

# STATE OF ENVIRONMENT REPORT

**2018**





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This report has been produced by Cairns Regional Council and endorsed at the Ordinary Meeting on the 22 May 2019.

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## STATE OF ENVIRONMENT: 2017/18 SNAPSHOT



**58.7%**  
of waste recovered



**24,178.3 ML**  
of water used



**239ML**  
of water saved in final  
stage of the water System  
Leakage Detection Program



**47% REDUCTION**  
in greenhouse gas  
emissions compared  
on 2007/08 levels



**9,869**  
people received water,  
waste and disaster resilience  
education - up 40.7%



**289**  
Green Space Our Place  
volunteers - up 43%  
from last year



**1,224**  
women & girl  
supported in 59 community  
cycling sessions



**WASTE  
REDUCTION &  
RECYCLING STRATEGY**  
the Litter & Illegal  
Dumping Plan Released



**\$58,736**  
for community-led  
environmental sustainability  
projects and nature-based  
school excursions



**14,924**  
native trees raised for  
revegetation



**26**  
community-led Great  
Northern Clean Ups



**Joined** the Cities Power Partnership & Climate  
Resilient Councils programs





## PREFACE

The 2018 State of Environment report (SoE) provides an overview of Cairns Regional Council's environmental and urban sustainability initiatives and performance in 2017/18.

The condition-pressure-response format is used throughout the document to provide context for identified pressures on the environment and the relevant management responses from Council. The report does not encompass work done by other agencies in local catchments within the Council boundary.

While SoE reporting is not a statutory requirement of local governments in Queensland, Council considers this the best practice and this is the thirteenth release of the report. Both the Queensland and Australian Government State of Environment reports can be accessed online for further information at a greater bioregional and national level.

'Cairns', 'the city' and 'the region' refer to the Cairns Regional Council local government area.

## INTRODUCTION

The Cairns Regional Council local government area (LGA) is located in the Wet Tropics bioregion, one of the most biodiverse regions in Australia. It sits in a coastal strip between the Coral Sea and Great Dividing Range, within the Barron, Mitchell, Mossman and Russell-Mulgrave catchments. The landscape includes wetlands, flat coastal lands, mountain ranges and metamorphic rocks covered in rainforest and wet sclerophyll forests. The city is framed by the World heritage-listed Wet Tropics Rainforest and Great Barrier Reef and more than half of the Cairns LGA has National Park, State Forest or Forest Reserve listing.

Proactive environmental management is crucial for the resilience of biodiversity and ecosystem function which sustains local endemic species, the region's iconic natural attractions, enduring traditional connections, local identity, lifestyle and industry.



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## FROM THE MAYOR

The Cairns region is located on the doorstep to the World Heritage listed Great Barrier Reef and Wet Tropics Rainforest, and our community is blessed with the lifestyle and opportunities this spectacular and diverse natural environment provides.

During 2018, the International Year of the Reef, Council continued to tackle its carbon footprint through increased use of roof top solar, adopted a new plan to tackle widespread littering and illegal dumping, committed to removing single-use plastics in its operations and is guided by a new Waste Reduction and Recycling Strategy to move Cairns towards a future where landfills are the last option.

Cairns Regional Council remains steadfast in its commitment to reduce our impact on the environment and support residents and businesses to do the same through the various programs and initiatives you will find in this State of Environment report.

I encourage everyone to join Council in taking care of our environment to secure the future of our region.

**BOB MANNING**  
Mayor of Cairns



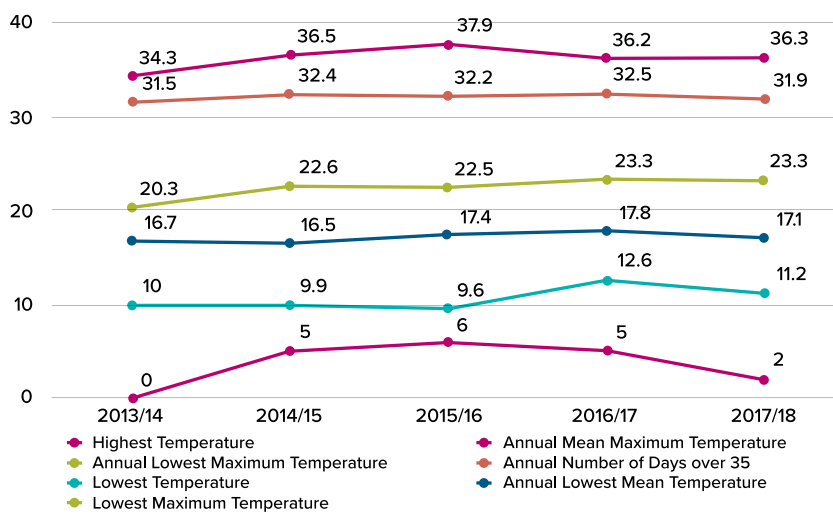
# CLIMATE

## CONDITION

### AIR TEMPERATURE

The mean air temperature for the Cairns AERO Station since 1941 is 29.1 degrees Celsius (°C), with the annual mean air temperature in 2017/18 almost 10% higher. Overall, Australia has warmed just over 1 °C since 1910 (BOM, CSIRO, 2018) and much of the North Tropical Coast has experienced a 0.15 Celsius increase per decade since 1970 (BOM, 2019).

### CAIRNS BOM AERO STATION TEMPERATURE (°C)

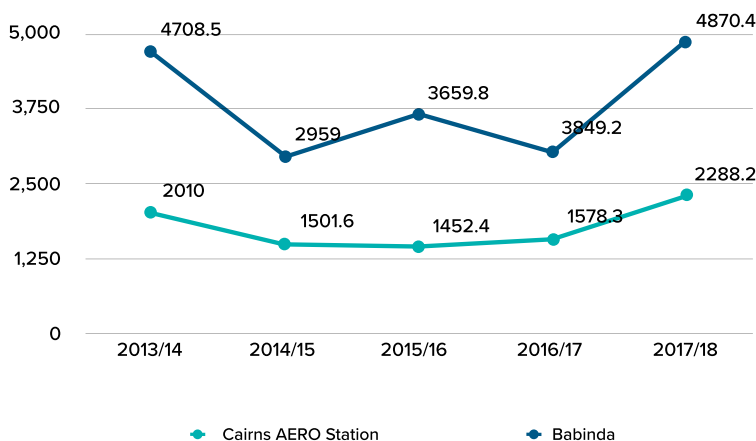


Temperatures recorded at the BOM Cairns AERO station may differ from those experienced in other microclimates within the Cairns LGA. To understand long term changes in temperature, the full dataset should be used. The BOM Cairns AERO Station is one of 112 stations apart of the Australian Climate Observations Reference Network.

### RAINFALL

Compared to the previous year, total rainfall in the Cairns region increased by 45% at the Cairns Airport and 59% at the Babinda Post Office, a 15% and 14% respective increase on average since records started (BOM, 2019).

### ANNUAL RAINFALL (MM)



Note: Rainfall data for Cairns AERO Station, March - June 2018 and Babinda, April- June 2018 yet to undergo quality control by BOM.

## OCEANS

There has been a 0.05 °C increase in sea surface temperature per decade in the Coral Sea between 1970 and 2018 (BOM, 2019). This warming and an increase in the frequency and intensity of marine heatwaves pose a major threat to the long-term health and resilience of coral reef ecosystems (BOM and CSIRO, 2018), including the Great Barrier Reef.

Sea level rise has varied around Australia and globally, there has been a 3.2cm increase per decade since 1993 (BOM and CSIRO, 2018).

Ocean acidity has increased around Australia, having led to a reduction in coral calcification and growth rates on the Great Barrier Reef, with implications for recovery from any further coral bleaching events (BOM and CSIRO, 2018). Annual monitoring of the long term condition for reefs around Cairns are published by the Australian Institute of Marine Scientists.

## EL NIÑO-SOUTHERN OSCILLATION (ENSO)

The ENSO outlook in 2017/18 for Australia was mostly neutral, except for a weak La Niña between December 2017 and late February 2018. This was considered to have had little impact on Australian rainfall compared to other events (BOM, 2018) but events are typically associated with increased tropical cyclones.

## EXTREME WEATHER EVENTS

In late March 2018, as a result of Cyclone Nora, Cairns experienced a localised rainfall and flooding event with an average recurrence interval (ARI) of about 100 years in the Freshwater and Currunda Creek sub-basin catchments, in Redlynch Valley (BMT WBM, 2018). In the same period, the greater Cairns region experienced a higher than 20 year ARI rainfall event in the Barron River catchment and between 10 and 20 year ARI in the Mulgrave & Russell River catchments.

## PRESSURE

### NATURAL VARIABILITY:

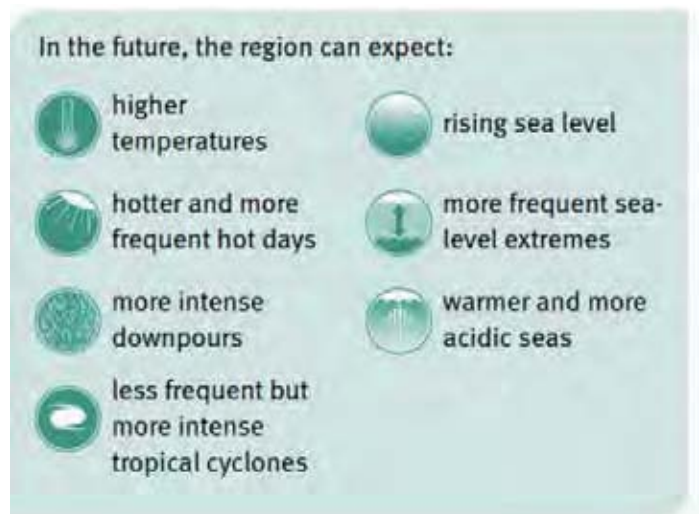
There is a strong degree of ongoing natural variability in the climate system from strong influences such as the El Niño Southern Oscillation and the location and intensity of summer monsoons.

### CLIMATE CHANGE FROM GREEN HOUSE GAS POLLUTION:

Concentrations of all the major long-lived greenhouse gases in the atmosphere continue to increase, with carbon dioxide (CO<sub>2</sub>) concentrations rising above 400 ppm since 2016 and the CO<sub>2</sub> equivalent (CO<sub>2</sub>-e) of all gases reaching 500 ppm for the first time in at least 800,000 years (CSIRO, BOM, 2018).

Under business as usual locally and globally, greenhouse gas emissions would continue to increase primarily from the burning of fossil fuels (the main source of CO<sub>2</sub>), agriculture and land use change or clearing.

Climate change is recognised as a major threat to terrestrial and marine biodiversity and ecosystem function. More information on predicted changes for the Cairns and Wet Tropics region under different greenhouse gas concentration pathways can be found at [www.climatechangeinaustralia.gov.au](http://www.climatechangeinaustralia.gov.au)



Climate Change in the Far North Queensland Region (Queensland Government, 2016).

## RESPONSE

### CLIMATE CHANGE MITIGATION

Council is committed to energy efficiency and greenhouse gas emissions reduction in its operations and promotes community opportunities, education and initiatives which do the same. This is underpinned by Council's policies on Corporate Sustainability, Energy and Emissions.

[See: Council Operations - Energy & Emissions Management](#)

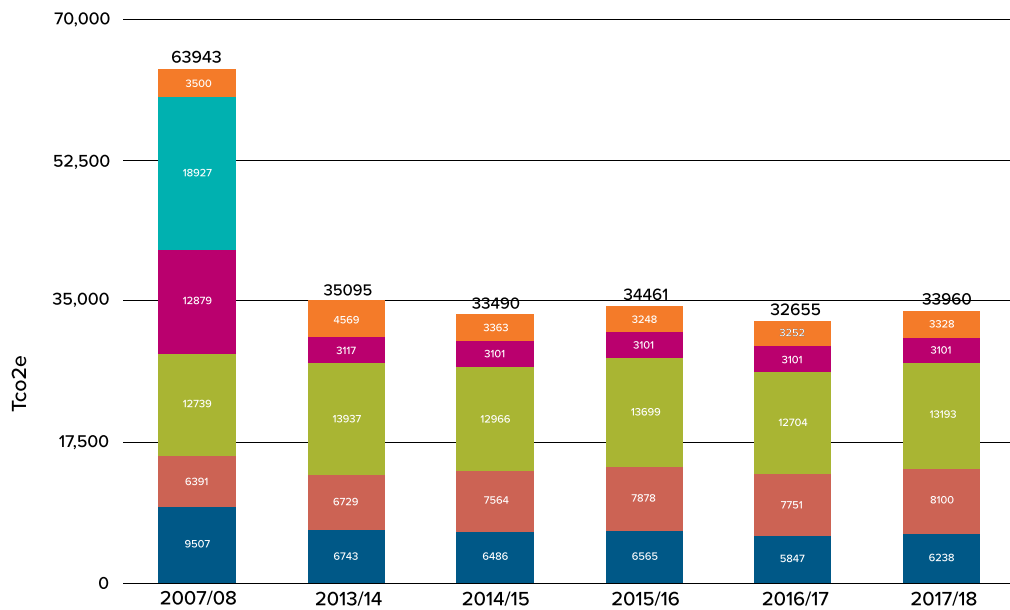
[See: Built Environment - Community Engagement, Waste Reduction & Recovery](#)

[See: Human Settlements - Transport](#)

### GREENHOUSE GAS EMISSIONS

Overall, Council's greenhouse gas emissions increased by 4% in 2017/18, compared with the previous years, with increases primarily from facilities and street lighting, along with water and sewerage and fuel use.

#### CAIRNS REGIONAL COUNCIL - GREENHOUSE GAS EMISSIONS



Accurate reporting on fugitive emissions remains a challenge for the organisation with changes to the National Performance Report in 2015. No significant process changes impacting nitrous oxide levels were observed in 2015/16 - 2017/18 and levels are assumed to be the same. Please note, there was an updated coefficient for electricity in 2013/14.

### NATURAL AREAS MANAGEMENT

In managing natural areas, Council encourages ecosystem resilience to the impacts of human pressures which interact with climate change impacts. In particular, Council's focus on pest plant and animal control is important as these species are often favoured by changed climatic conditions. Information on other predicted impacts in the Cairns region can be found in Council's Biodiversity Strategy 2012-2022.

[See: Terrestrial Biodiversity](#)



## CLIMATE ADAPTATION

Related: Energy & Emissions

As a growing city, Council is also committed to responsibly and strategically manage the risks that environmental hazards exacerbated by climate change can present to the local community, economy and environment. This includes,

### DISASTER MANAGEMENT AND RESILIENCE

Resilience to natural disasters is fostered through detailed planning, partnerships, training and community education, guided primarily by the Cairns Local Disaster Management Plan. To help the region prevent, prepare, respond and recover from events, Council delivers an ongoing disaster resilience education program. This is aimed at developing the region's collective responsibility in reducing risk to people, lifestyles and property, with specific support for vulnerable communities. To assist this, in late 2017, Council released the Cairns Disaster Dashboard - a live online hub of information for use in a disaster. The dashboard collates crucial information from Council, emergency services, utility providers and also provides road status updates, traffic and flood 'cams' for the public.



Direct Engagement – Disaster Resilience Education (persons)	
2015/16	1,700
2016/17	2,955
2017/18	4,678

### EXTREME WEATHER EVENTS: RAINFALL AND FLOODING – RESPONSE AND REVIEW

In response to the 2018 March event, Council, through the Local Disaster Centre coordinated and deployed significant resources to clear landslips, drains, water supply intakes and complete structural repairs to roads, the drainage network, bridges, paths and community facilities. Additionally, Council provided community support and arranged accommodation for those impacted.

Following this, Council commissioned an independent forensic review to determine the cause of flash flooding in Redlynch Valley and undertook detailed hydraulic modelling. Additionally, an independent review of the Copperlode Dam Emergency Action Plan was completed to identify any improvements and assess the plan's application during the event. Council also conducted investigations into flooding in the Barron River, Mulgrave & Russell River catchments, drawing on community observations.

These reports informed Council's immediate maintenance requirements and planning for flood mitigation, in terms of drainage management and appropriate development approvals, with the event itself an effective tool to test and generally confirm Council's modelling and response capacity.

### COASTAL HAZARDS ADAPTATION STRATEGY - OUR CAIRNS COAST

Council completed the first two stages of its Coastal Hazards Adaptation Strategy (CHAS) and successfully secured funding as part of the Queensland Government's QCoast2100 program for the remaining six phases. The project will help Council to make better decisions on how to manage coastal erosion, storm tide inundation and sea level rise as a result of climate change. The long term strategy will use improved mapping and modelling to explore and identify what adaptation actions Council will take and when to ensure the future resilience of the coastal environment and infrastructure.

### CLIMATE APPROPRIATE DESIGN

Council encourages development to deliver cool public spaces through requirements for shading and vertical landscaping in its Tropical Urbanism built form policy. This can support reduced heat island effects and demand for energy intensive cooling. Sustainable housing stock and commercial buildings are also promoted with Council guidelines for climate appropriate design and annual support of Sustainable House Day, with eight properties open in 2018 for display.

Council also supported the James Cook University Sensing Cities project, assisting with the installation of 86 sensors in the CBD to monitor temperature and humidity. It is intended that the data will be used to inform future decision making to better address the urban heat island effect.



## BUILT ENVIRONMENT

### CONDITION

The Cairns local government area spans a total land area of 1,693.3 km<sup>2</sup> and is home to culturally diverse people living in both rural and metropolitan communities. As the major commercial and service centre of Far North Queensland, land is primarily managed for the following range of values:

- Residential/industrial
- Nature conservation
- Tourism and recreation
- Cultural heritage
- Grazing, cropping and horticulture
- Mining

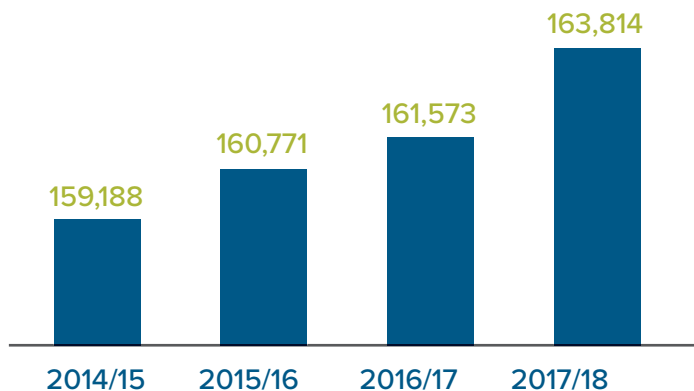
### PRESSURE

Environmental pressures typically associated with modern human settlements include:

- Increased urban footprint and an associated reduction in the size, function and connectivity of natural ecosystems
- Pollution and end-point greenhouse gas emissions
- Waste generation
- Diffuse source and point source waterway pollution (stormwater and waste water)
- Water supply demands on the catchment

These pressures are likely to increase in proportion to population. In 2017/18 Cairns had an estimated residential population of 163,814 people<sup>1</sup>. It also receives over 2.7million visitors a year, staying 5 nights on average<sup>2</sup>.

### CAIRNS REGIONAL COUNCIL ESTIMATED REGIONAL POPULATION

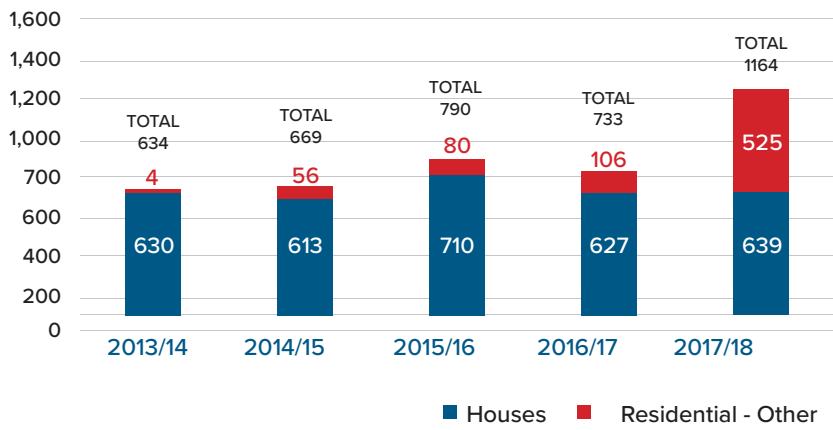


<sup>1</sup>Economy Id 2018

<sup>2</sup>Tourism Research Australia 2018 (data is based on a four-year average from 2014 to 2017).



## BUILDING APPROVALS IN CAIRNS REGIONAL COUNCIL LGA



## RESPONSE

### PLANNING AND DEVELOPMENT

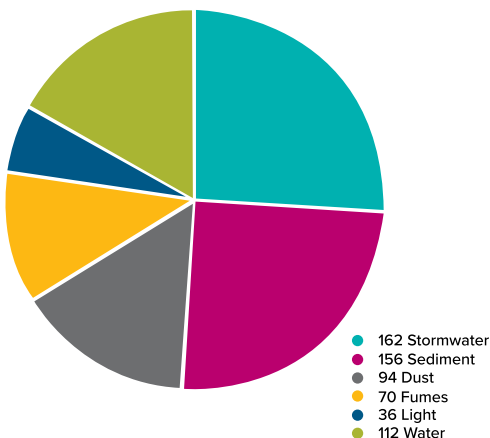
#### STRATEGIC PLANNING AND DEVELOPMENT ASSESSMENT

The CairnsPlan 2016 sets the parameters for land use and development across the region. It aims to balance settlement patterns, natural areas and features and infrastructure to encourage growth, while upholding the qualities that make the area special. This includes overlays for environmental management and natural values, triggering Council to form specific conditions depending on the type of development. Often this requires plans for vegetation protection and any removal, revegetation, appropriate landscaping, weed management, erosion and stormwater control or reports on acid sulfate soils.

#### COMPLIANCE

Council monitors compliance on sites before and during building, providing education to developers and builders for improved environmental outcomes. Where non-compliance occurs it is investigated by Council which has powers to enforce compliance issues relating to a range of matters under the *Environmental Protection Act 1994 (EPA)*. In 2017/18, Council investigated a total of 630 requests from the public relating environmental issues including noise, dust, odour, light, aerosols/fume nuisances, prescribed water contamination, extractive industries and sufficiency of erosion and sediment control measures.

#### CAIRNS REGIONAL COUNCIL - EPA INVESTIGATIONS 2017/18



Each matter investigated requires Council to collect all relevant information and provide evidence before deciding on the most appropriate compliance action, if any, that can be taken.

Examples of compliance actions include: education, Show Cause and/or Enforcement and/or Direction Notices, issuing of Penalty Infringement Notices and Court action where deemed necessary.





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## COMMUNITY ENGAGEMENT

### CAIRNS ECOFIESTA

The annual Cairns Ecofiesta continues to grow with an estimated crowd of 12,000 attendees learning about sustainable living and celebrating the natural environment. The event hosted 130 market stalls, including businesses and non-profits providing an array of pathways for community participation in environmental protection and low-impact living.

The 2018 event delivery built on existing waste avoidance initiatives with the successful trial of a large scale dish reuse system for waste-free dining. This saw an 80% reduction in waste which complimented eight free workshops for improved recycling, composting and DIY tools for avoiding single-use plastics in the home.

### GREEN SPACE OUR PLACE

Local volunteers in this Council program are supported to provide revegetation, maintenance and guided tours at local gardens, parks, reserves and walking tracks.

In 2017/18, the 289 - strong team propagated over 13,000 seedlings and planted more than 3,000 trees at sites including the Botanic Gardens & Mt Whitfield, Cattana Wetlands, Saltwater Creek, Cairns Esplanade and Jalarra Park, Stratford.

This was a 43% increase in volunteers - testament to the community's hands-on commitment to healthy public green spaces

### SEED LIBRARY & COMMUNITY GARDENS

Cairns Libraries distributed over 2,000 seeds packets to the community in 12 educational events at the Stratford Library, encouraging households to grow herbs and vegetables. The initiative fosters low-cost skills for resilience and encourages seasonally appropriate eating with reduced 'food miles'. The Seed Library was made possible by State Library of Queensland funding.

Further demonstrating these community benefits, Council approved applications for two new community gardens in Simmonds Street, Gordonvale and Gamburra Drive Park, Redlynch Valley. Unfenced public produce gardens ('pocket gardens') were also started in Trundle Terrace, Whitfield and Crathern Close Park, Edge Hill.

### CAIRNS DISTRICT SCHOOLS SCIENCE AND ENVIRONMENTAL SUSTAINABILITY ENRICHMENT PROGRAM

This program run by the Holloways Beach Environmental Education Centre, supports students to design and deliver sustainability projects by partnering talented year 5 students with mentors from the sustainability sector. In 2018 this Council funding supported projects on reef-friendly sunscreen, education on roaming cat impacts, using app based citizen science to reduce litter, the importance of low carbon, active commuting to school, plastic pollution prevention and environmental public art.

### CAIRNS REGIONAL COUNCIL TOTAL DIRECT REACH: WATER, WASTE OR DISASTER RESILIENCE EDUCATION



**4,625**  
2015/16



**7,016**  
2016/17



**9,869**  
2017/18

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## COMMUNITY SUSTAINABILITY GRANTS

Council provides an annual funding pool of \$25,000 for community-led projects that deliver biodiversity and sustainability improvements. In 2017/18, the following projects were funded:

- **The Junction Clubhouse:** Installation of a 19.8kw roof top solar PV system with in-kind support from a local supplier. This resulted in a 91% reduction in their first electricity bill, supporting the financial sustainability of its mental illness recovery programs.
- **The Last Straw on the Great Barrier Reef:** Production of a campaign video explaining the impacts of single use plastics like straws on the marine environment. The video received 38,000 views and called on businesses to remove these items, with one hundred businesses coming on board since the film's launch- saving an estimated 600,000 plastic straws a year.
- **Cairns and Far North Environment Centre:** Establishment of the MangroveWatch - Cairns Chapter which saw 113 people (teachers, land and sea rangers, community members and related non-profits) trained to monitor mangrove health in the region.
- **Bramston Beach Ratepayers and Progress Association:** A community-led rehabilitation program of Melaleuca Creek with the removal of pest species, planting and maintenance of native riparian species and education with Mirriwinni State School.
- **Yorkeys Knob State School P & C Association:** Establishment of an edible garden serving as an outdoor classroom and providing produce for the canteen. Compost bins and worm farms also supported the P&C canteen in the roll out of its bold Zero Waste Lunch program.
- **Gordonvale Men's Shed:** Installation of a 6.6kw roof top solar PV system to offset emissions of tools in the workshop.
- **Bayview Heights Community Kindy:** Installation of water efficient 'wicking beds' for teaching and fresh food production, with worm farms for food waste recovery and fertiliser.
- **Holloways Beach Community Garden:** Purchase of 23 raised garden beds for all abilities access, other materials and fencing to support the garden's expansion.
- **Babinda Taskforce:** Facilitated community workshops to build networks and sustainability projects in the Babinda area.

## NATURE BASED LEARNING GRANTS

Council has annual funding of \$20,000 available to support local students in accessing environmental and cultural heritage education. A total of 756 students were supported in 2017/18 from the following schools:

- **McDonnell Creek State School** – Fitzroy Island and Reef excursion
- **Gordonvale State High School** – Outer Reef excursion
- **Gordonvale State School** – Butterfly Sanctuary excursion and biodiversity education
- **Isabella State School** – Outer Reef excursion
- **Machans Beach State School** – Skyrail and Kuranda Train Wet Tropics and history education
- **Cairns School of Distance Education** - Daradgee and Holloways Beach Environmental Education Centres, Tinaroo and Cairns Dome excursions
- **St Josephs** – Reef excursion
- **Bentley Park College** – Tours of the Materials Recovery Facility and Botanic Gardens ‘





## WASTE REDUCTION & RECOVERY

Council processes waste for recovery or disposal to landfill through three major facilities:

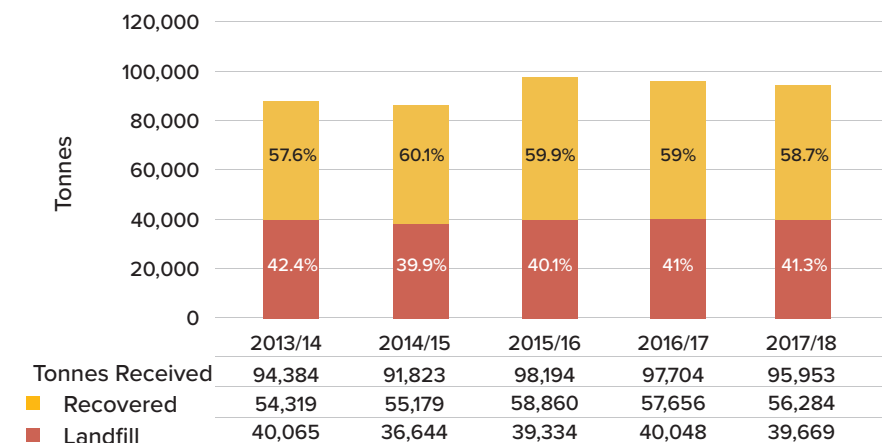


Three smaller private waste disposal facilities also operate in the Cairns local government area which also receive both commercial and industrial, and construction and demolition waste.

No new landfills are permitted in Cairns and closed Council landfills are managed and monitored closely. Methane from the closed Portsmouth Landfill has been captured and flared since 2012, destroying approximately 5,847 tco2e in 2017/18.

A total of 95,953 tonnes of waste was received by Cairns Regional Council in 2017/18, a reduction of almost 2% from the previous year. Of this, 90% was from the residential sector, 7.3% from commercial and industrial and 2.4% from construction and demolition.

### CAIRNS REGIONAL COUNCIL WASTE & RECOVERY RATE



Includes kerbside waste, kerbside recycling, municipal solid waste (self-haul), green waste, scrap metal (including white goods), recyclables (self-haul), construction & demolition waste, asbestos, lead acid batteries, oil, household hazardous waste (paints, chemicals, solvents), tyres and e-waste.



**TOTAL RECEIVED AT COUNCIL TRANSFER STATIONS  
BY SECTOR 2017/18 (WEIGHT)**

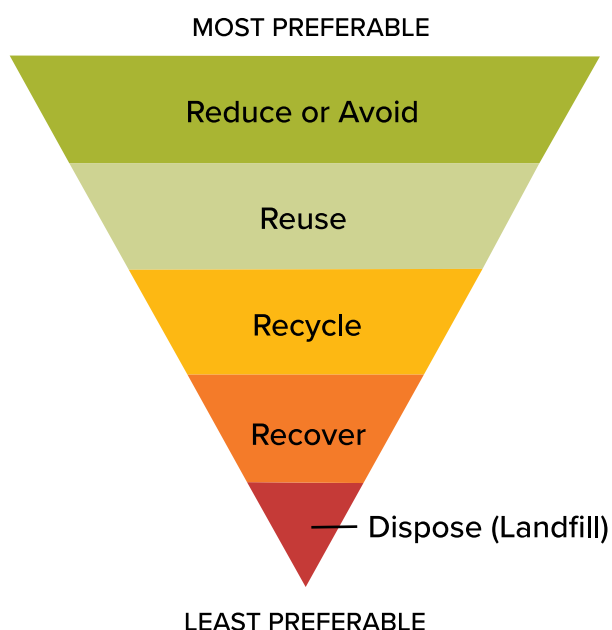
Sector	Total Received at Council Transfer Stations	Percentage to Landfill	Percentage Recycled
Residential	90.3%	41.3%	58.7%
Construction and Demolition	2.4%	100%	0%
Commercial and Industrial	7.3%	5.6%	94.4%

**WASTE REDUCTION AND RECYCLING STRATEGY**

Council released its new Waste Reduction and Recycling Strategy 2018-2027 which sets out how the waste and resource recovery needs of the growing region will be met. It is underpinned by a strategic direction in which landfills are the last option and is guided by these key objectives:

- **Provide education and awareness** - empowering our community to embrace waste avoidance, reduction and reuse
- **Reduce waste** - where Council and community take responsibility for reducing their own waste and using resources effectively
- **Maximise resource recovery** - reduce landfill disposal through resource recovery opportunities
- **Secure our future needs** - where our capacity and capability to manage future waste is secured
- **Advocacy and collaboration** - lead strategic alliances and partnerships to support best practices in waste management

**WASTE HIERARCHY**



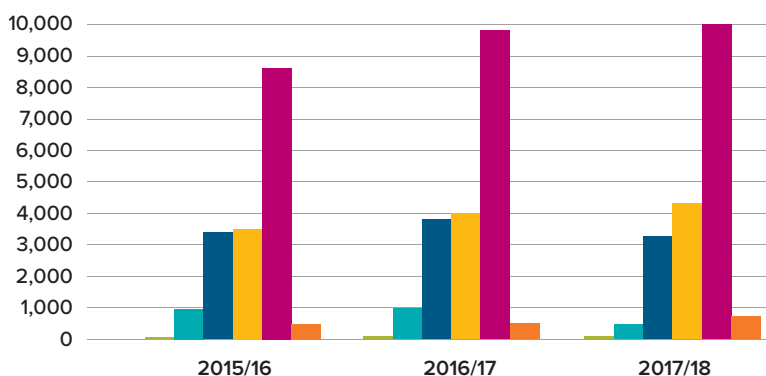
## CAIRNS REGIONAL COUNCIL SPECIFIC RECOVERY

A range of specific waste recovery initiatives are available through Council in addition to co-mingled recycling, including:

- Green waste, diverted from landfill through free residential drop offs twice a year. This is made into a freely available mulch, supporting water wise gardens.
- Glass unsuitable for traditional recycling markets which is crushed locally into ReGlass, a product used as fill in construction instead of quarried sand.
- Donated and discarded items, sold on for reuse at The Buy Back Shop.
- Some hazardous items such as batteries, e-waste, paints and oils, as supported by national product stewardship schemes.

### INITIATIVES

#### CAIRNS REGIONAL COUNCIL SPECIFIC RECOVERY INITIATIVES



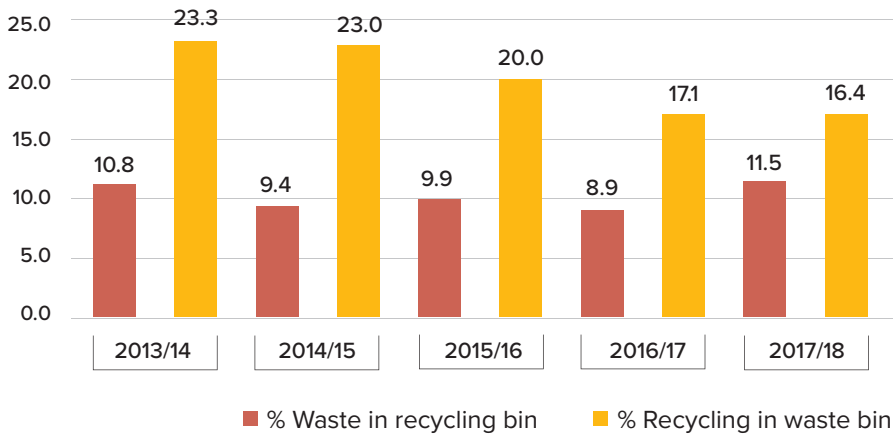
Initiative	2015/16	2016/17	2017/18
E-waste (t)	87.5	151.6	153.9
Crushed Glass (t)	989.0	965.0	558.0
Community Green Waste Drop Off (t)	3,412.0	3,892.0	3,250.0
Scrap metal & white goods (inc fridges, freezers, air con (t))	3,474.8	4,032.59	4,381.2
Fridges, Freezers, air con (units)	8,659.0	9,858.0	9,973.0
Buy Back Shop (t)	520.3	583.7	675.1

### WASTE AND RECYCLING SEPARATION

Council conducts regular audits to track community progress on waste and recycling separation. A reduction of recycling content in the kerbside waste bin (and an increase of waste incorrectly placed in the recycling bin) may indicate a growing desire by residents to recycle items, however there remains some confusion about what items can be accepted by Council's waste recovery facilities.



**CONTAMINATION RATES OF CAIRNS REGIONAL COUNCIL  
KERBSIDE WASTE & RECYCLING BINS**



Head to Council’s Recycle Right website to find out how to correctly separate items for waste and recycling: [recycleright.cairns.qld.gov.au](http://recycleright.cairns.qld.gov.au)

**WASTE AND RECYCLING EDUCATION**

Council’s direct waste and recycling education reach increased by 16% in 2017/18 compared to the previous year and included facility tours, school visits, workshops and events.



**2,000**  
2015/16



**2,800**  
2016/17



**3,254**  
2017/18

**WATER CONSUMPTION**

Water consumption grew by almost 3% in 2017/18 with increases from all sectors but remains below the peak consumption of 2014/15.

[See: Waterway Health](#)





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## TRANSPORT

### CONDITION

On average nine out of ten Australians travel to work, school or university by car<sup>3</sup> and a 2017 survey of Cairns households suggested that 20% of residents ride a bike once a week<sup>4</sup>. Council looks after the majority of roads in the local government area, including suburban roads with the exception of highways. This includes 1,034km of sealed urban roads and 644km of rural roads.

### PRESSURE

A dependence on vehicle-based transport is causing many adverse pressures on the natural environment. This includes,

- **Greenhouse gas emissions** - The transport sector is the second largest source of greenhouse gas pollution in Australia, experiencing higher growth than any other sector<sup>5</sup>
- **Impacts on Fauna** - Increased vehicle use typically leads to a proportional increase in wildlife injuries and road kills
- **Altered Vegetation** - Roads and associated roadside vegetation maintenance typically increase the potential for weed dispersal and habitat modification.

### RESPONSE

#### ACTIVE TRAVEL

##### Planning and Infrastructure

Council continues its support for a connected pedestrian and bicycle friendly region, with public engagement on the next Cycling and Walking Strategy held in 2017/18.

Works continued under the current Strategy to expand the cycling network with focus on the Northern Beaches Leisure Trail, completing the Kewarra Beach Foreshore section in 2017/18. Approximately \$1.5million is also contributed annually for the construction of new footpaths.

Council requires provisions for bicycle parking, footpaths and after trip facilities for certain developments under the Cairns Plan which saw a total of 1,912m of shared footpaths contributed by developers in 2017/18, bringing the total network to 511km.

<sup>3</sup> Climate Council, 2018.

<sup>4</sup> National Cycling Participation Survey, 2017.

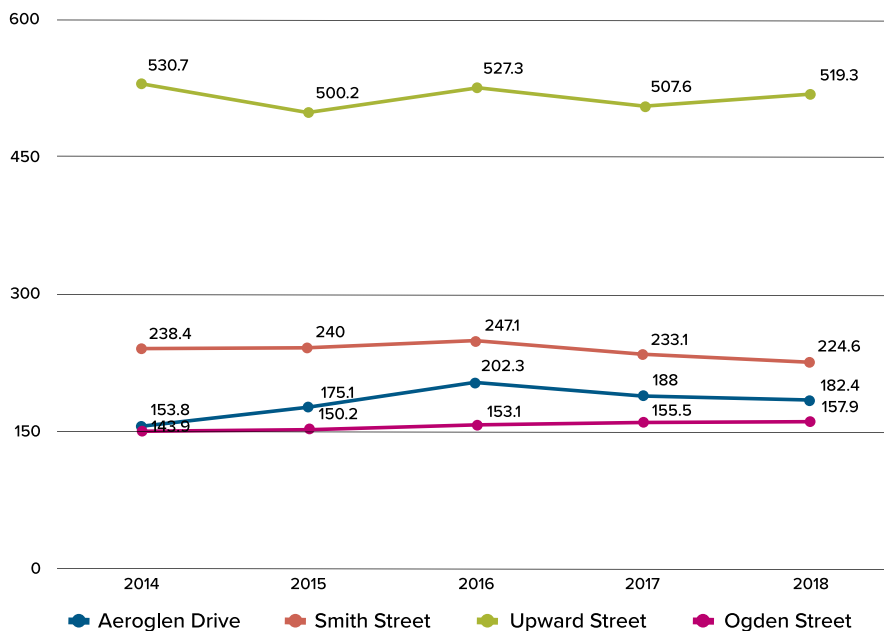
<sup>5</sup> Climate Council, 2018.

## Participation

Bicycle commuting is promoted annually through Ride 2 Work Day and in 2017/18 Council encouraged increased participation by women and girls with the Get Out Get Active program, funded by the Queensland Government. This supported 1,224 people attend 59 facilitated sessions of tailored, age-specific education in a social setting, improving safety skills and confidence.

Use of key cycleways was also monitored at key cycleways in partnership with the Department of Transport and Main Roads, seen below. Uptake generally follows rain-free weather, with increased activity on weekends.

### ANNUAL PROFILE - DAILY AVERAGE AEROGLEN & SOUTHERN CYCLEWAY, PER COUNTER SITE



## PUBLIC TRANSPORT

Council installs and maintains bus shelters around the region on behalf of the Queensland Government to support public comfort and access. In November 2017, Translink replaced ticketing equipment on local buses to ensure that Cairns customers have access to the same level of real time information provided in South East Queensland.

## ROADSIDE VEGETATION MANAGEMENT

Council is protecting the Tropical Pitcher Plant (*Nepenthes mirabilis*), a 'vulnerable' species on road reserves in Bramston Beach through altered road maintenance - avoiding herbicides and mowing to support its growth.

## ROADSIDE FAUNA MANAGEMENT

Council collects around 30 dead domestic and wild animals per month from Council roads due to car hits, with some variability on season.

## STORM WATER MANAGEMENT

See: [Water Quality](#).



## TERRESTRIAL BIODIVERSITY

### CONDITION

The Cairns local government area sits within the Barron, Mitchell, Mossman and Russell-Mulgrave catchments. The landscape includes wetlands, flat coastal lands, mountain ranges and metamorphic rocks covered in rainforest and wet sclerophyll forests. It is an area of significant biodiversity and includes sections of the World-heritage listed Wet Tropics Rainforest.

This section includes the biodiversity of terrestrial ecosystems and the 'Water' section addresses connected freshwater, estuarine and marine ecosystems.

### VEGETATION COVER

Surveys show that close to 68% of remnant vegetation cover remained in the Cairns LGA in 2017. Of the remnant vegetation left, under the Environmental Protection Act 1994, 18% was classified as 'of least concern', 70% 'no concern at present' and 12% 'endangered' (Queensland Government, 2019).

	Pre-Clear	1997/98 Baseline	2013	2015	2017
Remnant Vegetation Extent (ha)	167,324.62	113,410.31	113,293.76	113,282.84	113,272.63
Percentage Cover Remaining (%)	100.00	67.70	67.70	67.70	67.69
	Pre-Clear	1997/98 Baseline	2013	2015	2017
Remnant Vegetation Annual Rate of Clearing (ha p/a)	Not recorded	38.68	6.07	5.77	4.80

(Queensland Government, 2019)



.....

## SPECIES CONSERVATION STATUS

Queensland Conservation Status	Number of Recorded Species in Cairns Local Government Area 2017/18
Least Concern	3,009
Special Least Concern	44
Near Threatened	42
Vulnerable	64
Endangered	33
Extinct in the Wild	9
Introduced	404
Other	56
Total	3,661

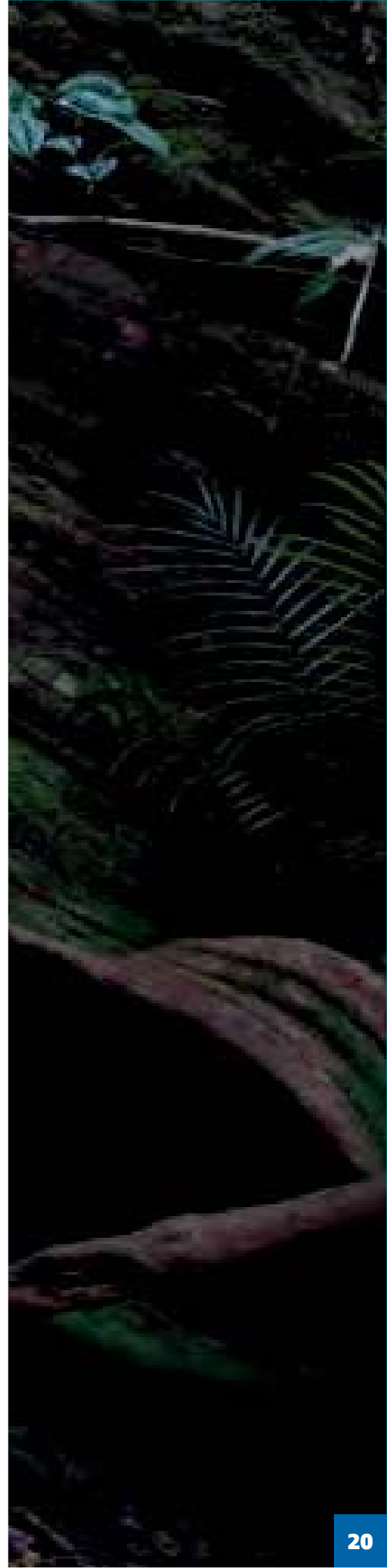
Data in previous reports not suitable to be used comparatively as per advice from the Queensland Government.

## PRESSURES

- Fragmentation of remnant vegetation
- Invasive terrestrial flora, fauna and pathogens
- Changes in climate including severe weather events like cyclones, floods and heatwaves
- Altered hydrology and fire regimes
- Indirect threats from the demands of a growing population

## RESPONSE

A key strategic goal of Council is to ensure that natural areas are 'maintained, enhanced and connected' and teams work across the local government area with other stakeholders responsible for land management. In 2017/18 Council significantly improved its management of pest surveillance, revegetation and fire activities with a new database to map its actions in the field. This will support improved reporting on this strategic goal in future.





## REVEGETATION

Council assists local landcare groups with site coordination (access, planting preparation and maintenance) and by providing plants stock through its nursery.

In 2017/18 a total of 14,924 native seedlings were raised for revegetation across the region. This includes plantings by Council at its own revegetation sites, on green spaces through the Green Space Our Place volunteer program and most significantly, by the following local groups:

- **Conservation Volunteers Australia**  
Atika Creek (Smithfield),  
Freshwater Creek (Redlynch)
- **Jaragun Pty Ltd**
- **Treeforce**  
Freshwater Creek (Redlynch)
- **Bramston Beach Ratepayers Progress Association**  
Melaleuca Creek
- **Dawul Wuru Land and Sea Rangers**  
Various locations
- **Mulgrave Landcare**  
Hemmings Creek (Gordonvale),  
Fig Tree Creek (Fishery Falls),  
Freshwater Creek (Redlynch)
- **Terrain**  
Thomatis Creek

Bentley Park Daycare, Trinity Park Daycare, Gordonvale State School, Marlin Coast Daycare, Redlynch College, Machans Beach State School and Cairns Community Kindy were also supported by Council's Natural Assets Management team.

### SEEDLINGS RAISED BY COUNCIL FOR REVEGETATION

2013/14	2014/15	2015/16	2016/16	2017/18
17,013	18,063	18,652	18,752	14,924

### TROPICAL TREE DAY

Over 170 people attended the 2017 Tropical Tree Day event to plant 1,000 trees in Kamerunga. Treeforce also planted 200 trees provided by Council in Redlynch to mark the occasion.

## WILDLIFE MANAGEMENT

### FLYING FOX EDUCATION AND MANAGEMENT

Council continues to work closely with the Flying Fox Advisory Committee in developing its long term management solutions for the wellbeing of this keystone species in an urban environment. In 2017/18 Council provided funding and support for the annual Cairns Bat Festival, 43 educational sessions at the Cairns Library City Library roost site, 6 school incursions, expos and public events and one Bat Care training course to support local populations in the face of higher than average rates of orphaned and deceased young at local colonies.



## BIOSECURITY

Upholding biosecurity is essential for the integrity of local ecosystems and industry such as agriculture and tourism. The Wet Tropics provide favourable conditions for pests to spread throughout the year, posing significant challenges.

Council is responsible for ensuring invasive biosecurity matter is managed in compliance with the *Biosecurity Act 2014*. In 2017/18, Council worked closely with the FNQ Regional Organisation of Councils and the Cairns Pest Regional Working Group to develop the next Biosecurity Plan for 2018-2023. This will outline landholder obligations across different land tenures and provide practical control measures.

### PEST PLANT MANAGEMENT

Council monitors pest plants in at high risk sites. So far, Council surveillance has identified over 2,000 pest plant infestations of note during the 2017/2018 period, following from the results of the 2016 riparian surveillance project which identified 2,400 pest plant infestations. These outcomes will inform their strategic control through the new Biosecurity Plan.

The following species received the greatest control effort in 2017/18: Thunbergia, Salvinia, Brillantaisia, Hymenachne, Kudzu, Siam and Water Hyacinth.

### PEST ANIMAL MANAGEMENT

Council runs an ongoing trapping and baiting program for feral pigs and feral dogs, with ongoing actions for pest deer. For the 2017/18 period, feral dog issues have been markedly increased compared with previous years and Council has stepped up capability to meet this.

Cairns Regional Council In-field Biosecurity (Hours)	2013/14	2014/15	2015/16	2016/16	2017/18
Total Staff Hours	6,532	6,794	4,880	4,687	5,150
Weed Control	4,652	4,914	3,189	2,960	3,270
Pest Animal Control	1,880	1,880	1,691	1,727	1,880

Data from 2017/18 pest weed and animal control does not include drive time or surveillance as previous years do.

### FIRE MANAGEMENT

Council has responsibilities for managing bushfire risk in the region and fire events on its own land under the *Disaster Management Act 2003*. In 2017/18, Council invested 38.5 hours into burns, maintaining and improving fire breaks and emergency access tracks. This was significantly less than previous years due to Fire Lines being markedly improved over previous conditions.





## WATERWAY HEALTH

The Cairns local government area sits within the Barron, Mitchell, Mossman and Mulgrave-Russell drainage basins and over 90km of wetlands, of which nine wetlands are of national importance. These provide great recreational value to the community, support biodiversity (including nurseries for seafood), can filter sediment and protect people and property from the effects of extreme climate events such as storm surges and floods. These flow into the Great Barrier Reef catchment, internationally recognised for its outstanding biodiversity.

### CONDITION

The Wet Tropics Healthy Waterways Partnership brings together scientific data from industry, agencies and academia to produce an annual report card on catchment health in the region. The 2018 Wet Tropics Report Card is based on data from 2016/17. Full details can be found online: [wettropicswaterways.org.au/wet-tropics-report-card](http://wettropicswaterways.org.au/wet-tropics-report-card) (The report card can be found on the next page).

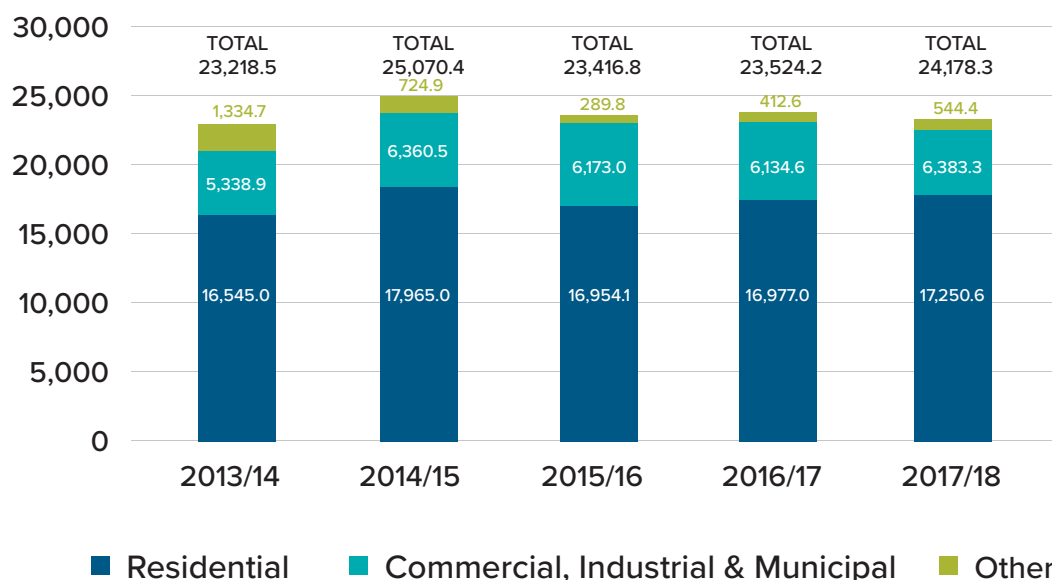
### PRESSURE

- Modification of hydrology and water flows.
- Habitat disturbance or loss including riparian, mangrove and saltmarsh communities.
- Invasive species.
- Pollution such as sediment, litter, nutrients and contaminants.
- Climate change impacts such as increased frequency of severe weather events, ocean acidification, rising sea temperature and sea levels.
- Unsustainable fishing and recreational impacts.
- Increased demand for potable water.

Water for the Cairns population is sourced from ten locations, including Lake Morris, Behana Creek and small intakes in largely rainforest locations.

## WATER CONSUMPTION

### ANNUAL WATER CONSUMPTION BY SECTOR (ML)



# WET TROPICS HEALTHY WATERWAY REPORT CARD



economic growth



population growth



## FRESHWATER B Russell

The Russell Basin is graded good overall. It is graded good for water quality and habitat and hydrology.

## FRESHWATER B Mulgrave

The Mulgrave Basin is graded good overall. It is graded good for water quality and habitat and hydrology.

## FRESHWATER B Barron

The Barron Basin is graded good overall. Water quality has improved to very good, mainly because of lower concentrations of sediment. Habitat and Hydrology is moderate.

### Atherton

### Mareeba

### Cairns

### Port Douglas

nutrients, sediments and pesticides

nutrients, sediments and pesticides

## ESTUARY B Russell-Mulgrave

The Russell-Mulgrave is graded good overall. It is graded good for water quality and habitat and hydrology.

## ESTUARY B Trinity Inlet

Trinity Inlet is graded good overall. It is graded very good for water quality. It is graded moderate for habitat and hydrology due to poor but improving seagrass condition.

## ESTUARY C Barron

The Barron Estuary is graded moderate overall. Water quality declined to a moderate grade, mainly because of higher chlorophyll-a concentrations. It is graded moderate for habitat and hydrology.

## MARINE C North Inshore

The North Inshore Zone is graded moderate overall. Water quality improved to a good grade, with better scores for water clarity, nutrients and chlorophyll-a. It is graded moderate for coral and poor for seagrass.

Council is an active partner of the Wet Tropics Healthy Waterways Partnership.

Total Water Consumed  
2017/18  
**24,178.3  
ML**

(excluding recycled water & urban stormwater reuse)

**RESPONSE**

**WATER CONSERVATION**

Conserving water is important to uphold the environmental flow of local waterways, reduce growing electricity demands due to pumping and treatment and to maintain adequate water supplies for a growing population. This is guided by strict environmental monitoring requirements and Council’s Demand Management Strategy, with energy use tracked through Council’s energy and emissions system.

**NETWORK IMPROVEMENTS**

Council completed its System Leakage Detection Program in 2018. Over the three years the program identified a total of 464 leaks with an estimated volume of 524Megalitres per annum (ML/a). In 2017/18, this included 141 leaks with an estimated volume of 103ML/a. Repair works completed to date have achieved water savings of 398Megalitres per annum, equivalent to the water demand of 1,473 new residential properties.

This compliments the investment in 55,000 new smart water meters for residential, commercial and high-volume water users, enabling live data for users and early detection of unusual water loss, for timely repairs.

**WATER EDUCATION**

Council launched its custom built ‘Water Engagement and Training (WET) Van’ and the ‘WaterWhys Schools Water Education Program’ in 2018. The WET Van teaches students and the wider community about the region’s water cycle and household water consumption through interactive games and displays. Water education is ongoing in schools and events, reaching 1,937 people directly in 2017/18.



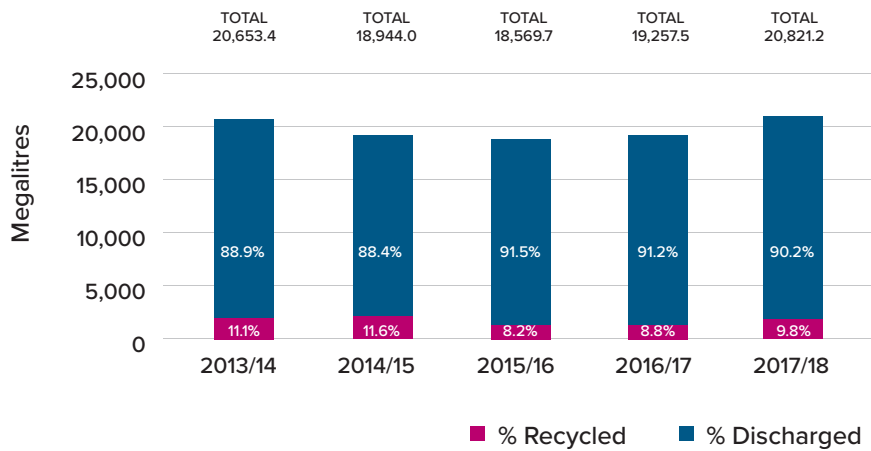


## WATER QUALITY

### WASTE WATER TREATMENT

Council manages six wastewater networks for significantly reduced nitrogen and phosphorous in waste water that is discharged into waterways that flow to the Great Barrier Reef lagoon. Four of these are able to produce Class A recycled water, which is used in limited applications around the city such as the Botanic Gardens, golf courses and a school.

### ANNUAL WASTE WATER TREATMENT



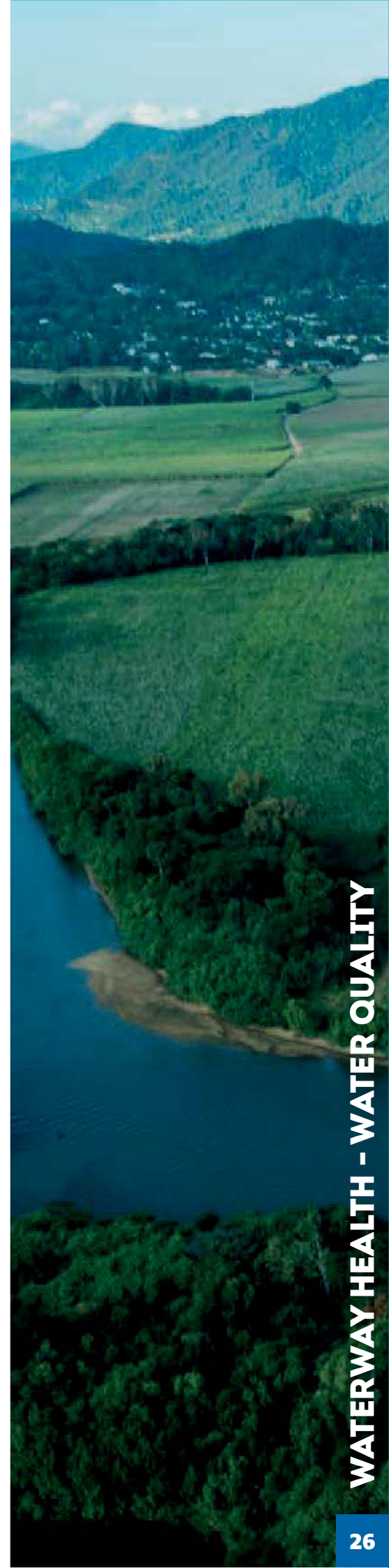
### WET TROPICS HEALTHY WATERWAYS PARTNERSHIP

Council is an active partner of the Wet Tropics Healthy Waterways Partnership, providing both technical data and financial support. The Partnership's aim is to improve the condition of our freshwater and estuary waterways that flow into the Great Barrier Reef. As an initiative of the Reef 2050 Long-Term Sustainability Plan, it enables stakeholders to collaboratively measure the effectiveness of land management practices in the region's catchments and to enable prioritisation of further actions.

### ENVIRONMENTAL SENSORS

Council commenced Smart Catchments in 2018, a pilot project in Saltwater Creek to install environmental sensors, allowing real-time data on water flowing through the catchment. This will be available online for the community and will support targeted education depending on the contaminants found, as well as monitoring any impacts on nutrient loads by Council's sewer pump station in wet weather overflows.

The project is delivered in partnership with James Cook University and funded by the Australian Government. Saltwater Creek flows through Whitfield, Edge Hill, Manoora, Aeroglen and Cairns North.



## LITTER, ILLEGAL DUMPING AND SEDIMENT CONTROL

Council investigates any contamination events in its network of over 260 drains and urban waterways and maintains a gross pollutant trap network to help capture sediment and other debris, with 147.6m<sup>3</sup> removed in 2017/18.

In 2018, Council released its *Litter and Illegal Dumping Action Plan* which builds upon ongoing litter management with:

- Infrastructure to increase access to responsible waste disposal options
- Education that increases the uptake of responsible waste disposal options
- Enforcement that discourages irresponsible disposal.

This supports the growing number of community-led clean ups throughout the year, with 26 held in the Council-supported 2017 Great Northern Clean Up.

## PEST FLORA AND FAUNA CONTROL

Wetland weed infestations can disturb habitat, natural flows and drainage, fishing grounds and visual appeal. Priority aquatic weeds are controlled by Council in numerous water bodies in the region, starting from the top catchments and working down, to contain their spread in the long term. These efforts have seen large reductions of *Salvinia Molesta* infestations in 2017/18.

Council also supported the 2018 Youth Tilapia Termination Competition at Cattana Wetlands, hosted by the Cairns and FNQ Fishing Group. Over 100 community members removed 260 invasive Tilapia on the day, with education on pest reduction provided by Council.

## VEGETATION CONSERVATION

The Cairns Plan includes an overlay identifying areas with vegetation conservation values and significant waterways. This can include rare or threatened plants species, regionally significant vegetation and areas with structural integrity and connectivity, with coinciding conditions for development.

A Marine Plant Management strategy is also in place for Council-managed areas to balance the hydraulic and ecological functions of Cairns' urban waterways. Management is ongoing for improved environmental values of the Cattana Wetlands, a rehabilitated sugar cane and sand mining quarry.

# COUNCIL OPERATIONS

Council is committed to civic leadership and decision making whereby economic, environmental, and community considerations are equally embraced for the well-being of present and future generations.

## CONDITION

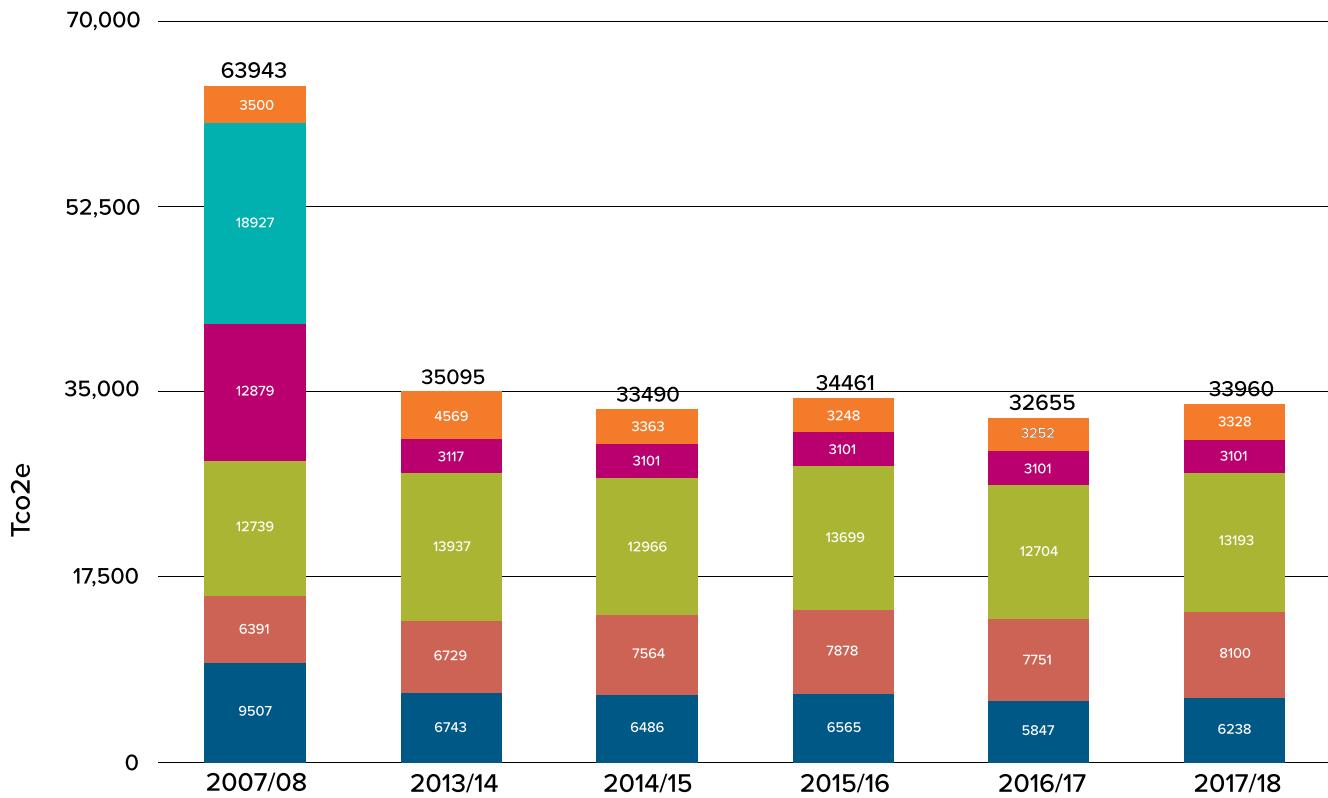
In 2017/18, Council had \$3.96 billion of assets under management, 1,184 employees, \$293 million in operational expenses and a \$169 million capital works budget.

More information can be found in Council's 2017/18, Annual Report.

## GREENHOUSE GAS EMISSIONS

Overall, Council's greenhouse gas emissions increased by 4% in 2017/18, compared with the previous year, with increases primarily from facilities and street lighting, along with water and sewerage and fuel use.

### CAIRNS REGIONAL COUNCIL - GREENHOUSE GAS EMISSIONS



	2007/08	2013/14	2014/15	2015/16	2016/17	2017/18
Total Council Activities Emissions (including refrigerant gases, propane etc)	63,943	35,095	33,480	34,461	32,655	33,960
Fuel Use Emissions	3,500	4,569	3,363	3,248	3,252	3,328
Landfill (Portsmith) Emissions	18,927	0	0	0	0	0
Waste Water Treatment Fugitive Emissions	12,879	3,117	3,101	3,101	3,101	3,101
Water/Sewerage Electricity Emissions	12,739	13,937	12,966	13,669	12,704	13,193
Street, Traffic and Public Lighting Emissions	6,391	6,729	7,564	7,878	7,751	8,100
Facilities Electricity Emissions	9,507	6,743	6,486	6,565	5,847	6,238

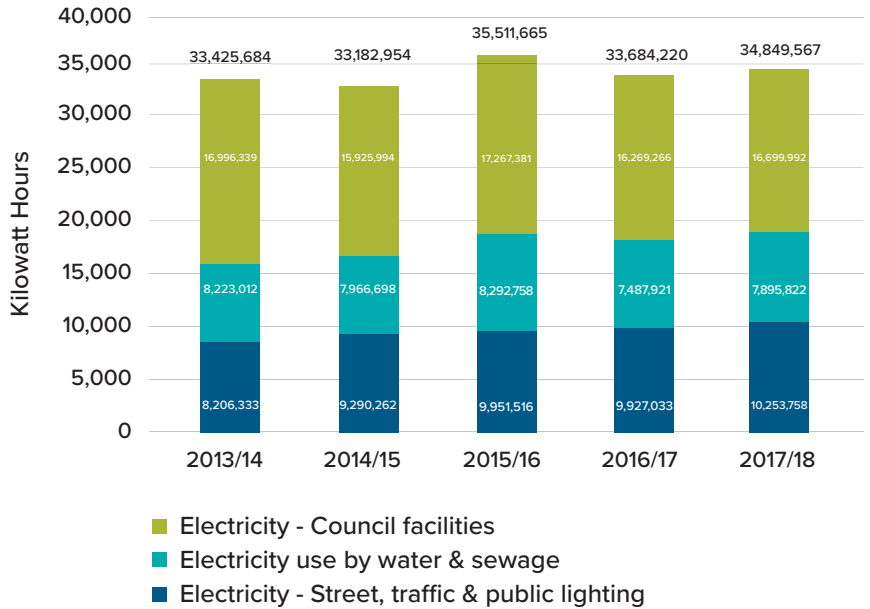
Accurate reporting on fugitive emissions remains a challenge for the organisation with changes to the National Performance Report in 2015. No significant process changes impacting nitrous oxide levels were observed in 2015/16 - 2017/18 and levels are assumed to be the same. Please note, there was an updated coefficient for electricity in 2013/14.



### ELECTRICITY CONSUMPTION

In 2017/18, electricity use increased by 3% overall. This is made up of 5% growth in facilities, including a 3% increase of an expanded street lighting network and the same for water and sewerage.

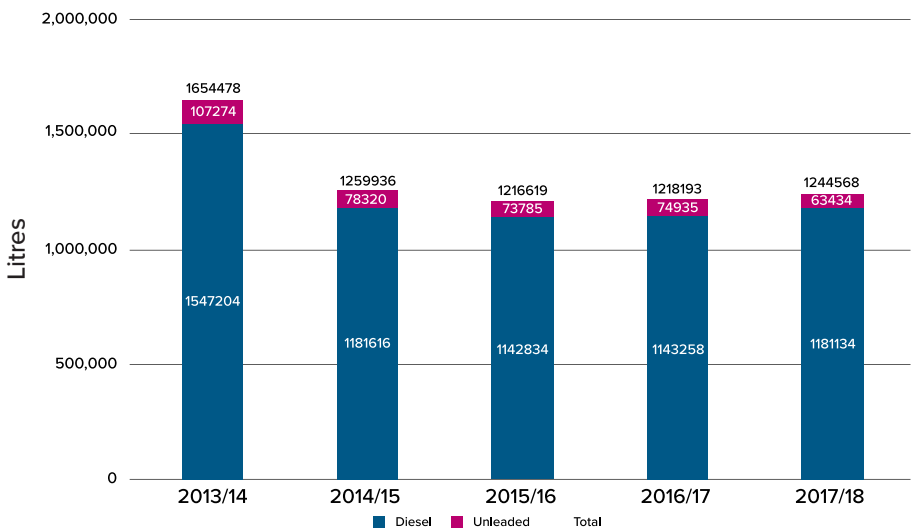
#### CAIRNS REGIONAL COUNCIL ELECTRICITY CONSUMPTION



### FUEL CONSUMPTION

With the growth in Council infrastructure and activities, the distance and fuel use increased by 2% in 2017/18 compared to the previous year. This included a reduction of 15% for unleaded fuel and a 3% increase in diesel fuel.

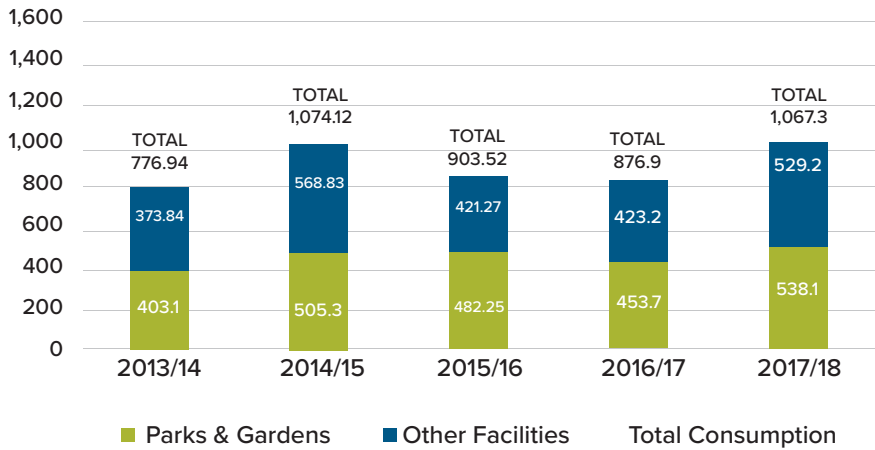
#### CAIRNS REGIONAL COUNCIL FLEET FUEL CONSUMPTION



**WATER CONSUMPTION**

Council is one of the major water users in the region, responsible for a large network of public grounds and facilities. In 2017/18, Council used 4.6% of the total water supplied in the local government area. Overall, there was a 23% increase on the year previous. It is estimated that 189.68ML of this was from standpipes, used to flush pipes, suppress dust and for other applications that support local construction projects.

**CAIRNS REGIONAL COUNCIL ANNUAL WATER CONSUMPTION (ML)**



**RESPONSE**

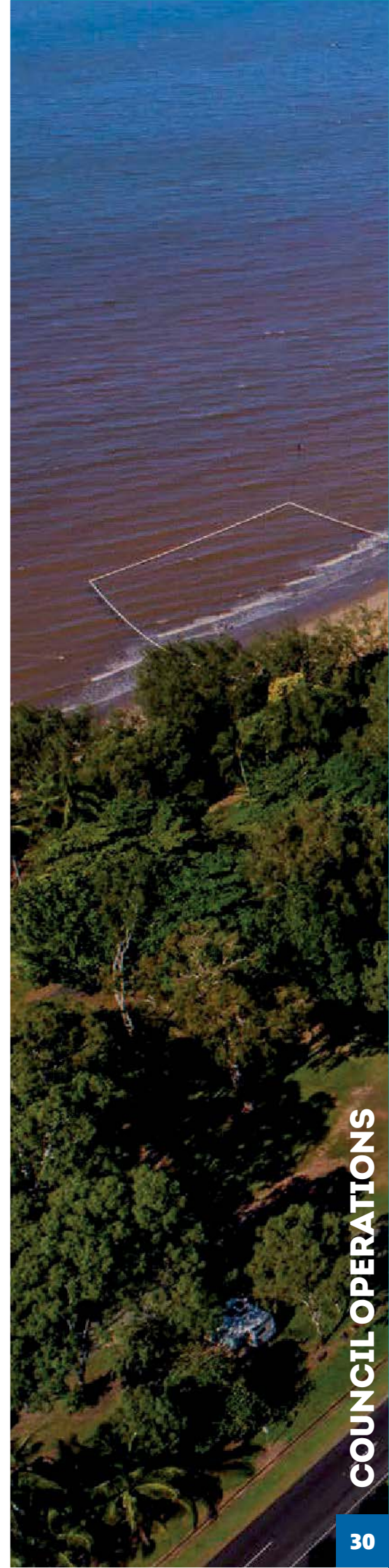
[Related: Climate Adaptation](#)

**ENERGY & EMISSIONS**

Council has had an Energy and Emissions Management Policy in place since 2007 with a Corporate Sustainability Policy since 2013, supporting the following initiatives in 2017/18:

**RENEWABLE ENERGY INVESTMENT**

Council commenced installation of 799kW of roof top solar PV capacity on 12 sites in 2017/18. This included the Edmonton Leisure Centre, Martyn Street Depot, Tobruk Pool, Cairns City Library, The Esplanade Lagoon, Northern, Marlin Coat and Southern Waste Water Treatment Plants, Sewerage Depot, Freshwater Creek Water Treatment Plant, Woree Disaster Coordination Centre and a Trinity Beach Pump Station.





## CITIES POWER PARTNERSHIP

Council has joined a 100-strong coalition of councils who have pledged to switch to non-polluting energy and reduce emissions in their communities. The Climate Council- run program is an important knowledge sharing platform for localised climate action. More information on Council's pledges can be found online.

## QUEENSLAND CLIMATE RESILIENT COUNCILS

Council joined this 5-year State Government program aimed at strengthening internal governance and processes to respond to climate change in 2018. The program includes expert briefings for councillors and managers, governance assessments and the provision of frameworks and tools to assist with climate response. Council also participated in the Queensland Government sector adaptation plans for Emergency Management, Tourism, Health and Biodiversity and Ecosystems.

## GREENHOUSE GAS EMISSIONS REDUCTION TARGET

Despite a slight increase in 2017/18, Council remains on track to meet its 50% greenhouse gas emissions reduction target by 2020, with a 47% reduction compared to 2007/08 levels.

## WATER MANAGEMENT

Council's new dedicated irrigation services team has commenced improvements of Council's extensive irrigation system, spanning from Babinda to Ellis Beach. Smart metering is being installed to guide appropriate watering, informed by local weather stations for more sustainable water use.

## ENVIRONMENTAL COMPLIANCE

Council develops environmental and cultural heritage management plans for Council's own operational and capital works programs to comply with relevant legislations. In 2017/18, this included the following key improvements:

- **Pied Imperial Pigeon Breeding Place Protection:** With assistance from local bird enthusiasts and ornithologists, Council is now routinely notified of seasonally nesting native bird locations and protects such sites whilst nesting and rearing occurs in compliance with the *Nature Conservation Act 1992*. This improved fauna management reduces impacts on wildlife and is assisted by licensed spotter catcher services where required.
- **Species Management Programs:** Council now has standardised options approved by the Department of Environment and Science to manage native fauna classified as least concern breeding or living in public places or Council work sites.





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## WASTE AND LITTER REDUCTION

Prompted by home-grown campaigns, Straw No More & The Last Straw on the Great Barrier Reef, in April 2018 Council resolved to remove straws and other single-use plastics from its operations and to transition its functions, venues and events to responsible alternatives. The motion also called for an investigation of a wider community and business program to reduce these commonly littered items.

Council has an important role to promote resource recovery and resource efficiency in the way it manages waste. Improving datasets to determine baseline waste generation, composition and recycling rates is a key action of the new Waste Reduction and Resource Recovery Strategy. This will be supported by the Queensland Government waste levy, with further weigh bridges installed at smaller landfills in the region, with data and a new waste diversion target for Council operations included in future reports.



## CAIRNS REGIONAL COUNCIL DATA

	2013/14	2014/15	2015/16	2016/17	2017/18	Percentage Change
<b>BUILT ENVIRONMENT</b>						
<b>Planning &amp; Development</b>						
Building Approvals	634	669	790	733	1,164	58.8%
Houses	630	613	710	627	639	1.9%
Residential-other	4	56	80	106	525	395.3%
<b>Low Carbon Travel</b>						
Length of shared pathways and cycleways (km)	490	494	504.8	509.2	511.1	0.4%
Percentage of people riding in the last week	Data not available	23.1%	22.7%	20.2%	Data not available	-
Percentage of people riding in the last year	Data not available	40.1%	38.3%	35.8%	Data not available	-
<b>Community Engagement</b>						
Waste and Recovery Education Reach (persons)	-	-	2,000	2,800	3,254	16.2%
Water and Waste Water Education Reach (persons)	-	-	925	1,261	1,937	53.6%
Disaster Resilience Education Reach (persons)	-	-	1,700	2,955	4,678	58.3%
<b>Waste &amp; Recovery Total</b>						
Total Received (tonnes)	94,384	91,823	98,194	97,704	95,953	-1.8%
Tonnes landfilled	40,065	36,644	39,334	40,048	39,669	-0.9%
Tonnes diverted from landfill	54,319	55,179	58,860	57,656	56,284	-2.4%
<b>All Sectors</b>						
Total	57.6%	60.1%	59.9%	59.0%	58.7%	-0.6%



	2013/14	2014/15	2015/16	2016/17	2017/18	Percentage Change
<b>BUILT ENVIRONMENT</b>						
<b>Total Waste Received by Sector (%)</b>						
Construction and Demolition	Data not available	Data not available	Data not available	2.0%	2.4%	20%
Commercial and Industrial	Data not available	Data not available	Data not available	8%	7.3%	-8.8%
Total Domestic	Data not available	Data not available	Data not available	90%	90.3%	0.3%
<b>Total Waste Recovered by Sector (%)</b>						
Construction and Demolition Waste Recovered	N/A	N/A	0.0%	0.0%	0.0%	-
Commercial and Industrial Waste Recovered	N/A	N/A	93.0%	94.0%	94.4%	0.5%
Domestic Waste Recovered	N/A	N/A	50.6%	57.6%	58.7%	1.9%
<b>Residential Waste &amp; Recycling Contamination Rate (%)</b>						
Waste materials in kerbside recycling	10.8%	9.4%	9.9%	8.9%	11.5%	29.2%
Recyclable materials in kerbside waste	23.3%	23%	20%	17.1%	16.4%	-4.1%
See 'Community Engagement' data on Community Waste & Recovery Education						

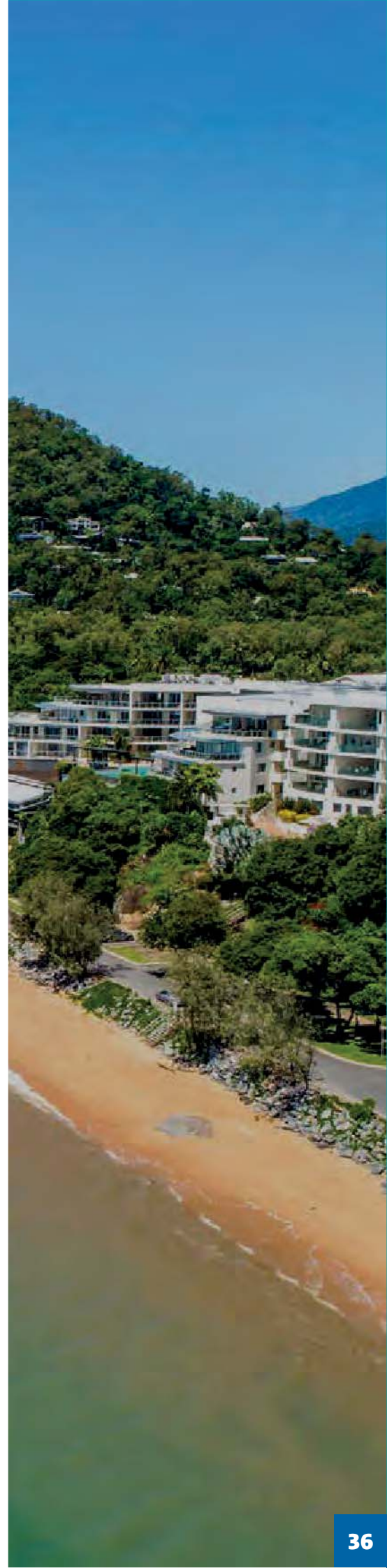




## CAIRNS REGIONAL COUNCIL DATA

	2013/14	2014/15	2015/16	2016/17	2017/18	Percentage Change
<b>BIODIVERSITY</b>						
<b>Revegetation</b>						
Trees raised for Council revegetation and conservation projects in the region	17,013	18,063	18,652	18,752	14,924	-20%
<b>Biosecurity</b>						
Hours spent on pest plant control	4,652	4,914	3,189	2,960	3,270	10%
Hours spent on pest animal control	1,880	1,880	1,691	1,727	1,880	9%
Feral pigs destroyed	135	137	138	198	126	-36%
<b>WATER &amp; WATERWAY HEALTH</b>						
<b>Potable Water Consumption (ML)</b>						
Total	23,218.5	25,050.4	23,416.8	23,524.2	24,178.3	2.8%
Residential	16,544.9	17,965	16,954.1	16,977	17,250.6	1.6%
Commercial, Industrial, Municipal	5,338.8	6,360.5	6,172.9	6,134.6	6,383.3	4.1%
Other	1,334.7	724.9	289.8	412.6	544.4	31.9%
<b>Waste Water Treatment (ML)</b>						
Total Treated	20,653	18,944	18,570	19,257.5	20,821.2	8.1%
Recycled	11.1 %	11.6%	8.2%	8.8%	9.8%	11.4%
Discharged	88.9 %	88.4%	91.8%	91.2%	90.2%	-1.1%
See 'Community Engagement' data on Community Water Education						

	2013/14	2014/15	2015/16	2016/17	2017/18	Percentage Change
<b>COUNCIL OPERATIONS</b>						
<b>Emissions (tco2e)</b>						
Total (including minor emissions from refrigerant gases and propane)	35,095.0	33,480	34,461	32,654.9	33,960.1	4%
Facilities Electricity	6,743	6,486	6,565	5,846.4	6,237.7	7%
Streetlight, Traffic and Public Lighting	6,729	7,564	7,878	7,751.9	8,100.5	4%
Water and Sewerage Electricity	13,937	12,966	13,669	12,703.4	13,193	4%
Waste Water Treatment Fugitive Emissions	3,117	3,101	3,101	3,101	3,101	-
Portsmith Landfill	0	0	0	0	0	-
Vehicle Fuel Use	4,569	3,363	3,248	3,252.2	3,327.9	2%
<b>Electricity (kWh)</b>						
Total	33,425,684	33,182,954	35,511,665	33,684,220	34,849,567	3%
Streetlight, Traffic and Public Lighting	8,206,333	9,290,262	9,951,516	9,927,033	10,253,753	3%
Water and Sewerage	16,996,339	15,925,994	17,267,381	16,269,266	16,699,992	3%
Council Facilities	8,223,012	7,966,698	8,292,768	7,487,921	7,895,822	5%
<b>Council Fuel Consumption (L)</b>						
Total	1,654,478	1,259,937	1,216,619	1,218,193	1,244,568	2.2%
Diesel	1,547,204	1,181,616	1,142,834	1,143,258	1,181,134	3.3%
Unleaded	107,274	78,320	73,785	74,935	63,434	-15.3%
<b>Council Water Consumption (ML)</b>						
Total	776.9	1,074.1	903.6	867.9	1,067.3	21.7%
Parks and Gardens	403.1	505.3	482.3	453.7	538.1	18.6%
Other Facilities	373.8	568.8	421.3	423.2	529.2	25%
Total Water Supplied to Cairns LGA	23,218.54	25,050.40	23,416.83	23,524.20	23,247.80	-1.2%
Percentage of Total Water Consumed by Council	3.3%	4.3%	3.9%	3.7%	4.6%	24%







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