



# **PUBLIC DISCLOSURE STATEMENT**

**TARONGA CONSERVATION SOCIETY  
AUSTRALIA PTY LTD  
ORGANISATION CERTIFICATION  
FY2020-21**

Australian Government  
**Climate Active  
Public Disclosure Statement**



An Australian Government Initiative



NAME OF CERTIFIED ENTITY: Taronga Conservation Society Australia Pty Ltd

REPORTING PERIOD: Financial year 1 July 2020 – 30 June 2021

**Declaration**

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.

Signature

Date 11<sup>th</sup> November 2021

Name of Signatory Bridget Corcoran

Position of Signatory Manager, Environmental Sustainability



**Australian Government**  
**Department of Industry, Science,  
Energy and Resources**

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Version number February 2021



# 1. CARBON NEUTRAL INFORMATION

## Description of certification

This inventory has been prepared for the financial year from 1 July 2020 to 30 June 2021 and covers the business operations of Taronga Conservation Society Australia (ABN - 41 733 619 876).

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 the Taronga Conservation Society (Taronga), including: Taronga Zoo and Taronga Western Plains Zoo.

The boundary excludes the transport of visitors and guests, tenants, and contractors to and from facilities operated by Taronga.

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

- Climate Active Standards
- The Greenhouse Gas 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 (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O) and synthetic gases - hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) sulphur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>). These have been expressed as carbon dioxide equivalents (CO<sub>2</sub>-e) using relative global warming potentials (GWPs).

*“One of six strategic priorities in the Taronga 2021-2025 Strategic Plan is to lead environmental sustainability and climate change action”*

## Organisation description

Taronga Conservation Society Australia (Taronga) is a statutory authority owned by the people of New South Wales and administered by the Department of Planning, Industry and Environment. Taronga is a not-for-profit conservation organisation working towards saving endangered wildlife from extinction. The organisation's activities span across the fields of conservation, research and environmental education.

Taronga operates Taronga Zoo in Sydney and Taronga Western Plains Zoo in Dubbo, and combined both zoos welcome almost 2 million guest each year.

Taronga has a deep commitment to conservation science. In Australia and internationally, Taronga works with universities, governments, and conservation partners to respond to challenges impacting wildlife and people. Taronga has a proud tradition of delivering conservation education programs that increase knowledge and awareness and inspire students to become champions for wildlife.

Taronga sees first-hand the impacts of climate change and other human-induced threats to wildlife and this has spurred the organisation to take bold steps to reduce its environmental footprint.

Taronga's vision is a shared future for wildlife and people, and we recognise our important role in inspiring people, driving change and helping safeguard the future of the planet. For this reason, one of six strategic priorities in the Taronga 2021-2025 Strategic Plan is to lead environmental sustainability and climate change action.

## 2. EMISSION BOUNDARY

### Diagram of the certification boundary



## Non-quantified sources

- **Wastewater treatment plant:** A small wastewater treatment plant (WTP) is onsite at the Taronga Zoo in Mosman. Based-on reports prepared to meet EPA pollution monitoring requirements, emissions resulting from the WTP are estimated to represent less than 1% of the overall carbon account.
- **Vet supplies:** The effort required to gather data related to pharmaceutical and medical supplies is greater than their potential impacts on the carbon accounts as the emissions are deemed to be immaterial.

*“Climate Active certification is one way that Taronga continues to be recognised for its leadership in sustainability.”*

## Data management plan

N/A

## Excluded sources (outside of certification boundary)

**Visitor, tenant and contractor travel to and from Taronga operated facilities:** Carbon emissions related to travel to and from the zoos by people who are not directly employed by Taronga falls outside of the operational control boundary. Also, there is no jurisdiction to enforce policies and procedures related to health, safety and the environment.

**Animal Transport:** The associated emissions from animal transport are outside of Taronga’s certification boundary as they are shared emissions between Taronga and the zoo which the animal is transferred to/from.

**Animal Emissions:** There is a high degree of uncertainty around the accurate measurement of emissions from the various animals housed in the zoos. Animals are maintained in a wild state and not domesticated or used for intensive farming purposes.

**Epicure Catering:** The food and beverage purchased by Epicure, an external catering company, falls outside of Taronga’s boundary and doesn’t meet the relevance test.

## 3. EMISSIONS SUMMARY

### Emissions reduction strategy

In its 2021-2025 Sustainability Strategy, Taronga has publicly committed to net zero emissions by 2030 with 70% reduction in absolute emissions based on FY18/19 levels. The Taronga Sustainability Strategy 2021-2025 can be found via this link: <https://taronga.org.au/conservation-and-science/sustainability>

Taronga will achieve 70% reduction in absolute emissions by embarking on an ambitious net zero pathway, including measures such as:

- Procuring 100% of electricity from renewable sources before 2030
- Zero net increase in water consumption (excluding recycled or rain water) from 2025
- 90% diversion of operational waste from landfill.

And by investigating opportunities such as:

- Reduction or elimination of gas consumption in new developments
- Transition to electric vehicles where possible
- Programs to support lower emissions transport for employee commuting
- Reduction of emissions associated with food & beverage
- Reduction of emissions associated with animal feed.

### Emissions over time

Taronga's emissions have grown as compared to the base year 2017-2018, due to significant growth in the business. Between 2017 and late 2019, Taronga's operational impacts such as electricity consumption increased in line with an increase in visitation, increase in FTE and the construction of a new Institute of Science and Learning. Following the 'black summer' bushfires, the COVID-19 pandemic and subsequent zoo closures in 2020 and 2021, emissions associated with zoo visitation lessened as well as impacts from staff travel, however some of the most significant emissions sources (like electricity and animal feed) were largely unchanged due to the continuing need to care for the animals in the zoo collection. Another notable impact to emissions has been an additional buildings footprint at both sites, with construction of the Wildlife Retreat accommodation in late 2019 at Taronga Zoo Sydney and the Waterhole Café in 2020 at Taronga Western Plains Zoo. Despite the steady growth in overall emissions associated with business growth, since the base year Taronga has succeeded in reducing some emissions sources such as those associated with water use and refrigerants. Going forward, Taronga is committed to eliminating at least 70% of total absolute emissions based on FY18/19 levels. Compared to FY19/20, food & catering emissions significantly increased due to the Retreat accommodation at TZ being used to full capacity for most of FY20/21. Also, in FY20/21 all the TWPZ accommodation was at full capacity and really high visitation (whereas FY19/20 was impact by drought, bushfires and first covid lockdown).

Table 1

Emissions since base year				
	Base year	Year 2:	Year 3:	Current year
	Year 1:	2018-19	2019-20	Year 4: 2020-21
	2017-18			
<i>Total tCO<sub>2</sub>-e</i>	12,704.1	13,789.4	13,425.5	15,032.2

## Emissions reduction actions

Between July 2020 and June 2021, Taronga took the following actions to reduce emissions:

- Undertook life cycle studies and workshops to understand embodied carbon in design options for new developments, as well as integrating solar PV into design where possible
- Continued investigations into strategies to achieve goal of 100% renewable electricity by 2030
- Continued to buy majority 100% recycled office paper
- Increase in virtual meetings and conferences to reduce travel emissions
- Began early investigations into electric vehicle infrastructure
- Continued investigating opportunities to reduce emissions associated with animal feed such as potential increase to onsite insect production
- Achieved an average recycling rate of 73% across both zoo sites and continued to undertake initiatives for increased recycling such as:
  - Implementation of a new aerobic digester at Western Plains Zoo Dubbo to process food scraps, food preparation waste and compostable packaging into a material which can be turned into compost. This will divert at least 18 tonnes of food waste from landfill every year.
  - Beginning a new design for Taronga Zoo Sydney 'front of house' bin signage so that organic waste from guests (for example food scraps) can be recovered (diverted from red landfill bins).



## Emissions summary (inventory)

Table 2

Emission source category	tonnes CO <sub>2</sub> -e
Accommodation and facilities	4.87
Air Transport (km)	17.97
Cleaning and Chemicals	26.20
Electricity	8,668.21
Food	3,033.69
Horticulture and Agriculture	300.31
ICT services and equipment	173.15
Land and Sea Transport (\$)	0.28
Land and Sea Transport (fuel)	208.39
Land and Sea Transport (km)	539.04
Office equipment & supplies	331.64
Products	20.44
Refrigerants	257.21
Stationary Energy	666.55
Waste	406.32
Water	365.66
Working from home	12.31
<i>Total Net Emissions</i>	<b>15,032.23</b>

## Uplift factors

Table 3

Reason for uplift factor	tonnes CO <sub>2</sub> -e
N/A	
<i>Total footprint to offset (uplift factors + net emissions)</i>	<b>15,032.23</b>

## Carbon neutral products

Taronga uses Winc and Reflex carbon neutral paper.

This assessment and Climate Active submission was prepared with the assistance of [Pangolin Associates](#) and these services are also carbon neutral.

## Electricity summary

Electricity was calculated using a location-based approach.

### Market-based approach summary

Table 4

Market-based approach	Activity Data (kWh)	Emissions (kgCO <sub>2</sub> -e)	Renewable %
Behind the meter consumption of electricity generated	0	0	0%
<b>Total non-grid electricity</b>	<b>0</b>	<b>0</b>	<b>0%</b>
LGC Purchased and retired (kWh) (including PPAs & Precinct LGCs)	0	0	0%
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)	1,822,732	0	19%
Residual Electricity	7,808,613	8,379,270	0%
<b>Total grid electricity</b>	<b>9,631,345</b>	<b>8,379,270</b>	<b>19%</b>
<b>Total Electricity Consumed (grid + non grid)</b>	<b>9,631,345</b>	<b>8,379,270</b>	<b>19%</b>
Electricity renewables	1,822,732	0	
Residual Electricity	7,808,613	8,379,270	
<b>Exported on-site generated electricity</b>	<b>0</b>	<b>0</b>	
Emission Footprint (kgCO <sub>2</sub> -e)		8,379,270	

<b>Total renewables (grid and non-grid)</b>	<b>18.93%</b>
<b>Mandatory</b>	<b>18.93%</b>
<b>Voluntary</b>	<b>0.00%</b>
<b>Behind the meter</b>	<b>0.00%</b>
<b>Residual Electricity Emission Footprint (tCO<sub>2</sub>-e)</b>	<b>8,379</b>

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

### Location-based approach summary

Table 5

Location-based approach	Activity Data (kWh)	Emissions (kgCO <sub>2</sub> -e)
NSW	9,631,345	8,668,211
<b>Grid electricity (scope 2 and 3)</b>	<b>9,631,345</b>	<b>8,668,211</b>
NSW	0	0
<b>Non-grid electricity (Behind the meter)</b>	<b>0</b>	<b>0</b>
<b>Total Electricity Consumed</b>	<b>9,631,345</b>	<b>8,668,211</b>
<b>Emission Footprint (tCO<sub>2</sub>-e)</b>	<b>8,668</b>	

## 4. CARBON OFFSETS

### Offsets strategy

Table 6

Offset purchasing strategy:	
In arrears	
1. Total offsets previously forward purchased and banked for this report	286
2. Total emissions liability to offset for this report	15,033
3. Net offset balance for this reporting period	14,747
4. Total offsets to be forward purchased to offset the next reporting period	0
5. Total offsets required for this report	14,747

### Co-benefits

#### Wind Power Electricity Project in Gujarat, India

The main purpose of the project is to generate renewable electricity using wind power and feed the generated output to the local grid in Gujarat, contributing to climate change mitigation efforts. Apart from the generation of renewable energy-based electricity, the project has also been conceived to enhance the propagation of commercialisation of wind power generation in the region and to contribute to the sustainable development of the region, socially, environmentally and economically. The proposed project will provide employment opportunities in the context of building infrastructure, installation and maintenance and managing the wind farm. Thus, the project helps with improving the quality of life of the people in the community.

#### Stapled Greenfleet Offsets

Taronga purchased an additional 1,000 tonnes of carbon offsets through Greenfleet. Greenfleet is a leading Australian not-for-profit environmental organisation on a mission to protect our climate by restoring forests. Greenfleet forests address critical deforestation, restore habitat for wildlife including many endangered species, capture carbon emissions to protect our climate, reduce soil erosion, improve water quality, and economically support local and indigenous communities.

## Offsets summary

### Proof of cancellation of offset units

Table 7

Offsets cancelled for Climate Active Carbon Neutral Certification										
Project description	Type of offset units	Registry	Date retired	Serial number (and hyperlink to registry transaction record)	Vintage	Eligible Quantity (tCO <sub>2</sub> -e)	Quantity used for previous reporting periods	Quantity banked for future reporting periods	Quantity used for this reporting period claim	Percentage of total (%)
150 MW grid connected Wind Power based electricity generation project in Gujarat, India	VCUs	Verra	13 Jan 2021	<a href="#">9088-67170752-67183751-VCS-VCU-1491-VER-IN-1-292-18062016-31122016-0</a>	2016	13,000	12,714	0	286	2%
150 MW grid connected Wind Power based electricity generation project in Gujarat, India	VCUs	Verra	10 Nov 2021	<a href="#">9085-66656489-66657927-VCS-VCU-1491-VER-IN-1-292-01012017-31122017-0</a> <a href="#">9085-66635540-66647847-VCS-VCU-1491-VER-IN-1-292-01012017-31122017-0</a>	2017	13,747	0	0	13,747	91%

Vishnuprayag Hydro-electric Project (VHEP) by Jaiprakash Power Ventures Ltd. (JPVL) (Stapled with Greenfleet)	VCUs	Verra	10 Nov 2021	<a href="#">10593-230777777-230778776-VCS-VCU-259-VER-IN-1-173-01012013-31122013-0</a>	2013	1,000	0	0	1,000	7%
<b>Total offsets retired this report and used in this report</b>									15,033	
<b>Total offsets retired this report and banked for future reports</b>									0	

Type of offset units	Quantity (used for this reporting period claim)	Percentage of Total
Verified Carbon Units (VCUs)	15,033	100%

## 5. USE OF TRADE MARK

Table 8

Description where trademark used	Logo type
External and Internal Presentations	Certified organisation
Marketing Material	Certified organisation
Website	Certified organisation
Annual Reports	Certified organisation

## 6. ADDITIONAL INFORMATION

N/A



# APPENDIX 1

## Excluded emissions

To be deemed relevant an emission must meet two of the five relevance criteria. Excluded emissions are detailed below against each of the five criteria.

**Table 9**

Relevance test					
Excluded emission sources	<i>The emissions from a particular source are likely to be large relative to the organisation's electricity, stationary energy and fuel emissions</i>	<i>The emissions from a particular source contribute to the organisation's greenhouse gas risk exposure.</i>	<i>Key stakeholders deem the emissions from a particular source are relevant.</i>	<i>The responsible entity has the potential to influence the reduction of emissions from a particular source.</i>	<i>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.</i>
Visitor, tenant and contractor travel	No	No	No	No	No
Animal Transport	No	No	No	No	No
Animal Emissions	No	No	No	No	No
Epicure Catering	No	No	No	No	No

## APPENDIX 2

### Non-quantified emissions for organisations

Table 10

Non-quantification test				
Relevant-non-quantified emission sources	<i>Immaterial &lt;1% for individual items and no more than 5% collectively</i>	<i>Quantification is not cost effective relative to the size of the emission but uplift applied.</i>	<i>Data unavailable but uplift applied. A data management plan must be put in place to provide data within 5 years.</i>	<i>Initial emissions non-quantified but repairs and replacements quantified</i>
Wastewater Treatment Plant	Yes	No	No	No
Vet Supplies	Yes	No	No	No





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