PUBLIC DISCLOSURE STATEMENT

AUSTRALIAN MUSEUM

ORGANISATION CERTIFICATION
FY2021–22

Australian Government

Climate Active
Public Disclosure Statement

AUSTRALIAN MUSEUM An Australian Government Initiative | Climate Active

NAME OF CERTIFIED ENTITY	Australian Museum
REPORTING PERIOD	Financial year 1 July 2021 – 30 June 2022 Arrears report
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.* Rene Hernandez Head of Building Infrastructure & Sustainability 27 October 2023

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

Version March 2022. To be used for FY20/21/CY2021 reporting onwards.

1. CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	5890 tCO_2-e
OFFSETS USED	2.5% VCUs, 97.5% CERs
RENEWABLE ELECTRICITY	18.60%
CARBON ACCOUNT	Prepared by: Pangolin Associates
TECHNICAL ASSESSMENT	25/09/2023 Emma Baird Pangolin Associates Next technical assessment due: FY2025 report
THIRD PARTY VALIDATION	25/08/2020 Johnsons MME Audit & Assurance Services Pty Ltd

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2. CARBON NEUTRAL INFORMATION

Description of certification

This inventory has been prepared for the financial year from 1 July 2021 to 30 June 2022.

The certification covers all business operations of Australian Museum Trust trading as Australian Museum (AM), ABN: 85 407 224 698, in the following locations and facilities:

- 1 Williams Street, Sydney NSW 2010
- Lizard Island Research Station, PMB 37 Cairns QLD 4892 Australia
- Museums Discovery Centre, 72 Showground Road, Castle Hill

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

"As a world-renowned scientific research, education and cultural institution it is important that the Museum shows leadership and tangible actions in reducing our impact on the environment."

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_2), methane (CH_4), nitrous oxide (N_2O) and synthetic gases - hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). These have been expressed as carbon dioxide equivalents (CO_2-e) using relative global warming potentials (GWPs).

Organisation description

The Australian Museum is Australia's first Museum, established nearly 200 years ago. As the custodian of over 21.9 million objects of natural history and culture from Australia and our region, the Collection is a dynamic source of scientific information on the pressing environmental and social challenges facing our region: the loss of biodiversity, a changing climate, information of climate solutions and the connections of humans to these complex ecosystems.

The AM uses the Collection to understand our world and share that knowledge with the public through exhibitions, programs and education outreach.

In identifying that climate change is one of the key issues of our time AM established the Sustainability Action Plan 2019-2021 with the goal to reduce our carbon footprint and become carbon neutral by 2021. As a world-renowned scientific research, education, and cultural institution it is important that the Museum shows leadership and tangible actions in reducing our impact on the environment. As such, a series of emissions reduction projects have been undertaken as well as other environmental indicators.

3. EMISSIONS BOUNDARY

Inside the emissions boundary

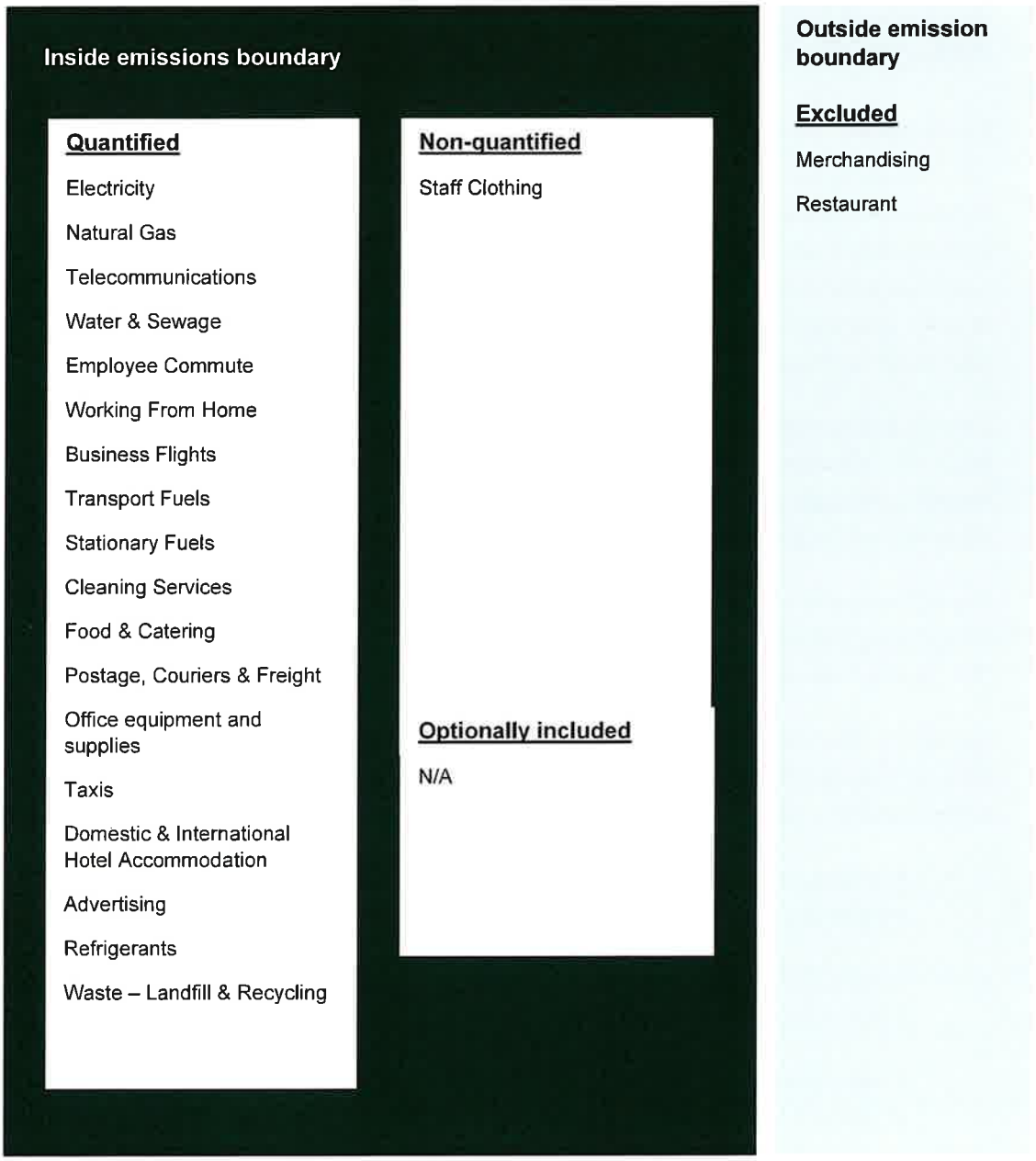
All emission sources listed in the emissions boundary are part of the carbon neutral claim.

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.



Data management plan for non-quantified sources

There are no non-quantified sources in the emission boundary that require a data management plan.

4. EMISSIONS REDUCTIONS

Emissions reduction strategy

As a NSW Government agency, the AM is committed to the NSW Government's Net Zero plan, by which Net Zero will be reached by 2050. Stage 1 of the plan (2020-2030) aims to fast track emissions over the next decade by driving the uptake of emission reduction technologies, empowering consumers and businesses to make sustainable choices and invest in new innovative technologies. The AM's emission reduction objectives are aligned with and directly contribute to 6 of the United Nations Sustainable Development Goals (SDGs).

The AM has set an interim target to reduce emissions across the value chain by >35% on 2005 levels by 2030. AM's 2005 measurement was based solely on energy consumption, and as stated in the Australian Museum's 2004-2005 Annual Report, the associated emissions were 4,037 t CO_2-e. The AM's Climate Active reporting includes scope 3 value chain emissions, which were not captured in the 2005 baseline.

The AM has a series of 5 key objectives to be delivered by 2025 as outlined in their Sustainability and Climate Action Plan 2023-2025. An integral element of the plan is the AM Sustainability and Climate Action Plan Steering Committee that meet every 2 months to drive and monitor the implementation of the actions.

Outcome 1. – Reduce Operational Impacts

Within a 2-year timeframe the AM aims to reduce energy, waste and resource use to reduce their overall emissions. Actions include:

- Increasing renewable energy consumption through NSW energy contract and considering implementing onsite renewables (Scope 2).
- Increase energy efficiency by upgrading the building management system, to better regulate internal environmental conditions by December 2025 (Scope 2).
- Increasing base building energy efficiency by upgrading boilers to a more energy efficient model by July 2024 (Scope 2).
- Transition company owned vehicles to at least 50% of the fleet hybrid or electric by 2026, and 100% of the fleet by 2030 (Scope 1).
- 75% waste diversion rate by 2025 and 90% by 2030 (Scope 3).

Outcome 2 – Future-proof the museum

Future-proofing the museum involves imbedding sustainability best practice into all operations in order to prepare for and adapt to climate change.

- All new developments endorsed by the AM must achieve a Green Star certification of 5 or 6 from June 2024.

Outcome 3 – Empower our people

The AM recognises the integral role of individuals in the climate crisis. We are committed to inspiring, engaging and involving our people, contractors and suppliers to reach our sustainability goals.

- All staff will undertake compulsory training on AM sustainability policies and practices by December 2023, and all new staff will have this training embedded into their onboarding.
- All staff are trained on different waste categories and responsible disposal in order to increase waste diversion rates by December 2023.

Outcome 4 – Engage Stakeholders

The AM is committed to engaging with the community and stakeholders to share knowledge and encourage dialogue about sustainability.

- We are an active member of the City of Sydney's Sustainable Destination Partnership.
- We aim to collaborate with the University sector by launching at least one new project by the end of 2023 that contributes to biodiversity conservation and ecosystem restoration.

Outcome 5 – Lead for climate action

The AM is committed to leading the global conversation on climate change and its consequences for people and nature.

- Deliver new exhibitions and resources for the public to educate about sustainability and climate change by 2025.

Emissions reduction actions

The AM has undertaken a number of building efficiency initiatives to reduce its carbon emissions including:

- Upgrading and trialling climatic monitoring systems to the AM's air conditioning units to maximise energy efficiency, helping reduce energy consumption by 25%, while providing an innovative and green way to conserve and manage the AM's renowned collection
- Completing a significant lighting upgrade replacing nearly 2,000 fluorescent luminaires with energy-efficient LED lights across large areas of the site
- Committing to eliminating single-use plastics across the AM's food and beverage operations.

At the AM waste is considered a valuable resource to reduce, reuse and recycle. Project Discover, the AM's $57.5M building upgrade that was completed in 2020, achieved over a 90% diversion rate of construction waste to landfill. Hardwood flooring removed from the Pacific Collection stores was reused in the touring exhibition hall and stair balustrading was reused in signage.

The AM's waste system aims to reduce waste to landfill in both public and back-of-house spaces. The AM's waste streams include: fluorescent lights, print cartridges, batteries, e-waste, mobile phones, soft plastics, organics, cardboard and paper, plastic/glass and aluminium as well as general waste. Compostable waste was added to the public waste streams in late 2020.

The AM is a founding member of the Sustainable Destination Partnership, a member of the NSW Government's Sustainable Advantage, and is proud to collaborate with The Australia Institute on their Climate of the Nation 2020 research report that shows a strong correlation between experience of climate impacts like bushfires and the intensity of concern about climate change.

5. EMISSIONS SUMMARY

Emissions over time

Emissions since base year		
		Total tCO_2-e
Base year:	2018-19	4,857
Year 1:	2019-20	4,002.7
Year 2:	2020-21	6,445.5
Year 3	2021-22	5,889.5

Significant changes in emissions

N/A

Use of Climate Active carbon neutral products and services

N/A

Organisation emissions summary

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

Emission category	Scope 1 emissions (tCO_2-e)	Scope 2 emissions (tCO_2-e)	Scope 3 emissions (tCO_2-e)	Total emissions (tCO_2-e)
Accommodation and facilities	0	0	13.99	13.99
Cleaning and Chemicals	0	0	108.46	108.46
Electricity	0	3,554.93	589.79	4144.72
Food	0	0	14.14	14.14
ICT services and equipment	0	0	80.75	80.75
Office equipment & supplies	0	0	131.39	131.39
Postage, courier and freight	0	0	42.14	42.14
Professional Services	0	0	203.55	203.55
Refrigerants	2.30	0	0.00	2.30
Stationary Energy (gaseous fuels)	586.59	0	149.11	735.70
Stationary Energy (liquid fuels)	2.82	0	0.16	2.98
Transport (Air)	0	0	61.20	61.20
Transport (Land and Sea)	31.30	0	246.18	277.47
Waste	0	0	24.45	24.45
Water	0	0	35.67	35.67
Working from home	0	0	10.59	10.59
Total	**623.01**	**3,554.93**	**1,711.58**	**5,889.51**

Uplift factors

N/A

6. CARBON OFFSETS

Offsets retirement approach

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)	5,890
3. Total eligible offsets required for this report	5,890
4. Total eligible offsets purchased and retired for this report	7,548
5. Total eligible offsets banked to use toward next year's report	1,658

Co-benefits

Guanacaste Wind Farm, Costa Rica

The project will contribute to the sustainable development of Costa Rica as it will foster and stimulate the expansion of renewable energy technologies, reduce the country's dependency on fuel imports and consequently improve its trade balance. Furthermore, by demonstrating the viability of larger grid connected wind farms, the project will strengthen and diversify the national energy supply, foster the development of sustainable energy technologies, and improve local living standards.

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 (%)**
Guanacaste Wind Farm	CER	ANREU	29th June 2023	1,839,868 – 1,847,266	CP2		7,399	0	1,658	5,741	97.5%
AAC Block Project By Aerocon Buildwell Pvt. Ltd. (EKIESL- June 2016-02)	VCU	Verra	20th May 2023	11961-371328782-371328930-VCS-VCU-1423-VER-IN-4-1549-01012017-31122017-0	2017	-	149	0	0	149	2.5%
Stapled to:											
Greenfleet offsets	-	-	27th June 2023	-	-	149	-	-	-	-	
									Total offsets retired this report and used in this report	**5,890**	
									Total offsets retired this report and banked for future reports	**1,658**	

Type of offset units	Quantity (used for this reporting period claim)	Percentage of total
Certified Emissions Reductions (CERs)	5,741	97.5%
Verified Emissions Reductions (VERs)	149	2.5%

Transaction ID	AU28216
Current Status	Sending (91)
Status Date	29/06/2023 20:59:09 (AEST) 29/06/2023 10:59:09 (GMT)
Transaction Type	Cancellation (4)
Transaction Initiator	Stuart, Benjamin Mathew Clarke
Transaction Approver	Rockliff, Nathan Stephen
Comment	Retired on behalf of Australian Museum for Climate Active emissions for FY2022

Transferring Account

Account Number	AU-2321
Account Name	Carbon Financial Services Pty. Ltd.
Account Holder	Carbon Financial Services Pty. Ltd.

Acquiring Account

Account Number	AU-2764
Account Name	Voluntary Cancellation – CP2
Account Holder	Commonwealth of Australia

Transaction Blocks

Party	Type	Transaction Type	Original CP	Current CP	ERF Project ID	NGER Facility ID	NGER Facility Name	Safeguard	Kyoto Project #	Vintage	Expiry Date	Serial Range	Quantity
CR	CER	Kyoto Voluntary Cancellation	2	2					CR-4147			1,839,868 - 1,847,266	7,399

Transaction Status History

Status Date	Status Code
29/06/2023 20:59:10 (AEST) 29/06/2023 10:59:10 (GMT)	Unsent (92)
29/06/2023 20:59:09 (AEST) 29/06/2023 10:59:09 (GMT)	**Sending (91)**
29/06/2023 20:59:09 (AEST) 29/06/2023 10:59:09 (GMT)	Account Holder Approved (97)
29/06/2023 20:49:35 (AEST) 29/06/2023 10:49:35 (GMT)	**Awaiting Account Holder Approval (95)**

7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

Renewable Energy Certificate (REC) summary

N/A

APPENDIX A: ADDITIONAL INFORMATION

N/A

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	0	0	0%
Total non-grid electricity	**0**	**0**	**0%**
LGC Purchased and retired (kWh) (including PPAs & Precinct LGCs)	0	0	0%
GreenPower	753	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)	951,411	0	19%
Residual Electricity	4,165,701	4,144,721	0%
Total grid electricity	**5,117,865**	**4,144,721**	**19%**
Total electricity consumed (grid + non grid)	**5,117,865**	**4,144,721**	**19%**
Electricity renewables	952,164	0	
Residual Electricity	4,165,701	4,144,721	
Exported on-site generated electricity	**0**	**0**	
Emissions ($kgCO_2$-e)		4,144,721	

Total renewables (grid and non-grid)	**18.60%**
Mandatory	**18.59%**
Voluntary	**0.01%**
Behind the meter	**0.00%**
Residual Electricity Emission Footprint (tCO2-e)	**4,145**

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)
NSW	5,117,865	3,991,935	358,251
Grid electricity (scope 2 and 3)	**5,117,865**	**3,991,935**	**358,251**
NSW	0	0	0
Non-grid electricity (Behind the meter)	**0**	**0**	**0**
Total electricity consumed	**5,117,865**	**3,991,935**	**358,251**

Emissions footprint (tCO_2-e)	**4,350**
Scope 2 emissions (tCO_2-e)	3992
Scope 3 emissions (tCO_2-e)	358

Climate Active carbon neutral electricity summary

Carbon neutral electricity offset by Climate Active product	Activity data (kWh)	Emissions ($kgCO_2$-e)
N/A	**0**	**0**

Climate Active carbon neutral electricity is not renewable electricity. The emissions have been offset by another Climate Active member through their product certification.

APPENDIX C: INSIDE EMISSIONS BOUNDARY

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. These emissions are accounted for through an uplift factor. 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
Staff Clothing	Yes	No	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?
Merchandising	Yes	No	No	No	No	No
Restaurant	No	No	No	No	No	No

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