



Sustainability Snapshot Report

2020



Acknowledgement of Traditional Owners

The City of Rockingham respectfully acknowledges the traditional owners and custodians of the land on which Rockingham stands today, the Nyoongar people. We wish to acknowledge the strength of their continuing culture and offer our respects to Elders past, present and emerging. The word 'Nyoongar' is identified as a single language but can be pronounced and spelt several ways. This document uses 'Nyoongar' to represent the different spellings.



Foreword from the Mayor

Each year, the Sustainability Snapshot Report proves to be a valuable resource by allowing us to reflect on our achievements over the year, track our progress towards our sustainability goals and identify areas for further improvement. After such an unexpected year, it's more important than ever to take a moment to celebrate the wins while setting our sights on the future. Despite the unprecedented events which have affected us all in varying ways, I am continually impressed by our community's strength and resilience and our dedicated staff working to ensure Rockingham continues to be a great place to live.



Mayor Barry Sammels

Introduction

The Sustainability Snapshot Report captures actions and initiatives from across the organisation which collectively work towards our sustainability aspirations outlined in the Strategic Community Plan 2019-2029.

The Sustainability Snapshot Report was initially launched in 2017 and has been released on an annual basis since then. As the fourth consecutive report, valuable baseline data has been established and we have witnessed significant improvements across each of the six key focus areas. The Report serves as a valuable resource for reflecting, goal setting and sharing the ongoing work delivered by the City in working towards a sustainable future.

These actions are reported on under the six key focus areas:

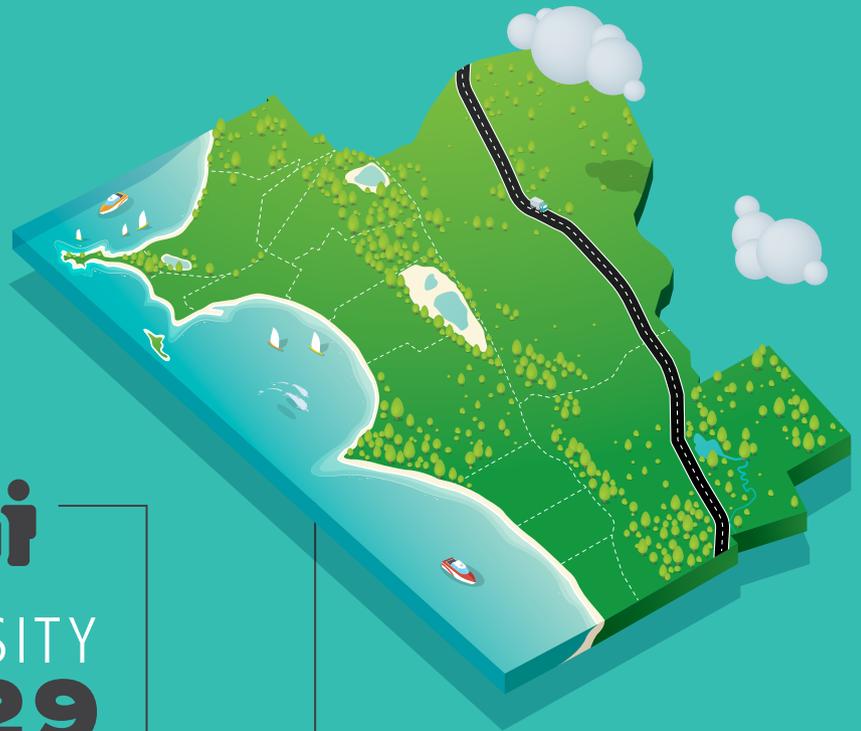






City of Rockingham Region Overview

Located approximately 40 km south of Perth, the City of Rockingham local government area comprises 16 suburbs, a 37 km stretch of coastline, significant natural areas including the Shoalwater Islands Marine Park, Lake Richmond and its thrombolite community and numerous cultural heritage sites. Rockingham is the place 'where the coast comes to life', with residents and visitors enjoying the natural abundance in the region, the lifestyle and the activities on offer. Retail and hospitality are some of the biggest industries along with education, health care and social services as well as a growing tourism sector (economic.id).



POPULATION

(ABS ERP 2019)

135,943

PROJECTION

(2036)

239,147

71% ▲ INCREASE



DENSITY

5.29

PERSONS PER HECTARE

RESIDENTS BORN OVERSEAS

31.7% PEOPLE



TOTAL LGA AREA
25,703
HECTARES

Sustainability Milestones

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.

December 2015

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

November 2012

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

2010

2011

2012

2013

2014

2015

September 2003

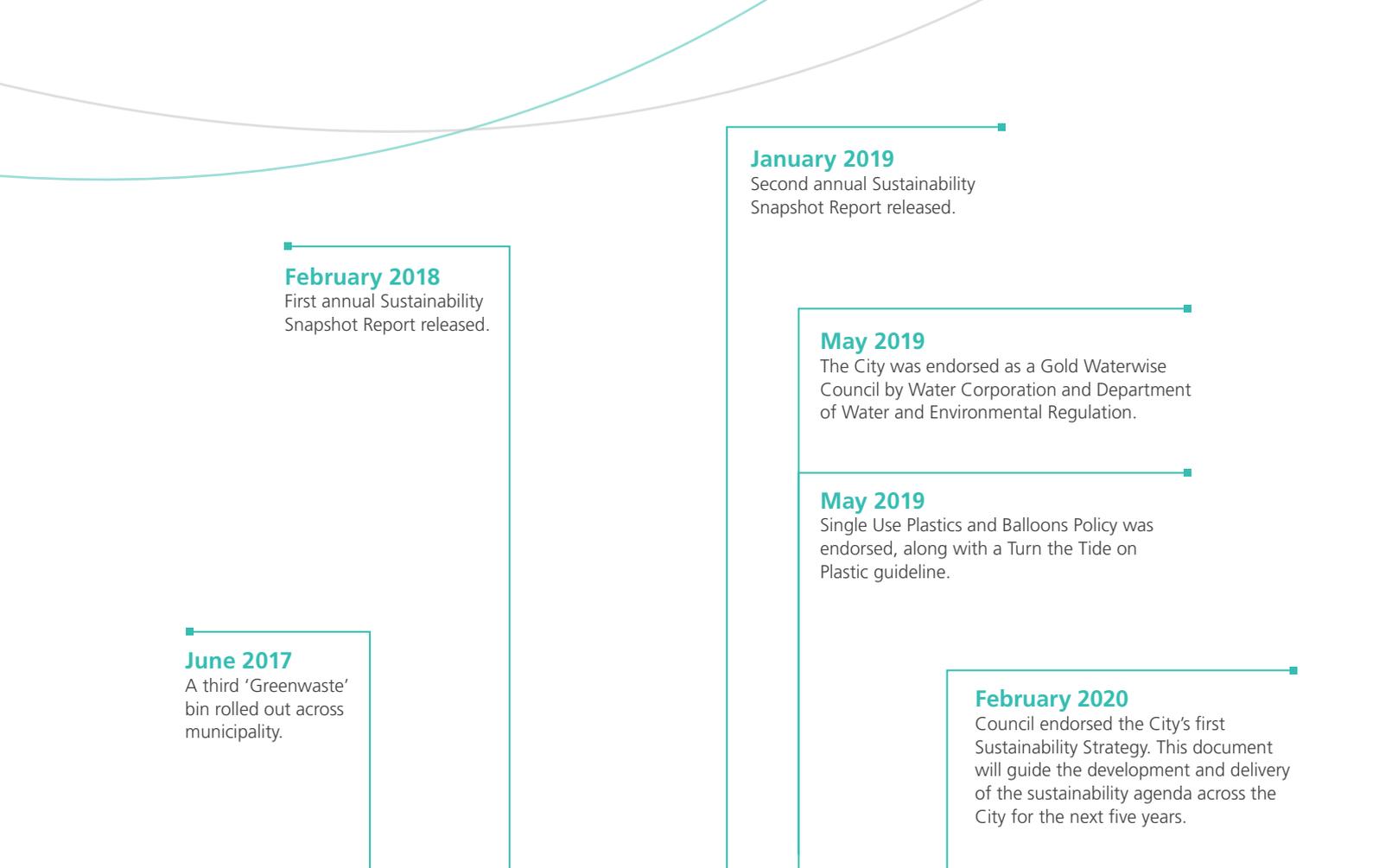
WA State Sustainability Strategy 'Hope for the Future' released.

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).



February 2018

First annual Sustainability Snapshot Report released.

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.

June 2017

A third 'Greenwaste' bin rolled out across municipality.

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.

2016 2017 2018 2019 2020

March 2017

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

May 2018

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

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.

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Water

The City is responsible for managing this indispensable and finite resource to ensure public facilities such as sporting fields, parks and swimming pools are available for the community.

In striving to achieve leadership in sustainability, the City continues to explore opportunities to reduce operational water use, investigate alternative water sources and support water efficiency measures within the community.

With the review of the Water Efficiency Action Plan due to commence in 2021, new benchmarking and goals will be set for the forthcoming period.



Strategic Community Plan Objectives:

1.1 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
- ▶ Water Efficiency Action Plan 2016



Updates and achievements



Carpark rain garden within the Golden Bay Foreshore Park.

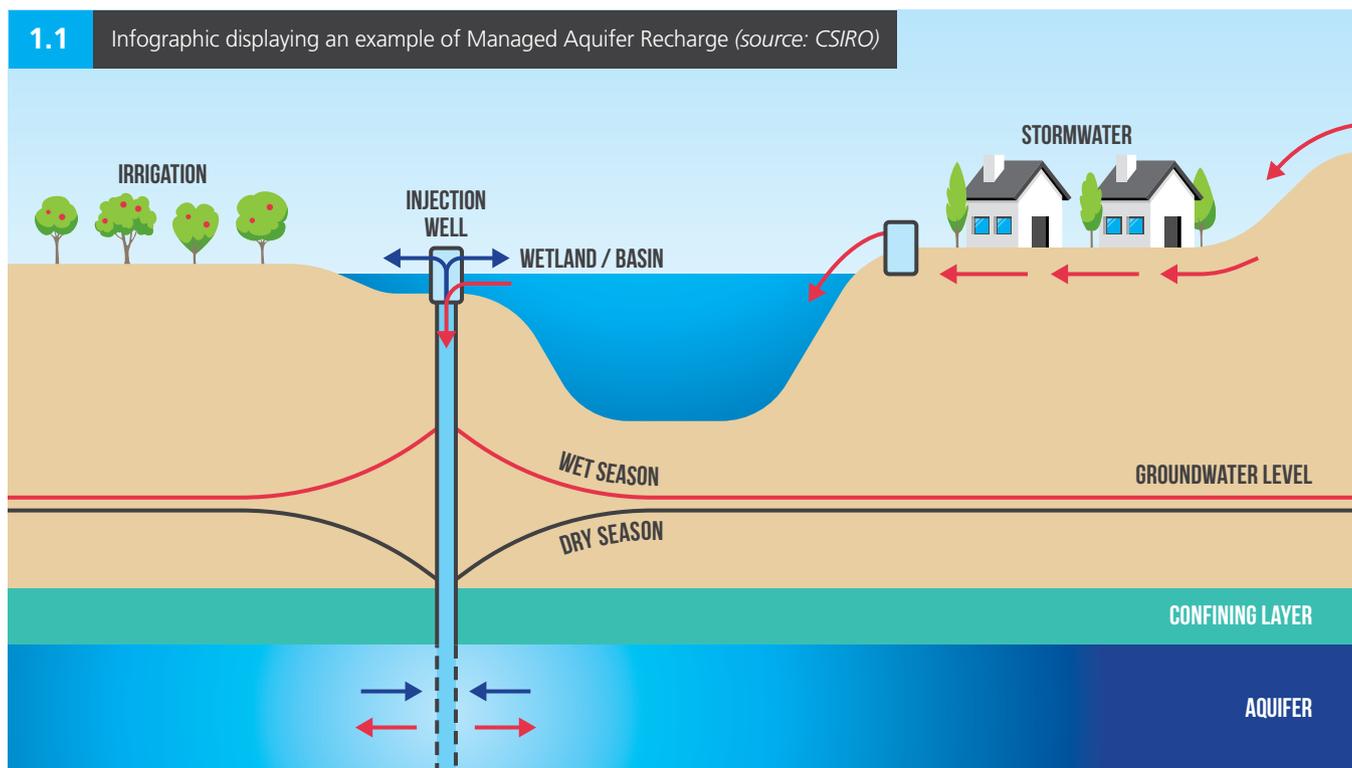


Roadside rain garden on Portofino Avenue in Baldivis.

- ▶ Two new areas of public open space were constructed in Golden Bay using [water sensitive urban design \(WSUD\)](#). This included bio retention gardens being integrated into car parking areas and public open space to capture nutrients and hydrocarbons found within the stormwater runoff. Bio retention gardens are planted with wetland and coastal trees, shrubs and groundcover species consistent with the *Vegetation guidelines for stormwater biofilters in the south-west of Western Australia*.
- ▶ Several [roadside rain gardens](#) were installed at the Spires Estate, Baldivis, as a trial for WSUD in residential road reserves. Rain gardens are specially designed garden beds that filter stormwater runoff from hard surfaces or stormwater pipes. Rain gardens represent a more efficient approach to stormwater treatment than typical end of pipe solutions by providing at-source treatment throughout the catchment.
- ▶ In March 2020, a scope of works was prepared to appoint a consultant to construct a test bore into the Leederville aquifer together with a hydrogeological investigation. The test bore and the hydrogeological investigation will determine the viability of [managed aquifer recharge \(MAR\)](#) at the Rivergums Estate in Baldivis and determine the next steps, consistent with the national water recycling guidelines. Bore installation is anticipated in the early months of 2021. More information about the benefits of MAR can be found in the 2019 Sustainability Snapshot Report.



- ▶ The City was endorsed as a [Gold Waterwise Council](#) for the second year running by the Water Corporation, based on the implementation of actions listed in the City's Water Efficiency Action Plan (2016). This endorsement recognises the City's approach to sustainable water management and is a reflection of the ongoing hard work and commitment across a number of teams.
- ▶ The City is currently exploring opportunities to reuse excess water from a local brewery (a by-product from the brewing process) in our road construction. As the water has been treated it was deemed unsuitable for use in our parks and landscaped areas.



→ Storm / Waste-water to aquifer in wet season

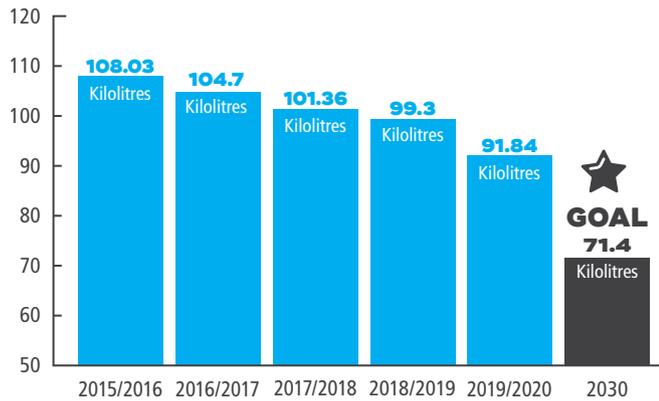
→ Recovery from aquifer in dry season



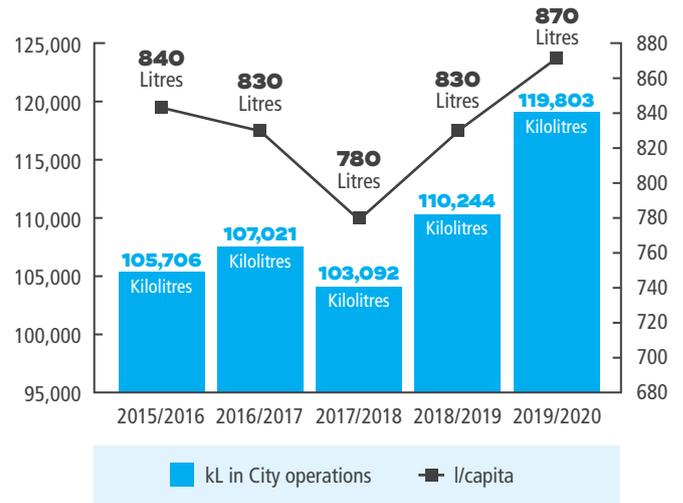
Facts and Figures

Water use data

Community water use (per capita)



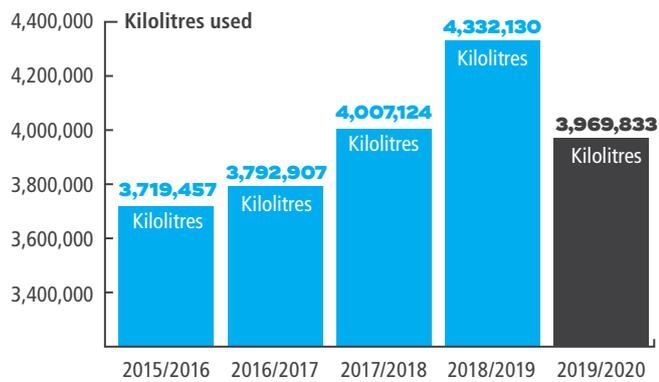
Scheme water used in City operations



- ▶ During the COVID-19 enforced closure, maintenance and upgrade works were carried out on the pools at the Aqua Jetty and the Rockingham Aquatic Centre, which were subsequently emptied and refilled. This accounted for around 4500 kL of water. Additionally, a leak was identified in early 2020 at the Aquatic Centre which saw almost 6000 kL of water lost before the leak could be located and repaired. If not for the maintenance works and leak, total scheme water consumption would be within the normal usage scope.
- ▶ Water meters at the aquatic centres are monitored regularly to ensure leaks or faults can be detected and repaired in a timely fashion.
- ▶ Community water use per capita has continued to decline, dropping almost 16.6 kL per capita since reporting began in 2015/2016. If water use continues to drop at this rate, the goal of 71.4 kL per capita will be reached by 2027, several years ahead of schedule.



Groundwater used for Irrigation



Each year, the City is allocated groundwater licenses for groundwater extraction by Water Corporation to maintain public open space. **This year, the City used almost 11% less than its allocation**, which is indicative of the best practice irrigation methods employed by the City. Further, usage was less than the two years previous.



That is the equivalent of saving over 191 Olympic swimming pools of groundwater.



Focus moving forward

- ▶ Construction of the MAR test bore was due to commence in early 2020. The test bore and hydrogeological investigations will determine the viability of MAR in this location and will also guide future Stage 2 investigations.
- ▶ Calibration of the City's rainfall gauges to reduce unnecessary irrigation across public open space and sports fields.
- ▶ Installation of pool blankets at the Rockingham Aquatic Centre and the Aqua Jetty to help reduce water loss through evaporation.
- ▶ Conduct another water efficiency audit in the 2020/2021 period to help target water efficiency measures.
- ▶ Preparation of a new Waterwise Council Action Plan to replace the Water Efficiency Action Plan (2016). The new Action Plan will account for operational and demographic changes within the City since 2016 and look at how we can improve our water efficiency over the next five years in line with best practice.









Waste and Recycling

The waste and recycling industry has received a lot of attention over recent years. While there are a range of environmental impacts associated with waste and resource recovery, there is also huge potential to develop more sustainable systems. The City plays a key role in ensuring sustainable waste management by providing optimal services for our residents, supporting waste reduction initiatives and minimising environmental impacts.



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 Leadership 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

Consistent with the State Waste Avoidance and Resource Recovery Strategy 2030, the City, along with other local governments, is required to prepare a waste plan to ensure consistency with the Waste Strategy. The Waste Plan will inform the City's new Waste Services Strategy, to be developed in 2021.



Updates and achievements

- ▶ **A Compost at Home pilot program was launched in September 2020.** Participants were randomly selected following an expression of interest period which received significant interest at the time. A total of 400 residents were selected and received either an indoor or outdoor composting bin. In return, participants will provide feedback on their composting habits over a 12 month period to help inform further expansion of the program and track waste reduction. Composting helps to capture carbon in the soil and it reduces the amount of waste that is sent to landfill.
- ▶ Litterbusters continues to be an important service provided by the City, with more than 3000 litter reports received from the community in the 2019/2020 financial year. As a result, **427 tonnes of material was removed from public spaces and disposed of.** The Litterbusters team was established in 2014 and has since helped to keep our outdoor areas clean, safe and attractive.



Mayor Barry Sammels with Waste Education Officer Kelly Levisohn and residents who are participating in the Compost at Home program.

- ▶ **2756 tonnes of construction waste was diverted from landfill** and sold to contractors for reuse in civil projects.
- ▶ As it came up for renewal, the contract for management of fleet tyres was updated to require the provider to be accredited with the Tyre Stewardship Association (TSA). **This ensures environmentally responsible management of end of life tyres**, in line with TSA guidelines. With almost 1000 tyres being replaced over the financial year, this ensures best practice and a commitment to our sustainability aspirations.

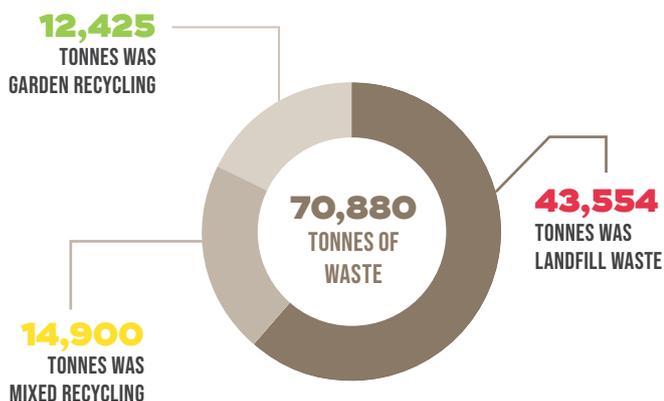


Residents are encouraged to report unauthorised littering via the mobile app or by calling **1800 4 LITTER**.



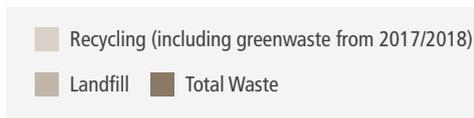
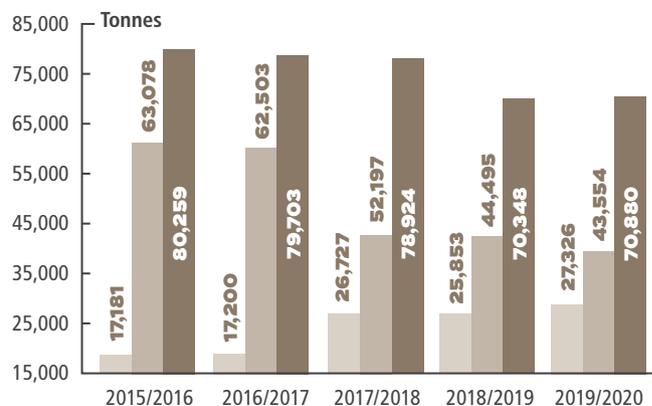
Facts and Figures

- ▶ A total of 70,880 tonnes of residential waste material was collected in 2019/2020. This includes kerbside bin collections, hard waste verge collections and residential drop off at the landfill facility.



- ▶ Since 2015/2016, **waste to landfill has decreased by 31%**. The introduction of the Garden Organics Greenwaste bin in 2017/2018 has resulted in a significant increase in waste diversion.

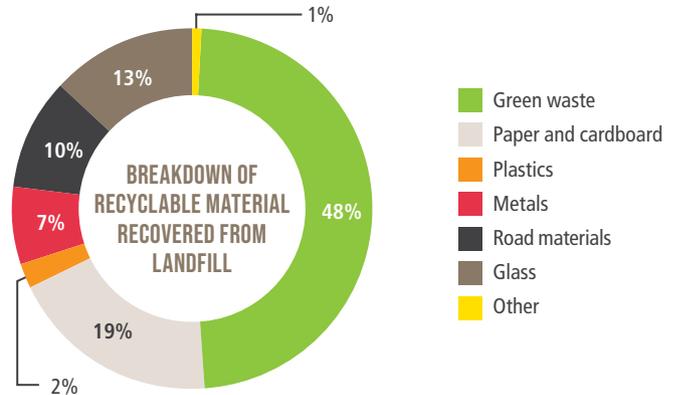
- ▶ **Total waste collection has dropped by 11.7%**, while the City's population has grown by approximately **6.03%*** in the same time (*based on population forecast from forecast.id.com.au). This is a reflection of improved waste and recycling behaviours of City residents.





Facts and Figures

- ▶ Further to kerbside recycling, the City recovers additional materials from landfill. A breakdown of these materials is displayed in the pie graph. **In 2019/2020 a total of 35,561 tonnes of material was recovered.**
- ▶ 11 kg of mobile phones and 13 kg of printer cartridges were collected for recycling, diverting valuable materials from landfill.



Focus moving forward

- ▶ Support the State Container Deposit Scheme 'Containers for Change' by promoting proper waste separation and provide planning advice on development applications for refund points.
- ▶ Recycling collection points for mobile phones, batteries and printer cartridges to be installed at the Administration centre and all four public libraries.
- ▶ Pursue grant opportunities to deliver a total e-waste recycling scheme.
- ▶ Pursue accreditation with the Tyre Stewardship Association Australia, to ensure best practice around procurement and disposal of fleet tyres.
- ▶ Review the Compost at Home pilot and seek to establish it as a regular program.
- ▶ Develop a new Waste Strategy to guide the direction of waste and recycling management in the City over the next five years. Balancing environment aspirations with economic requirements will be of key importance.







Energy and Emissions

To ensure a sustainable future, the City is committed to improving energy efficiency and reducing greenhouse gas emissions across all of its operations. With such a large number of facilities, services and infrastructure to deliver and maintain, together with a growing population, this continues to be a challenging task. Examples of these operations include streetlighting, landfill and waste services, running community facilities, maintaining green spaces and hosting community events. The City continues to explore opportunities for best practice while ensuring the needs of our community are being met.



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:

Strategic Asset Management Plan (In development)

Sustainability Strategy



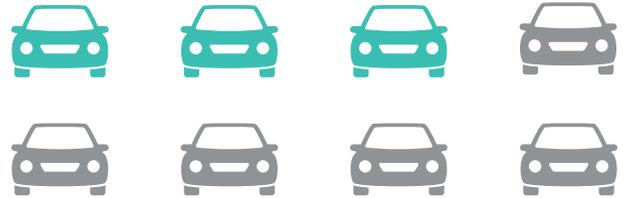
Updates and achievements

▶ Carbon neutral fleet

Each year, the City calculates the emissions created from its vehicle fleet, and purchases offsets through a registered provider. This year, offsets were directed to the Yarra Yarra Biodiversity corridor near Dongara, WA, via Carbon Neutral. This reforestation project is the largest biodiverse carbon sink in Australia. Trees and shrubs are planted throughout key sites, particularly on non-productive farmland, which helps establish habitat stepping stones and links for biodiversity to move and disperse back through the landscape.



- ▶ Three Smartwatch vehicles that were due for replacement were changed over to **hybrid vehicles**, with the remaining five to be transitioned to hybrids in 2020/2021. Once the vehicles have been in operation for a full financial year, we will be able to determine the potential energy savings and emissions reductions offered by these vehicles.



- ▶ The City's top 10 energy using facilities are fitted with solar panels, which total a 600kw solar capacity. **Collectively these panels produced over 1 million kwh of energy in 2019/2020.**
- ▶ A total of 92 City facilities are installed with solar PV, totalling 3046 panels.



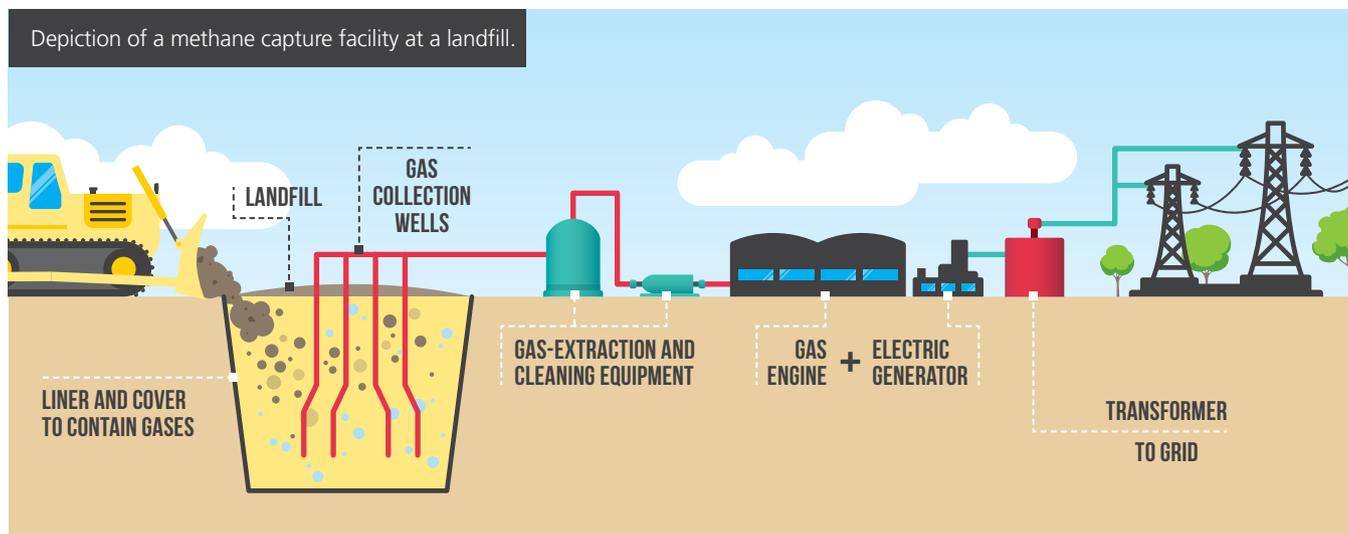
9060 kw Less Power

235 lights were upgraded to energy saving LEDs. **It is anticipated that this will reduce power consumption by 9060 kw per year.**



Methane to megawatts

80,000 tonnes of CO₂e (carbon dioxide equivalent) was captured from waste decomposing at the landfill in 2019/2020. Captured gases are then transformed into electricity and transferred to the grid. In this time period, 13,000 MWh of electricity was produced which is enough to power approximately 2324 average Western Australian homes for a year.



1.85 km

of new cycling infrastructure was installed.



Focus moving forward

- ▶ A further 517 lights are identified for LED upgrades in the following financial year.
- ▶ Solar PV systems are due to be upgraded or installed on nine different City facilities.
- ▶ Investigation of an Energy Monitoring Platform to monitor utilities and emissions across major City facilities. This will enable development of an Emissions and Energy Reduction Plan in the future.
- ▶ Development of a Sustainable Home Guideline to assist residents in lowering their home energy and water use.
- ▶ Development of a Sustainable Transport Plan to guide the implementation and support of active transport and public transport modes within the City of Rockingham.









Nature and Environment

The City of Rockingham is home to a unique and diverse range of natural environments. These include Lake Richmond and its thombolite community, the Shoalwater Islands Marine Park and a colony of Little Penguins and cultural heritage sites such as Aboriginal 'scar trees'. The City plays a considerable role in ensuring these sites are managed appropriately, while also ensuring well maintained public open spaces and nature reserves are available to the public.



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 public open spaces, walkways, amenities and facilities for the community.



Key City Documents:

- ▶ Greening Plan
- ▶ 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



Updates and achievements



Oblong Turtle (*Chelodina oblonga*)

Study on the Oblong Turtle

The City engaged researchers from Murdoch University to conduct a preliminary investigation into the population status of the Oblong Turtle (*Chelodina oblonga*) (previously *Chelodina colliei*) within the City of Rockingham's wetlands.

Chelodina oblonga is the only native freshwater turtle species in the Perth metropolitan region and it plays a crucial role in aquatic ecosystems by controlling insect populations.

The overall outcomes of the study found population structure and abundance varied greatly between the 12 wetlands surveyed, with higher abundances of turtles found in wetlands in a more natural state with less surrounding disturbance. The survey also revealed that overall, the populations were dominated by adults and most wetlands either had few or no juveniles, suggesting a lack of breeding success.

It is thought that predation from feral animals such as cats and foxes and vehicle injury during migration are some of the major threats. Following outcomes of this study, an informative flyer was delivered to residents living close to wetlands. The flyer provided detail on what to do if you find a turtle, some of the threatening processes and general information about the species.

If you see a turtle nesting or on its way to nest, please do not disturb it or pick it up as this will cause the turtle to abandon her nesting effort. If you see an injured turtle contact the Wildcare Helpline (9474 9055).



Little Penguin research project

Since 2012, the City of Rockingham has been contributing funding towards annual studies, undertaken by Murdoch University, which aim to estimate the population of the Little Penguin (*Eudyptula minor*) colony at Penguin Island. The seabirds are key bioindicators of coastal marine environmental health as they are relatively easily studied and hence changes to specific variables can be easily determined (Cannell 2020).

The findings of the latest Population Estimate study have shown an estimated decline of 80% of overall population size since the initial baseline study was undertaken in 2007. Research suggests that the decline can be attributed to a range of anthropogenic and natural influences including marine heatwaves and their effect on food availability, increased mortality rates in the adult population, overheating, watercraft injury, Penguin Island visitor rates and public access to habitat areas.

In order to progress the matter, a working group has been established to discuss the findings of the most recent Population Estimate Report and commence discussions on a proposed way forward. The working group comprises representatives from the City, the Department of Biodiversity, Conservation and Attractions (DBCA), as well as two experts from Murdoch University, including Dr Belinda Cannell who oversees the annual monitoring and reporting.



Little Penguin chicks on Penguin Island

Rural Land Strategy updated

A revised Rural Land Strategy was adopted by Council in July 2020. The revised Strategy provides an increased focus on identifying and protecting environmental and landscape values in the City's rural areas. To achieve this, several performance based initiatives such as limitations to lot sizes and limitations to vegetation clearing on rural land have been implemented. Development proposals are now required to demonstrate that no more than 30% of the onsite vegetation will be cleared, while still ensuring that new developments meet the State's bushfire protection requirements. Previously, up to 60% of vegetation on site would typically be cleared. Further information is available on the City's website.



Updates and achievements



27,000 native seedlings planted

- ▶ 16,000 new seedlings were planted across City conservation reserves as a part of the revegetation works outlined in the Greening Plan.
- ▶ An additional 11,000 native plants were planted in various reserves across Baldivis and Secret Harbour, after the Annual Native Plants Giveaway had to be cancelled due to restrictions on gatherings at the time. The Native Plants Giveaway is usually held in late autumn as part of the City's commitment to building water sensitive communities, and to support the establishment of habitat for wildlife. The City was awarded grant funding from the Water Corporation as part of its Waterwise Greening Scheme to help deliver this program.



On track to meet our greening goal

The Greening Plan outlines a goal of 15,000 new street and parkland trees to be planted over a five year period between 2017 and 2022 while also setting targets for canopy cover and tree retention. In 2019/2020, 4627 were installed, meaning we are well on track to meet the identified target.

- ▶ 571 trees were planted as a part of the Winter Street Tree planting program.
- ▶ 18 community planting days were held with 4737 plants being installed by various community groups and volunteers.



The City manages 437 public open space areas (POS), totalling 2,094 hectares.



92 staff are employed to help manage and maintain these areas.



The City is also responsible for the management of 490 hectares of locally significant natural areas which support a diverse assemblage of flora and fauna.

Focus moving forward

- ▶ Further monitoring of the Oblong Turtle population to evaluate the long-term viability of the species as well as targeted surveys to determine the cause of poor recruitment. Results of the ongoing monitoring will determine future management and conservation actions.
- ▶ The City is now commencing an interim assessment of the success of the on ground actions prescribed by the Baldivis Tramway Management Plan (2014), which will prioritise reserve management actions for the next three years. The Assessment Report will be written in-house based on information provided from environmental consultant studies. The Baldivis Tramway Reserve is an area of significant remnant bushland located within the suburb of Baldivis. Located within a highly urbanised environment, the reserve provides a unique opportunity to act as a linear network for biodiversity and as an asset for nature appreciation and unstructured recreation.
- ▶ Development of an Environmental Protection Strategy. The City is in the process of developing a Community Plan Strategy for environmental protection on private land. The Strategy is being guided by the findings of the Natural Areas Technical Assessment undertaken in 2018, which identified and prioritised areas based on their environmental significance.
- ▶ As a part of the Lake Richmond Management Plan, endorsed in February 2020, an investigation into the feasibility of restoring the lake's hydrology to its pre-development conditions in order to support the declining Thrombolite community. This commenced in December 2020 and will be carried out over the next five years.



Key City Documents:

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



Environmental Education and Engagement

The City works in close partnership with the community to ensure the sustainable use and management of our local environment. In particular, the City plays an important role in providing a range of opportunities for environmental education and engagement which assists residents, schools and community groups to adopt more sustainable practices.



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, sport, culture and the arts.

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.



Updates and achievements



The following represents events that took place in the 2019/2020 financial year, before restrictions were imposed as a result of COVID-19. While many planned events had to be cancelled or rescheduled, the City is exploring ways to engage and support the community, while ensuring social distancing can be maintained.

- ▶ The City became a **Grow it Local partner** in January 2020. The platform is aimed at encouraging more people to grow and share food. Within the first six months, 32 local households had 'put their patch on the map'.
- ▶ Three **corporate volunteering** events were held in 2019/2020 with the remainder of scheduled events cancelled due to COVID-19 restrictions. The City's Corporate Volunteering Program is an initiative we have committed to through our Volunteering Strategy 2016 - 2022. Since 2017, we have helped nine different community groups and organisations get some much-needed work done at their premises.
- ▶ The **Seaside Scavange event** was held at the Rockingham Foreshore in November 2019. This was the second time the event has been hosted in Rockingham with the City providing staff assistance, bins and advertising support. Over 70 people took part in the event along with an additional 15 volunteers. Ages ranged from 1 - 59 years old. 80 kg of litter was collected on the day, including 1228 cigarettes butts.



- ▶ **Nyoongar Stories Exhibition** was launched during National Reconciliation Week 2019. Those who attended were told stories about the deep, ongoing connection that Nyoongar people have to the land that they managed sustainably for thousands of years.
- ▶ The City hosted the 2019 **Rockingham NAIDOC Celebration**; the Danjoo - Interwoven Art Exhibition and a series of educational workshops for the public, such as cooking, art, a cultural bush walk, traditional weaving and native foods. NAIDOC 2020 was postponed nationally until November due to COVID-19.
- ▶ The **Your Move showcase event** was held in 2019. 14 local schools are now signed up to the program, which is aimed at promoting active travel to schools and reducing carbon emissions.

Focus moving forward

- ▶ The City will develop an annual calendar of sustainability related events to ensure a coordinated approach to the planning and delivery of community focused sustainability events, mindful of any relevant COVID-19 restrictions.



Volunteers at the Reuse Shop

Volunteering helps to connect with those around you while completing meaningful work that can benefit your community, the environment and your wellbeing. Volunteers are an integral part of our community and an invaluable asset to the City.

Jenny and Les Young have been volunteering at the City's Reuse Shop and Recycling Yard at the Millar Road Landfill since 2018. They help to keep waste away from the landfill by sorting and merchandising stock. Jenny and Les are also keen gardeners.





Climate Response

The world is beginning to witness the impacts of a changing climate. While the effects are wide reaching, local governments will play an important role in the mitigation and management of the climate based threats such as sea-level rise, increased storm events, reduced rainfall and increased bushfire occurrences.

All actions mentioned throughout this report work collectively to mitigate the impacts of climate change.



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 and Adaptation Plan
- ▶ Sustainability Strategy

Climate Response

Key achievements and updates

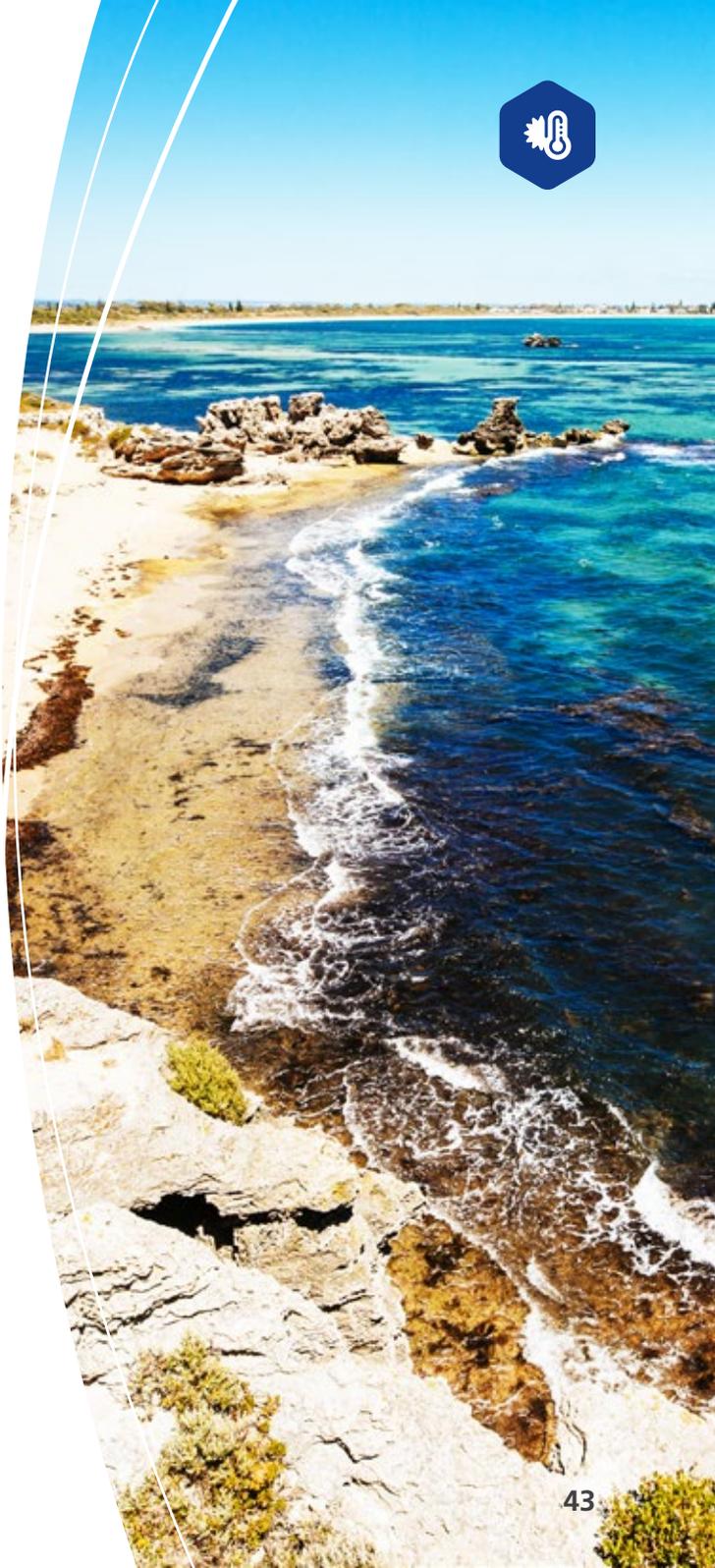
- ▶ **Beach Profile surveys** were undertaken at Point Peron, Safety Bay Foreshore and Waikiki Foreshore in February and April 2020.
- ▶ Coastal monitoring was also undertaken at Mersey Point and Kwinana Headlands to inform future coastal management.
- ▶ **Spur Groyne extension** - The City successfully secured a State Government grant of \$650,000 to refurbish the spur groyne in Peron. The groyne captures sand coming into the area around the Peron boat ramps in order to reduce the volume that enters the harbour. The captured sand is then used to renourish the beaches in the City that are experiencing erosion. The City is also undertaking modelling and design for an extension to this groyne.
- ▶ **Hydrographic Coastal Survey** - A second grant through the Department of Transport's Coastal Adaptation and Protection grants program was also awarded for a full coverage hydrographic beach survey to be conducted along the coast from Peron to Singleton. The data obtained from this survey will enhance the accuracy of future coastal monitoring programs and coastal hazard modelling studies. Data for the remaining stretch of the City's coastline, within Cockburn Sound, will be collected by a separate survey, to be commissioned by the Cockburn Sound Coastal Alliance. The two surveys will ensure that the entire stretch of coastline, from Fremantle to Singleton, will be surveyed using the same methodology.
- ▶ As part of its involvement in the Peron Naturalists Partnership, the City has joined the **CoastSnap initiative**. A coastal photo monitoring stand has been installed at Shoalwater Beach, where members of the community can take photos from the fixed smartphone camera stand and submit them via email or social media. This will help to provide valuable information on how the coast changes over time, while also helping to engage beach goers with our coastal vulnerabilities.



Coastsnap stand installed on the jetty at Mersey Point



Images taken from the CoastSnap stand, which display the changes and impacts experienced along the coastline due to differing weather events.





Key achievements and updates



Storm damage to temporary seawall at Mersey Point - May 2020.



Repairs made to temporary seawall at Mersey Point following storm damage – June 2020.

Mersey Point temporary seawall repaired

- ▶ Repairs were carried out on the Mersey Point temporary seawall following a storm surge event in May 2020 which caused significant damage. The seawall was constructed in 2017 to protect major infrastructure and assets including Arcadia Drive and several homes in the short term while further options are considered for the long term management of this highly vulnerable area. With sea level rise and increased severity and frequency of storm surge events, planning for, managing and mitigating these hazards will become increasingly important.

It is worth noting that this erosion event did not occur within recorded typical storm events. Instead, the erosion appears to have occurred as a result of coinciding tide elevations and storm surge peaks. The evidence of changing local weather patterns can be further illustrated by the graphs below, displaying long term rainfall trends and long term tide elevations.

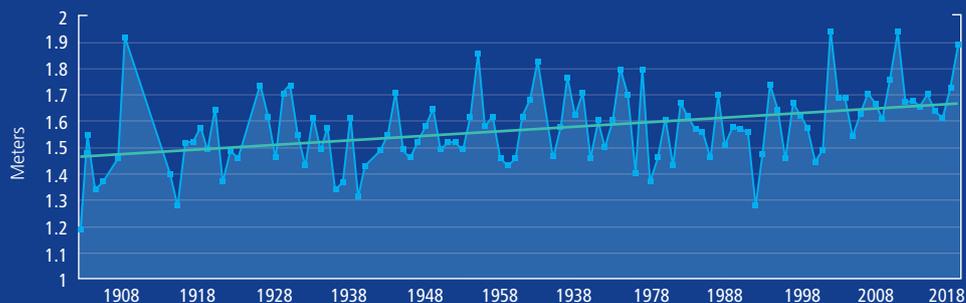


Spotlight on local weather patterns

Observing and recording these weather patterns locally is an important step to responding to these kind of events and mitigating future risks of climate change impacts in the City of Rockingham.

While this data was taken from Fremantle and Mandurah (the closest available stations) it is reflective of what is witnessed in Rockingham.

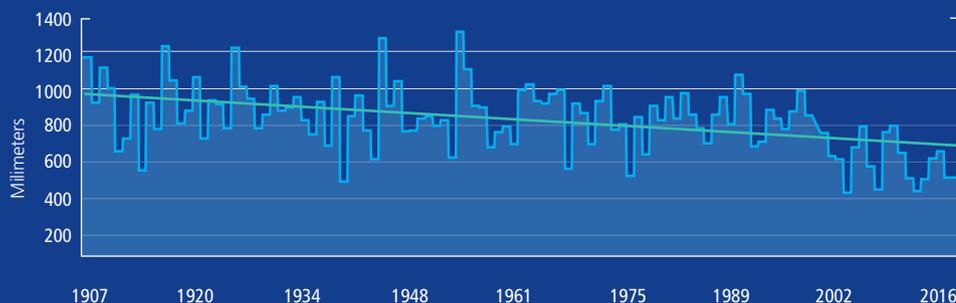
Annual maximum tide elevation (BoM Station No. 62230)



As seen in the graph, the annual maximum tidal elevation has increased while the severity of tidal surges has also increased in recent years.

— Maximum Trendline —■ Maximum Point

Long-term annual rainfall (BoM Station No. 9572)



This graph depicts the gradual decline in annual rainfall experienced over the last century. Of particular concern is the rate of decline, which has increased from the year 2000 onwards.

■ Annual Rainfall — Annual trendline



- ▶ **The City continues to participate in the following partnerships:**
- ▶ Cities Power Partnership (CPP) - Australia's largest network of local governments committed to taking action on climate change, run by the Climate Council.
- ▶ Peron Naturaliste Partnerships (PNP) - An incorporated collective group of nine local governments between Cape Peron and Cape Naturaliste, with the overall objective to provide a regional mechanism to facilitate effective and timely adaptation responses to climate change. As a part of this partnership, the City collects monthly data on beach widths along with other PNP members, to determine changes to the coastline and develop a coordinated approach.

Focus moving forward

- ▶ In accordance with the Coastal Hazard Risk Management and Adaptation Plan, adopted in September 2019, the City is in the process of preparing a Coastal Monitoring Plan and a Local Planning Policy for coastal hazards. The Coastal Monitoring Plan will identify areas where improvements can be made to coastal hazard modelling and planning over the next ten years. The Local Planning Policy will ensure consistency between SPP 2.6 - State Coastal Planning and the City's CHRMAP in the context of considering the risk of coastal hazards as part of the planning process.
- ▶ Identify preferred sites for beach renourishment using sand stockpiled from Point Peron.





Acknowledgements

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



Asset Services



Community Capacity Building



Engineering 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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