

WESTERN SYDNEY
UNIVERSITY



STATUS REPORT 2023



RACE TO ZERO FOR COLLEGES AND UNIVERSITIES

ENVIRONMENTAL SUSTAINABILITY

A vibrant, high-angle photograph of a tropical forest. A multi-tiered waterfall flows down a moss-covered rock face on the right side of the image. The surrounding area is densely packed with various types of green trees and plants, including ferns in the foreground. The overall scene is a rich, natural landscape.

RACE TO ZERO

FOR COLLEGES
AND UNIVERSITIES
**ENVIRONMENTAL
SUSTAINABILITY**

In November 2021, Western Sydney University committed to the following ambitious targets as part of the UN-led “Race to Zero for Colleges and Universities” with targets of:

- Carbon Neutral 2023
- Climate Positive 2029.

During 2022, with the assistance of the NSW Government’s Sustainable Advantage program we engaged the consultants 100% Renewables to assist in applying the methodology ascribed by the Australian Government’s Climate Active program to achieve the target of Carbon Neutral 2023. The steps of this process are outlined below in Figure 1.

**In April 2023,
Western Sydney
University was certified
as carbon neutral by
Climate Active for its
Australian business
operations in 2022.**



Figure 1. Methodology for Climate Active accreditation

1. BOUNDARY DEFINITIONS

At a general level, the boundary of the Climate Active methodology is consistent with international Greenhouse Gas (GHG) protocols in categorising emission sources as Scopes 1, 2 and 3 (Figure 2), with:

- Scope 1 emissions including natural gas, fuels and refrigerants used on site.
- Scope 2 emissions including electricity supplied from the grid.
- Scope 3 emissions including supply chain goods and services.

Establishing the boundaries for Western Sydney University's carbon footprint included two key dimensions, firstly the organisational boundary reflecting the campuses and facilities comprising the University, and secondly the emission sources and categories.

The organisational boundary utilised built upon that used for the University's mandatory annual reporting for the Australian Government's National Greenhouse and Energy Reporting (NGER) Scheme, which includes Scopes 1 & 2.

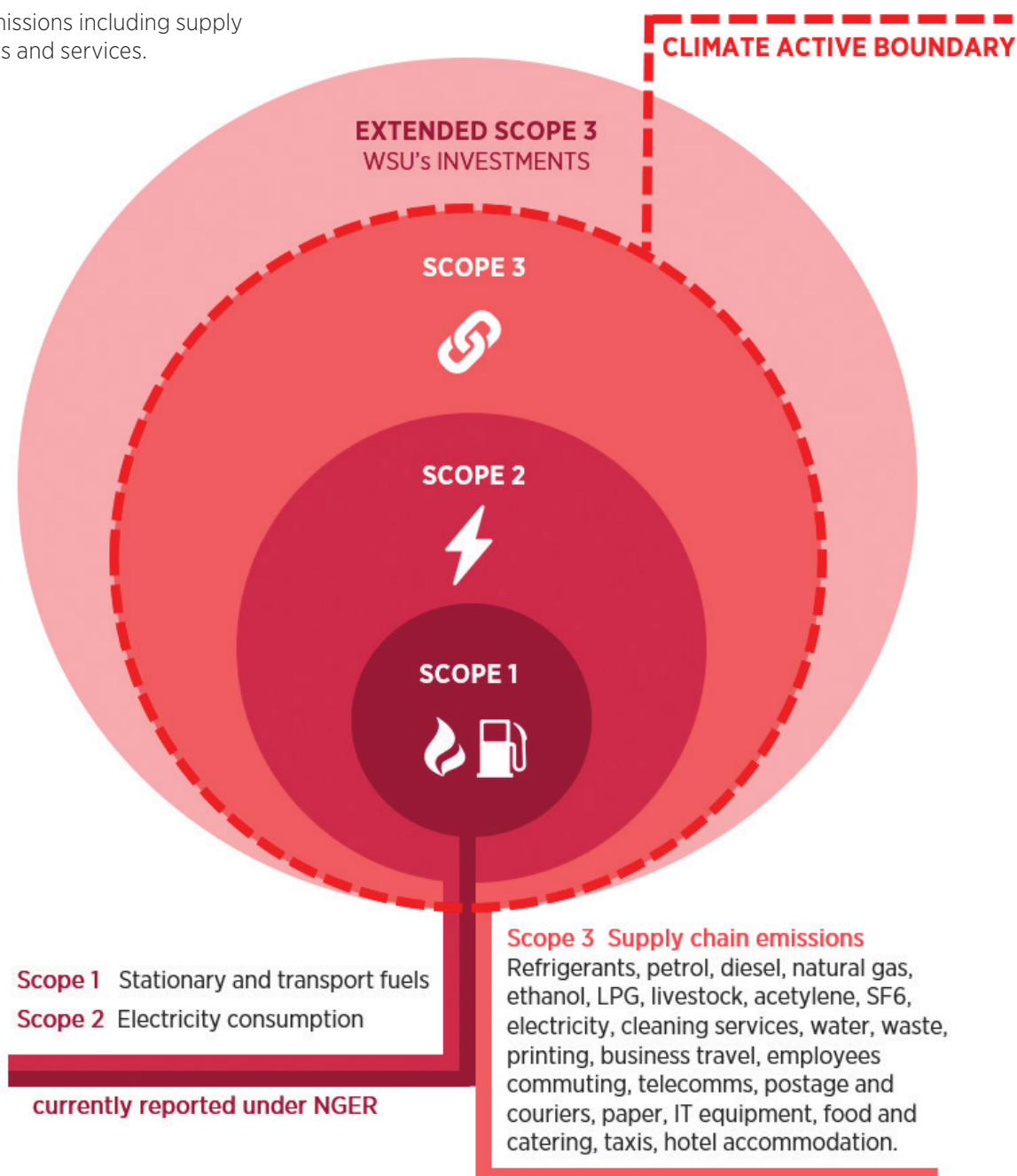
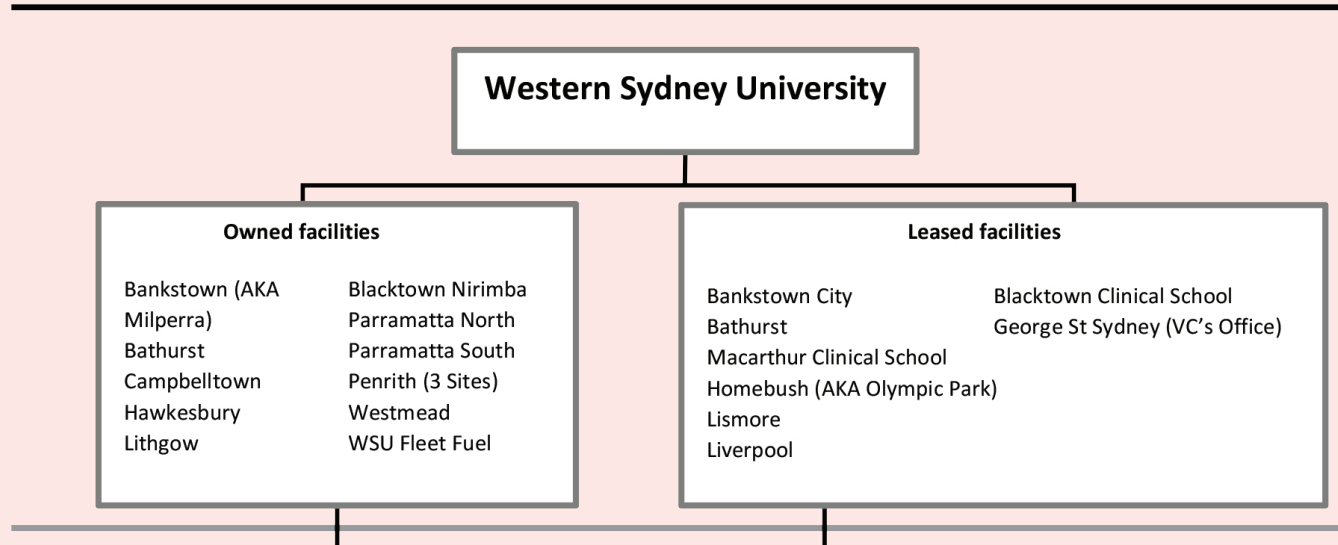


Figure 2. Scopes 1, 2 and 3

Climate Active - Organisational Boundary

● Scope 1
 ● Scope 2
 ● Scope 3
 ○ Scope 3 non-quantified or excluded



Climate Active - Operational Boundary

Included emission sources			Excluded emission sources	
Quantified			Non-quantified	
Natural gas	*Diesel - stationary	Diesel - fleet	LPG - stationary	Investments
Petrol - fleet	Ethanol - fleet	Refrigerants		Campuses w/o op control
SF6	Electricity - WSU assets	Electricity - Student acc		Capital investments
Shuttle buses	Enteric fermentation	**Potable water		
Scope 3 facilities - NG	Scope 3 facilities - elec	Paper		
Outsourced printing	IT equipment lease	IT software		
Outsourced data centre	Office equipment	Food & catering		
Postage & couriers	Waste	Green waste		
Air travel	Business accomm	Employee commute		
Inter-campus travel	Salary-sacrif vehicles	Telecommunications		
Cleaning services	Stationery	Chemicals		
Advertising	Education and training	Business services		
Legal services	Subscr. & periodicals	Sec. & personal safety		
Machine equip hire	Bldg fixtrs and fit, furn	Constr of uni buildings		
Working from home	Clothing	Hire cars		

Figure 3. Organisational boundary and included emission sources

2. CARBON FOOTPRINT ESTIMATION AND VERIFICATION

Utilising 2021 data as a projection for 2022, the total carbon footprint was estimated at 58,146 tonnes CO₂-e, comprising 11% Scope 1 (6,226 tonnes CO₂-e), 24% Scope 2 (14,089 tonnes CO₂-e), and 65% Scope 3 (37,831 tonnes CO₂-e) (Table 1).

The data and methodology were then audited by a third party accredited by Climate Active.

Scope 1	Scope 2	Scope 3	Total
6,226	14,089	37,831	58,146
11%	24%	65%	100%

Table 1. 2022 Carbon footprint estimation submitted to Climate Active (tonnes CO₂-e)

3. CARBON OFFSET PURCHASES

An internal working group was established to determine an appropriate strategy for the purchase of carbon offsets accredited by Climate Active.

A portfolio approach was agreed based upon a proportion of local Australian carbon credits (ACCUs) and a range of both technology and nature-based projects in countries with whom the University has established teaching and research collaborations.

Portfolio of carbon offset projects



5%

Local and social co-benefit (ACCUs)

- Mt Mulgrave Savanna Burning
(2,902 t @ \$41.50 / t)



50%

International entry level

- Huaneng Jilin Wind Farm, China (CER)
(29,014 t @ \$4.78 / t)



45%

International sequestration/renewable energy (VCU or equiv.)

- Chol Charoen WWT / biogas, Thailand (VCS)
(10,112 t @ \$6.67 / t)
- Rimba Raya Biodiversity Reserve, Indonesia (VCS-CCBS)
(16,000 t @ \$16.30 / t)

Figure 4. Carbon Offset portfolio 2022

4. CERTIFICATION AND NEXT STEPS

In April 2023, Western Sydney University was certified as carbon neutral by Climate Active for its Australian business operations in 2022.

In parallel to 2023 accreditation by Climate Active, a 'True-Up' process was undertaken on the basis that actual 2022 data will be used to estimate the 2023 carbon footprint. This 'True-Up' data has been submitted to Climate Active.

Row Labels	Sum of Scope 1 (TCO2e)	Sum of Scope 2 (TCO2e)	Sum of Scope 3 (TCO2e)	Sum of Total Emissions (TCO2e)
Accommodation and facilities	-	-	24.44	24.44
Air Transport (km)	-	-	109.81	109.81
Cleaning and Chemicals	-	-	1,295.67	1,295.67
Construction Materials and Services	-	-	11,121.08	11,121.08
Electricity not under operational control	-	-	479.51	479.51
Electricity under operational control	-	14,089.00	-	14,089.00
Food	-	-	415.85	415.85
Horticulture and Agriculture	603.79	-	-	603.79
ICT services and equipment	-	-	4,754.90	4,754.90
Land and Sea Transport (fuel)	153.14	-	80.64	233.79
Land and Sea Transport (km)	-	-	1,706.97	1,706.97
Machinery and vehicles	-	-	1,082.69	1,082.69
Office equipment & supplies	-	-	3,247.31	3,247.31
Postage, courier and freight	-	-	126.29	126.29
Products	-	-	5.67	5.67
Professional Services	-	-	11,365.93	11,365.93
Refrigerants	2,991.11	-	-	2,991.11
Stationary Energy	2,478.20	-	615.73	3,093.94
Waste	-	-	96.77	96.77
Water	-	-	1,007.27	1,007.27
Working from home	-	-	294.31	294.31
Grand Total	6,226.25	14,089.00	37,830.85	58,146.10

Attachment 1. Details of carbon footprint estimation 2022 (based upon 2021 data)



WESTERNSYDNEY.EDU.AU