Carbon Neutral Public Disclosure Summary

An Australian Government Initiative

Climate Active

BRISBANE CITY COUNCIL

REPORTING PERIOD: 2018-19

FINAL REPORT

Declaration

To the best of my knowledge, the information provided in this Public Disclosure Summary is true and correct and meets the requirements of the National Carbon Offset Standard (NCOS) Carbon Neutral Program.

Date: 9.12.19

Colin Jensen

CHIEF EXECUTIVE OFFICER

BRISBANE CITY

Dedicated to a better Brisbane

1. Carbon neutral information

1A. Introduction

Brisbane City Council (Council) is Australia's largest local government authority in terms of both population and budget. It is dedicated to ensuring Brisbane is a great place to live and providing leadership and good governance for the people of Brisbane.

As Queensland's capital, Brisbane has a thriving economy and significant infrastructure investment. The Greater Brisbane economy was valued at $171 billion in 2018-19, accounting for 49% of Queensland's economic output and nine per cent of Australia's output[1]. Brisbane has a warm, subtropical climate, extensive parklands and recreational facilities, a diverse natural environment and vibrant central business district, retail, arts and entertainment precincts.

Council is made up of 26 wards, spanning a geographic area of 1,342 square kilometres. It provides a broad array of services for the city's 1,231,605 residents, manages local infrastructure and assets valued at more than $23 billion and has an annual budget in the order of $2.9 billion.

The *City of Brisbane Act 2010* (the Act) creates a framework for the city's day to day operations and long-term plans. The Act provides for the way in which Council is constituted and its responsibilities and powers.

Brisbane Vision 2031 is Council's long-term community plan for the city. The main priorities for the plan are to maintain and improve quality of life for the Brisbane community and ensure Brisbane meets the liveability and sustainability opportunities of the future. *Brisbane Vision 2031* outlines aspirations for the city's future and identifies targets to be achieved by 2031, including carbon neutral status for Council operations.

Brisbane has been a leader in sustainability practices for more than 20 years. Council has been active in responding to climate change, focusing on the performance of its own operations, as well as delivering initiatives to support Brisbane residents and businesses to reduce their greenhouse gas emissions. To further demonstrate its sustainability leadership, Council committed to achieve and maintain carbon neutral status for its operations from 2016-17.

As at December 2016, Council had met all requirements to self-declare that it had achieved carbon neutrality for its operations in accordance with the National Carbon Offset Standard (NCOS). Council obtained certification of its carbon neutral status under the NCOS Carbon Neutral Program following finalisation of its 2016-17 carbon accounts in early 2018.

This 2018-19 Public Disclosure Summary (2018-19 PDS) is Council's third annual report under the NCOS Carbon Neutral Program and provides an update on progress made in 2018-19. It outlines the 2018-19 Carbon Account, including changes from the 2016-17 base year, recently implemented emissions reduction measures, and details of the annual offset reconciliation.

1B. Overview of Council operations

In 2018-19, Council provided the following services to the residents of Brisbane:

- land use planning and development assessment
- operation of public transport services, including one of the largest bus fleets in Australia and the iconic CityCat and CityFerry network
- transport network development and maintenance
- waste management services, including operation of a landfill facility
- provision of on and off-street parking services
- development and maintenance of urban parks
- provision and management of arts and cultural facilities and events
- provision and maintenance of libraries, community halls and sports and recreational facilities
- street cleaning and graffiti removal
- animal management
- vaccination services
- mosquito control and pest management

[1] Brisbane City Council estimate based on Australian Bureau of Statistics (ABS) and Queensland Treasury data.

- disaster response and recovery
- flood risk management
- biodiversity conservation
- green community initiatives, including programs and events to support greater sustainability action by households, students and businesses.

The infrastructure and assets managed by Council in 2018-19 included:
- 578 picnic grounds
- 2,135 parks, comprising 9,761 hectares of natural areas and 6,681 hectares of urban parks (including sports parks)
- 149 dog off-leash areas in parks
- 34 libraries, including a mobile library
- 22 swimming pools
- 12 cemeteries and crematoria
- 4,887 kilometres of paths and walkways
- 6,275 bus stops
- 21 CityCat ferries
- 1,219 buses
- 9 cross river ferries
- 8 cross river bridges (excluding the Clem 7 tunnel)
- 81 wharves, jetties and pontoons.

1C. Council's certification boundary

Council's 2018-19 Carbon Account was prepared in accordance with the *NCOS for Organisations* (1 November 2017 version) and relevant national legislation and international standards. These included:
- *National Greenhouse and Energy Reporting (Measurement) Determination 2008*, Compilation No. 10, Registered 5 July 2018
- *Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard*, 2004
- *GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard*, 2011.

The organisational emissions boundary was defined in accordance with section 2.3.1 of the *NCOS for Organisations* using an 'operational control' approach. It included all entities for which Council had the full authority to introduce or implement its operating policies.

The entities included within the organisational emissions boundary are Council and its six operational divisions, the Resource Recovery Innovation Alliance (RRIA)[2] and Council's eight wholly-owned subsidiaries. These include:
- Brisbane Marketing Pty Ltd
- Brisbane Powerhouse Pty Ltd
- City of Brisbane Investment Corporation (CBIC) Pty Ltd
- City Parklands Services Pty Ltd
- Brisbane Green Heart CitySmart Pty Ltd
- Museum of Brisbane Pty Ltd
- TradeCoast Land Pty Ltd
- Oxley Creek Transformation Pty Ltd.

In addition to the wholly-owned subsidiaries, Council has part or shareholder interests in a number of other entities. However, as Council does not have operational control of these entities, they are excluded from the certification boundary. The excluded entities and Council's equity share are as follows:
- Brisbane Bus Build (50%)
- Brisbane Housing Company Ltd (9.1%)
- Major Brisbane Festivals (50%)
- Queensland Urban Utilities (85%)
- SEQ Regional Recreational Facilities (12.5%)
- Council of Mayors (SEQ) Pty Ltd (10%).

[2] The RRIA is an alliance arrangement between Council and a third party contractor for the innovative and environmentally sustainable management of Council's waste transfer stations and Rochedale landfill facility. The alliance was previously known as the Brisbane Waste Innovation Alliance.

All direct emissions (scope 1) and indirect emissions from purchased electricity (scope 2) arising from the activities of the included entities have been identified and included within the certification boundary, where possible. Other indirect emissions occurring as a result of the included entities' activities (scope 3) were considered by Council and have been included within the certification boundary, where they were deemed to be relevant and material. There were no emissions generating activities associated with TradeCoast Land Pty Ltd or Oxley Creek Transformation Pty Ltd in 2018-19[3].

Section 2.3.1 of the *NCOS for Organisations* outlines scope 3 emissions sources deemed to be relevant to all organisations. These emissions sources have been included in Council's emissions boundary, regardless of size.

The *GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard* was applied in the consideration of other scope 3 emissions sources. Council considered emissions from the 15 categories listed in section 5.4 of the standard and sought to quantify emissions from all relevant sources. The following criteria, also listed in section 2.3.1 of the *NCOS for Organisations*, were applied in determining the relevance of identified scope 3 emissions sources:

- the source is likely to be large relative to Council's scope 1 and 2 emissions
- the source has the potential to contribute to Council's greenhouse gas risk exposure
- the source is deemed to be relevant to key stakeholders
- Council has the potential to influence reductions from the source
- the source relates to emissions from outsourced activities previously performed in-house or activities outsourced by Council that are typically performed in-house by other local government authorities.

When assessing whether scope 3 emissions sources were large relative to scope 1 and 2 emissions, a one percent materiality threshold was applied to the overall carbon footprint, in line with section 2.3.1 of the *NCOS for Organisations*. The total amount of emissions excluded (not quantified) on the basis of materiality does not exceed five percent.

As noted above, Council provides municipal waste management services to the residents of Brisbane. These services are delivered by Council and RRIA, either directly or under contract, and include kerbside waste collection, operation of four resource recovery centres, transportation of waste from resource recovery centres for final disposal or processing and operation of the city's landfill at Rochedale. Where these services are delivered directly by Council or RRIA, they are accounted for under scope 1 and 2 emissions. Where the services are provided by contractors, they are accounted for as scope 3 emissions.

As Council (through RRIA) is deemed to have operational control of the Rochedale landfill, all emissions generated from waste disposal at the site, including the disposal of municipal waste, is included in the certification boundary and accounted for under scope 1 emissions. However, any emissions occurring as a result of the disposal or processing of municipal waste at sites operated by third parties (e.g. private landfill, composting or recycling facilities) are excluded from the emissions boundary on the basis that they are associated with the resident population, rather than Council operations.

Emissions of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydro-fluorocarbons (HFCs), per-fluorocarbons (PFCs) and sulphur hexafluoride (SF_6) were considered in preparing Council's emissions inventory. All emissions are accounted for in tonnes of carbon dioxide equivalent (tCO_2-e). No PFC or SF_6 emissions were identified in 2018-19.

1D. Emission sources within the certification boundary

The emissions sources included within Council's organisational emissions boundary in 2018-19 are outlined in **Table 1**.

[3] TradeCoast Land Pty Ltd and Oxley Creek Transformation Pty Ltd operate out of Council facilities and any associated emissions are accounted for within the emissions inventory prepared for Council's operational divisions.

Table 1: Included emissions sources

Scope	Emissions source
1	Fuel combustion – stationary energy
1	Fuel combustion – transport
1	Fuel use – oils and greases
1	Fugitive emissions – landfill
1	Fugitive emissions – refrigerants
2	Electricity use – buildings and facilities
2	Electricity use – Council-controlled streetlights
3	Asphalt production input materials
3	Business travel – accommodation
3	Business travel – flights
3	Business travel – rental cars
3	Business travel – taxis
3	Cleaning services
3	Construction materials and services
3	Contracted bus services
3	Downstream leased assets
3	Employee commuting
3	Energy extraction, production and transportation (E,P&T)
3	Food and catering
3	Green waste processing and transportation
3	Hired vehicles and equipment
3	Horticultural services
3	ICT applications and services
3	ICT equipment
3	Machinery and equipment
3	Mowing and tree maintenance services
3	Municipal waste transportation
3	Office supplies
3	Paper use
3	Postage, courier and freight
3	Printing and publications
3	Professional services
3	Purchased vehicles
3	Quarry services
3	Third-party controlled streetlights
3	Transportation components and systems
3	Transportation repairs and maintenance
3	Upstream leased assets – base building services
3	Venue hire
3	Waste
3	Water use

Emissions from the following sources have not been quantified in line with the abovementioned provisions of the *NCOS for Organisations*. The exclusion of these sources is not expected to materially affect Council's overall emissions.

Table 2: Excluded emissions sources

Scope	Emissions source	Justification for exclusion
1	Fugitive emissions – landfill gas management	Council works with a third party to manage fugitive emissions at its operating landfill at Rochedale, through landfill gas capture and combustion via electricity generation or flaring. Any emissions (or reductions) associated with the capture and combustion of landfill gas at the site are excluded from Council's certification boundary on the basis these activities are undertaken by an independent third party and are outside of Council's operational control. The-third party retains all rights and responsibilities in relation to landfill gas captured and transferred.
1	Fugitive emissions – closed landfill sites	Council is responsible for managing around 150 closed landfill sites, all of which ceased operations between 1940 and 1996, long before Council committed to achieve carbon neutral status for its operations. While active landfill gas management still occurs at five of these legacy sites, the vast majority have been converted for alternative use as public parks or sporting fields and are no longer identifiable as landfills. In most cases, limited (or no) information is available about the waste that was deposited, making it difficult to accurately estimate emissions continuing to be released.
3	Investments	Council has interests or shareholdings in a number of entities that are excluded from the certification boundary on the basis that they are outside of Council's operational control.
3	Office equipment	Emissions from office equipment are estimated to be less than one per cent of total emissions and do not meet other relevance criteria.
3	Other purchased goods and services (not captured in categories listed in **Table 1**)	Emissions from other purchased goods and services are individually estimated to be less than one per cent of total emissions and do not meet other relevance criteria.

The following emissions sources are included in the certification boundary, but were only partially accounted for in 2018-19, due to gaps in the available data. Council is continuing to work towards filling data gaps by taking the steps outlined in **Table 3**. It should be noted, however, that Council is relying on contractors, tenants and landlords to provide data that is generally not required to be reported under existing contracts or lease agreements. Data will therefore only be included in future emissions reports, where provided.

Table 3: Data management plan for emissions sources partially accounted for in 2018-19

Scope	Emissions source	Data management plan
3	Downstream leased assets	Council has over 650 downstream leases, including approximately 36 commercial and retail leases, 22 pools, three golf courses and more than 590 community leases (e.g. halls, sporting venues etc.). Electricity consumption data was obtained for 18 commercial leases, all 22 pools, two golf courses and 193 community facilities in 2018-19. Council will continue to seek data from all lessees and work towards comprehensive reporting of emissions from downstream leased assets in future carbon accounts.
3	Upstream leased assets – base building services	Council and its subsidiaries occupy 20 leased facilities where base building services are provided by the lessor. In 2018-19, emissions have been quantified for five Council facilities, including the primary tenancy at Brisbane Square, and facilities occupied by Brisbane Marketing Pty Ltd, City Parklands Services Pty Ltd and Brisbane Green Heart CitySmart Pty Ltd. Data will continue to be sought from all lessors to enable quantification in future carbon accounts.
3	Water use	Water consumption data is currently available and associated emissions have been estimated for all Council owned facilities and 30 of 48 upstream leased sites. Data will continue to be sought for all remaining upstream leases to enable comprehensive quantification in future carbon accounts.

In addition, Council is continuing to rely on expenditure data and emissions factors developed using generalised input-out analysis[4] to estimate emissions associated with several scope 3 sources, including construction materials and services. While the input-output factors are expected to generate conservative estimates of emissions associated with these sources, Council is working to improve the accuracy of its emissions calculations by moving to alternative activity-based methods, where available.

1E. Diagram of certification boundary

See **Appendix A**.

[4] Input-output factors represent the emissions intensity of a dollar spent in a particular sector of the Australian economy and are derived from Australian Bureau of Statistics (ABS) data for total sector emissions and expenditure.

2. Emissions reduction measures

2A. Emissions over time

Council has prepared carbon accounts and reported publicly on its operational greenhouse gas emissions since achieving carbon neutral status in 2016-17. As the first year of comprehensive carbon reporting, the 2016-17 carbon account forms the baseline for Council's emissions reporting.

In 2018-19, Council's overall carbon footprint had declined 8% from baseline levels. This was primarily the result of reduced scope 1 emissions and increased voluntary renewable energy purchases.

Scope 1 emissions had reduced by 22% in 2018-19, largely due to reduced fugitive emissions from landfill. Lower emissions were the result of improvements to landfill gas capture infrastructure over the last two years, which saw an increase in gas capture rates.

The reduction in scope 1 emissions was partially offset by a ten percent increase in scope 3 emissions. This was primarily driven by additional construction activity resulting from major road infrastructure projects, such as the Kingsford Smith Drive and Wynnum Road upgrades and Council's ongoing road resurfacing and bikeway construction programs. Other minor changes to scope 3 emissions arose from improved data collection, which enabled the estimation of emissions from previously excluded sources.

Scope 2 emissions have remained relatively stable since 2016-17, down by two percent in 2018-19 against baseline levels. However, these emissions were largely negated in 2018-19 through voluntary renewable energy purchases. Council voluntarily purchased and retired 50,032 Large-Scale Generation Certificates (LGCs) in the reporting period, representing an increase of more than 100% from the base year.

An assessment of the impacts of improved data collection on 2016-17 emissions has been undertaken and found to have an immaterial impact (<1%). As such, the baseline has not been recalculated in 2018-19.

Table 4. Emissions since base year

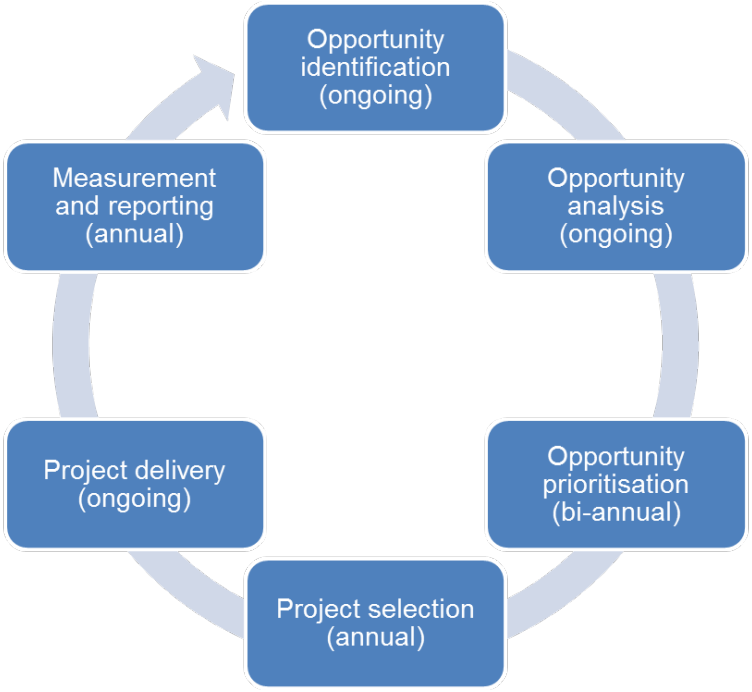
Emissions source	2016-17 base year (tCO_2-e)	2018-19 (tCO_2-e)	Change in emissions (tCO_2-e)	% change
Scope 1	285,376	223,391	-61,985	-22%
Scope 2	51,563	50,473	-1,090	-2%
Scope 3	329,896	362,358	+32,462	+10%
TOTAL GROSS EMISSIONS	**666,835**	**636,222**	**-30,613**	**-5%**
EMISSIONS REDUCED THROUGH VOLUNTARILY RETIRED LGCs AND EXPORTED SOLAR GENERATION	**22,796**	**46,607**	**+23,811**	**+104%**
TOTAL NET EMISSIONS	**644,039**	**589,615**	**-54,424**	**-8%**

2B. Emissions reduction strategy

Council is reducing its carbon footprint through investments in energy efficiency and emissions reduction projects, as well as renewable energy purchases. From 2016-17, carbon offsets have been purchased on a financial year basis to negate remaining emissions and maintain Council's carbon neutral status.

The *Corporate Plan 2016-17 to 2020-21 – 2017 Update* outlines Council's objective to continually improve energy and carbon management (Program 3 – Clean, Green and Sustainable City). This is being achieved through the ongoing identification, analysis and prioritisation of a pipeline of energy and carbon abatement opportunities. **Diagram 1** below provides a visual representation of Council's approach to continuous improvement in energy and carbon management.

Diagram 1: Council's continuous improvement process



The *Carbon Neutral Council Emissions Management Plan (EMP) 2017-18 to 2020-21* outlines Council's emissions reduction strategy. It comprises a four-year rolling program of priority energy efficiency and emissions reduction projects and actions in the following areas.

1. Improve the energy efficiency and emissions profile of **existing assets and services**, where possible and cost-effective.
2. Ensure the design and delivery of **new assets and services** is informed by an understanding of expected energy consumption and associated emissions and, where practical, incorporates measures to improve energy and emissions performance.
3. Encourage changes in **employee behaviour** to support improved energy efficiency and emissions reduction outcomes.
4. Develop **organisational capacity** to identify and deliver ongoing improvements in energy and carbon management across Council operations.

2C. Emissions reduction actions

Council has made significant progress in the delivery of energy efficiency and emissions reduction projects, including:

- retrofitting more than 25,000 streetlights with energy efficient lamps and ensuring all new and replacement lamps in street and other public lighting applications are LEDs, where possible
- installing a total of 960 kilowatts (kW) of solar systems across 16 sites since achieving carbon neutral status in 2016-17, bringing total installed capacity to 1.2 megawatts (MW) in 2018-19
- including electric vehicles in Council's passenger fleet, ensuring all new buses utilise new generation, high-efficiency Enhanced Environmentally-friendly Vehicle (EEV) diesel engine technology, and trialling a diesel-electric hybrid bus on the popular City Loop route
- piloting eco-driving training with 370 Council bus drivers
- diverting organic waste from landfill through a dedicated green waste collection service, the Love Food Hate Waste campaign and launch of community composting hubs at 23 locations across the city
- utilising recycled asphalt to reduce requirements for bitumen and aggregate in asphalt production
- upgrading the heating system and insulation in the storage bins at the Eagle Farm asphalt plant, reducing energy consumed in maintaining the temperature of asphalt produced prior to delivery.

In addition, over the 14 years from 2003 to June 2018, Council purchased more than 920,000 megawatt hours (MWh) of electricity from renewable energy sources, reducing its greenhouse gas emissions by more than 850,000 tCO_2-e[5], and purchased and cancelled around 2.2 million carbon offsets.

In 2018-19, Council implemented the following emissions reduction measures:

- purchased 50,032 MWh of electricity from renewable energy sources
- installed 813 kW of solar PV systems at the New Farm library, bus and field services depots and four resource recovery centres
- LED lighting upgrades at the Brisbane Riverstage, Rivergate ferry maintenance facility, Eagle Farm archives and stores and other workshops and depots
- additional street and public LED lighting installations, including in the Inner City Bypass RNA tunnel
- ongoing utilisation of recycled asphalt, reducing bitumen and aggregate used in asphalt production.

Table 5 provides a summary of the estimated annual emissions reductions achieved as a result of measures implemented in 2018-19.

Table 5: Emissions reduction measures (2018-19)

Scope	Emissions source	Action undertaken	Status	Annual emissions reduction (tCO_2-e)
2	Electricity – buildings and facilities	Purchased and voluntarily surrendered Large-scale Generation Certificates (LGCs)	Purchased for electricity consumed in 2018-19	46,530
2	Electricity – buildings and facilities	Installed 99 kW solar PV system at Carina bus depot	Completed in 2018-19	141
2	Electricity – buildings and facilities	Installed 29 kW solar PV system at New Farm library	Completed in 2018-19	42
2	Electricity – buildings and facilities	Installed 100 kW solar PV system at Nudgee resource recovery centre	Completed in 2018-19	142
2	Electricity – buildings and facilities	Installed 100 kW solar PV system at Chandler resource recovery centre	Completed in 2018-19	142
2	Electricity – buildings and facilities	Installed 77 kW solar PV system at Ferny Grove resource recovery centre	Completed in 2018-19	110
2	Electricity – buildings and facilities	Installed 66 kW solar PV system at Willawong resource recovery centre	Completed in 2018-19	94
2	Electricity – buildings and facilities	Installed 100 kW solar PV system at the new TradeCoast field services depot	Completed in 2018-19	142
2	Electricity – buildings and facilities	Retrofitted Brisbane Riverstage with LED lighting	Completed in 2018-19	12
2	Electricity – buildings and facilities	Retrofitted Rivergate ferry maintenance facility with LED lighting	Completed in 2018-19	19
2	Electricity – buildings and facilities	Retrofitted Eagle Farm archives and stores with LED lighting	Completed in 2018-19	89
2	Electricity – buildings and facilities	Retrofitted Wacol field services depot with LED lighting	Completed in 2018-19	21

[5] Includes full fuel cycle emissions, i.e. scope 2 emissions associated with grid electricity generation and scope 3 emissions associated with energy extraction, production and transportation (E,P&T).

Scope	Emissions source	Action undertaken	Status	Annual emissions reduction (tCO_2-e)
2	Electricity – buildings and facilities	Retrofitted Bracalba quarry workshop with LED lighting	Completed in 2018-19	11
2	Electricity – buildings and facilities	Installation of LED lights in the Inner City Bypass RNA tunnel	Completed in 2018-19	287
2,3	Electricity – Council Controlled streetlighting Third party streetlights	Installation of LED lights in other street and public lighting applications	Completed in 2018-19	456
3	Asphalt production input materials	Utilisation of recycled asphalt in asphalt production	Completed in 2018-19	1,360
TOTAL				**49,598**

As noted in **Table 2**, while these sources are excluded from the certification boundary, Council continues to work with third parties to actively manage landfill gas at the Rochedale landfill and other closed landfill sites, where it remains technically feasible to do so. Landfill gas capture and combustion at the Rochedale landfill reduced greenhouse gas emissions by 325,305 tCO_2-e in 2018-19. Gas captured and combusted at closed landfill sites reduced greenhouse gas emissions by a further 53,567 tCO_2-e.

3. Emissions summary

3A. Final 2018-19 carbon accounts

Council's carbon footprint is made up of emissions from landfill, fuel combustion, and electricity use and other indirect emissions sources, such as construction materials and services, third-party controlled streetlighting, municipal and green waste transportation and catering services.

In 2018-19, the four largest emissions sources accounted for around 63% of Council's total carbon footprint, before accounting for renewable energy purchases. These were construction materials and services (20%), fuel combustion for stationary energy and transport purposes (19%), fugitive emissions from Council's operating landfill at Rochedale (16%), and electricity use at buildings and facilities and for Council controlled streetlighting (eight per cent).

Council's operational divisions accounted for the majority (80%) of the gross emissions footprint. RRIA accounted for 17% of total emissions with the subsidiaries contributing the remaining three per cent.

Table 6 provides a summary of emissions by source in the reporting period. **Table 7** provides a summary of emissions by responsible entity.

Table 6: Council's emissions by source (2018-19)

Scope	Emissions source	Emissions (tCO_2-e)
1	Fuel combustion – stationary energy	12,463
1	Fuel combustion – transport	107,113
1	Fuel use – oils and greases	19
1	Fugitive emissions – landfill	100,729
1	Fugitive emissions – refrigerants	3,067
2	Electricity use – buildings and facilities	48,271
2	Electricity use – Council controlled streetlights	2,202
3	Asphalt production input materials	8,512
3	Business travel – accommodation	80

Scope	Emissions source	Emissions (tCO_2-e)
3	Business travel – flights	343
3	Business travel – rental cars	5
3	Business travel – taxis	34
3	Cleaning services	1,270
3	Construction materials and services	128,572
3	Contracted bus services	1,784
3	Downstream leased assets	18,839
3	Employee commuting	8,098
3	Energy E,P&T	18,426
3	Food and catering	741
3	Green waste processing and transportation	1,153
3	Hired vehicles and equipment	26,923
3	Horticultural services	9,278
3	ICT applications and services	9,572
3	ICT equipment	14,879
3	Machinery and equipment	4,826
3	Mowing and tree maintenance services	2,756
3	Municipal waste transportation	11,108
3	Office supplies	764
3	Paper use	186
3	Postage, courier and freight	3,007
3	Printing and publications	3,797
3	Professional services	15,748
3	Purchased vehicles	3,665
3	Quarry services	1,112
3	Third-party controlled streetlights	35,554
3	Transportation components and systems	12,188
3	Transportation repairs and maintenance	8,374
3	Upstream leased assets – base building services	2,889
3	Venue hire	951
3	Waste	6,328
3	Water use	596
TOTAL GROSS EMISSIONS		**636,222**
EMISSIONS REDUCED THROUGH VOLUNTARILY RETIRED LGCs		**46,530**
EMISSIONS REDUCED THROUGH EXPORTED SOLAR GENERATION		**77**
TOTAL NET EMISSIONS		**589,615**

Table 7: Council's emissions by responsible entity (2018-19)

Responsible entity	Emissions (tCO_2-e)
Council operational divisions	509,037
RRIA	107,197
Brisbane Marketing Pty Ltd	3,642
Brisbane Powerhouse Pty Ltd	1,682

CBIC	7,841
City Parklands Services Pty Ltd	5,467
Brisbane Green Heart CitySmart Pty Ltd	701
Museum of Brisbane Pty Ltd	655
TradeCoast Land Pty Ltd	0
Oxley Creek Transformation Pty Ltd	0
TOTAL GROSS EMISSIONS	**636,222**
EMISSIONS REDUCED THROUGH VOLUNTARILY RETIRED LGCs	**46,530**
EMISSIONS REDUCED THROUGH EXPORTED SOLAR GENERATION	**77**
TOTAL NET EMISSIONS	**589,615**

4. Carbon offsets

4A. Offsets summary

In 2017-18, Council forward cancelled 659,973 offset units to negate forecast 2018-19 emissions and banked 464 cancelled units and 49,434 active units for future use.

As Council's final 2018-19 carbon accounts resulted in a lower than forecast net carbon footprint of 589,615 tCO_2-e, 70,358 forward cancelled units have been carried over for use in 2019-20. A further 709,063 offset units were purchased in 2018-19, bringing total holdings available for the 2019-20 reporting period to 829,319 tCO_2-e.

Council's carbon footprint is forecast to increase slightly in 2019-20 to 609,320 tCO_2-e, net of expected renewable energy purchases. All units banked or carried over from 2018-19 have been allocated to cover emissions in this period. An additional 489,064 purchased units were allocated and forward cancelled to cover remaining forecast emissions, leaving 219,999 active units to be banked for use in 2020-21.

Offset units cancelled to negate Council's 2018-19 emissions are detailed in **Table 8**. Units carried over and forward cancelled for use in 2019-20 are detailed in **Table 9**.

For details of all offset units cancelled by Council to meet its carbon neutral commitment, please see the Retired VCUs report on the Verified Carbon Standard (VCS) APX Registry website (search by Account Holder Brisbane City Council) and the Clean Energy Regulator's list of voluntary cancellations in the Australian National Registry of Emissions Units (ANREU).

Table 8: Offset units retired to negate 2018-19 emissions

Projects supported by offset purchase	Offset type	Registry	Cancellation period	Serial numbers	Vintage	Quantity
Tipperary Group of Stations Savanna Burning Project	ACCU	ANREU	2018-19	3,765,803,809 - 3,765,820,557	2017-18	16,749
West Arnhem Land Fire Abatement (WALFA) Project	ACCU	ANREU	2018-19	3,756,628,973 - 3,756,643,972	2016-17	15,000
Biomass based cogeneration plant at Godrej Agrovet Ltd. Chintampalli	VCU	APX	2017-18	4815-199786204-199802515-VCU-048-APX-IN-1-1315-01012014-31122014-0	2014	16,312
Biomass based cogeneration plant at Godrej Agrovet Ltd. Chintampalli	VCU	APX	2018-19	4815-199802516-199814906-VCU-048-APX-IN-1-1315-01012014-31122014-0	2014	12,391
Biomass based cogeneration plant at Godrej Agrovet Ltd. Chintampalli	VCU	APX	2018-19	4812-199723428-199726753-VCU-048-APX-IN-1-1315-01012016-31032016-0	2016	3,326
Biomass based cogeneration plant at Godrej Agrovet Ltd. Chintampall	VCU	APX	2017-18	4819-199951655-199954917-VCU-048-APX-IN-1-1315-01012013-31122013-0[6]	2013	3,263
Biomass based cogeneration plant at Godrej Agrovet Ltd. Chintampall	VCU	APX	2017-18	4814-199756754-199762543-VCU-048-APX-IN-1-1315-01012015-31122015-0	2015	5,790
Biomass based cogeneration plant at Godrej Agrovet Ltd. Chintampall	VCU	APX	2018-19	4814-199762544-199786203-VCU-048-APX-IN-1-1315-01012015-31122015-0	2015	23,660
Hyundai Steel Waste Energy Cogeneration Project	VCU	APX	2018-19	4805-198328137-198664515-VCU-015-APX-KR-1-786-01012012-31122012-0	2012	336,379
Renewable Energy Project in Rajasthan and Maharashtra	VCU	APX	2018-19	5705-255967630-255982353-VCU-034-APX-IN-1-1579-01012015-31122015-0	2015	14,724

[6] Units 4819-199927863-199954917-VCU-048-APX-IN-1-1315-01012013-31122013-0 were forward allocated and cancelled to cover 2017-18 emissions. As the final 2017-18 carbon account was lower than forecast, units 4819-199951655-199954917-VCU-048-APX-IN-1-1315-01012013-31122013-0 were carried over and allocated to cover 2018-19 emissions.

Projects supported by offset purchase	Offset type	Registry	Cancellation period	Serial numbers	Vintage	Quantity
Renewable Energy Project in Rajasthan and Maharashtra	VCU	APX	2018-19	5700-255816754-255842395-VCU-034-APX-IN-1-1579-01012016-31122016-0	2016	25,642
Renewable Energy Project by LNB Group	VCU	APX	2018-19	5286-221928510-221928847-VCU-048-APX-IN-1-1418-01012014-31122014-0	2014	338
Renewable Energy Project by LNB Group	VCU	APX	2018-19	5704-255945679-255967629-VCU-034-APX-IN-1-1418-01062015-31122015-0	2015	21,951
Renewable Energy Project by LNB Group	VCU	APX	2018-19	5702-255866836-255908525-VCU-034-APX-IN-1-1418-01012016-31122016-0	2016	41,690
Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China	VCU	APX	2018-19	5729-256953449-257003821-VCU-028-APX-CN-1-438-01012014-31122014-1	2014	50,373
Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China	VCU	APX	2018-19	5730-257023449-257025475-VCU-028-APX-CN-1-438-26052015-25122015-1[7]	2015	2,027
TOTAL OFFSETS RETIRED TO NEGATE 2018-19 EMISSIONS						**589,615**
TOTAL NET EMISSIONS AFTER ACCOUNTING FOR OFFSETS						**0**

Table 9: Offset units carried over and allocated in advance to negate projected 2019-20 emissions

Projects supported by offset purchase	Offset type	Registry	Cancellation period	Serial numbers	Vintage	Quantity
Tipperary Group of Stations Savanna Burning Project	ACCU	ANREU	2018-19	3,768,304,431 - 3,768,306,431	2017-18	2,001
Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China	VCU	APX	2018-19	5730-257025476-257084075-VCU-028-APX-CN-1-438-26052015-25122015-1[8]	2015	58,600

[7] Units 5730-257023449-257084075-VCU-028-APX-CN-1-438-26052015-25122015-1 were forward allocated and cancelled to cover 2018-19 emissions. As the final 2018-19 carbon account was lower than forecast, units 5730-257025476-257084075-VCU-028-APX-CN-1-438-26052015-25122015-1 were carried over and allocated to cover 2019-20 emissions.

[8] As above.

Projects supported by offset purchase	Offset type	Registry	Cancellation period	Serial numbers	Vintage	Quantity
Renewable Energy Project by LNB Group	VCU	APX	2018-19	5703-255908526-255918746-VCU-034-APX-IN-1-1418-01012017-30112017-0	2017	10,221
Renewable Energy Project by LNB Group	VCU	APX	2019-20	5703-255918747-255944546-VCU-034-APX-IN-1-1418-01012017-30112017-0	2017	25,800
Renewable Energy Project in Rajasthan and Maharashtra	VCU	APX	2019-20	5701-255842396-255866029-VCU-034-APX-IN-1-1579-01012017-31122017-0	2017	23,634
1.6 MW Bundled Rice Husk Based Cogeneration Plant by M/s Milk Food Limited (MFL) in Patiala (Punjab) and Moradabad (U.P.) Districts	VCU	APX	2019-20	6201-285763144-285794095-VCU-034-APX-IN-1-784-01012016-31122016-0	2016	30,952
1.6 MW Bundled Rice Husk Based Cogeneration Plant by M/s Milk Food Limited (MFL) in Patiala (Punjab) and Moradabad (U.P.) Districts	VCU	APX	2019-20	6200-285705032-285763143-VCU-034-APX-IN-1-784-01022014-31122014-0	2014	58.112
Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China	VCU	APX	2019-20	6194-284586840-284588317-VCU-028-APX-CN-1-438-01012014-31122014-1	2014	1,478
Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China	VCU	APX	2019-20	6193-284436840-284586210-VCU-028-APX-CN-1-438-26052015-25122015-1	2015	149,371
Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China	VCU	APX	2019-20	5729-257009298-257023448-VCU-028-APX-CN-1-438-01012014-31122014-1	2014	14,151
Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China	VCU	APX	2019-20	6167-283045170-283055169-VCU-028-APX-CN-1-438-01012014-31122014-1	2014	10,000
Gangakhed Sugar and Energy Private Ltd (GSEPL) 30 MW Bagasse Based Co-generation Power Project	VCU	APX	2019-20	6196-284674990-284675213-VCU-048-APX-IN-1-1539-01012015-31122015-0	2015	224

Projects supported by offset purchase	Offset type	Registry	Cancellation period	Serial numbers	Vintage	Quantity
Gangakhed Sugar and Energy Private Ltd (GSEPL) 30 MW Bagasse Based Co-generation Power Project	VCU	APX	2019-20	4584-190022402-190027401-VCU-048-APX-IN-1-1539-01012015-31122015-0	2015	5,000
Gangakhed Sugar and Energy Private Ltd (GSEPL) 30 MW Bagasse Based Co-generation Power Project	VCU	APX	2019-20	6197-284675214-284704989-VCU-048-APX-IN-1-1539-01012014-31122014-0	2014	29,776
CECIC HKC Gansu Changma Wind Power project	VCU	APX	2019-20	6203-285890595-286000594-VCU-034-APX-CN-1-717-01012016-31122016-0	2016	110,000
CECIC HKC Gansu Changma Wind Power project	VCU	APX	2019-20	6132-280823336-280873335-VCU-034-APX-CN-1-717-01012016-31122016-0	2016	50,000
North East Arnhem Land Fire Abatement (NEALFA) Project	KACCU	ANREU	2019-20	3,755,749,415 - 3,755,759,414	2016-17	10,000
DAC-2015-01 (Devine Agribusiness Carbon Pty Ltd Vegetation Project)	KACCU	ANREU	2019-20	3,771,865,731 - 3,771,885,730	2017-18	20,000
TOTAL OFFSETS CARRIED OVER/FORWARD CANCELLED TO NEGATE 2019-20 EMISSIONS						**609,320**
TOTAL ACTIVE OFFSETS BANKED FOR FUTURE USE						**219,999**

4B. Offsets purchasing and retirement strategy

Council forward purchases and cancels carbon offsets at the beginning of each reporting period. Forward purchases are based on the final carbon accounts for the previous year, with adjustments to account for any projected changes in the emissions profile in the reporting period.

A 'true-up' occurs following finalisation of the carbon accounts for the financial year, with any surplus offsets carried over for use in the subsequent reporting period. In the event that Council underestimates its emissions, additional offsets will be purchased and retired to cover the shortfall. Details of any carryover or shortfall will be included in the PDS for the subsequent reporting period.

The purchase of financial instruments, including carbon offsets and Renewable Energy Certificates, is covered by Council's *Financial Risk Management Framework* and must be undertaken by Corporate Finance, under delegation from the Chief Executive Officer. Carbon offsets may be purchased in a single annual transaction or at regular intervals throughout the year, depending on market conditions, including availability and price.

Council takes delivery of carbon offset units in its own public registry accounts, wherever possible. In this case, units are retired as allocated for use in a given reporting period. Where Council does not have an account in the registry that holds the particular type of carbon offset units purchased, the units may be transferred into the supplier's registry account and retired by the supplier on Council's behalf. In these instances, retirement is to occur at the time of purchase. Council maintains an internal record of its carbon offset holdings, including status of units, registry accounts and the reporting period to which the units are allocated.

Council considers the following criteria when undertaking carbon offset purchases:

- NCOS-eligible – all purchased offsets must be eligible for use under the NCOS
- cost – all purchased offsets are to represent value for money in line with Council's procurement principles, measured by price as well as merit against other criteria
- potential negative impacts – any offset projects with negative economic, social, or environmental outcomes are to be avoided
- location – it is desirable to purchase some offsets from local or Australian projects, where available
- technology – consideration is to be given to the technology applied in the offset project with a view to broadening the offset portfolio to include a range of technologies and spread investment risk
- positive impacts – Council will favour offset projects that have a positive economic, social or environmental impact or provide co-benefits.

Council will only purchase offsets where it can be verified that the emissions reductions have occurred.

4C. Offset projects (co-benefits)

Table 10 provides details of the co-benefits provided by the offset projects supported via Council's 2018-19 offset purchase and cancellation.

Table 10: Co-benefits provided by supported offset projects (2018-19)

Project name	Co-benefit verification standard	Location	Proportion of offsets (%)	Co-benefits
Grouped Hydropower Plants in Chongqing, Yunnan, Sichuan and Guizhou Provinces, P.R. China	Social Carbon	China	9%	• Provides a stable electricity supply to poor rural communities. • Supports local economic development outcomes including job creation and improved community infrastructure. • The project has supported complementary activities in the local area including: ○ providing job training for adults and educational programs for children ○ delivering an agricultural education program and establishing a library of agricultural resources for use by local farmers ○ establishing a disaster relief fund. ○ supplying composting toilets.
Tipperary Group of Stations Savanna Burning Project and West Arnhem Land Fire Abatement (WALFA) Project	-	Australia	5%	• Protects local environment, cultural sites, infrastructure and communities from devastating bushfires. • Supports local economic development including job creation within remote aboriginal communities.

5. Use of trade mark

A register of use of the trademark during the 2018-19 reporting period is provided in **Table 11** below.

Table 11: Trademark register

Where used	Logo type
Council website – Carbon Neutral Council page	Carbon neutral organisation
Mandatory back panel template appearing on all Council publications in A4 and DL sizes – enables the trade mark to be featured on all publications	Carbon neutral organisation
Cities Power Partnership Summit presentation of case study of Council's carbon neutral achievement	Carbon neutral organisation

Appendix A: Council's certification boundary