



PUBLIC DISCLOSURE STATEMENT

DAREBIN CITY COUNCIL

ORGANISATION CERTIFICATION


FY2021-2022

Australian Government
Climate Active
Public Disclosure Statement



An Australian Government Initiative



NAME OF CERTIFIED ENTITY	Darebin City Council
REPORTING PERIOD	Financial year 1 July 2021 – 30 June 2022 Arrears report
DECLARATION	<p><i>To the best of my knowledge, the information provided in this public disclosure statement is true and correct and meets the requirements of the Climate Active Carbon Neutral Standard.</i></p>  <p>Vanessa Petrie General Manager City Sustainability & Strategy 31 August 2023</p>



Australian Government
**Department of Climate Change, Energy,
 the Environment and Water**

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Version March 2022.



1. CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	4,871 tCO ₂ -e
OFFSETS BOUGHT	90% CERs, 5% ACCUs, 5 % VCUs
RENEWABLE ELECTRICITY	107%
TECHNICAL ASSESSMENT	Next technical assessment due: FY2022-23 report

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2. CARBON NEUTRAL INFORMATION

Description of certification

Darebin City Council (ABN 75 815 980 522) is certified carbon neutral for council operations. This certification covers all Darebin City Council services and facilities.

This certification does not cover accommodation & outdoor events, downstream transportation & distribution, other purchased goods & services, community waste disposal.

Organisation description

Darebin City Council is one of 79 Victorian councils operating as a public statutory body, incorporated under the Victorian Local Government Act 1989.

Darebin City Council is a local government authority in the inner northern region of Melbourne. Darebin was formed in 1994 with the merger of most of the former Cities of Northcote and Preston. The City covers 54 square kilometres and is bounded by the Merri Creek to the west and Darebin Creek to the west.

Darebin is home to a diverse and vibrant population of around 165,000 people. More than 35% of Darebin residents were born overseas and 37.5% use a non-English language at home.

Darebin City Council is known worldwide for being the first jurisdiction to declare a climate emergency in 2016. Since this declaration, Darebin has taken urgent action to reduce corporate and community emissions.

“The Climate Active Program plays an important role in Darebin’s response to the climate emergency.”

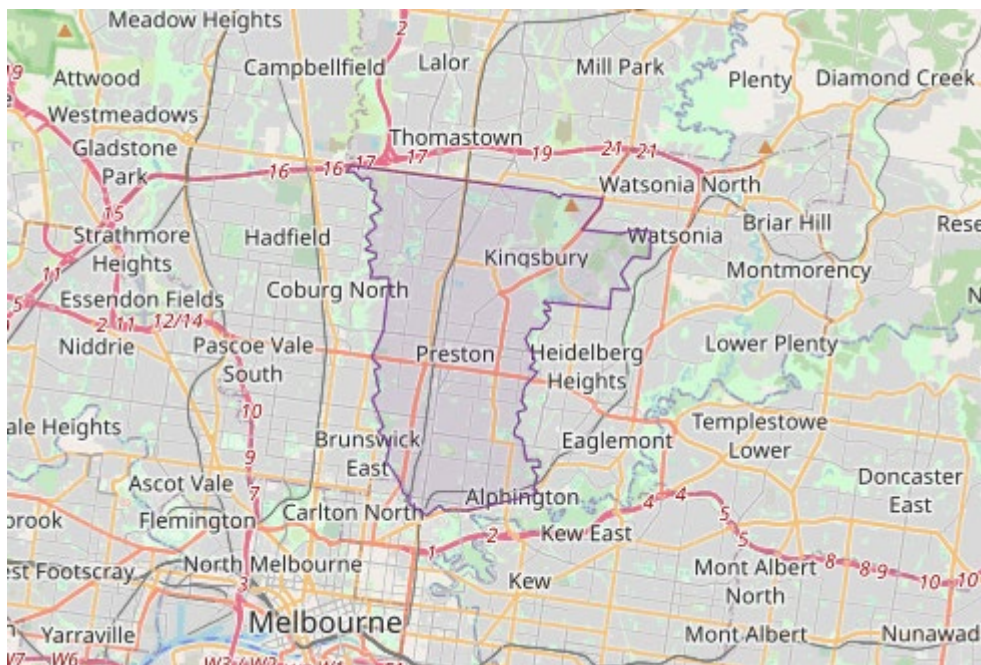


Figure 1: Map of the City of Darebin

Services and Facilities

Darebin City Council is responsible for maintaining an extensive range of facilities and delivering a diverse range of services. The community infrastructure maintained by Darebin includes roads, car parks, drains, town halls, libraries, recreation facilities, childcare centres, community hubs, parks and gardens.

Most of council's operations are run out of the Preston Municipal Offices and the Reservoir Operations Centre. Several other facilities located throughout the City are used for additional council operations. Council owns and/or operates more than 200 buildings and over 80 parks and gardens.

The services provided by council include property, economic, human, environmental, recreational and cultural services. Council also enforces state and local laws relating to matters such as land use, planning, environment protection, public health, traffic and parking, and animal management.

Below is an overview of the services and operations delivered by Darebin City Council during 2021-22:

- Animal management
- Community and cultural services
- Health services
- Local laws
- Parks, gardens and open space
- Planning and building
- Recreation services
- Roads and parking
- Strategic planning
- Sustainability and environmental services
- Waste management

3.EMISSIONS BOUNDARY

Inside the emissions boundary

All emission sources listed in the emissions boundary are part of the carbon neutral claim.

The organisation boundary includes emissions from all activities over which we have full operational control (see Figure 2).

Quantified emissions have been assessed as relevant and are quantified in the carbon inventory. This may include emissions that are not identified as arising due to the operations of the certified entity, however, are **optionally included**.

Non-quantified emissions have been assessed as relevant and are captured within the emissions boundary but are not measured (quantified) in the carbon inventory. All material emissions are accounted for through an uplift factor. Further detail is available at Appendix C.

Outside the emissions boundary

Excluded emissions are those that have been assessed as not relevant to an organisation's or precinct's operations and are outside of its emissions boundary or are outside of the scope of the certification. These emissions are not part of the carbon neutral claim. Further detail is available at Appendix D.

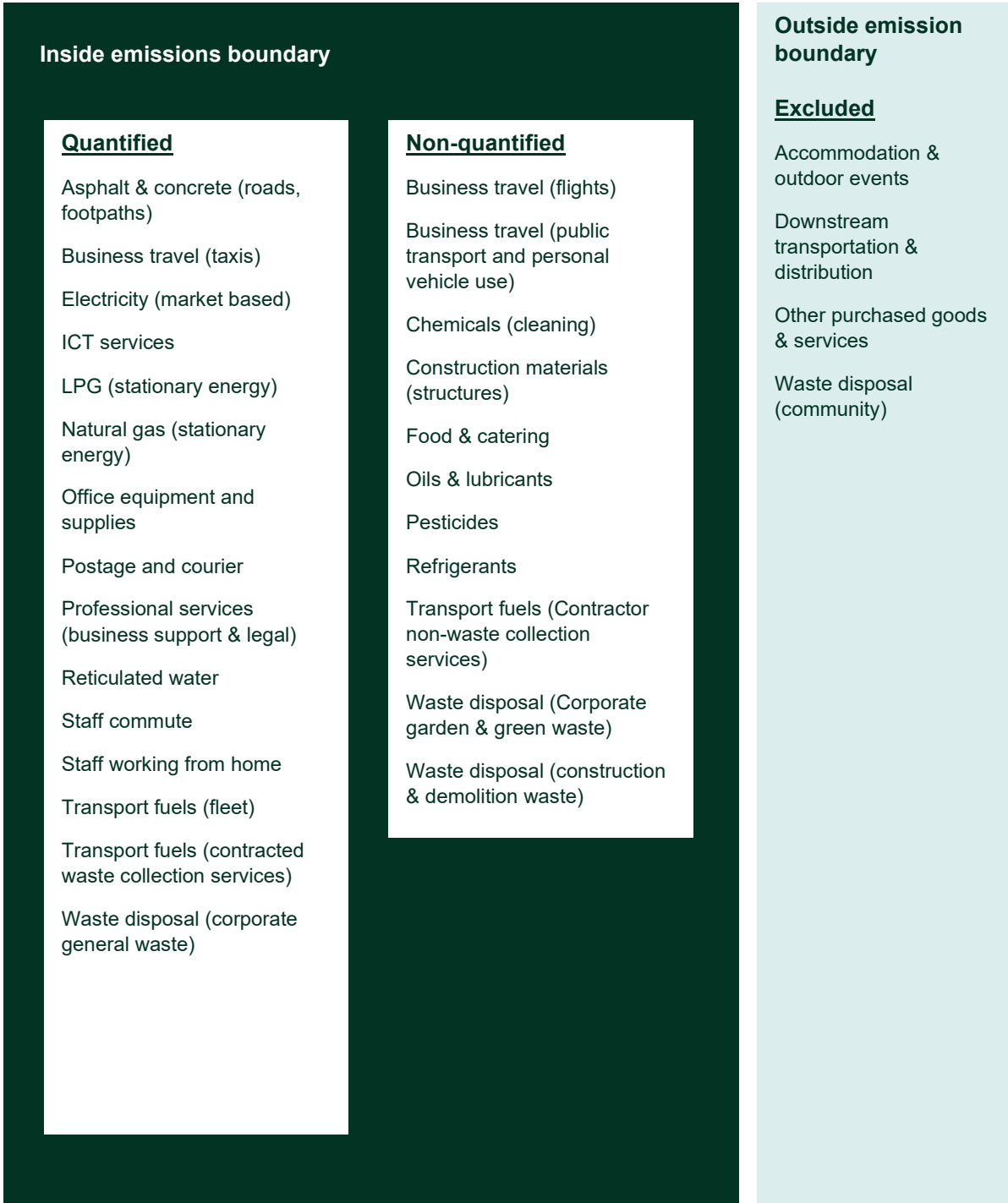


Figure 2: Emissions Boundary

Data management plan for non-quantified sources

The data management plan below outlines how more rigorous quantification can be achieved for non-quantified emissions sources identified as being '*Data unavailable but uplift applied*'.

Emission Source	Data Management Plan
Pesticides	<ol style="list-style-type: none"> 1. Determine approach to data collection, including relevant stakeholders, processes and data fields to be collected. 2. Implement process to centralise data capture. Prioritising collection of pesticides and other chemicals, then potentially expanding to other horticultural products. 3. Review and validate data, before determining inclusion in Climate Active inventory. <p>The proposed data management plan is expected to be implemented by 2024.</p>
Refrigerants	<ol style="list-style-type: none"> 1. Determine approach to data collection, assess the feasibility of a developing a full asset list of refrigerant-based air-conditioning and large refrigeration systems, including refrigerant types and charge. 2. Implement process to capture data of refrigerant recharging e.g. ensure the refrigerant charge amount is itemized on maintenance invoices. 3. Review and validate data, before determining inclusion in Climate Active inventory. <p>The proposed data management plan is expected to be implemented by 2024.</p>
Transport fuels (contractor non-waste collection services)	<ol style="list-style-type: none"> 1. Assess what types of contractors should data be collected from e.g. facility maintenance, cleaning, bushland etc. 2. Determine the boundary of the data collection e.g. set an expenditure threshold for determining whether the contractor should be included. 3. Determine a process for the data collection e.g. odometer readings, surveys, monthly or quarterly reports etc. 4. Review and validate data, before determining inclusion in Climate Active inventory. <p>The proposed data management plan is expected to be a work in progress, with significant progress by 2023 and robust implementation by 2025.</p>

4. EMISSIONS REDUCTIONS

Emissions reduction strategy

Darebin has taken significant steps to reduce its emissions in recent years and is committed to making further progress. To support this, Council will continue to implement an emissions reduction strategy for its operations, based on opportunity and priority.

Climate Emergency Plan 2017-22

On 5 December 2016, Darebin Council led the world by unanimously voting to recognise we are in a state of climate emergency that requires urgent action by all levels of government. In August 2017, after extensive community consultation, this was followed by the adoption of Darebin's Climate Emergency Plan 2017-2022.

The Plan provided an overarching framework for Council's work to reduce greenhouse gas emissions both in its own operations and in the community, and to support the community to adapt and develop resilience to the impacts of climate change. By the end of 2022, Darebin will have progressed or achieved five of the six Plan's goals, shown in Table 1 below. Of the 156 actions, 74% of these actions have been delivered, 21% are in progress and only 6% have not yet been started.

Table 1 Progress against the six plan goals from Darebin's Climate Emergency Plan 2017-2022

Council Operations	1. 45% reduction of gross greenhouse gas emissions by 2022 (baseline 15,740 tCO₂-e)	105% (4,901.39 tCO₂-e)	Achieved
	2. Net greenhouse gas emissions for Council operations by 2020	Zero net emissions	Achieved
	3. An additional 440kW of on-site renewable energy generation by 2022 (baseline 377kW)	824kW total capacity	Achieved
	4. Negative emissions (drawdown)	n/a	Not yet started
Community	5. Net zero emissions (baseline 1.951 MtCO ₂ -e) by 2020	21% reductions (1.544 MtCO ₂ -e)	In progress
	6. Double local renewable energy generation (baseline 19MW) by 2022	54MW	Achieved

The Review can be read in full here: https://hdp-au-prod-app-dare-yoursay-files.s3.ap-southeast-2.amazonaws.com/3116/6105/7362/Climate_Emergency_2017-2022_Plan_review_final.pdf.

Climate Emergency Strategy and Action Plan 2030

Darebin is currently reviewing its Climate Emergency Plan, which will provide a strategy from 2023 until 2030. The Climate Emergency Plan will be backed up with an Action Plan for the first three years of its delivery. The Draft Plan is expected to go into community consultation in July-August 2023 and adopted by

the end of 2023.

Darebin is committed to strong climate actions as per its Council Plan 2021-2025, to assess current and future climate risks facing our community and to identify initiatives that can provide maximum protection for people, property and the natural environment.

At the core of Council's next update to the climate emergency there will be an in-depth engagement across our community. This will include the diverse voices of Darebin to ensure our ambitions coincide with the needs of the community. This engagement will reflect our values to create an equitable, vibrant and connected community and will include a deep and ongoing engagement with Aboriginal and Torres Strait Islander people.

VECO

Darebin led the largest emissions reduction project ever undertaken by local government in Australia – the Victorian Energy Collaboration (VECO). This was a 46 Council-strong partnership, who are all procuring 100% renewable electricity under a long-term contract. Council signed a 9.5-year retail-aligned power purchasing agreement (PPA) for the purchase of electricity and Large-Scale Generation Certificates (LGCs) for all Council's electricity needs.

Under this arrangement 45 per cent of all Victorian Council electricity needs will be powered with 100% renewables, reducing greenhouse emissions by 260,000 tonnes of CO₂-e every year, or the equivalent to powering 48,000 homes with renewables or removing the emissions from 90,000 cars every year.

Under VECO, Darebin will retire 1 LGC for every MWh of energy consumed under the contract, including the mandatory surrendering to meet the Renewable Energy Target obligations. This will ensure that councils' electricity use, for sites where council is the account holder, will be 100% carbon neutral electricity under the market-based accounting methodology.

Solar Photovoltaics

Council has gradually built its solar PV capacity on council-owned buildings over several years. The most recent installations were completed in July 2021. The table below provides details of recent solar installs, Council's total solar capacity and planned future installs.

Site	Year of Install	System Size / Description
Systems installed during 2021-22		
Darebin Community Sports Stadium	2021	75 kWp
Thornbury Kindergarten and MCH	2021	15 kWp installed over two systems
Narrandjeri Stadium	2021	~100 kWp on new facility
Northcote Aquatic & Recreation Centre (under construction)	2023	~450 kWp on new facility
Total Council Capacity to date including pre-2019 systems		712.02 kWp across 34 sites

Council is continuing to scope high priority sites for solar PV installation and is planning to gradually increase

capacity over the following years.

Energy Efficiency

Council's Environmentally Sustainable Design Policy sets the ESD standard minimum requirements for new buildings, upgrades, minor refurbishments and facilities management service contracts. The minimum requirements cover the aspects of building fabric, heating ventilation and air conditioning (HVAC), energy, lighting, equipment and appliances, hot water, water efficiency and stormwater. Depending on the size and type of the project, a Sustainable Management Plan, a Sustainable Design Assessment and a Green Star certification (5 or 6 star) may be required.

New Council-constructed community facilities such as the redesign of Northcote Aquatic and Recreation Centre and the new Narrandjeri Multi-Sports Stadium are designed to be fully electric as well as achieve the highest Green Star ratings.

Narrandjeri Stadium is a 6-Star Green Star Design and As-Built rating. Key features include a thermal labyrinth system, roof-mounted solar panels, electric vehicle charging stations and 15 StrataVault tree cells in the carpark to allow tree cover to spread without damaging the pavement.

Northcote Aquatic & Recreation Centre (under construction) is an all-electric 6 Star Green Star rated facility due for completion in late 2023. Materials have been selected to minimise the carbon footprint of the construction and increase durability. For example, the light-weight timber structure reduces embodied carbon while offering a natural aesthetic.

In addition to the above, council has undertaken several energy efficiencies projects in recent years, mainly in the areas of streetlighting, building lighting, HVAC and hot water. The main energy efficiency improvements undertaken during 2021-22 were through lighting upgrades, HVAC improvements, and energy assessments on leased facilities.

Darebin joined forces with Councils from across Victoria to push for more sustainable design within planning requirements. On 21 July 2022, a planning scheme amendment was lodged with the State Government, seeking to introduce planning policy that elevates sustainability requirements for new buildings and encourages a move towards net zero carbon development.

Electric vehicles (EVs)

Council recognises the need to transition its fleet and buildings to be fully electric to reduce its emissions from fuel combustion. 6 charging stations are installed at Preston Municipal Offices and 5 at the Operations Centre. Council passenger fleet consists of 3 BEV, 6PHEV and 2 e-bikes. Several trials for waste trucks, and street sweepers have been undertaken and application for the Darebin context is being assessed.

Sustainable Procurement

A strong sustainable procurement policy encourages suppliers to council to reduce their own emissions, thereby reducing council's indirect emissions. A recent example of this is council's contract for household recycling collection services, where the contractor offsets the emissions from transport fuel associated with completed collection runs for council. Further opportunities remain to tighten council's approach to sustainable procurement and raise the ambition, to generate further emission reductions.

All the below projects and actions from Darebin' Climate Emergency Plan (CEP) were in progress during the 2021/22 reporting year.

CEP	Project title	Action
Energy Efficiency	Continue energy efficiency program for council buildings	Works to include: Building Monitoring Systems, HVAC upgrades, double glazing, insulation, air-leakage control, saving on average 221tCO ₂ per year and returning \$1.40 for every \$1 spent.
	Build new buildings to a high ESD standard	Provide training in ESD for all teams involved in council building projects
	Make streetlight use more energy efficient	In partnership with VicRoads, upgrade V level streetlights to energy-efficient LEDs.
		Investigate installation of timer and dimming technology on pedestrian street lights.
Renewable Energy and Fuel Switching	Install solar PV on Council properties and infrastructure	Install 440kW of solar PV on council buildings over the next 5 years. Review this target with a view to expanding it, based on the roof space available, changes in battery pricing, whether local electricity trading/Virtual Net Metering becomes available, and in light of the new feed-in-tariff.
	Purchase renewable energy	Reallocate current funds required for GreenPower purchase (\$300,000) to more strategic action and review if impact or pricing changes.
Zero Emissions Transport	Upgrade Council's vehicle fleet with lowest emission vehicles	Partner with others to look at public charging options
		Partner with others to explore electric car share options
		Explore lower emission options for heavy fleet including electric and hydrogen fuel alternatives
	Increase number of staff walking, cycling and using public transport for commuting and work	Continue the Green Travel program, which incentivises staff to use sustainable forms of transport to commute

	trips	Continue to provide electric bikes/Myki cards for work travel
		Advocate for state and national government action and support.
Consumption and Waste Minimisation	Enable and support council staff to reduce their waste and consumption	Continue to expand waste and recycling practices throughout Council buildings and venues
		Embed strong environmental procurement practices to reduce waste creation
		Continue to reduce waste from council operations
		Continue actions to reduce council's paper use
	Continue to implement education on waste minimisation through staff programs, with a stronger emphasis on avoidance (i.e. reducing consumption in the first place)	
	Embed avoidance of consumption and minimising carbon-intensive products (including food)	Through the organisational review of all Council programs and policies embed: <ul style="list-style-type: none"> – questioning and where possible avoiding consumption – specifically reducing consumption of carbon intensive products (including food) – providing more vegetarian and other sustainable catering options at Council-run events"
Fossil Fuel Divestment	Fossil Fuel Divestment	Actively invest with fossil-free financial institutions within the Darebin City Council Investment Policy parameters
		Advocate for fossil-free financial institutions to improve their credit rating and financial rate of return
		Partner with relevant fossil fuel divestment campaigns

Adaptation and Resilience	Protect water for the environment and liveability	Implement good urban design incorporating WSUD and ESD practices and principles
	Reduce the urban heat island effect	Continue to implement Urban Forest and Green Streets strategies planting thousands of trees per year in parks and on nature strips to increase the canopy to over 25%
		Promote and encourage Green roofs, walls and facades
		Implement legislation and programs to protect significant trees
		Review the Open Space Strategy
Engaging the community	Maintain staff awareness programs on climate change	Use internal communications such as e-newsletters and events to advise staff on our climate change polices relevant to their work and how they can make practical changes to help restore a safe climate. A high percentage of staff live in Darebin and can disseminate information to broader communities

5. EMISSIONS SUMMARY

Emissions over time

Emissions since base year		Total tCO ₂ -e
Base year/Year 1:	2019-20	15,740.2
Year 2:	2020-21	14,099.5
Year 3:	2021-22	4,870.8 ¹

Significant changes in emissions

Council has reduced its operational emissions by 69% compared to the base year of 2019-20.

Emission source	Current year (tCO ₂ -e)	Previous year (tCO ₂ -e)	Reason for change
Electricity	0	7,049	Change to 100% renewable energy contract (VECO)
Diesel oil post-2004	1,392	1,507	Some energy efficiency measures
General waste (municipal waste)	269	174	Climate Active waste calculator methodology change
Working from home	454	539	Primarily due to opening up after COVID-19 shutdowns
Natural Gas VIC (metro)	1,162	2,155	Northcote Aquatic & Recreation Centre redevelopment from gas to 6 Green Star all-electric

¹ Includes uplifts (415.71 tCO₂-e)

Organisation emissions summary

The electricity summary is available in the Appendix B. Electricity emissions were calculated using a market-based approach.

Emission category	Sum of Scope 1 (tCO ₂ -e)	Sum of Scope 2 (tCO ₂ -e)	Sum of Scope 3 (tCO ₂ -e)	Sum of total emissions (tCO ₂ -e)
Construction Materials and Services	0.00	0.00	157.99	157.99
Electricity	0.00	0.00	0.00	0.00
ICT services and equipment	0.00	0.00	135.48	135.48
Office equipment & supplies	0.00	0.00	88.13	88.13
Postage, courier and freight	0.00	0.00	160.36	160.36
Professional Services	0.00	0.00	156.44	156.44
Stationary Energy (gaseous fuels)	1078.64	0.00	83.73	1162.37
Stationary Energy (liquid fuels)	10.63	0.00	0.63	11.26
Transport (Land and Sea)	1450.93	0.00	329.50	1780.42
Waste	0.00	0.00	268.83	268.82
Water	0.00	0.00	79.92	79.92
Working from home	0.00	0.00	453.85	453.85
Total	2540.20	0	1914.85	4455.05

Uplift factors

An uplift factor is an upwards adjustment to the total carbon inventory to account for relevant emissions, which cannot be reasonably quantified or estimated. This conservative accounting approach helps ensure the integrity of the carbon neutral claim.

Reason for uplift factor	tCO ₂ -e
Chemicals (cleaning) - emission source unquantified and requires uplift	27.58
Refrigerants -emission source unquantified and requires uplift	22.28
Contractor Fuel Use (non-waste collection services) - emission source unquantified and requires uplift	114.75
Pesticides - emission source unquantified and requires uplift	27.58
Garden/Green Waste and Construction/Demolition Waste - emission source unquantified and requires uplift	223.54
Total of all uplift factors	415.71
Total footprint to offset <i>(total net emissions from summary table + total uplifts)</i>	4,870.76

6. CARBON OFFSETS

Offset retirement approach

Offset purchasing strategy: in arrears

1. Total number of eligible offsets banked from last year's report	0
2. Total emissions footprint to offset for this report (tCO ₂ -e)	4,871
3. Total eligible offsets required for this report	4,871
4. Total eligible offsets purchased and retired for this report	4,901
5. Total eligible offsets banked to use toward next year's report	30

Co-benefits

The projects have been chosen following Darebin's social procurement policies providing strong socio-economic and environmental benefits. They also work towards achieving the sustainable development goals as marked below for each project:

Mt Mulgrave Savanna Burning: This is a 25 year long project that started in 2015 and is scheduled to end in 2040, covering an area of 280,728 hectares. The project is located on Mt. Mulgrave Station at approximately 100 km north of Chillagoe and 200 km west of Cairns on Cape York Peninsula, north Queensland. The project is by the Kingsley family the owners of the station (pastoral lease). It is an early-dry season (EDS) savanna burning project and aims to reduce uncontrolled late-dry season (LDS) wildfires that commonly occur throughout the north of Queensland. Aerial ignition of prescribed fires during the EDS and firefighting activities during the LDS are common project activities every year. This helps reduce the emission of the large volume of greenhouse gases (GHG) released by these fires while alleviating the risk of catastrophic wildfires. The project generates annual ACCUs designated for sale, providing further financial support for ongoing fire management and strategic planning.

- Socio-economic benefits: As a market-based mechanism for climate protection, the initiative provides financial incentive to landowners to continue in climate-friendly fire management practices.
- Ecological benefits: Through these preventative measures the project not only reduces global GHGs each year but equally preserves Northern Australia's unique landscape and protects the country's endemic wildlife.
- SDG Benefits:
 - o 15- Life on land - Ecological protection, plant and animal populations are not wiped out in high intensity fires. Low intensity fires are easier to recover from and have smaller impact on food availability and reproduction.

- 13- Climate action - 135,463 tCO₂-e emissions avoided from late season hot fires between 2015-2021 by implementing savanna fire management practices.
- 17- Partnership for the goals - Cooperation agreements encourage the engagement between landholders, government and non-government organisations to achieve emissions reduction and biodiversity conservation goals through partnerships and agreements.

Bolden Creek ecological preserve: The Boden Creek project protects almost 4,000 ha in southern Belize from logging and being transformed into agricultural land. The forest will sequester carbon to contribute to the global fight against the climate crisis, while also protecting and enriching the habitat of many endangered species. The project delivers significant benefits to the local community such as creating jobs, providing training, improving the local water quality and developing private sector eco-tourism.

- Socio-economic benefits: The project actively contributes to local sustainable economic development. Working closely with the three local communities, Indian Creek Village, Golden Stream Village, and Pine Hill Mennonite Community, the project creates jobs, builds the private sector and develops their non-rural skills in business management, such as labour allocation, planning, payroll, supplies and regulation compliance.
- Ecological benefits: By preventing deforestation, controlling access to the site (an informal right-of-way has been established for the communities to cross the project area to access the local market) and regularly patrolling the area, the project minimises disturbance to the natural habitat. This protects native wildlife and develops the area for eco-tourism, which will be run by a local contractor.
- SDG Benefits:
 - 1- No poverty - 1300+ people across 3 communities benefiting from the project.
 - 4- Quality education - Training in non-rural activities business management, ecotourism services, rangers and patrols and assisting data collection.
 - 6- Clean water and sanitation - 1300+ people benefit from improved water as without the project there could be contamination to the water board.
 - 8- Decent work and economic growth - Full-time jobs for locals who will be paid at least 2.5 times the poverty rate.
 - 13- Climate action - 60,000 tCO₂-e mitigated on average per year.
 - 14- Life below water - Coral reef protected thanks to avoidance of contamination as project site drains directly into Port Honduras Marine Sanctuary, a UNESCO World Heritage Site.
 - 15- Life on land - 3,980 ha of crucial habitat protected for animals such as tapirs, jaguars and howler monkeys.

Hongji and Yandun Wind: Located in within Wulanchabu City in China's Autonomous Region of Inner Mongolia, this project involves the construction and operation of 315 wind turbines that generate clean green energy for the North China Power Grid. By displacing fossil fuel-generated energy the project effectively reduces greenhouse gas emissions and contributes towards China's transition to a low-carbon future. In addition to environmental benefits the project boosts the local economy through job creation.

- Socio-economic benefits: The project boosts the local economy through job creation. As the wind turbines are manufactured in China, jobs are created at multiple stages, during manufacturing, installation, and the operation of the project - providing future-proof opportunities that is helping to drive China's transition to renewable energy sources.
- Ecological benefits: Emission reductions and weening the country's dependence on fossil fuels.
- SDG Benefits:
 - o 7- Affordable and clean energy - 726,383 MWh of renewable energy supplied to the grid on average annually.
 - o 8- Decent work and economic growth - Local jobs created during the construction and operational phase of the project
 - o 13- Climate action - 610,400 tCO₂-e mitigated on average per year.

Eligible offsets retirement summary

Offsets retired for Climate Active carbon neutral certification											
Project description	Type of offset units	Registry	Date retired	Serial number (and hyperlink to registry transaction record)	Vintage	Stapled quantity	Eligible quantity (tCO ₂ -e)	Eligible quantity used for previous reporting periods	Eligible quantity banked for future reporting periods	Eligible quantity used for this reporting period	Percentage of total (%)
Mt Mulgrave Savanna Burning Project	ACCU	ANREU	07/03/2023	8,347,898,856 - 8,347,899,100	2022-23	-	245	0	2	243	5%
Bolden Creek Ecological Preserve Forest Carbon Project	VCU	VERRA	07/03/2023	10223-195558674-195558918-VCS-VCU-263-VER-BZ-14-647-01012014-31122014-0	2014	-	245	0	1	244	5%
Inner Mongolia Wulanchabu Hongji Wind Farm Project	CER	Swiss National Registry	08/03/2023	1,135,285,460 – 1,135,289,870	CP2	-	4,411	0	27	4,384	90%
Total offsets retired this report and used in this report										4,871	
Total offsets retired in this report that have been banked for future reports									30		

Type of offset units	Quantity (used for this reporting period claim)	Percentage of total
Australian Carbon Credit Units (ACCUs)	243	5%
Verified Carbon Units (VCUs)	244	5%

Certified Emissions Reductions (CERs)

4,384

90%

7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

Renewable Energy Certificate (REC) summary

The following RECs have been surrendered to reduce electricity emissions under the market-based reporting method.

1. Large-scale Generation certificates (LGCs)*	6190
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* LGCs in this table only include those surrendered voluntarily (including through PPA arrangements) and does not include those surrendered in relation to the LRET, GreenPower, and jurisdictional renewables.

Project supported by LGC purchase	Eligible units	Registry	Surrender date	Accreditation code (LGCs)	Certificate serial number	Generation year	Quantity (MWh)	Fuel source
Dundonnell Wind Farm - VIC	LGC	REC Registry	08 Dec 2022	WD00VC37	33868-37583	2022	3716	Wind
Dundonnell Wind Farm - VIC	LGC	REC Registry	22 Feb 2022	WD00VC37	213101-215574	2020	2474	Wind
Total LGCs surrendered this report and used in this report							6190	

APPENDIX A: ADDITIONAL INFORMATION

Additional offsets retired for purposes other than Climate Active carbon neutral certification							
Project description	Type of offset units	Registry	Date retired	Serial number	Vintage	Eligible Quantity (tCO ₂ -e)	Purpose of cancellation
Huaneng Jilin Tongyu Phase II Wind Farm project	CER	Swiss National Registry	4/11/2022	C256EN, 11.2022	2013	333	Solo Resource Recovery compensated fleet emissions associated with the operations within City of Darebin for the 2021/22 contact year

APPENDIX B: ELECTRICITY SUMMARY

Electricity emissions are calculated using a **market-based approach**.

Location-based method

The location-based method provides a picture of a business's electricity emissions in the context of its location, and the emissions intensity of the electricity grid it relies on. It reflects the average emissions intensity of the electricity grid in the location (State) in which energy consumption occurs. The location-based method does not allow for any claims of renewable electricity from grid-imported electricity usage.

Market-based method

The market-based method provides a picture of a business's electricity emissions in the context of its renewable energy investments. It reflects the emissions intensity of different electricity products, markets and investments. It uses a residual mix factor (RMF) to allow for unique claims on the zero emissions attribute of renewables without double-counting.

Market Based Approach Summary			
Market Based Approach	Activity Data (kWh)	Emissions (kgCO ₂ e)	Renewable Percentage of total
Behind the meter consumption of electricity generated	833,666	0	11%
Total non-grid electricity	833,666	0	11%
LGC Purchased and retired (kWh) (including PPAs & Precinct LGCs)	6,190,000	0	80%
GreenPower	0	0	0%
Jurisdictional renewables (LGCs retired)	0	0	0%
Jurisdictional renewables (LRET) (applied to ACT grid electricity)	0	0	0%
Large Scale Renewable Energy Target (applied to grid electricity only)	1,288,804	0	17%
Residual Electricity	-546,021	-543,271	-7%
Total grid electricity	6,932,784	-543,271	89%
Total Electricity Consumed (grid + non grid)	7,766,450	-543,271	107%
Electricity renewables	8,875,471	0	
Residual Electricity	-546,021	-543,271	
Exported on-site generated electricity	340,940	-248,886	
Emissions (kgCO ₂ e)		0	
Total renewables (grid and non-grid)	107.03%		
Mandatory	16.59%		
Voluntary	79.70%		
Behind the meter	10.73%		
Residual Electricity Emission Footprint (TCO₂e)	0		

Figures may not sum due to rounding. Renewable percentage can be above 100%

Location Based Approach Summary

Location Based Approach	Activity Data (kWh)	Scope 2 Emissions (kgCO ₂ e)	Scope 3 Emissions (kgCO ₂ e)
VIC	6,932,784	6,308,833	693,278
Grid electricity (scope 2 and 3)	6,932,784	6,308,833	693,278
VIC	833,666	0	0
Non-grid electricity (Behind the meter)	833,666	0	0
Total Electricity Consumed	7,766,450	6,308,833	693,278
Emission Footprint (TCO₂e)	7,002		
<i>Scope 2 Emissions (TCO₂e)</i>	6309		
<i>Scope 3 Emissions (TCO₂e)</i>	693		

APPENDIX C: INSIDE EMISSIONS BOUNDARY

Darebin City Council's greenhouse gas emissions inventory has been prepared according to the Climate Active Carbon Neutral Standard. The emissions boundary is consistent with the GHG Protocol Corporate Accounting and Reporting Standard:

- Organisational boundary: Council uses the operational control approach for measuring and reporting on the organisation's emissions. The organisation boundary includes emissions from all activities over which we have full operational control (see Figure 2).
- Operational boundary: the reported emissions inventory includes direct emissions sources (scope 1), indirect emissions from purchased energy (scope 2) and other measurable indirect sources (scope 3) that are material and relevant to council's operations (see Figure 2).

Based on an operational control approach, the following asset types have been included within the operational boundary:

- Administration and Operations Buildings
- Child Care and Maternal Health Facilities
- Community Facilities
- Libraries
- Leisure and Sports Facilities
- Parks and Open Space
- Roads

Other assets types for which council does not have full operational control of, but are material and relevant to council's operations, have been included in the reporting boundary. These are:

- Leased Facilities for which council is responsible for general maintenance (includes an aquatic centre, several sports facilities, childcare and kindergartens, and other small community facilities)
- Street Lighting (owned and operated by network distribution companies)

These emissions sources have been included within scope 3 among other sources deemed relevant to council's value chain.

The following greenhouse gases have been considered:

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)
- Synthetic gases (HFCs, SF₆, CF₄, C₂F₆)

Non-quantified emission sources

The following sources emissions have been assessed as relevant, are captured within the emissions boundary, but are not measured (quantified) in the carbon inventory. They have been non-quantified due to one of the following reasons:

1. **Immaterial** <1% for individual items and no more than 5% collectively
2. **Cost effective** Quantification is not cost effective relative to the size of the emission but uplift applied.
3. **Data unavailable** Data is unavailable but uplift applied. A data management plan must be put in place to provide data within 5 years.
4. **Maintenance** Initial emissions non-quantified but repairs and replacements quantified.

Relevant-non-quantified emission sources	(1) Immaterial	(2) Cost effective (but uplift applied)	(3) Data unavailable (but uplift applied & data plan in place)	(4) Maintenance
Business travel (flights) and Public transport & personal vehicle use	Yes	No	No	No
Chemicals (cleaning)	No	Yes	No	No
Construction materials (structures)	Yes	No	No	No
Food & catering	Yes	No	No	No
Oils & lubricants	Yes	No	No	No
Pesticides	No	No	Yes (uplift applied & data plan in place)	No
Refrigerants	No	No	Yes (uplift applied & data plan in place)	No
Transport fuels (contractor non-waste collection services)	No	No	Yes (uplift applied & data plan in place)	No
Waste disposal (garden & green waste)	No	Yes	No	No
Waste disposal (construction & demolition waste)	No	Yes	No	No

APPENDIX D: OUTSIDE EMISSIONS BOUNDARY

Excluded emission sources

The below emission sources have been assessed as not relevant to an organisation's or precinct's operations and are outside of its emissions boundary. These emissions are not part of the carbon neutral claim. Emission sources considered for relevance must be included within the certification boundary if they meet two of the five relevance criteria. Those which only meet one condition of the relevance test can be excluded from the certification boundary.

Emissions tested for relevance are detailed below against each of the following criteria:

1. **Size** The emissions from a particular source are likely to be large relative to the organisation's electricity, stationary energy and fuel emissions
2. **Influence** The responsible entity has the potential to influence the reduction of emissions from a particular source.
3. **Risk** The emissions from a particular source contribute to the organisation's greenhouse gas risk exposure.
4. **Stakeholders** Key stakeholders deem the emissions from a particular source are relevant.
5. **Outsourcing** The emissions are from outsourced activities previously undertaken within the organisation's boundary, or from outsourced activities typically undertaken within the boundary for comparable organisations.

Emission sources tested for relevance	(1) Size	(2) Influence	(3) Risk	(4) Stakeholders	(5) Outsourcing	Included in boundary?
Accommodation & outdoor events	No	Yes	No	No	No	No
Downstream transportation & distribution	No	No	No	No	No	No
Other purchased goods & services	Yes	No	No	No	No	No
Waste disposal (community)	Yes	No	No	No	No	No



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