

Australian Government
Carbon Neutral Program
Public Disclosure Summary

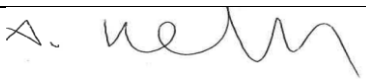


NAME OF CERTIFIED ENTITY: **Taronga Conservation Society Australia Pty Ltd**

REPORTING PERIOD: July 2017 – June 2018

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 Carbon Neutral Program.

Signature: 	Date: 12/10/2018
Name of Signatory:	Anne Karin Kehlhofer
Position of Signatory:	Manager, Environmental Sustainability

Carbon neutral certification category	Organisation
Date of most recent external verification/audit	16 November 2018
Auditor	Benjamin Jenkins – GPP Audit Pty Limited
Auditor assurance statement link	N/A



Australian Government
Department of the Environment and Energy

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1. Carbon neutral information

Organisational Overview

Taronga Conservation Society Australia is a not-for-profit conservation organisation working towards saving endangered wildlife from extinctions. With a clear vision to help secure a shared future for wildlife and people, activities span the fields of conservation, research, education and tourism.

Taronga Conservation Society of Australia operates two world leading zoos, Taronga Zoo in Sydney and Taronga Western Plains Zoo in Dubbo as well as the Taronga Institute of Science and Learning and Taronga Wildlife Retreat. For our 1.7 million guests, we create transformational experiences that empower people to change their attitudes and behaviours and achieve positive outcomes for wildlife.

Taronga has a deep commitment to conservation science. In Australia and internationally, we work with university, government and conservation partners to respond to challenges impacting wildlife and people. We also have a proud tradition of delivering conservation education programs that increase knowledge and awareness and inspire students to become champions for wildlife.

Taronga receives support from the NSW Government and the Taronga Foundation. Established in 2000, the Taronga Foundation raises funds for wildlife in our care and for conservation and education programs. Taronga is a broad and diverse organisation.

We have a clear vision to help secure a shared future for wildlife and people with activities that span the fields of conservation, research, education and tourism.

Taronga sees first-hand the impact of climate change and other human-induced threats to wildlife and this has spurred the organisation to take great lengths to decrease its environmental footprint.

Methodology

This inventory has been prepared for the financial year from 1 July 2017 to 30 June 2018.

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 (TCS), including: Taronga Zoo, Taronga Western Plains Zoo, Taronga Institute of Science and Learning and Taronga Wildlife Retreat.

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

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).

Quantified sources

The sources of carbon emissions within the operational boundary are:

Scope	Emission Source
1	Natural Gas
1	Refrigerants
1	Fuel for vehicles and generators
2	Electricity
3	Employee Commute
3	Business flights
3	Telecommunications
3	Water
3	IT equipment
3	Office Paper
3	Publications Paper
3	Printing
3	Cleaning Services
3	Food and Catering
3	Postage
3	Hotel accommodation
3	Clothing
3	Animal Food
3	Taxis
3	Waste – landfill, compost recycling

Not-quantified sources

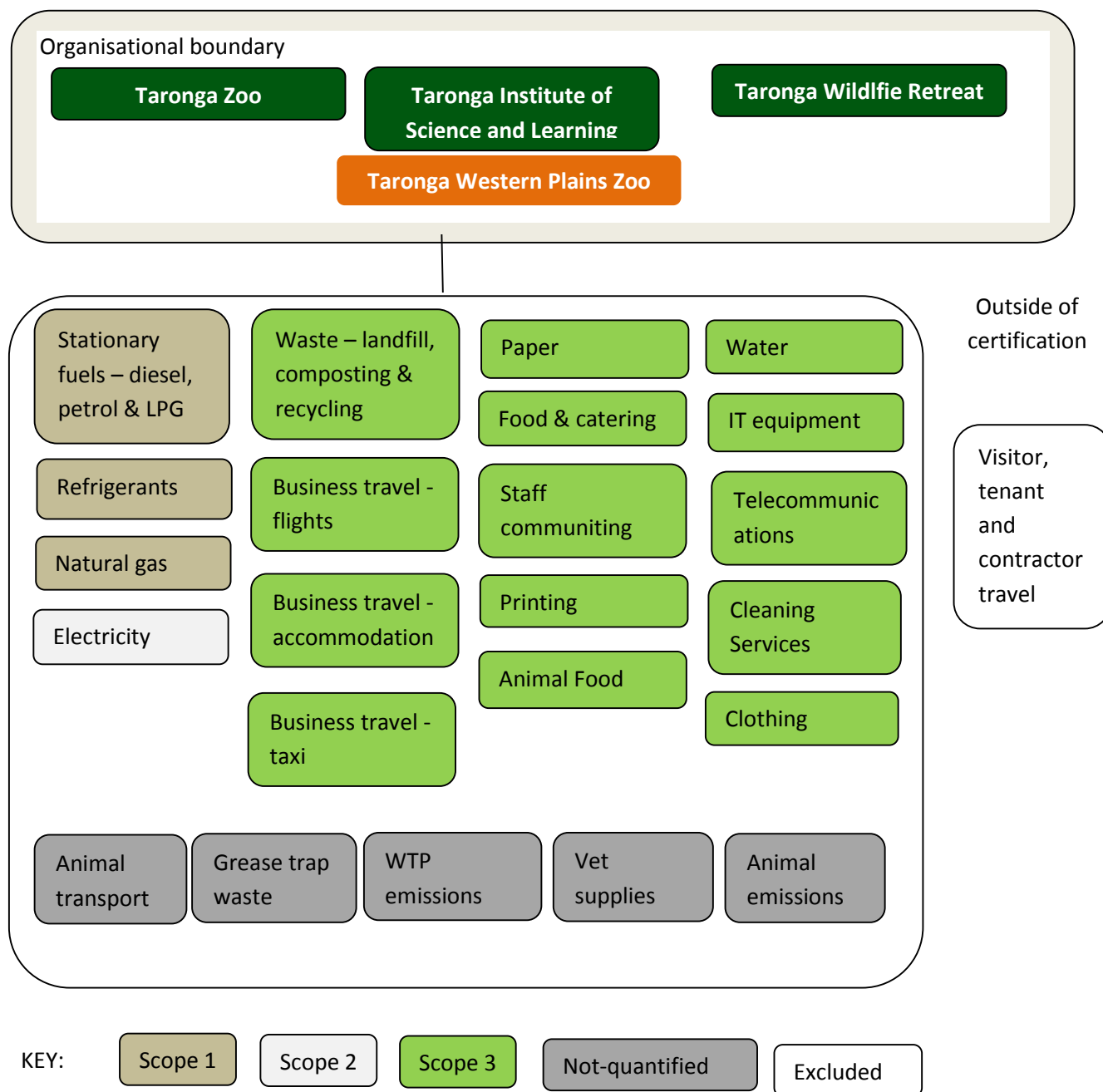
In accordance with the NCOS for organisations and Section 6.3 of the GHG Protocol, the following emission sources have not been quantified. These are not expected to have a material impact on the carbon accounts:

Not Quantified Sources		
Scope	Emission Source	Justification
3	Animal Transport	There is a high degree of uncertainty related to the actual weights, distances and vehicle types used to transport animals from and to various third-party locations. Emissions from this source are not currently quantified due to potential inaccuracies and estimations required to assess potential impact. Further engagement is required to enable accurate reporting for this activity
3	Liquid Waste disposal from grease traps	Liquid waste disposal from grease traps (scope 3) - quantification of emissions related to the processes involved in the various streams associated with the treatment of grease trap waste is not currently possible due to insufficient data from third-party suppliers. Further engagement will be undertaken so that this activity can be incorporated into future accounts.
1	Wastewater treatment plant	A small wastewater treatment plant (WTP) onsite at the Mosman site has been excluded due to insufficient data relating to outflows. 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.
3	Vet supplies	The effort required to gather data related to pharmaceutical and medical supplies is greater than their potential impacts on the carbon accounts.
3	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 generally maintained in a wild state and not domesticated or used for intensive farming purposes.

Outside of scope

Visitor, tenant and contractor travel to and from TCS operated facilities (scope 3): Carbon emissions related to travel to and from the zoos by people who are not directly employed by TCS is outside of the operational control boundary as there is no jurisdiction to enforce policies and procedures related to health, safety and the environment.

1C. Diagram of the certification boundary



2. Emissions reduction measures

Emissions reduction strategy

In 2017, Taronga Conservation Society Australia worked with the Office of Environment & Heritage and Department on Industry on their Net Zero Carbon Strategy. This entailed the identification of key priorities and outlining concrete actions to reduce the organisation's carbon footprint. The strategy focuses on the the following four pillars:

- Smart Demand
- Smart Supply
- Partnerships & Contract
- Communications & Education

In line with this strategy, a multi-staged business plan to reduce Taronga's grid-based electricity consumption has been produced, of which stage 1 was approved in February 2018.

This involves the implementation of several separate mid to large-scale solar PV installations at TZ and TWPZ. Combined these installations are anticipated to be 400 kW in size. It also includes other energy efficiency measures, including the implementation of voltage optimisation at Taronga Zoo.

Emission Reductions Actions				
Scope	Emission Source	Site	Reduction Measure	Year Completed
2	Electricity	Taronga Western Plains Zoo	Solar PV – 5 kW system at the Billabong Camp precinct	2013
2	Electricity	Taronga Western Plains Zoo	Solar PV – 10 kW system at the Elephants precinct	2015
2	Electricity	Taronga Western Plains Zoo	Solar PV – 98 kW system at the Savannah Plaza precinct	2016
2	Electricity	Taronga Zoo and Taronga Western Plains Zoo	Procurement of Green Power 10 %	2016-2018
2	Electricity	Taronga Western Plains Zoo	Voltage Optimization (VO) has been implemented to stabilise voltage and reduce load at the administration building and Zoofari Lodge	2017
2	Electricity	Taronga Western Plains Zoo	Solar PV – 4.5 kW system at the new Lions precinct	2017
2	Electricity	Taronga Zoo	Solar PV – 69 kW system at the new Institute of Science and Learning	2018
2	Electricity	Taronga Zoo	Solar PV – system to be implemented on the Taronga Wildlife Retreat	To be completed end of 2018/ early 2019

1,2,3	Various sources (efficiency in electricity, water, gas, embodied emissions material)	Taronga Zoo	6 GreenStar Design & As Built rating for new Institute of Science of Learning	Construction complete awaiting certification early 2019
1,2,3	Various sources (efficiency in electricity, water, gas, embodied emissions material)	Taronga Zoo	5 GreenStar Design & As Built rating for new Wildlife Retreat	Construction in progress awaiting certification 2019
2	Electricity	Taronga Western Plains Zoo	Solar PV – system to be impletment on new Bikes & Carts Hiring facility	To be completed end of 2018

3. Emissions summary

Emissions Summary		
Scope	Emission source	t CO ₂ -e
1	Stationary fuel: Gasoline	48.5
1	Stationary fuel: Diesel oil	176.9
1	Stationary fuel: LPG	140.3
1	Natural Gas - NSW	111.5
1	Refrigerant	306.3
2	Purchased electricity --NSW	7,394.4
3	Stationary fuel: Gasoline	2.6
3	Stationary fuel: Diesel oil	9.1
3	Stationary Fuel: LPG	8.3
3	Purchased electricity --NSW	901.7
3	Natural Gas - NSW	27.7
3	Water - NSW	507.8
3	100 % Recycled Office paper	6.5
3	Carbon Neutral Office paper*	0.0
3	100 % Recycled Printing paper	50.6
3	Employee Commuting	747.0

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3	Business Flights	196.9
3	Cleaning Services	41.2
3	Food & Catering	14.3
3	Printing	174.4
3	Telecommunications	79.7
3	IT Equipment	38.2
3	Taxis	5.6
3	Domestic Hotel Accommodation	21.1
3	International Hotel Accommodation	1.2
3	Clothing	22.4
3	Animal Food	800.2
3	Waste - landfill (commercial/industrial)	165.6
3	Waste - landfill (construction/demolition)	19.1
3	Waste - landfill (timber)	12.3
3	Waste - landfill (green waste)	45.1
3	Waste - landfill (sludge)	84.4
3	Waste (compost)	26.2
3	Waste- recycling (garden and food organics)	46.4
3	Waste- recycling (steel)	34.2
3	Waste- recycling (Paper)	5.3
3	Waste- recycling (Cardboard)	9.0
3	Waste- recycling (Glass)	0.8
3	Waste- recycling (Cans)	2.4
3	Waste- recycling (Mixed Plastic)	69.3
3	Waste- recycling (Co-mingled)	8.8
Total Gross Emissions		12,363.2
GreenPower		-829.6
Total Net Emissions		11,533.6

*Carbon Neutral Office Paper consists of the following products and quantities; Planet Ark – 10 reams, Staples – 54 reams, Reflex – 14 reams.

4. Carbon offsets

4A. Offsets summary

Table 3. Offsets Summary				
Date of cancellation	Offset project, unit type and registry	Serial numbers	Vintage	Quantity
2 Nov 2018	86 MW Hydro Project, India – VCUs, VCS Registry	6117-280138485-280150042-VCU-030-MER-IN-1-93-01012013-31122013-0 https://vcsregistry2.apx.com/myModule/rpt/myrpt.asp?r=206&h=23210	2013	11,558
Total offsets cancelled				11,558
Net emissions after offsetting				0
Total offsets banked for use future years: (from 6117-280138485-280150042-VCU-030-MER-IN-1-93-01012013-31122013-0)				24

4B. Offsets purchasing and retirement strategy

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 in order to maintain certification

5. Have you done more?

Greenfleet

The Taronga Conservation Society purchased an additional 2,311.6 biodiversity offsets. This equates to planting ~8,626 native trees.

Greenfleet revegetation projects are located in areas that are in need of native, biodiverse forests. The native forests take carbon from the atmosphere to restore and protect our climate, but they also do much more. Greenfleet plants a variety of native trees in permanent forests that help to reduce salinity and soil erosion, provide essential habitat for native wildlife, and provide much needed resilience in our precious landscape.

Some images of typical Greenfleet revegetation projects can be found here:

<https://www.flickr.com/photos/greenfleet/albums/with/72157667271225051>