



Climate Active **Public Disclosure Summary**

Randwick City Council 2018-19

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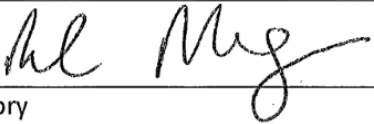
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Declaration

Name of Certified Entity: Randwick City Council

Reporting Period: FY 18/19

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 Carbon Neutral Program.

Signature		Date	4/12/2019
Name of Signatory Peter Maganov			
Position of Signatory Manager Sustainability			

Carbon neutral certification category	Organisation
Date of most recent external verification/audit	17 February 2019
Auditor	Benjamin Jenkins
Auditor assurance statement link	NA

1. Carbon Neutral Information

1.1. Introduction

Randwick City is located in the eastern suburbs of Sydney, bounded by Waverley Council to the north, the Pacific Ocean to the east, Botany Bay to the south and the City of Sydney and Bayside Councils to the west.

Randwick City covers 37 square kilometres and includes the suburbs of Chifley, Clovelly, Coogee, Kensington, Kingsford, La Perouse, Little Bay, Malabar, Maroubra, Matraville, Phillip Bay, Randwick and South Coogee. Randwick City is known for its extensive parkland and open space areas including Centennial Park, Heffron Park and Kamay Botany Bay National Park; 29 kilometres of coastline with the magnificent Coastal Walkway linking ten beaches and eight ocean pools; excellent education and medical facilities including the University of NSW (UNSW), the Randwick Hospitals Complex and associated research and related services; a strong artistic and cultural focus; regionally significant recreational facilities; employment facilities such as Port Botany; and its proximity to the Sydney Central Business District and Sydney Airport.

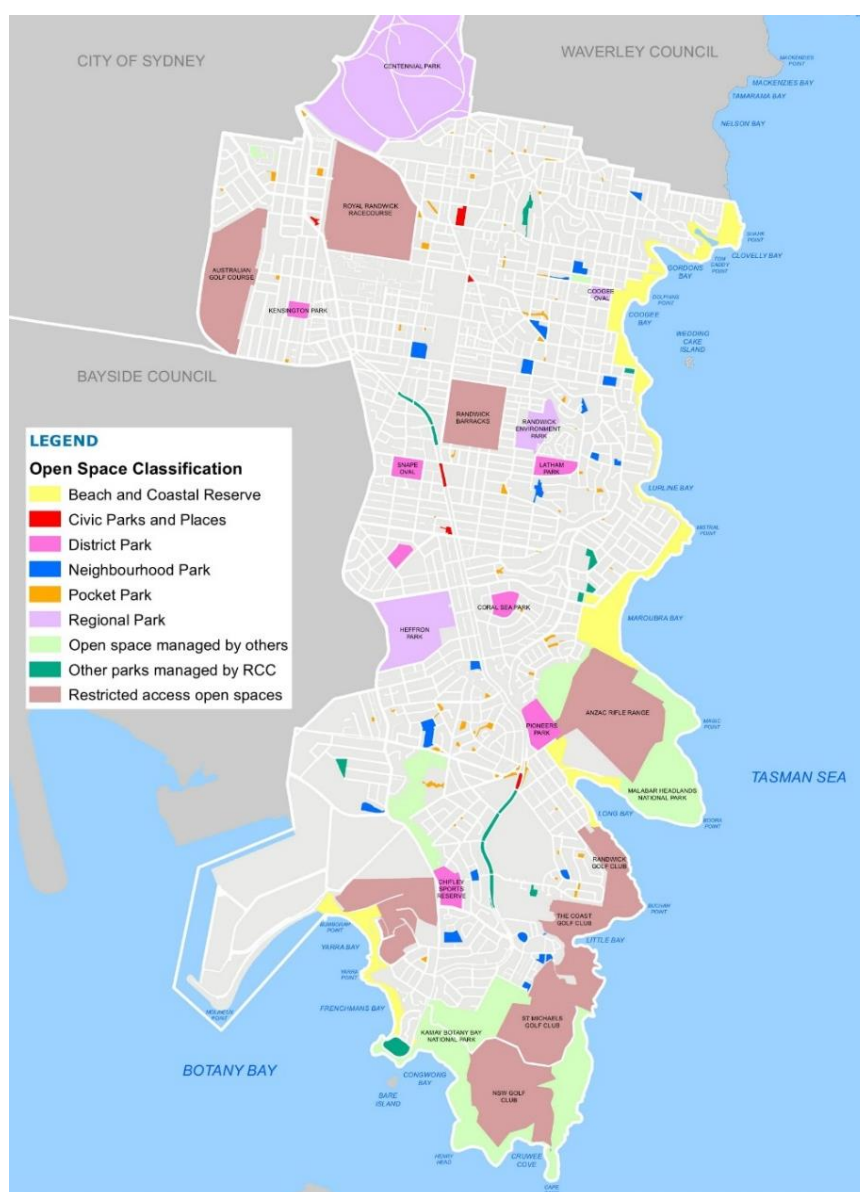


Figure 1 - Map of Randwick City

OUR COMMUNITY



151,993

Residents (2017
estimate; ABS)



58,702

In homes
(ABS census)



2.2%

Predicted rate
of growth



34

Median age

OUR GEOGRAPHY

37.4km²

Area

29km

Coastline

30%

Open space

58

Playgrounds

14%

Tree canopy cover
(UTS 2014)

58

Playgrounds

87

Parks

19

Sportfields

15

Community Centres

13

Suburbs

10

Beaches

8

Ocean pools

4

Golf courses

3

Libraries

2

National Parks

1

Leisure Centre

OUR ORGANISATION



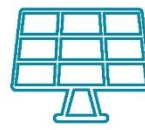
528

Permanent
employees



23

Council
buildings



12

Solar power
systems



18

Water recycling and
harvesting systems

Figure 2 - Our Numbers

1.2. Carbon Neutral

This inventory has been prepared for the financial year from 1 July 2018 to 30 June 2019.

The operational boundary has been defined based on an operational control test, in accordance with the principles of the National Greenhouse and Energy Reporting Act 2007. This includes all operations which are controlled by Randwick City Council.

The methods used for collating data, performing calculations and presenting the carbon account are in accordance with the following standards:

- National Carbon Offset Standard (NCOS) for organisations
- The GHG Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
- National Greenhouse and Energy Reporting (Measurement) Determination 2008

Where possible, the calculation methodologies and emission factors used in this inventory are derived from the National Greenhouse Accounts (NGA) Factors in accordance with "Method 1" from the National Greenhouse and Energy Reporting (Measurement) Determination 2008.

The greenhouse gases considered within the inventory are those that are commonly reported under the Kyoto Protocol; carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and synthetic gases - hydrofluorocarbons (HFCs). No perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) or nitrogen trifluoride (NF₃) were detected within the operational boundary. All emission sources have been expressed as carbon dioxide equivalents (CO₂-e) using relative global warming potentials (GWPs).

1.3. Emission Sources within Certification Boundary

Quantified sources

- Transport Fuel
- Natural Gas
- Refrigerants
- Electricity - including street lighting
- Water
- IT Equipment
- Telecommunications
- Office Paper
- Stationery
- Merchandising
- Office Furniture
- Bitumen
- Chlorine
- Employee Commute

- Business flights
- Cleaning
- Food and Catering
- Postage and Couriers
- Printing
- Hotel Accommodation
- Advertising
- Taxis
- Waste – landfill Commercial
- Waste Landfill Garden and green
- Waste – Recycling

Excluded sources

- NA

2. Emissions Reduction Measures

2.1. Emissions Reduction Strategy

In 2018, Randwick Council committed to an in-principle objective of achieving 100% renewable energy and net-zero greenhouse gas emissions by 2030. This target is in line with the Paris Agreement of 'keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius'.

A 100% renewable energy roadmap report was completed in 2019 to reduce Council's emissions in line with this target.

Randwick Council also has a Renewable Energy Master Plan, adopted by Council in 2015, which outlines how the Randwick LGA can increase the uptake of renewable energy both for its own operations and across its municipality.

As greenhouse gas emissions from Council's electricity and gas consumption make up over 65% of Randwick Council's annual emissions, the transition to renewables has been a key focus of the Council's emission reduction journey.

The 2015 Renewable Energy Master Plan suggested that Council aim to have 15% of its total stationary energy demand supplied by renewable energy by 2025. This target was largely based on the installation of rooftop solar on Council assets.

With the implementation of energy efficiency projects, a street lighting upgrade and a renewable energy power purchase agreement (PPA), this percentage increased to over 20% in July 2019.

Activities completed in the *current* reporting year (2018/19)

Status	Emission Source	Emission Reduction Action	Annual Emissions Savings
Completed in 2018/19	Electricity	Bowen Library and Malabar Library LED lighting upgrade	248
Completed in 2018/19	Electricity	Installation of Voltage Optimisation Technology at Bowen Library and Des Renford Leisure Centre	29
Completed in 2018/19	Electricity	Disconnection of hot water pump at Des Renford Leisure Centre	NA
Completed in 2018/19	Transport	Purchase of 1 x electric car and 1 x electric bike for council staff use	NA
Completed in 2018/19	Transport	Installation of electric vehicle charging station at Randwick Community Centre. Upgrade of electric vehicle charging stations at Prince Henry Centre and Administration Building.	NA
Completed in 2018/19	Electricity	Cleaning and maintenance of rooftop solar	NA
Emission savings from activities completed in 2018/19:			277

Activities completed in the *previous* reporting year (2017/18)

Status	Emission Source	Emission Reduction Action	Annual Emissions Savings
Completed in 2017/18	Asphalt	Replacement of 4,400 tonnes of hot asphalt with warm asphalt.	NA
Completed in 2017/18	Electricity	Works Depot LED lighting upgrade	113
Completed in 2017/18	Electricity	Purchase of 349 MWh of GreenPower	321
Completed in 2017/18	Electricity	Installation of monitoring hardware on rooftop solar	NA
Completed in 2017/18	Electricity	Annual maintenance and cleaning of rooftop solar	NA
Completed in 2017/18	Transport	Purchase of 2 x electric bike for council staff	NA
Emission savings from activities completed in 2017/18:			434

Activities completed in the *next* reporting year (2018/19)

Status	Emission Source	Emission Reduction Action	Annual Emissions Savings
Completed in 2019/20	Electricity	Installation of 10 kW rooftop solar array at Malabar Library	14
Completed in 2019/20	Electricity	20% Renewable Energy Power Purchase Agreement (PPA) for all of Council's electricity	1,890
Completed in 2019/20	Transport	Purchase of 2 x electric cars, 1 x electric beach vehicle and 2 x electric bikes.	NA
Completed in 2019/20	Electricity	Install smart HVAC timers at Bowen Library.	NA
Completed in 2019/20	Electricity	Implementation of sub-metering across Council's 4 largest sites.	NA
To be completed in 2019/20	Electricity	Installation of additional HVAC controllers across Council sites.	NA
To be completed in 2019/20	Electricity	Installation of lighting timers at the Depot Warehouse.	NA
To be completed in 2019/20	Electricity	Street Lighting Upgrade	1,100
To be completed in 2019/20	Electricity	LED upgrades at 25 council sites, including timers and sensors.	NA
To be completed in 2019/20	Electricity	Upgrade of HVAC system at Administration Building	NA
Emission savings from activities completed in 2018/19:			3,004+

3. Emissions Summary

Table 1 – Emissions Summary

Emission Source	Base Year – 2017/18 (tCO ₂ -e)	2018/19 (tCO ₂ -e)
Advertising and promotion	65.6	179.22 ^D
Chlorine	12.7	38.60
Cleaning Services	75.9	238.37 ^D
Clothing	5.8	8.47
Commercial and industrial waste	278.0	278.04
Courier Services	42.4	5.18
Domestic hotel 4 Stars	11.0	7.87
Electricity remaining	9,373.1	9,093.65
Electricity renewables	-	-
Medium Car: unknown fuel	118.5	126.54
Train	2.0	2.14
Bicycle	-	-
Walk	-	-
Bus	6.08	6.50
Motorbike/scooter	0.14	0.15
Light rail and tram	0.05	0.06
Food & Catering	230.4	221.05
Fuel: Biodiesel	11.5	7.72
Fuel: Diesel	1,433.5	1,190.31
Fuel: E10	143.6	122.28
Fuel: LPG -Post 2004 vehicles	8.8	9.01
Fuel: Petrol	616.9	472.57
Garden and green	31.8	177.80 ^D
IT Equipment	65.6	345.68 ^D
Economy class flights: Long haul (over 10000km)	-	-
Economy class Flights Medium haul (between 3700 km and 10000km)	7.8	2.81
Economy class Flights Short (between 400 km to 3700km)	32.3	4.46
Flights Very short (up to 400 km)	1.0	1.34
Marketing and distribution	55.6	55.72

Emission Source	Base Year – 2017/18 (tCO ₂ -e)	2018/19 (tCO ₂ -e)
Natural Gas NSW	752.5	711.01
Water - New South Wales/ACT	98.4	104.89
Office Furniture	61.8	277.99 ^D
Paper	36.9	13.30 ^D
Postal services	694.9	337.14 ^D
Printing and stationery	136.9	247.90
Recycling	-	-
Refrigerant	16.9	16.9
Taxi - Sydney	2.9	5.10
Telecommunications	123.1	118.72
Bitumen	114.2 ^C	144.28
Total Gross Emissions	14,668.57	14,572.77
GreenPower or retired LGCs	-283.5	0
Total Net Emissions	14,385.07	14,572.77

^C Data revised post Base Year due to updated calculation methodology.

^D Data revised post Base Year due to updated due to more accurate data source found.

4. Carbon Offsets

4.1. Offsets Summary

Table 2 - Offsets Summary

Date of cancellation	Offset project, unit type and registry	Serial numbers	Vintage	Quantity
12/12/2019	Myamyn conservation project, Australia	BBA-2467-VOL003-4088 to BBA-2467-VOL003-4587	2019	500*
12/12/2019	Hebei Yingxin Glass Group Co. Ltd. Glass Furnace Flue Gas Waste Heat To Energy Project (GS750) Gold Standard	GS1-1-CN-GS750-15-2013-3612-40474-40973; https://registry.goldstandard.org/credit-blocks/details/71242	2013	500
12/12/2019	Huoshui Grouped Small Hydro Verified Carbon Standard	5431-237163147-237177219-VCU-028-APX-CN-1-438-01012014-31122014-0; https://vcsregistry2.apx.com/myModule/rpt/myrpt.asp?r=206&h=26388	2014	14,073
Total Offsets Cancelled (Climate Active Compliant Only)				14,573
Net Emissions After Offsetting				0.0

* One Myamyn Lowland Forest Conservation offset is equivalent to a 1.5 m² Australian Biodiversity Unit. This unit is therefore paired with a Verified International Carbon credit (in this case the Hebei Yingxin Glass Group Co. Ltd. Glass Furnace Flue Gas Waste Heat To Energy Project (GS750) Gold Standard) to be Climate Active compliant. Hence the total Climate Active offsets cancelled is equal to 14,573 tCO₂-e.

4.2. Project Summary

Myamyn Lowland Forest Conservation - Australia

The Annya State Forest in south-western Victoria is an area of high ecological value containing numerous vulnerable and endangered plant and animal communities. The forest is characterised by messmate stringybark trees, with a diverse understorey growing on fertile soils. In 1997 sections of the forest were illegally cleared and planted with Tasmanian blue gum, an invasive eucalyptus species. This project seeks to restore the site and protect it in perpetuity from land clearing.

As well as cleared land, the site contains remnant forests that are among the most undisturbed in the region, while a large freshwater wetland provides a rare pocket of habitat for local frog, bird and bat species such as the southern toadlet, curly sedge and southern bent-wing bat. By protecting the site and replanting cleared areas with native plants, this project permanently protects and enhances local biodiversity.

The Myamyn project has rehabilitated over 20 hectares of cleared lands, protecting a total of 200 hectares against further clearing and enhancing habitat by controlling weeds and pest animals like cats and foxes. In doing so, habitat for a range of vulnerable and endangered native species is protected and enhanced – including the southern brown bandicoot, powerful owl and long-nosed potoroo.

Huóshi Grouped Small Hydropower - China

This project consists of multiple small-scale hydropower plants that generate renewable energy for rural Southwest and South Central China. By supplying clean hydroelectric power to the local grid, the project displaces greenhouse gas emissions, helping mitigate climate change and improving the lives of local people.

Huóshui Grouped Small Hydropower is made up of 95 hydropower plants with a total combined capacity of 215.71 MW that generate clean energy to help meet China's mounting energy demands sustainably. The small-scale plants range in capacity from 0.1 to 14 MW, and together supply enough renewable energy to power over half a million average Chinese homes each year. Their 'run-of-river' design allows them to do so with minimal environmental impact. The cost of developing hydropower plants in remote locations is a significant barrier to construction, so this project would not be possible without the revenue generated by carbon credits.

Huóshi Grouped Small Hydropower helps diversify China's energy sector and provides local employment opportunities in power plant construction and operation, alleviating regional poverty. The project activities also fund social initiatives in cooperation with local organisations, including disaster relief funds and educational programmes, including those aimed at improving the lives of China's left-behind children, whose parents have migrated to the cities for work leaving their children behind. Sustainable agricultural workshops create increased income opportunities for local farmers, while the reliable electricity supplied by the project gives remote communities better access to electrical appliances that ameliorate their daily life.

Yingxin Glassworks Waste Heat to Energy – China

Producing glass is an energy intensive process. The Yingxin Glassworks Factory is implementing measures to make it more environmentally friendly by installing state-of-the-art technology. The company is using a system to capture waste heat and channel it back into further glass production as electricity, significantly reducing their need for fossil-fuel derived power in their operations.

This project saw the installation of an innovative waste-heat-capture method at the Yingxin Glassworks Factory. Four boilers convert waste heat into energy, which drives two 6MW turbines to generate electricity that can then be used for glass production elsewhere in the facility. By recovering and using waste heat from the glass smelting furnaces, electricity is generated without needing more fuel, reducing the demand for fossil-fuel power.

In total, 76,000 MWh of electricity is produced each year, which equates to 67,000 tonnes of CO₂ emissions avoided annually. The electricity generated by this project meets approximately 55% of the facility's electricity demand for glass production. In addition to the environmental benefits, the project owner has provided scholarships to children and supporting schools, as well as elderly people and the local infrastructure. Local people are also permitted to borrow machinery and tools at no cost.

4.3. Offsets Purchasing and Retirement Strategy

Randwick City Council's carbon offsetting strategy is as follows:

- 1. Maximise the proportion of eligible Australian-based offsets within the allocated budget.*
- 2. For offsets which are not based in Australia, projects with a focus on energy (e.g. wind, solar, biomass) are preferred.*
- 3. Reduce the allocated budget each year to reflect the reduction in carbon emissions.*

Offsets are purchased and retired in arrears at the end of the reporting period. Any remaining offsets will be used in the following year's accounts in order to maintain certification.

To achieve certified carbon neutrality, Randwick Council purchases only verified carbon offsets eligible under the National Carbon Offset Standard. These offsets have been assessed as meeting the NCOS offset integrity principles.

Where possible, Randwick Council seeks to firstly reduce its own emissions at the source, and then secondly to procure offsets which deliver positive environmental, social and economic co-benefits.

In accordance with the National Carbon Offset Standard for Organisations, Randwick Council's approach to achieving certified carbon neutrality is:

1. Accurately measure its emissions
2. Continue to reduce its emissions
3. Offset any emissions which cannot be reduced
4. Publically report on the sources of emissions to identify areas for improvement
5. Independently audit the carbon account

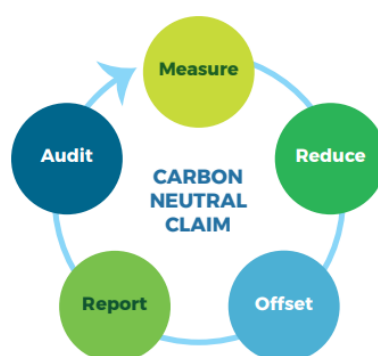


Figure 3 - Activities for Carbon Neutrality (source: NCOS for Organisations, 2017)

5. Use of Trade Mark

Trademark will be used in the following when and if approved for use.

Table 3 - Trade Mark Register

Where used	Logo type
Website	Certified organisation
E-news to residents and staff	Certified organisation
Printed magazines sent out to residents	Certified organisation
Email signatures	Certified organisation

6. Community Emission Reduction Actions

Randwick Council recognizes that its operational emissions, whilst significant, make up approximately 1.5% of the total annual emissions in its local government area. Community focused Sustaining Our City initiatives ensure that the Council and its residents work together to reduce their emissions. Current examples include:

6.1. Randwick Programs

Pool Efficiency Program

The Pool Efficiency Program was run in partnership with the UNSW Cooperative Research Centre for Low Carbon Living (CRCLCL). The program allowed residents to receive a free audit of their pool's energy consumption and a tailored report on how their energy consumption can be decreased. Residents which installed the suggested energy-efficient technology also received a rebate of \$250 provided jointly by UNSW and Randwick City Council. Since the program's completion it has been integrated into the offerings of the Australian Energy Foundation and made available to councils all around Australia.

Sun Tenants

Over 45% of private dwellings in the Randwick LGA are rented. This is 40% higher than the average rate in the greater Sydney region. This can be a significant barrier for tenants looking to install solar due to the 'split incentive problem'. Sun Tenants is a finance tool which helps tenants install rooftop solar on rented properties by splitting the savings between the tenant and owner. The program is currently being trialed on Council buildings leased to local businesses, and will be promoted to the community in early 2020.

6.2. Regional Programs

Solar My Schools

A regional environmental program run across the 3 eastern suburbs councils (Randwick, Waverley, Woollahra) to assist local schools (and other community centres) install quality rooftop PV systems. The program is now working with 60 of the 64 schools across the 3-Council region, and has installed 554 kW of solar to date (2019) in the Randwick LGA alone, with up to another 930 kW to be installed in 2020 and 2021.

Australian Energy Foundation

The Energy Advisory Service which is provided in partnership with the Australian Energy Foundation is an initiative to assist residents install rooftop solar and reduce their energy consumption. Through this program, 500 Randwick residents have attended information sessions, with over 150 residents installing solar.

Compost Revolution

Compost has been running since 2010 as part of a collaborative project with neighbouring Waverley and Woollahra Councils. The program enables residents across the 3 Council areas to obtain discounted compost bins or worm farms as well as technical support and advice to encourage them to avoid placing organic food waste into their red-lidded rubbish bins. Through the program, Randwick residents have composted approximately 2,000 tonnes of organic material composted annually, resulting in an equivalent reduction in greenhouse gas emissions of approximately 500 tonnes.

EV Charging Stations

The first rollout of public electric vehicle (EV) charging stations included a total of 6 stations installed across the 3-council region in early 2019, 4 of which are located within the Randwick LGA.

National Carbon Offset Standard
Public Disclosure Summary
2018-19