

Australian Government  
Carbon Neutral Program  
Public Disclosure Summary



NAME OF CERTIFIED ENTITY: Taronga Conservation Society Australia Pty Ltd

REPORTING PERIOD: July 2018 – June 2019

### 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	05/12/2019
Name of Signatory	Anne 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

### 1. i) Organisational Overview

Taronga Conservation Society Australia 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 extinctions. It's vision is to 'secure a shared future for wildlife and people'. 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 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 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 sees first-hand the impact of climate change and other human-induced threats to wildlife and this has spurred the organisation to take bold steps to decrease its environmental footprint.

### 1. ii) Methodology

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 the Taronga Conservation Society (TCS), 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 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 (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O) and synthetic gases - hydrofluorocarbons (HFCs). No perfluorocarbons (PFCs), sulphur hexafluoride (SF<sub>6</sub>) or nitrogen trifluoride (NF<sub>3</sub>) were detected within the operational boundary. All emission sources have been expressed as carbon dioxide equivalents (CO<sub>2</sub>-e) using relative global warming potentials (GWPs).

#### 1. ii a) Quantified Sources

Quantified Sources	
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	Meat – beef and poultry
3	Seafood
3	Bakery
3	Fruit & Veg
3	Flour and Cereals
3	Dairy
3	Other foods
3	Drinks – beer, wine & spirits, soft drinks
3	Postage
3	Hotel accommodation
3	Clothing
3	Animal Food
3	Taxis
3	Waste – landfill, compost, recycling, organic

## 2. ii b) Non 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:

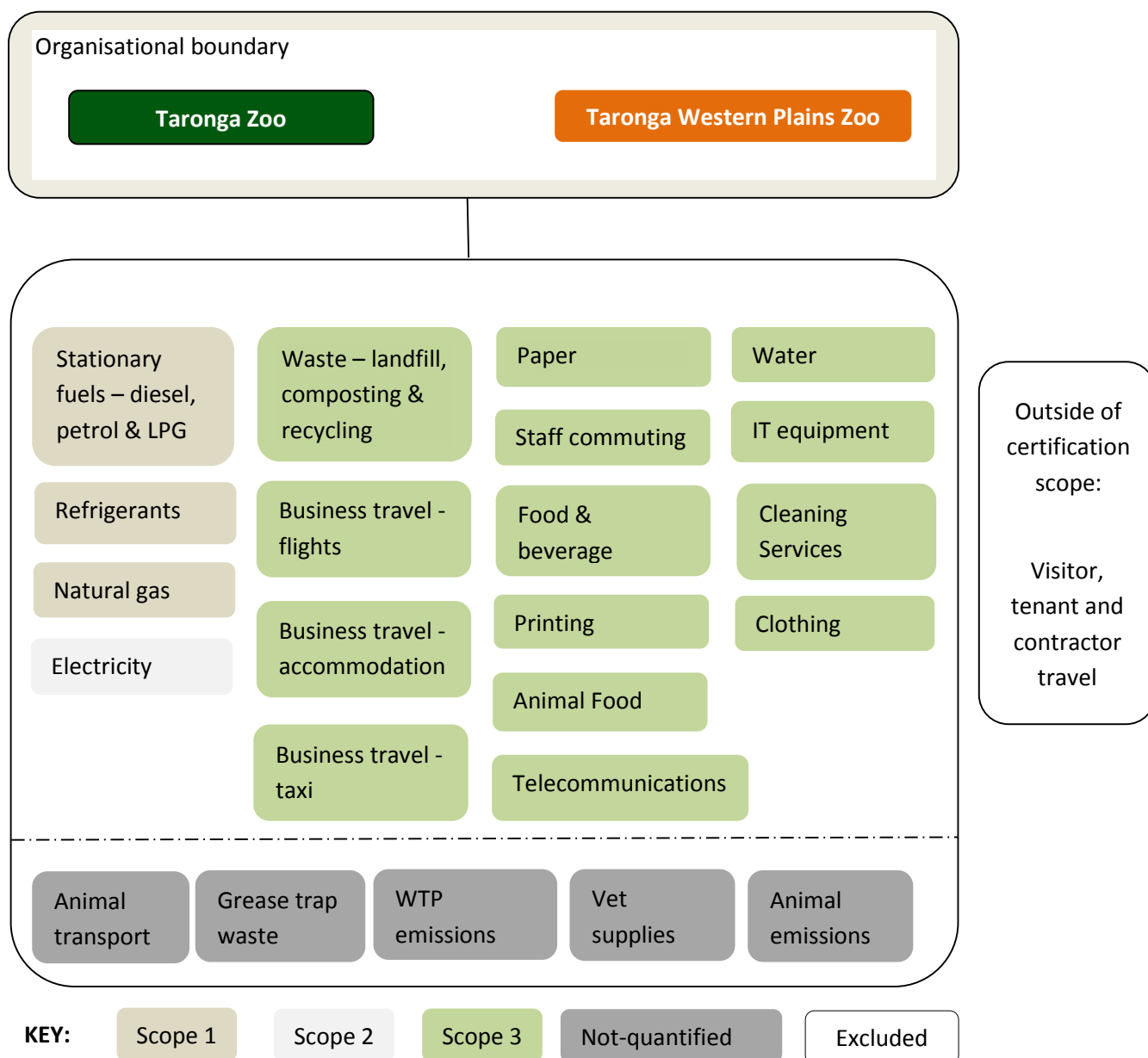
Not Quantified Sources		
Scope	Emission Source	Justification

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 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.

### 3. ii c) 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.

#### 4. ii d) Diagram of the Certification Boundary



## 2. Emissions reduction measures

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**
- **Partnerhsips & 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
3	Waste	Taronga Zoo	Implementation of food waste stream captured through biodigester	2017
2	Electricity	Taronga Zoo	Solar PV – 69 kW system for new Institute of Science and Learning	2018

2	Electricity	Taronga Zoo	Solar PV – 50 kW system to be implemented for new Wildlife Retreat	2019
3	Waste	Taronga Zoo	Implementation of compostable packaging stream through animal waste steam	2019
1,2,3	Various sources (efficiency in electricity, water, waste gas, embodied emissions material)	Taronga Zoo	6 GreenStar Design & As Built rating for new Institute of Science of Learning	2019
1,2,3	Various sources (efficiency in electricity, waste water, gas, embodied emissions material)	Taronga Zoo	5 GreenStar Design & As Built rating for new Wildlife Retreat	Construction complete awaiting certification (early 2020)
2	Electricity	Taronga Western Plains Zoo	Solar PV – 84 kW system for new Bikes & Carts hiring facility	2019
2	Electricity	Taronga Western Plains Zoo	Ground mounted solar PV system for new Waterhole precinct	early 2020
2	Electricity	Taronga Western Plains Zoo	Ground mounted solar PV system for administration and workshop precinct	early 2020
3	Waste	Taronga Western Plains Zoo	Implementation of food waste stream and compostable packaging stream to divert from landfill and compost	early 2020

### 3. Emissions Summary

Emissions Summary		
Scope	Emission source	t CO <sub>2</sub> -e
1	Stationary fuel: Gasoline	27.3
1	Stationary fuel: Diesel oil	181.5
1	Stationary fuel: LPG	138.5
1	Natural Gas - NSW	269.4
1	Refrigerant	248.4
2	Purchased electricity – NSW	7,969.0
3	Stationary fuel: Gasoline	1.4
3	Stationary fuel: Diesel oil	9.3
3	Stationary Fuel: LPG	8.2
3	Purchased electricity – NSW	885.5
3	Natural Gas - NSW	66.9
3	Water - NSW	113.1
3	100% Recycled Office paper - Now Nallawilli Officer Paper	51.5
3	100% Recycled Printing paper - Now Nallawilli Officer Paper	5.8
3	Carbon Neutral Office Paper – Reflex Copy Carbon & Winc Carbon Neutral	0.0
3	Employee Commuting	795.3
3	Business Flights	175.1
3	Cleaning Services	39.9
3	Printing	162.8
3	Telecommunications	61.9
3	IT Equipment	52.5
3	Taxis	5.5
3	Domestic Hotel Accommodation	11.1
3	International Hotel Accommodation	0.7
3	Meat Products (Beef)	388.6
3	Meat Products (Poultry)	155.6
3	Seafood	24.9



3	Bakery	43.4
3	Fruit & Veg	36.9
3	Flour and Cereals	6.6
3	Dairy	151.7
3	Other foods	55.0
3	Drinks (Beer)	6.0
3	Drink (Wine & Spirits)	2.7
3	Drinks (Soft drinks)	25.3
3	Clothing	20.2
3	Animal Food	944.3
3	Waste - landfill (commercial/industrial)	123.3
3	Waste - landfill (construction/demolition)	35.2
3	Waste - landfill (timber)	16.0
3	Waste - landfill (green waste)	89.6
3	Waste - landfill (sludge)	90.0
3	Waste (compost)	31.5
3	Waste- recycling (garden and food organics)	46.5
3	Waste- recycling (steel)	36.8
3	Waste- recycling (Paper)	3.8
3	Waste- recycling (Cardboard)	14.5
3	Waste- recycling (Glass)	0.6
3	Waste- recycling (Cans)	2.2
3	Waste- recycling (Mixed Plastic)	50.4
3	Waste- recycling (Co-mingled)	107.0
<b>Total Gross Emissions</b>		<b>13,789.4</b>
<b>GreenPower</b>		<b>0.0</b>
<b>Total Net Emissions</b>		<b>13,789.4</b>

## 4. Carbon offsets

**Table 3.** Offsets Summary

Projects supported by offset purchase	Eligible offset units	Registry	Cancellation date	Serial numbers (including hyperlink to registry transaction record)	Vintage	Quantity
Bundled Wind Power Project in Rajasthan by Orange Renewable Power Pty Ltd	VCUs	APX	20 September 2019	<a href="#">5807-260947572-260961308-VCU-034-APX-IN-1-1465-01012018-31032018-0</a>	2018	13,737
Bundled Wind Power Project in Rajasthan by Orange Renewable Power Pty Ltd	VCUs	APX	20 September 2019	<a href="#">7058-367666034-367666798-VCU-034-APX-IN-1-1465-01042018-31122018-0</a>	2018	765
Total offsets cancelled						14,502
Net Emissions after offsetting						0
<b>Total offsets banked for use future years:</b>						<b>712</b>

## 5. Use of trade mark

**Table 4.** Trade mark register

Where used	Logo type
Website	Climate Active – Certified Organisation
Brochures and event information	Climate Active – Certified Organisation
Promotional Sustainability Video	Climate Active – Certified Organisation
Annual Report Sustainability Section	Climate Active – Certified Organisation

## 6. Have you done more?

### Creating habitat for wildlife through Greenfleet carbon sequestration projects

Taronga Conservation Society of Australia purchased an additional 2,900 tonnes of biodiversity offsets worth \$43,506 (ex. GST) ,through Greenfleet. Greenfleet is an Australian based charity which plants and manages forests through a portfolio approach or “carbon pool”. These credits equate to planting ~8,626 native trees.

The plantings that Taronga has invested in will occur in Ringtail Creek, Noosa (QLD). The project aligns closely with Taronga’s conservation work by generated new habitat for species many of which are endangered or close to, some of which are Taronga’s legacy species.

#### Project Benefits:

- Large scale reforestation of 500k trees (which equates to more than 300 MCG’s)
- Converting plantations for timber into indigenous forests which will hold National Park status in 5 years time.

#### Community Engagement:

- Educate and raise awareness within the local community of the importance of native reforestation as a methodology of tackling climate change (via a collaboration with Zero Emissions Noosa).

#### Environmental Benefit (Water):

- Recycling cleaned wastewater and redirecting it into the forest (rather than the ocean).

#### Local Economic Benefit:

- Provide employment for the local indigenous community (the Gubbi Gubbi people) and engaging with traditional owners
- Government scheme with Noosa Landcare for unemployed youth, this is a skilled based program to educate and create potential employment.

#### Wildlife:

- Goal is to increase Koala corridors
- Habitat for Greater Glider, Coxens Fig Parrot, Swift Parrot, Koala

