore Reserve

% 'Good' or better (2017) **82.7%**

% 'Good' or better (2021) **80.6%**

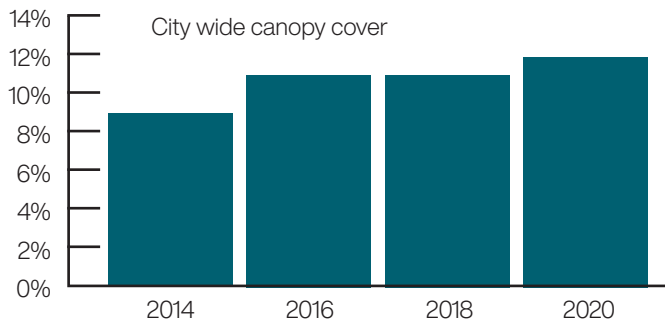
Decrease by **2.1%**



Vegetation condition is rated according to the Keighery Vegetation Condition Scale below:

Completely Degraded	Degraded	Good	Very good	Excellent	Pristine
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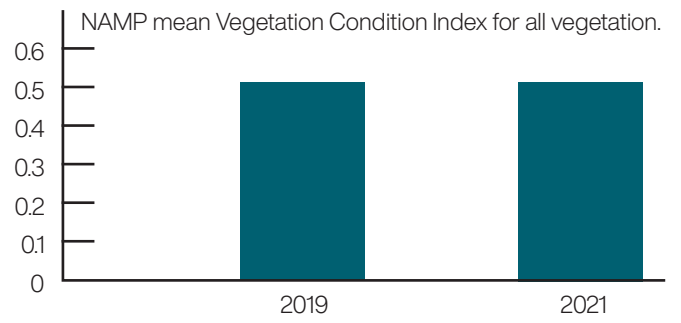
Canopy cover



Source: Urban Tree Canopy Dashboard (Western Australian Planning Commission 2022)

The percentage of canopy cover >3 metres in the whole of the City increased from 11% in 2018 to 12% in 2020. This can be largely attributed to implementation of projects such as the Leafy City Program and the Street Tree Planting Program. The Urban Tree Canopy Dashboard canopy cover data is not yet available for 2022.

Vegetation condition



The mean Vegetation Condition Index for all vegetation in conservation areas with a Natural Area Management Plan has remained relatively stable from 2019 to 2021.



Peregrine falcon (*Falco peregrinus*) at Lake Joondalup





Objective

To manage the City's water resources in a sustainable manner in order to decrease water consumption, increase efficiency and improve water quality.

The *Waterwise Council Action Plan 2021 - 2026*, *Climate Change Strategy 2014 - 2019* and *Yellagonga Integrated Catchment Management Plan 2021 - 2026* provide a coordinated approach to manage water conservation and water quality within City operations and the community.

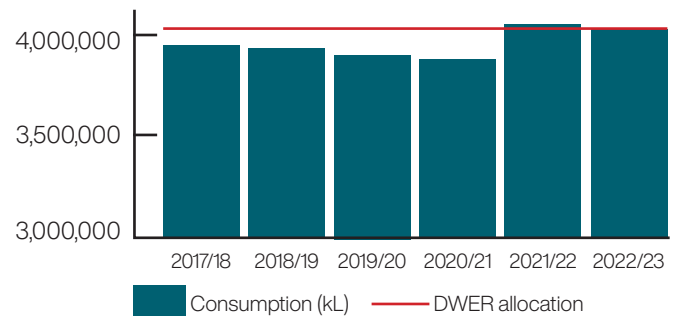
Key achievements

- Re-endorsed as Gold Waterwise Council as part of the Waterwise Council Program for achievements in sustainable water management.
- Re-endorsement of the City of Joondalup Leisure Centre – Craigie as a Gold Waterwise Aquatic Centre.
- Completed the Sump Beautification Project at Stanford Park (Mullaloo), which included underground storage and turf swale transforming the City's drainage infrastructure into a usable community green space.
- Upgraded Killen Park (Duncraig), Sycamore Park (Duncraig) and Wentworth Park (Padbury) as part of the Parks Development Program which included hydro-zoning, eco-zoning, redesigning irrigation systems and landscaping improvements.
- Upgraded 12 existing play spaces as a part of the Play Spaces Renewal Program, converting irrigated turf areas into unirrigated mulched areas which become incorporated into a nature play space.
- Managed and enhanced wetlands through integrated management, such as electronic fishing removal of feral fish, maintenance of water aerators and removal of invasive weed species.
- Continued to implement the Yellagonga Water Quality Monitoring and Improvement Program including ongoing monitoring of surface water and groundwater quality.
- Implementation of the Saving our Snake-necked Turtle Program in collaboration with the City of Wanneroo, Department of Biodiversity, Conservation and Attractions, Friends of Yellagonga Regional Park, Woodvale Waters Friends of Beenyup Channel and community members.

Key performance indicators

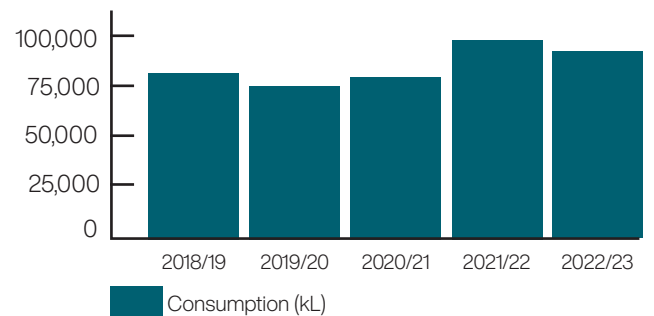
- Corporate groundwater use for 2022/23 was 4,165,361kL. This is a decrease of 2% compared to the previous year (2021/22) and is 1% below the total current annual groundwater allocation limit set by the Department of Water and Environmental Regulation.

Corporate groundwater consumption (kL/yr)



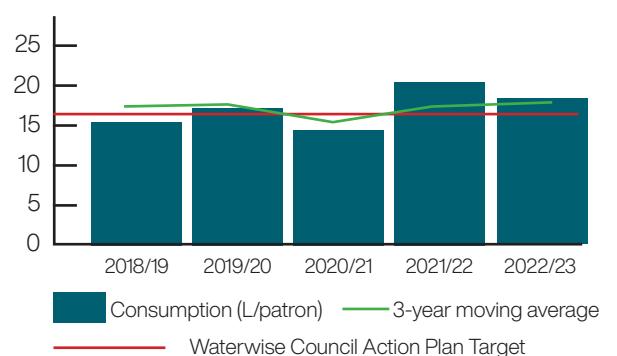
- The City's 2022/23 corporate scheme water consumption was 91,476kL which is a 5% decrease from 2021/22.

Corporate scheme water consumption (kL/yr)



- Scheme water use at Craigie Leisure Centre for 2022/23 was 22,395kL which equates to a consumption of 18L/patron. This is higher than the *Waterwise Council Action Plan* target of 16L/patron, although it's lower than the consumption per patron in 2021/22.

Craigie Leisure Centre scheme water consumption (L/patron)



Objective

To reduce energy consumption and greenhouse gas emissions by the City and the community to mitigate the effects of climate change.

The City is taking steps to prepare and adapt to future climate change impacts through implementing its *Climate Change Strategy 2014 - 2019* and *Bike Plan 2016 - 2021*.

Key achievements

- Engaging the community to seek feedback on the City's draft Coastal Hazard Risk Management and Adaptation Plan.
- Monitoring shoreline movements over time through the City's annual Coastal Monitoring Program.
- Implementing the annual Sand Bypassing Program from Sorrento Beach to Hillarys Beach.
- Purchasing 1,665 tonnes of carbon offsets to offset 100% of the City's fleet emissions.
- Generating 355,759kWh of power from the City's Renewable Energy Program, equivalent to the electricity used by 68 households in one year.
- Saved approximately 933 tonnes of greenhouse gas emissions through the use of geothermal heating for the indoor pools at Craigie Leisure Centre.
- Upgraded street lighting to LEDs with smart lighting controls within residential areas of Hillarys and Iluka.
- Installing an additional 5kW solar PV system at Chichester Park in Woodvale. The City has solar PV systems located on a total of 19 City buildings and solar battery backup systems on two City buildings.
- Commenced construction on a 1.8km shared bike pathway along Eddystone Avenue in Craigie which was completed in November 2023 and is co-funded by the Department of Transport's WA Bike Network Funding Program.
- Constructed a 1.2km shared bike pathway along Joondalup Drive in Edgewater.

Key performance indicators



Solar energy generated

355,759kWh



Total greenhouse gas emissions

12,148 tCO₂-e

Total greenhouse gas emissions decreased by 43% in 2022/23 as compared to the baseline year in 2012/13. Greenhouse gas emissions decreased by 17% in 2022/23, as compared to 2021/22 due to a reduction in electricity usage and a change in emissions factors.



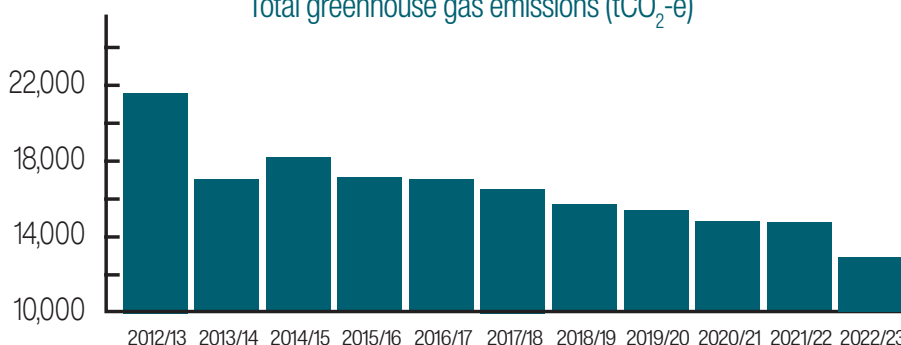
Net greenhouse gas emissions

10,483 tCO₂-e

Net greenhouse gas emissions decreased by 35% in 2022/23 compared to the baseline year in 2012/13. Greenhouse gas emissions decreased by 21% in 2022/23, as compared to 2021/22.



Total greenhouse gas emissions (tCO₂-e)





LED street lights, Grand Boulevard, Joondalup





Objective

To minimise waste to landfill through sustainable waste management practices which incorporate reduce, reuse, recovery and recycling principles.

The City's *Local Government Waste Plan* guides the City's waste management practices with the aim of minimising waste to landfill and informs long-term planning for waste management.

Key achievements

- Bulk hard waste recycling of skip bins, mattresses and white goods of 5,320t of which 1,293t were recycled, meaning a diversion rate of 24%.
- Conducted bin audits to inform behaviour change and waste disposal trends.
- Delivered 99 community waste education classroom sessions with schools, and 21 waste education sessions with community groups.
- A total of 572t of litter collected by the City.
- Implementation of a cleaning up dog waste educational campaign.

Key performance indicators



Total residential waste collected

75,714t

Total residential waste collected in 2022/23 decreased by 2% compared to 2021/22.



Percentage waste diverted from landfill

58%

Decrease of 3% from 2021/22.



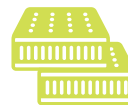
The decrease is mainly due to the Resource Recovery Facility being decommissioned in August 2021 resulting in all red bin waste now going to landfill.



Bulk hard waste collection

4,728t

In skip bins.



174t

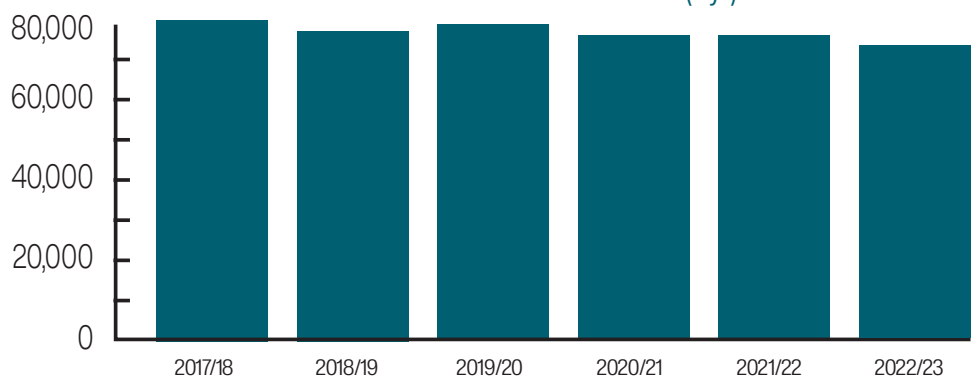
Mattresses



417t

White goods

Total residential waste collected (t/yr)





Objective

To enhance community participation in environmental education initiatives, sustainable behaviour change and encourage community appreciation and ownership of the natural environment.

The City conducts an Environmental Education Program, targeting schools, residents and the broader community. Community education and engagement is an important component in all the City's environmental plans..

Key achievements

- Implementation of the Waterwise Verge Rebate Program for approximately 100 households to increase canopy cover, biodiversity and ecological corridors.
- Continuing to collaborate with the City's Friends Groups by providing 9,850 native seedlings from the City's nursery, attending planting days and producing a Friends Group newsletter.
- Implementing the Adopt-a-Coastline/Bushland program with St Mark's Anglican Community School (Hillarys), Glengarry Primary School (Duncraig) and Mullaloo Beach Primary School (Mullaloo) at Hillarys Foreshore Reserve, Littorina Park (Heathridge) and Lilburne Park (Duncraig).
- Delivering a series of environmental activities relating to biodiversity, energy, water, waste, and transport, including Celebrate Yellagonga Day, Solar Battery Storage event, Waterwise Verge Garden workshop, Plant Giveaway event, WA Tree Festival and Fabulous Fungi Discovery session.
- Distribution of a regular Sustainability e-newsletter promoting sustainability information, events and initiatives to community members.



Key performance indicators



Native plants

9,850

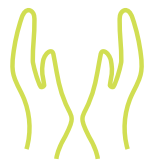
Provided to Friends Groups.



Friends groups

17

Operate in the City of Joondalup.
Reduced by 2 groups since 2021/22



Event attendance

2,984

From 8 environmental events.



Friends of Yellagonga Regional Park 30th year anniversary celebration

Strategic approach

Submissions to Local, State and Federal Government

The City provides submissions to Local, State and Federal Governments on proposed plans, strategies and policies affecting local government. In 2022/23 the City prepared submissions on:

- WA Pest Parrot and Cockatoo Management Strategy online survey – Department of Primary Industries and Regional Development (DPIRD)
- *Aboriginal Cultural Heritage Act 2021* Phase Three Submission – Western Australian Local Government Association (WALGA) to incorporate into their submission to Department of Planning, Lands and Heritage (DPLH)
- Stage 3 of the *Biosecurity and Agriculture Management Act 2007* review – WALGA to incorporate into their submission to DPIRD
- *State Coastal Planning Policy 2.6* health check submission – WALGA to incorporate into their submission to DPLH
- City of Wanneroo's proposed boardwalk at Lake Joondalup Park submission – City of Wanneroo

Existing and emerging sustainability challenges

Changing legislative and regulatory environment	<ul style="list-style-type: none"> • Shifting responsibilities from State to Local Government in coastal hazard planning, bushfire mitigation, carbon emission reductions and vegetation retention. • Amendments to environmental legislation. • Future reductions in groundwater allocations. • Waste management requirements including State Government targets to reduce waste to landfill.
Climate change	<ul style="list-style-type: none"> • Impacts from increasing risk of natural hazards such as increased bushfires and coastal erosion. • Drying climate, increased temperatures and sea level rise. • Loss of biodiversity. • Urban forest management and increasing canopy cover.
Increasing community expectations	<ul style="list-style-type: none"> • Action and leadership on climate change mitigation and adaptation issues. • Biodiversity management to protect native flora, fauna and vegetation communities. • Sustainable approaches to weed management. • Managing urban development and vegetation retention. • Provision of education and incentives on key environmental issues. • Volunteering opportunities to get involved in environmental sustainability initiatives.
Environmental planning	<ul style="list-style-type: none"> • Greater requirement for environmental considerations as part of developments, projects and events. • Increased requirement to advocate and provide input into State and Federal policy and legislation changes. • Balancing the retention of native vegetation with the need for developments.

Priorities for 2023/24

To achieve its environmental long-term objectives, the City will continue to develop, review and implement strategic management plans including development of the following plans and strategies:

- *Environment Strategy.*
- *Climate Change Plan.*
- *Coastal Hazard Risk Management and Adaptation Plan.*
- *Iluka-Burns Beach Foreshore Reserve Management Plan.*

The City's environment services for 2023/24 have a budget of \$2.53 million with 38.8 full time equivalent staff, including environmental development and planning, litter collection, natural areas management, technical engineering support services, waste management and natural areas/buildings.²



Southwestern snake-necked turtle (*Chelodina colliei*)

Stay connected with the City's environmental and sustainability initiatives

The City welcomes and encourages the community to connect and participate in its environmental and sustainability initiatives.

To learn more about the City's events and news, follow the City on social media, and subscribe to the City's e-newsletter at joondalup.wa.gov.au

² As detailed in the City of Joondalup Corporate Business Plan 2023-2027 for the environment net service cost including depreciation.



T: 08 9400 4000

Boas Avenue Joondalup WA 6027

PO Box 21 Joondalup WA 6919

joondalup.wa.gov.au



This document is available in alternative formats upon request.