

Sustainability Snapshot Report

2021



Acknowledgement of Traditional Owners

The City of Rockingham respectfully acknowledges the Traditional Owners and Custodians of this land, the Binjareb and Whadjuk, Nyoongar* peoples and their connection to the land, waters and community. We wish to pay our respects to all Aboriginal communities and their cultures; and to Elders past, present and emerging.

The City's third Reconciliation Action Plan (RAP) 2021-2023 was released in March 2021. It aims to grow a community that demonstrates strong relationships, champions mutual respect and creates opportunities with local Aboriginal communities.

**While Nyoongar is identified as a single, spoken language there are up to 14 different dialects and variations in both pronunciation and in the spelling of many words such as: Nyoongar, Whadjuk and Binjareb. Additionally where the City uses the term Aboriginal it is intended to encompass all Aboriginal and Torres Strait Islander people.*



Foreword from the Mayor

The annual release of the Sustainability Snapshot Report provides an opportunity for the City to reflect on the collective initiatives undertaken by both staff and our Rockingham community. Identification of future directions through regular reporting helps in creating a more resilient and connected community. This report assures transparency between the City and its residents.

As the City's fifth consecutive report, it is promising to see the ongoing commitment and progress made across all six key focus areas. I look forward to being a part of how the City evolves into the future



Mayor Deb Hamblin

Introduction

This is the City's fifth annual Sustainability Snapshot Report. The Sustainability Snapshot Report provides an opportunity for the City to showcase its collective initiatives and actions and to set future directions. This is in accordance with the City's overarching direction outlined in the Strategic Community Plan 2019-2029. Implementation of key actions are further supported by City Community Plan Strategies, including the Sustainability Strategy 2020.

Reporting is divided into six key focus areas, these include:



Water



Waste and Recycling



Energy and Emissions



Nature and Environment



Environmental Education and Engagement



Climate Response







City of Rockingham Region Overview

The City of Rockingham is located approximately 40 km south of Perth. The Local Government Area comprises 16 suburbs and continues to experience rapid residential development in response to a growing population. Situated alongside 37 km of coastline, Rockingham is known as the place 'where the coast comes to life'. The City features a range of unique cultural heritage sites and natural environments including the Shoalwater Islands Marine Park and the Rockingham Lakes Regional Park.



Population

— (ABS ERP 2020) —

138,581

Projection

— (2036) —

201,021

— (2046) —

239,147



Density
539.2

persons per km²

\$5.18

— Billion —

Gross Regional
Product



257 km²

— Land Area —

25,703

Hectares

Sustainability Milestones

March 2017

City endorsed as a Waterwise Council by Water Corporation and Department of Water and Environmental Regulation.

November 2011

Became a signatory of the WALGA Local Government Climate Change Declaration. The City's own Climate Change Declaration was also endorsed by Council.

November 2012

'Local Government Energy Efficiency Program' launched in the City. Sponsored by the Federal Government.

December 2015

Paris Agreement: Australia committed to reduce emissions by 26-28 per cent below 2005 levels, by 2030.

2011

2012

2013

2014

2015

2016

November 2012

Climate Change Response Strategy - adopted by Council in November 2012.

November 2014

Strategic Community Plan 2015-2025 adopted (Climate Change Defence and Management Strategy and Climate Change Mitigation Strategy identified).

September 2003

WA State Sustainability Strategy 'Hope for the Future' released.

June 2017

A third 'Greenwaste' bin rolled out across municipality.

February 2018

First annual Sustainability Snapshot Report released.

May 2018

The City became a signatory of the Climate Council's Cities Power Partnership (formally announced in August 2018).

January 2019

Second annual Sustainability Snapshot Report released.

May 2019

The City was endorsed as a Gold Waterwise Council by Water Corporation and Department of Water and Environmental Regulation.

May 2019

Single Use Plastics and Balloons Policy was endorsed, along with a Turn the Tide on Plastic guideline.

February 2020

Council endorsed the City's first Sustainability Strategy. This document will guide the development and delivery of the sustainability agenda across the City for the next five years.

2017

2018

2019

2020

2021

September 2019

Council endorsed the Coastal Hazard Risk Management and Adaptation Plan, originally earmarked in the Strategic Community Plan as the 'Climate Change Defence and Management Strategy'.

The City also made a submission on the State Government's Climate Change in WA Issues Paper.

August 2020

Launch of the Compost at Home Scheme.

January 2020

Third annual Sustainability Snapshot Report released.

April 2021

Fourth annual Sustainability Snapshot Report released.

May 2021

Waste Plan 2020/2021.

Water

The City recognises its responsibility in effectively and efficiently managing this precious resource, by encouraging sustainable water use in the community and maintaining public amenities such as parks, sporting fields and swimming pools.

While on track to meet established water reduction targets from 2016, the release of the City's Waterwise Council Action Plan 2021 outlines updated actions and goals for the next five years.



Strategic Community Plan Objectives:

3.3 Climate Change Adaptation

Acknowledge and understand the impacts of climate change, and identify actions to mitigate and adapt to those impacts.



Key City Documents:

- Planning Policy 3.4.3
Urban Water Management
- **Waterwise Council Action Plan 2021**

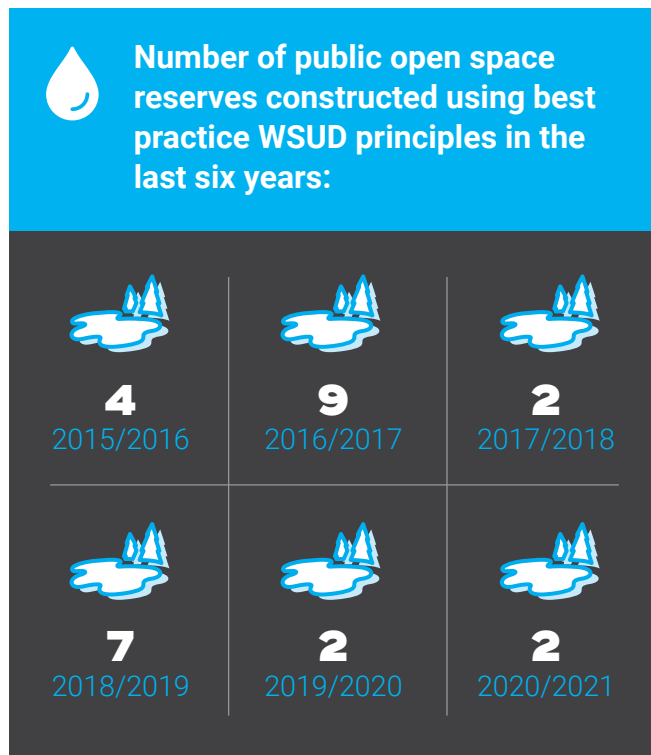






Updates and achievements

- ▶ Since 2015, 26 public open space (POS) areas have been constructed using best practice **water sensitive urban design (WSUD)** principles. These reserves assist in improving the quality of stormwater runoff through providing necessary filtration. Two new POS reserves were constructed at Paradise Road, Oasis Estate, Baldivis and Amberley Drive, Baldivis in 2020/2021 using WSUD principles.



- ▶ Several **roadside swales** were constructed in 2020/2021, following the successful trial of rain gardens last financial year. Rain gardens are garden beds designed to absorb stormwater runoff from stormwater pipes or hard surfaces. Swales are used to capture nutrients and hydrocarbons from stormwater runoff. Roadside swales were constructed at Alumina/Zirconia Drive and the Vistas Estate Stage 4b (as pictured).
- ▶ Ongoing monitoring and improvement of **groundwater usage efficiency** for irrigation occurs each year. This year, the focus was on assigning a number of groundwater bores across the City to a dousing program to improve system operating efficiency. This program assists in removing iron build up in bore pumps, columns and associated fittings through the application of a chemical treatment agent. It is expected these works will result in water savings by reducing rust clogging in irrigation hardware.





What is MAR?

Managed aquifer recharge (MAR) provides a means to generate water supplies from sources that may otherwise be wasted. Essentially, MAR involves recharging groundwater aquifers under controlled conditions to store the water for later abstraction.

MAR can play an important role in integrating the management of surface and groundwater resources while achieving key environmental benefits.

Some benefits include:



Improved
water
supply
security



Restoring
groundwater
levels by
replenishing
aquifers



The creation
of a water
supply with no
evaporation
loss



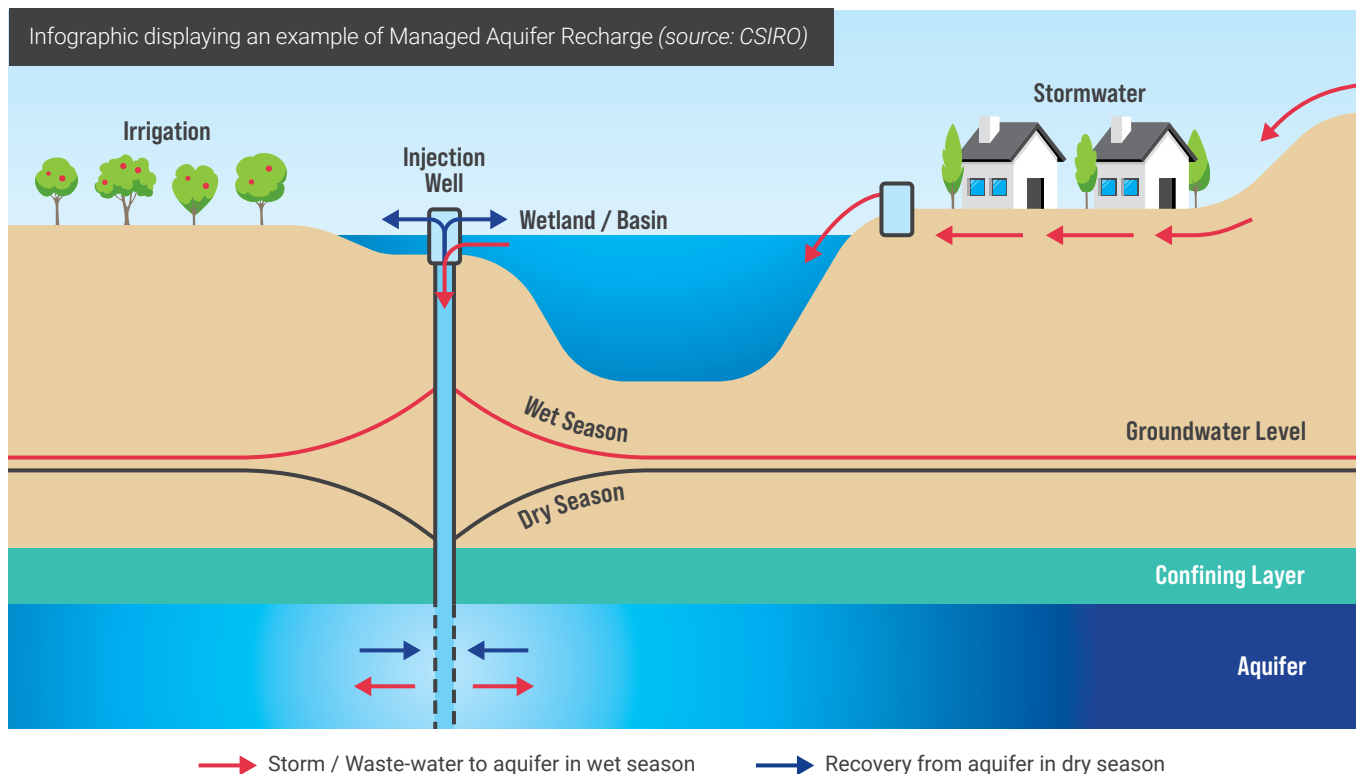
Mitigating
the potential
pressure on
natural water
resources

Water storage is essential to improve the sustainability and resilience of water supply, both of which contribute to urban amenity and liveability of cities (CSIRO).



- In 2018, the City commissioned an extensive desktop assessment into the viability of **Managed Aquifer Recharge (MAR)** to maintain the water balance at source. This involved assessing the possibilities of collecting water above ground (such as stormwater runoff) and then injecting or infiltrating it back into groundwater aquifers under controlled conditions.

Following an initial desktop analysis, a test bore was drilled into the Leederville aquifer to allow for onsite hydrogeological investigations. The results of the hydrogeological study are expected to be delivered in 2022, and will determine whether MAR is achievable at the Rivergums Estate in Baldivis.





Updates and achievements

- Following endorsement as a **Gold Waterwise Council** for the fourth consecutive year, the City remains on track to meeting its 2016 water reduction targets. Following the review of the Water Efficiency Action Plan 2016, the City has released an updated document with new benchmarking targets and actions. The Waterwise Council Action Plan 2021 provides a framework for meeting targets over the next five years. Targets use 2015 water data as a baseline and are as follows:



Reduce corporate potable water consumption by 15% per capita by the end of 2030;



Reduce the City's groundwater consumption by up to 10% based on the Department of Water and Environmental Regulation standard groundwater allowance of 7,500 kL/ha;

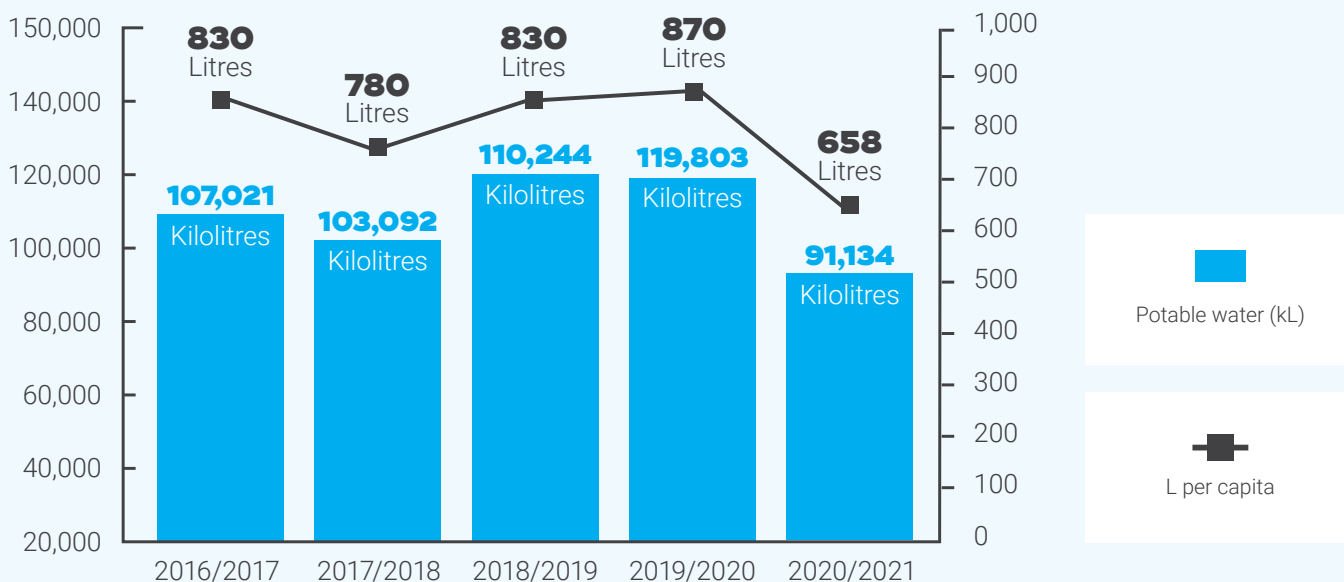


Reduce community water consumption by 15% per capita by 2030 and by 25% by 2060.





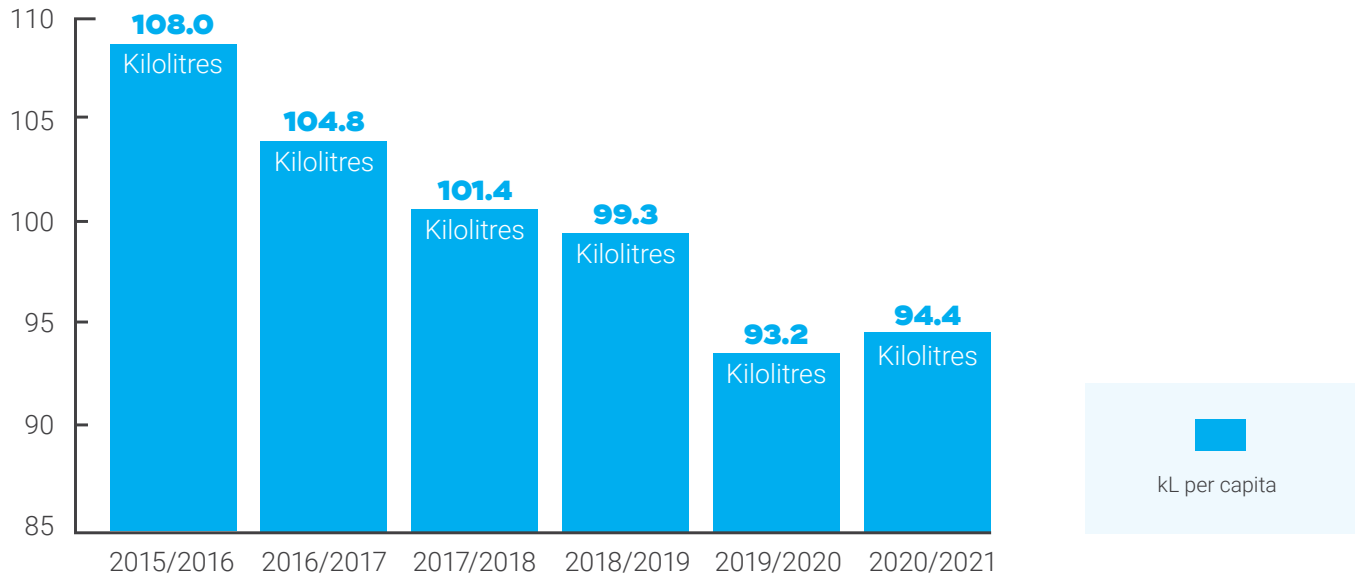
Scheme Water Consumption



- Decreases in potable/scheme water consumption in 2020/2021 can be linked to significant reductions in the City's top five potable consuming assets. 20,550 kL of water was saved between 2019/2020 and 2020/2021 as the result of a major leak being repaired at the ablutions facility at Churchill Park at the Rockingham Foreshore. This is an 86% reduction in usage for this particular facility.
- In 2020/2021, a pool blanket was installed on the 50 m pool at Rockingham Aquatic Centre. Pool blankets have numerous benefits including a reduction in water evaporation and debris falling into pools. They also provide heating using free, renewable energy from the sun.
- As the top consuming corporate assets, the Rockingham Aquatic Centre and Aqua Jetty are key facilities for ongoing targeted water consumption reduction.



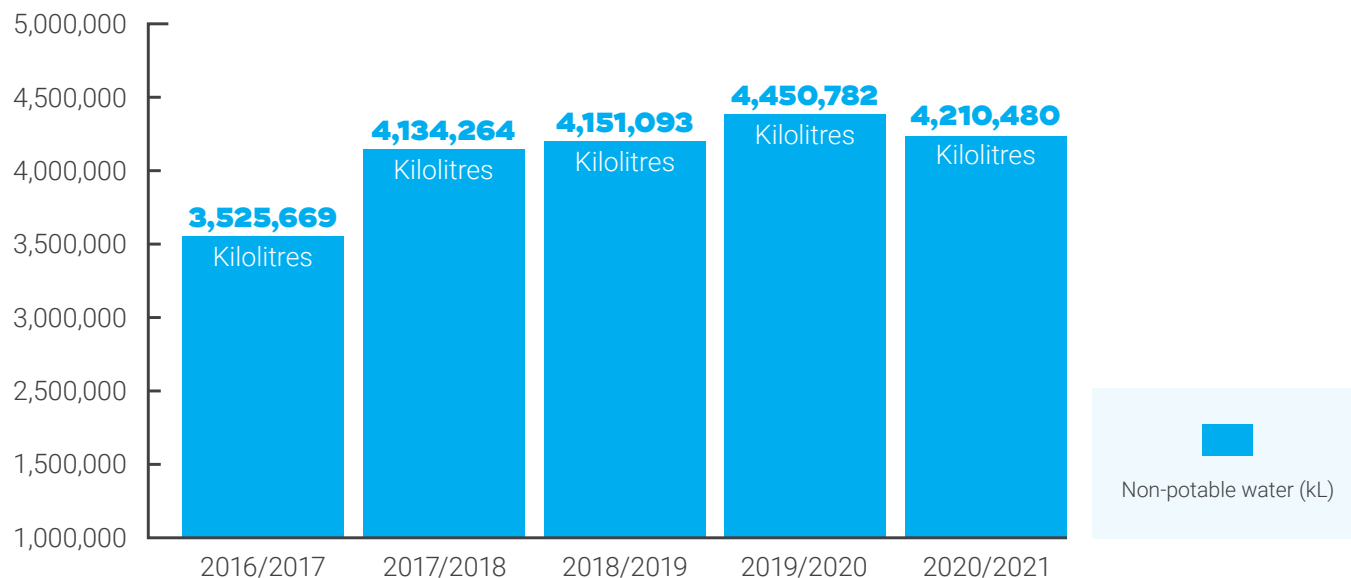
Community Water Consumption



- Community water usage comprises of use among the residential, educational and commercial sectors. While there was a slight increase between the last two financial years, water consumption is still trending downwards. The City's community water consumption goal, of a 15% per capita reduction by 2030 and a 25% reduction by 2060, remains on track to being met.



Groundwater for Irrigation

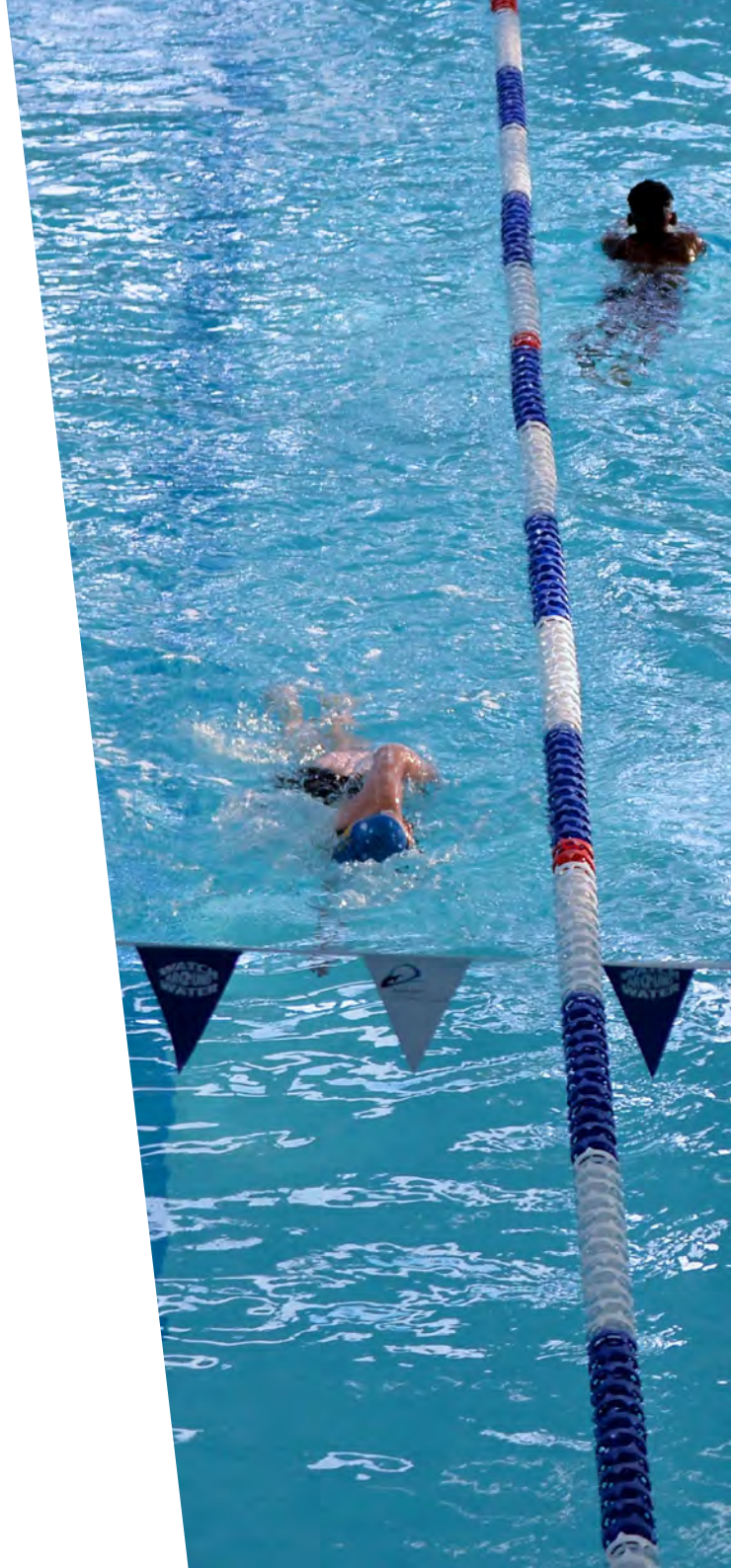


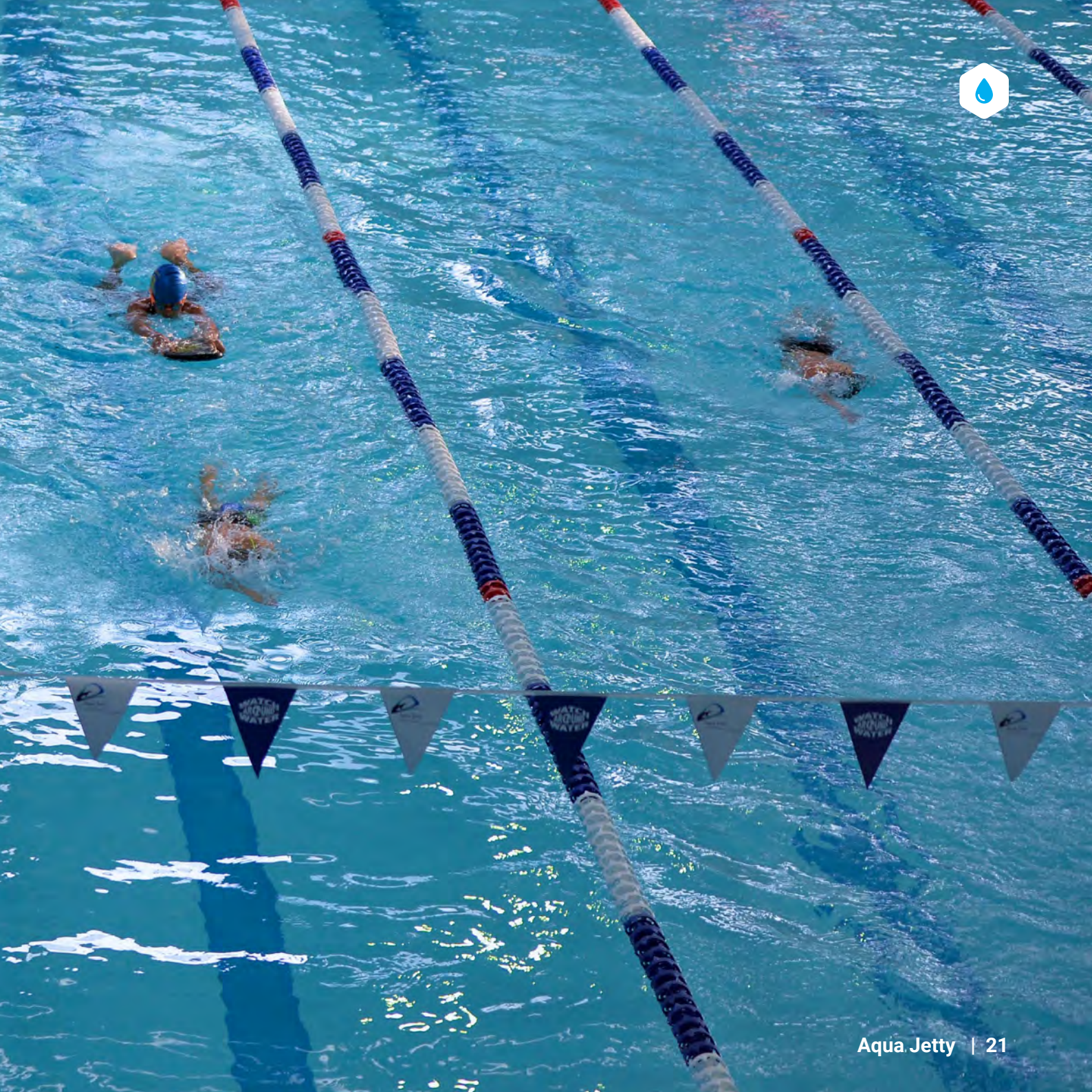
- ▶ Irrigation of City reserves is sourced from groundwater bores and is reflected in consumption usage data. The City continues to maintain groundwater consumption below its annual allocation. In 2020/2021 consumption was 21% less than the total allocation.
- ▶ Improvements to the structure of lake walls at the Rivergums Reserve, Baldivis was conducted after defects were discovered. Extensive repairs were completed to ensure the retention of water at this location. The artificial lake is used as a reservoir for irrigating the surrounding parks.
- ▶ Irrigation upgrades were completed at Lark Hill Sportsplex to improve system uniformity and overall efficiency. This has been achieved through configuring a new irrigation control system and stations, helping to reduce water being lost during routine maintenance.



Focus Moving Forward

- ▶ Review hydrogeological investigation results for Managed Aquifer Recharge project to assess future progression.
- ▶ Continue to advocate for the inclusion of WSUD elements within road reserves earlier in the planning stages.
- ▶ Continue to maintain Gold Waterwise Council status by submitting annual progress reports to Water Corporation.
- ▶ Implement water efficiency actions outlined in the Waterwise Council Action Plan 2021.
- ▶ Continue to improve irrigation infrastructure with investigations into mobile fertilisation injection systems alongside extra stationary dousing units. These units will be used to provide nutrient and wetting agents to turf and garden areas, promoting healthier vegetation and reducing groundwater usage reliance.





Waste and Recycling

Considering the environmental impacts of waste, it is important that sustainable waste solutions are managed by the City in concurrence with appropriate waste education for community members.

The City's Waste Plan 2020/2021, provides a framework for the implementation of key actions which will deliver best practice, sustainable waste management. This plan is in alignment with the State's 'Waste Avoidance and Resource Recovery Strategy 2030'.

From January 2022, the two phases of regulated bans on the sale and supply of single-use plastics begin coming into effect, in accordance with Western Australia's 'Plan for Plastics'. This is a positive step in supporting more sustainable, plastic free communities. As the implementation of these regulations fall outside local government's scope of responsibility, it is encouraging to see the State showing leadership in this space. The bans on single-use items are additional to the City's own Single Use Plastics and Balloon Policy which was endorsed in 2019.



Strategic Community Plan Objectives:

2.7 Services and Facilities

Provide cost effective services and facilities which meet community needs.

3.4 Sustainable Waste Solutions

Incorporate new opportunities that support responsible and sustainable disposal of waste.

4.3 Leader in Sustainability

Provide community education on the management of waste, and provide opportunities for community involvement in sustainability programs.



Key City Documents:

- ▶ **Single Use Plastics and Balloons Council Policy**
- ▶ **Waste Plan 2020/2021**
Endorsed in May 2021 by the Department of Water and Environmental Regulation, the City's Waste Plan 2020/2021 provides a framework for implementing new and existing waste reduction initiatives.

2





Electronic Waste Collection

- E-waste contains both valuable and hazardous waste materials, which is why effective and safe material recovery and recycling is essential in reducing environmental and human health impacts.

An **E-waste Recycling and Reuse Program** was established at the Millar Road Landfill Facility in March 2021. Funding from the WA State Government's WasteSorted E-waste 2020/2021 Grant program supported a wider collection range of electronic waste, including computers, televisions and accessories. This new service provides residents with the opportunity to safely recycle used electronic devices and reduce their impact on our health and environment. Please visit the City's website for a list of the electronic waste items which the Millar Road Landfill and Recycling Facility accepts.

Collection stations for e-waste are also positioned within the City's Administration Building and all four public libraries.

Batteries, mobile phones and printer cartridges are collected at these locations in partnership with external providers. These stations provide the community with accessible drop off locations, free of charge.



Compost at Home

- In September 2020, the City successfully trialled a Compost at Home program by providing 336 residents with indoor and outdoor composting bins. Feedback overall was positive with 88% of the 175 participants still using their composting bin at the end of the 12 month trial. Based on participant responses, it was estimated that 800-900 kg of organic waste was diverted from landfill each week during the trial period. Over a year, this can result in more than 40 tonnes of waste being diverted from landfill.

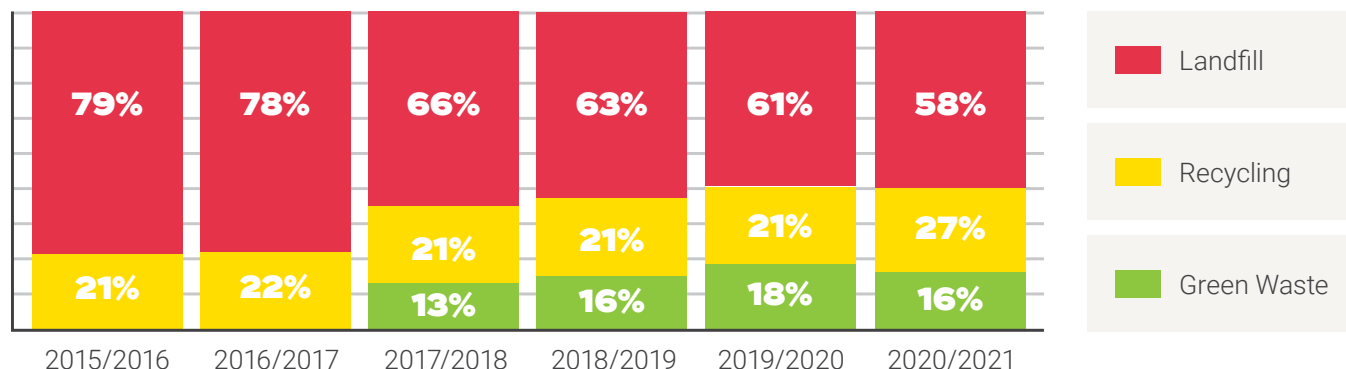
In addition to reducing the amount of waste going to landfill, composting also assists in reducing emissions by trapping carbon in the soil. The lessons learnt from the trial will be used to evaluate the feasibility of establishing an ongoing program within the City.



- ▶ During 2020/2021, **78,614 tonnes of residential waste** material was collected. This includes kerbside bin collections, hard waste verge collections and residential drop off at the landfill facility.
- ▶ Since 2015/2016, there has been a 28% decrease in landfill waste. The introduction of the Garden Organics Greenwaste bin in 2017/2018 influenced a significant reduction of waste to landfill.



Residential Waste Collection



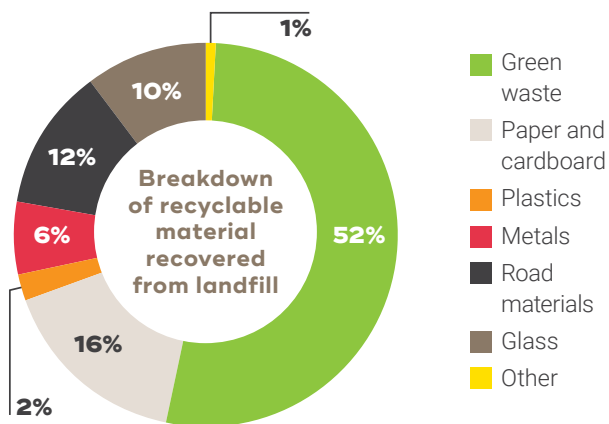
Residential Waste Collection (Tonnes)

	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021
Green Waste	-	-	9,965	11,322	12,425	12,348
Recycling	17,181	17,200	16,762	14,531	14,900	20,852
Landfill	63,078	62,503	52,197	44,495	43,554	45,414
Total Waste	80,259	79,703	78,924	70,348	70,880	78,614



Facts and Figures

- ▶ A total of **35,754 tonnes** of additional materials were diverted from landfill separate to kerbside recycling by the City in 2020/2021. Key recovery avenues for materials include green waste processing, material recovery facility and waste salvaged from landfill drop off. The displayed graph shows a breakdown of recyclables.
 - On a proportional basis, there has been a 4% increase in green waste recovered in the last financial year. Other material categories have remained relatively similar.



126 kg printer cartridges were recycled in partnership with Close the Loop.

- ▶ **Litterbusters** is an integral part of the City's response to reducing litter, illegal dumping and graffiti. In 2020/2021, 2,762 reports were responded to with **369 tonnes of litter** subsequently collected. Since its inception in 2014, almost **2,500 tonnes of waste** has been collected thanks to the response from Litterbusters and the community.

Tonnes of waste collected since 2015/2016		
307	662	324
2015/2016	2016/2017	2017/2018
365	427	369
2018/2019	2019/2020	2020/2021

Residents are encouraged to report unauthorised littering via the mobile app or by calling **1800 4 LITTER**.





1,853 tonnes of construction waste

was diverted from Millar Road Landfill Facility and sold for reuse in civil projects in 2020/2021.

Over 900 tyres

were replaced across the City Fleet. Tyres are recycled through a Tyre Stewardship Australia (TSA) accredited provider to ensure environmentally responsible management of end of life tyres.

Recycling Coffee Capsules

Used coffee capsules cannot be recycled through your normal kerbside recycling bin. To support recyclables being diverted from landfill, coffee capsule recycling bins were placed across City facilities for staff to access. In 2021, one recycling bin was collected; each bin holds approximately 1,500 used capsules.

- ▶ Continue supporting City residents in reducing the amount of food waste going to landfill through a Compost at Home program.
- ▶ Annual reporting on actions outlined in the City's Waste Plan 2020/2021. Some of these actions include:
 - *Increase the capture of reusable goods and source separation at the Millar Road Landfill Facility Re-use Shop.*
 - *Introduce three Better Practice 3-Bin FOGO system by 2025.*
 - *Investigate options to introduce changes to vergeside collections to improve material recovery and reduce illegal dumping.*
- ▶ Redevelopment of Millar Road Landfill Facility is currently in the planning stages to better utilise available space for optimised safety, recovery and customer experience.
- ▶ Pursue accreditation with the Tyre Stewardship Association Australia.
- ▶ Continue to keep the community informed on regulation changes under the State's *Plan for Plastics*.

Energy and Emissions

Reducing greenhouse gas emissions is a global issue, which requires strong leadership and action. Minimising the City's energy usage and emissions is challenging with the large array of facilities, services and infrastructure it maintains, alongside a growing population. However, the City is committed to reducing its energy usage and emissions through new technologies and initiatives, to create a more sustainable future.



Strategic Community Plan Objectives:

3.5 Alternative Energy Applications

Embrace new technology and apply alternative energy solutions to City facilities and services.

4.3 Leadership in Sustainability

Provide community education on the management of waste, and provide opportunities for community involvement in sustainability programs.



Key City Documents:

- ▶ Tourist Destination Strategy 2019-2024
- ▶ Sustainability Strategy
- ▶ **Strategic Asset Management Plan 2021**



3





Community Powerbank

During 2021, the City supported and assisted in the installation of a 464 kWh Western Power Community PowerBank. Positioned in Salamanca Reserve, Port Kennedy, this PowerBank enables connected households to save on electricity costs and also allows the grid to support additional rooftop solar installations.



Carbon Neutral Fleet

The City's vehicle fleet emissions are offset each year by purchasing offsets from accredited providers. These targeted offsets help to reduce the City's overall carbon footprint. This year, the Yarra Yarra Biodiversity Corridor Project was selected for fleet emission offsets. With over 13,000 hectares of plantings, the project is the largest reforestation carbon sink in Australia. The project helps to increase wildlife habitat and connectivity, improve soil erosion and provide education opportunities for research and the community.

One additional hybrid vehicle was purchased in 2021. The City now has four hybrid models within its Smartwatch fleet.





Energy Efficiency Program

Energy consumption reduction initiatives are supported through the City's Energy Efficiency Program. Key energy efficiency improvements currently focus on the installation of solar PV panels and the upgrading of lights to LEDs across the City.

- ▶ Approximately 500 new solar PV panels were installed in 2020/2021. In total, the City now has 3,500 solar PV panels installed across 98 sites.
- ▶ Last year, 358 lights were upgraded to LEDs over 45 locations. It is estimated that energy saved equates to 576 kWh from this switch, a 35% reduction.



576 kWh of saved energy

Street Lighting

- ▶ The ownership and maintenance of street lighting is shared between Western Power and the City, with 60% of City owned streetlights located in Secret Harbour. During 2021/2022, a multi-stage project started to transition 1,200 of these streetlights in Secret Harbour to LEDs. So far, 226 streetlights have been identified for upgrades as part of the first project stage.



2.5 km

of new bike paths (cycling infrastructure) installed.



- ▶ In 2021, the City joined the Western Australian Local Government Association (WALGA) **Sustainable Energy Procurement Program**. This Power Purchase Agreement will allow the City to source electricity from renewable wind farms within WA. By joining this program, the City is taking a significant step in reducing its carbon footprint and working towards a long term goal of becoming carbon negative.
- ▶ To establish a more accurate, real-time energy monitoring system, the City is participating in a WALGA working group to support ongoing emission reporting.

E-Scooters

In 2021, the City approved 200 e-scooters to be rolled out over more than 16 locations. In early 2022, these e-scooters will be made available for community use, providing an accessible low-emission transport alternative.

Electric Vehicle Infrastructure Charging Network Plan

In 2021, the City participated in a Perth South West - Metropolitan Alliance (formerly South West Group) project to prepare a plan for the delivery of a network of electric vehicle chargers across the region.

The identification of appropriate charging sites across the region is expected to assist in accelerating the uptake of electric vehicles within the community. Through the recommendations outlined as part of this collaborative project, the City hopes to remove accessibility barriers and help reduce the level of emissions produced by transportation vehicles. Recommendations from the project are expected to be delivered soon.

The Perth South West project will also provide policy recommendations detailing requirements for the installation of charging infrastructure at new developments sites.



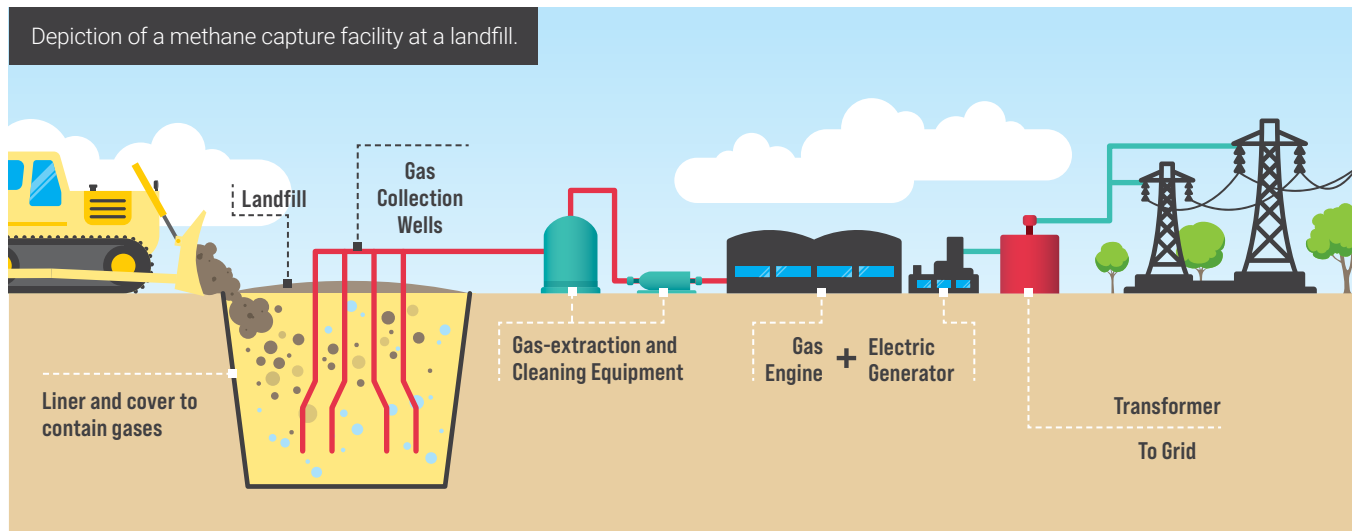
The Perth South West is an alliance of six Local Governments across the South West Perth metropolitan area of Western Australia. The Group works together on regional projects where benefits can be achieved across jurisdictional boundaries and alongside the City of Rockingham, includes the following member Local Governments:

City of Cockburn | Town of East Fremantle
City of Fremantle | City of Kwinana | City of Melville

Methane Harvesting

In the latest financial year, approximately **101,000 tonnes CO₂e** (carbon dioxide equivalent) was captured from decomposing waste in landfill. Once captured, gases are transformed into electricity, which in 2020/2021, was equivalent to powering 1,858 average Western Australian homes. Energy generated was approximately 10,591 MWh during the last financial year.

Since commissioning in 2007, over 1.3 million tonnes of CO₂ has been harvested through the Methane Harvest Facility at the Millar Road Landfill.





Focus Moving Forward

- ▶ Work in partnership with Western Power to install another two community batteries in Baldivis, to support the high uptake of solar panels within the suburb.
- ▶ Reduce corporate carbon footprint through the Power Purchase Agreement with renewable energy sourced from wind farms operated in WA.
- ▶ 100 additional City lights to be converted to LEDs.
- ▶ Continue to deliver cycling infrastructure upgrades across the City.
- ▶ Transition of remaining four Smartwatch vehicles under the Fleet Replacement Program to hybrid models.
- ▶ Establish a real-time energy monitoring platform to effectively report on corporate and community emissions. Data will be used to prepare an Energy Management Plan for targeted reductions to City emissions.
- ▶ Release a Sustainable Home Guideline to assist residents in lowering home water and energy usage.





Nature and Environment

Stretching from pristine beaches to rural lands, the City of Rockingham comprises of range of unique natural environments. In 2021, the City continued to manage and monitor its natural areas by implementing the Community Plan - Natural Area Conservation.



Strategic Community Plan Objectives:

3.6 Preservation and Management of Bushland and Coastal Reserves

Encourage the sustainable management and use of the City's bushland and coastal reserves.

3.7 Liveable Suburbs

Plan for attractive sustainable suburbs that provide housing diversity, quality open spaces, walkways, amenities and facilities for the community.



Key City Documents:

- ▶ Greening Plan (to be revised in 2022)
- ▶ Wetland Management Plan
- ▶ Lake Richmond Management Plan
- ▶ Foreshore Management Plan
- ▶ Natural Area Conservation Strategy
- ▶ Reserve Prioritisation Report
- ▶ Bushland Management Plan
- ▶ Tamworth Hill Swamp Management Plan
- ▶ **Planning Policy 3.1.1 Rural Land Strategy**
- ▶ **Public Open Space Community Plan Strategy (2020-2025)**



Frog Monitoring

Since 2015, the City has undertaken a Frog Population Monitoring Program across a number of wetlands, looking specifically at the Squelching Frog (*Crinia insignifera*) to provide an indication of overall wetland health.

The Program was continued this year, with 50 sites surveyed across 14 wetlands in the City. Automated call recorders were deployed at sites overnight to detect the presence of frog species.

A total of five frog species were recorded from the sites surveyed. These were the Squelching Froglet (*C. insignifera*), Clicking Frog (*C. glauerti*), Slender Tree Frog (*Litoria adelaidensis*), the Motorbike Frog (*L. moorei*), and the Western Banjo Frog (*Limnodynastes dorsalis*). The most common frog species detected was the target species *C. insignifera*. The wetlands that contained the most species of frogs were Lake Richmond and Lake Cooloongup.

Estimates indicated that 74% of sites within the study were occupied by the target species. This is higher compared to previous years, however, was only statistically significant from the 2016 monitoring year.

The effect of improved breeding conditions for the species may not be observed until the next breeding season, when the new tadpoles reach maturity.

Monitoring will be undertaken again in 2022 to establish three years of consecutive data, which will provide the City with a better understanding of changes over time.

Squelching Frog (*Crinia insignifera*), Biota Environmental Sciences





Foreshore Management Plan

The City is in the process of conducting a review of the Foreshore Management Plan. The Plan will assess progress since the last review in 2016 and guide ongoing use and management for the next five years.

To inform the Plan, the City conducted an environmental assessment of the City's foreshore reserves. During the detailed fauna survey, a total of 54 species were recorded including nine mammal species, 19 reptile species, two amphibians and 24 bird species. Of these, two species were listed as having high conservation value: Quenda (*Isoodon fusciventer*) - Priority 4 and Perth Slider (*Lerista lineata*) - Priority 3.

The study also found that, since 2016, the overall condition of vegetation within the City's coastal foreshore reserves has improved.



Quenda (*Isoodon fusciventer*)



Perth Slider (*Lerista lineata*)

Minimising Litter entering Lake Richmond

The Lake Richmond Management Plan was endorsed in February 2020, with key management actions to occur over the next five years. After initial internal investigations, a floating litter boom was installed on a drain entering Lake Richmond. This boom will assist with better practice litter management, in addition to routine litter collection from all drains. Plans are in place for the remaining drains to have litter booms installed.





Cats Local Law Amendment

Outdoor domestic cats are a recognised threat to global biodiversity. In Australia, it is estimated that one pet cat can kill up to 186 species of reptiles, birds and mammals per year, most of which are native species. Collectively, pet cats kill 390 million animals per year in Australia (Legge *et al.* 2019).

To this end, the City proposed an amendment to the *Cats Local Law 2018*, which is expected to come into effect in 2022. The amendment prohibits cats from a number of City managed reserves. The City hopes this will encourage responsible cat ownership and reduce the occurrence of nuisance and roaming cats.

Keeping your cat securely contained 24 hours a day is the only way to prevent it from killing wildlife. Please see the City's website for easy tips on training your cat to stay indoors.



Legge, S., Woinarski, J. C., Dickman, C. R., Murphy, B. P., Woolley, L. A., & Calver, M. C. (2020). We need to worry about Bella and Charlie: the impacts of pet cats on Australian wildlife. *Wildlife Research*, 47(8), 523-539.

Native Plant Giveaway 2021

11,000 seedlings were provided to residents as part of the City's annual Native Plant Giveaway in May 2021. This year's event was hosted by Native Plants WA. This initiative encourages residents to plant native species and green the community.

Protection of Wetlands on Private Land

The City's Rural Land Strategy was adopted by Council in July 2020 to provide an increased focus on protecting environmental and landscape values through planning in the City's rural areas.

The Strategy includes a discretionary clause that allows for subdivisions to vary the minimum allowable lot sizes in instances where improved environmental outcomes can be demonstrated. Over the past 18 months, this clause has been primarily used to cede privately owned conservation category wetlands to the City for ongoing management. To date, the City has secured roughly 17 ha of wetlands, which will be incorporated into future conservation reserves. In addition to this, the City is also in negotiations to have an additional 15 ha ceded.

The wetlands of the Swan Coastal Plain provide habitat for millions of native animals and plants. Since European settlement, the majority of these wetlands have been filled, drained or cleared of vegetation. It is therefore important to conserve the remaining wetlands to protect biodiversity and maintain the linkages between wetlands in the City.



Greening Urban Environments

The City's Greening Plan provides a framework for the expansion of greening public open spaces and streetscapes, with the goal of 15,000 new trees planted by 2022. Since 2017, over **13,000 new trees** have been planted across the City. With a planned revision of the Greening Plan in 2022, the City is well on track to meeting its original goal.

In 2020/2021, **3,367 new trees** were installed.

Beside the new trees planted associated with the Greening Plan, a number of native species seedlings were also planted across the City as part of conservation management actions. **50,515 new seedlings** were planted across City conservation reserves as part of the revegetation works over the 2020/2021 financial year.

- ▶ During the City's annual Winter Street Tree planting program **703 trees** were planted.
- ▶ **18 community planting days** held over past year helped in planting **8,575** seedlings across **seven** reserves. In collaboration with Perth NRM, 12 local community groups, schools and corporate partners assisted in this effort.



1,720

trees planted

2017/2018



3,525

trees planted

2018/2019



4,627

trees planted

2019/2020



3,367

trees planted

2020/2021



Within the past year, the City has acquired six additional POS areas. The City now manages **443 public open space (POS) areas**, totalling **2,100 hectares**.



To maintain and manage these areas, the City has **92 dedicated members** of staff employed.



Focus Moving Forward

- ▶ Next financial year, the City will continue to support the protection of the Snake-necked Turtle (*Chelodina oblonga*) in partnership with Murdoch University researchers. A Turtle Trackers citizen science program will begin which is designed to help the species during the breeding season (spring 2022). Volunteers will be responsible for monitoring nesting sites to assist in protecting females from predatory species like foxes and Australian Ravens.
- ▶ Continue to offer free native plants to residents annually.
- ▶ Key updates to environmental management plans are to be released in 2022. These include: the Greening Plan and the Foreshore Management Plan.
- ▶ Release of Community Plan Strategy: Planning Strategy - Environmental Protection to support the protection of environmental values on private land.
- ▶ Karnup District Structure Plan is to be prepared with a focus on retention of existing areas of high ecological value. As an area of high population growth, early planning will help support the creation of more sustainable suburbs. These objectives will be supported by the release of the Community Plan Strategy: Planning Strategy - Environmental Protection.
- ▶ Contribute towards the annual population monitoring of the Little Penguin (*Eudyptula minor*) colony at Penguin Island.
- ▶ Continue to participate in the Department of Biodiversity, Conservation and Attractions' *Little Penguin Working Group* and set aside funding to implement the agreed priority management actions to support the ongoing conservation of the colony.





Environmental Education and Engagement

A range of events and programs are supported and enabled by the City which promote sustainable practices to all members of the community. Encouraging residents to partake in a healthy lifestyle, active mobility and environmental awareness were key themes during last financial year.

During 2021 COVID-19 restrictions were still in place, which continued to limit the facilitation of certain City events.



Strategic Community Plan Objectives:

1.4 Attractions and Events

Seek to host iconic community events and attractions that will entice residents and visitors throughout the year.

2.4 Community Engagement

Facilitate comprehensive community engagement on issues facing the City, ensuring that residents can provide input into shaping our future.

2.5 Community Capacity Building

Empower the community across all ages and abilities to be culturally aware and involved with a diverse range of community initiatives that incorporate volunteering.

4.3 Leadership in Sustainability

Provide community education on the management of waste, and provide opportunities for community involvement in sustainability programs.

4.7 Key Stakeholders Partnerships

Foster relationships and partnerships with key stakeholders to achieve enhanced community outcomes.



Key City Documents:

- ▶ Health and Wellbeing Strategy
- ▶ Volunteering Strategy
- ▶ Cultural Development and the Arts Strategy
- ▶ Library and Information Strategy

- ▶ **Reconciliation Action Plan 2021-2023**

The third edition of the City's Reconciliation Plan, aims to encourage respectful and collaborative engagement with the Indigenous community.



Updates and achievements

- ▶ City libraries continue to champion sustainable practices to the community. In 2020/2021, **32 free sustainability related workshops were held**, including events which focused on organic gardening and recycling and upcycling of materials.
- ▶ Since partnering with the **Grow It Local program** in January 2020, 328 community members have signed up to the platform. This program encourages residents to grow, share and eat locally grown foods from their own gardens. In addition, a free six-week program, 'Grow.Cook.Eat', is offered to residents to improve knowledge and confidence in growing an edible garden. In the 2020/2021 financial year, nine workshops were held engaging 205 community members.
- ▶ One **corporate volunteering** event was held in the past financial year. Fourteen City employees assisted Native Plants WA, a local organisation which alongside providing native plant species, supports bush revegetation works through education and training within the community.
- ▶ The annual **Castaways Sculpture Awards** event was held in October 2020. This event promotes environmental awareness, through the use of repurposed materials for a sculpture exhibition.

Rockingham Youth Centre

Following refurbishments to an old commercial building, the new Rockingham Youth Centre opened with a launch event in March 2021. At the launch event, the City piloted workshops aimed to help upskill local young people. These included **a bike maintenance and planting workshop**. Following the launch event, an additional planting workshop was held in April with the intention to continue these into the future.





School Events

Throughout 2020/2021, local schools were involved in a number of programs and projects encouraging sustainable lifestyles, including:

► Upcycle Art Project

Held in the first half 2021 the Upcycle Art Project had **16 schools** participate. This project encourages students to create exhibits from used materials. The event promotes the reuse and upcycling of materials found in daily life.

► Walk Safely to School Program

In 2021, 29 local schools registered for the Walk Safely to School Day in March. More than 3,200 students actively travelled to school on the day.

The City supports this event through funding of school breakfasts on the day.

► Your Move Program

The City actively promotes the Department of Transport's Your Move program which encourages students to actively travel to school. In 2020/2021, **19 local schools signed** up to the Your Move program.



10
schools

2017/2018



14
schools

2019/2020



19
schools

2020/2021

Focus Moving Forward

- Release of 2022 calendar for environmental and sustainable events.
- Sustainability will continue to be a key theme for workshops held at City libraries.
- Continue to partner with Grow It Local to support residents in creating edible gardens.
- Increase community engagement and education through the employment of a dedicated City Environmental Education Officer.

Climate Response

Global advocacy for climate change response from leaders continued in 2021, with the release of the Intergovernmental Panel On Climate Change Sixth Assessment Report being a highlight. The report presents detail on the unequivocal influence of humans warming the atmosphere, oceans and lands and promotes the need for significant global action.

As a local government, the City has a responsibility to ensure the community is informed about potential climate-related risks. Working collaboratively to mitigate the impacts of climate change is essential.



Strategic Community Plan Objectives:

3.1 Infrastructure Planning

Plan and develop community, sport and recreation facilities which meet the current and future needs of the City's growing population.

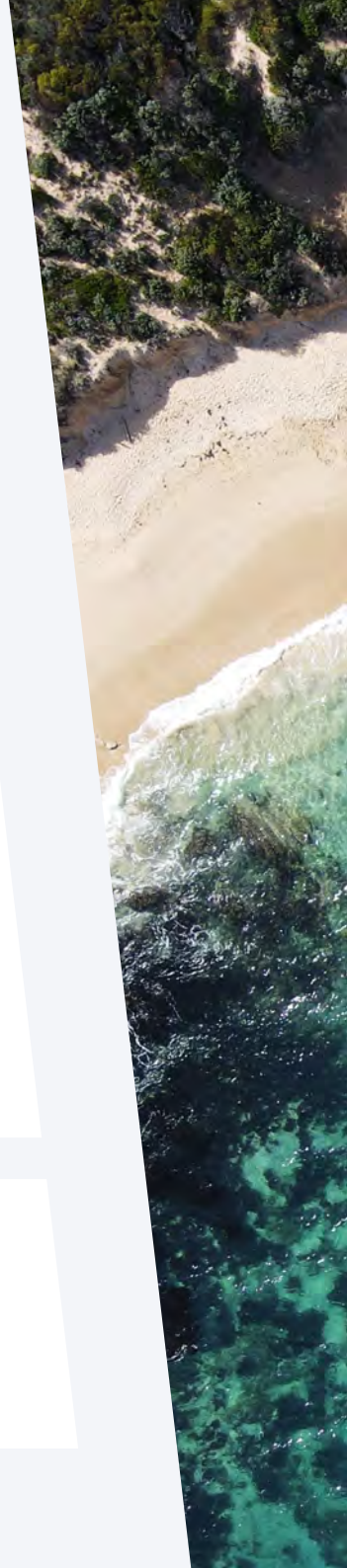
3.3 Climate Change Adaptation

Acknowledge and understand the impacts of climate change, and identify actions to mitigate and adapt to those impacts.



Key City Documents:

- Coastal Hazard Risk Management Adaptation Plan
- Sustainability Strategy





Hydrographic Survey

The City was successfully awarded a Coastal Adaptation and Protection (CAP) grant in 2020 to undertake a hydrographic survey of the Rockingham coastline. The survey was completed by a team from the Department of Transport (DoT) in May 2021 over three days. The survey covered the entire coastline, from the Kwinana headlands in the north, to Singleton in the south, and was inclusive of the nearshore zone and beach.

Hydrographic data was recorded using a multibeam echo sounder, which uses sound pulses or “pings” to determine the bathymetry (depth) of the seabed. The boat was also equipped with a terrestrial laser scanner, which uses light pulses to measure the beach and dune topography.

High quality bathymetric and topographical data are essential for assessing how vulnerable our beaches are to coastal hazards and climate change. The data will inform a number of studies recommended in the City’s Coastal Hazard Risk and Adaptation Plan (CHRMAP).

► Coastal Monitoring Surveys

In 2020/2021, seven coastal monitoring surveys were conducted across five locations, including Mersey Point, Safety Bay Foreshore, Point Peron, Waikiki Foreshore and Kwinana Headlands. Monitoring included completion of beach profile surveys and feature surveys.

► Risk Management

Considering climate change when assessing project risk is important to ensuring a resilient community. To encourage more employees to engage with this topic, updates were made to the internal Risk Management training booklet.

Cities Power Partnership

Since 2018, the City has been affiliated with the Cities Power Partnership (CPP). Under this partnership, the City has pledged to implement five key actions for climate change action. Collaboration between councils is important in identify key areas of improvement and the CPP hosts workshops through the year to support this communication.

The Department of Transport survey boat conducting the hydrographic survey at the Pond in May 2021





Peron-Naturaliste Partnership

The Peron-Naturaliste Partnership (PNP) is a collective of nine Local Governments located between Point Peron and Cape Naturaliste. The City joined the PNP in 2011, recognising the importance of taking a regional and collaborative approach to coastal management.

As part of the PNP partnership, City Officers have been performing monthly beach monitoring at 16 locations along the City's coastline since 2017. This includes beach width measurements, on-ground photo monitoring and tidal measurements.

In order to ensure the methods used remain current and in line with best practice, the PNP recently engaged expert coastal engineers to conduct a review of the monitoring program. The consultants offered a number of recommendations to improve and expand the monitoring program. Per the recommendations, all PNP members will continue to monitor the same locations monthly with the goal of establishing a baseline of at least five years of data, in which significant trends can be seen.

In 2020, the City installed a CoastSnap station at Mersey Point jetty as part of the City's involvement in the PNP. The stand provides a platform for community members to snap images of Mersey Point from a fixed position using their smartphones and share the images via a QR code or social media.

The University of Western Australia conducted a review of the CoastSnap program. Of all the CoastSnap stands in the PNP region, Rockingham has the highest number of photos uploaded and the largest number of 'local champions' that have uploaded multiple photos over time. The PNP is looking to expand the CoastSnap program with an optional survey that will gauge the coastal community values expected to be released in 2022.





Point Peron Sand Trap

Natural build-up of sand occurs as a result of the Garden Island Causeway, where sand is excavated from the Point Peron Sand Trap. Excavation of sand from this area delivers sand for beach renourishment where significant erosion has occurred, and safe access to Point Peron Boat Ramp.

In 2020/2021, **13,319 m³** was excavated from Point Peron Sand Trap during two excavation campaigns.

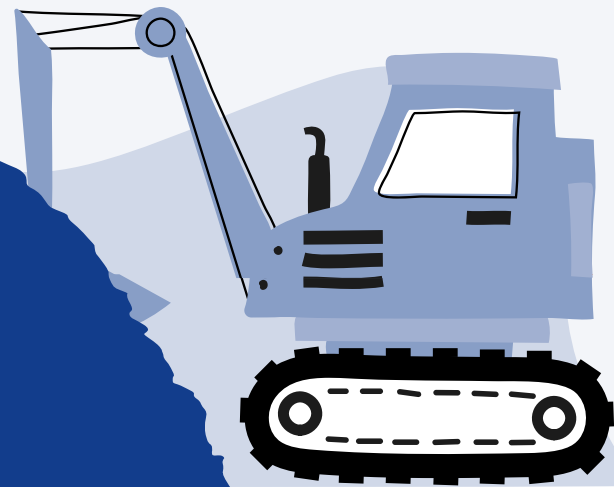
In February 2021, **14,584 m³** was taken from the stockpile for the Kwinana Headlands Beach Renourishment. As a site with ongoing erosion issues, the sand renourishment of Kwinana Headlands Beach is intended to protect the shoreline from further erosion and improve beach amenity. In June 2021, **10,162 m³** remains within the Point Peron Sand Stockpile, with a preferred site yet to be determined.

8,266 m³
excavated

September
2020

5,053 m³
excavated

May and June
2021





- ▶ Finalisation of the Coastal Monitoring Plan in accordance with the City's CHRMAP.
- ▶ Determine preferred sites for Point Peron Sand Trap stockpile for beach renourishment.
- ▶ Complete the Coastal Costings Assessment, as recommended by the CHRMAP. The assessment will estimate the cost of all coastal adaptation scenarios presented by the CHRMAP. This includes the cost of managed retreat and the cost of protecting coastal assets with hard infrastructure, such as seawalls.



Acknowledgements

The City wishes to acknowledge the following teams who collectively work to deliver the various sustainability actions detailed in this report.



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Community
Capacity Building



Technical Services



Land Development
and Infrastructure



Library Services



Parks Services



Strategic Planning
and Environment



Waste Services

Further, thank you to all City of Rockingham residents who contribute towards our sustainable future.





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