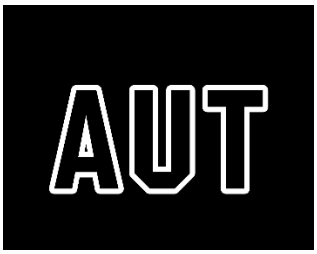
EMISSIONS INVENTORY REPORT

Prepared in accordance with ISO 14064-1:2018. This report is to be read in conjunction with the Emissions Inventory spreadsheet.



Prepared by Lucy McKenzie, Director of Sustainability and Liam West, Sustainability Graduate, AUT University

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Verification Status: Independently Verified

Measurement Period: 01/01/2022– 31/12/2022

Base year period: 01/01/2018 to 31/12/2018

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INTRODUCTION

Auckland University of Technology (AUT) is committed to advancing knowledge and understanding the issues and opportunities around creating a sustainable future for people and the planet and its biological ecosystems. This vision encompasses three core values which intersect across all areas of our activities. They are Mauri ora - wellbeing, Ki Tua - futures and Whanaungatanga - connectivity. The approach is outlined through the Sustainability Plan which sets out goals and targets until 2025. This is also contextualised through our commitment to the United Nation's Sustainable Development Goals (SDGs) of which SDG 13, Climate Action is seen as critical.

AUT has reported on its carbon emissions to the Tertiary Education Facilities Management Association of Australasia since 2012. This provides a benchmark against other tertiary Institutes in Australasia. It has reported one of the lowest carbon footprints in this sector.

This report is our fourth GHG Inventory report and is consistent with the International Standards Organisation (ISO) 14064-1:2018 which is based on the Greenhouse Gas Protocol (GHG Protocol[1]). This is a Corporate Accounting and Reporting Standard (2004) and ISO 14064-1:2018 Specification with Guidance at the Organisation Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals. Where relevant, the inventory is aligned with sector best practice for emissions measurements and reporting.

For the purposes of this report, AUT refers to the three campuses operations, AUT Foundation and AUT Ventures Ltd. It excludes AUT Millennium, Warkworth Observatory and the Mangere Refugee Centre.

STATEMENT OF INTENT

ISO14064-1 9.3.2 (a)

This inventory forms part of AUT's commitment to gain ISO14064-1:2018 verification. This report:

- relates specifically to emissions of AUT;
- has been prepared following the requirements in ISO14064-1;
- has been prepared as part of an ongoing commitment to measure and reduce emissions as outlined in our Sustainability Plan; and
- Identifies exposure to carbon risk within our core business and our supply chain, in support of a longer-term goal of transitioning to a business model that is viable within a net zero economy.

Intended users of this report include, but are not limited to:

- Our staff and students
- Prospective students
- Our industry partners and government
- Strategic Leadership and AUT Council
- General public
- Ministry for the Environment

[1] Throughout this document 'GHG Protocol' means the GHG Protocol Corporate Accounting and Reporting Standard and 'ISO 14064-1:2018' means the international standard *Specification with Guidance at the Organisational Level Quantification and Reporting of Greenhouse Gas Emissions and Removals*.

DESCRIPTION OF AUT

ISO14064-1 9.3.1 (a) and 9.3.2 (a)

AUT is the second largest university in Aotearoa, New Zealand. It operates across three campuses located in Auckland and in 2022 had an enrolment of 19,124 equivalent full-time students (EFTS) and 2,418 full time equivalent (FTE) staff. This info can be found from the 2022 annual report on AUT's website. Students are provided with unique learning opportunities through engagement with industry, business, and international partners.

The University has five Faculties:

- Business, Economics and Law
- Culture and Society
- Design and Creative Technologies
- Health and Environmental Sciences
- Te Ara Poutama (Faculty of Māori and Indigenous Development).

For more information on the University see the Annual Reports for the year ended December 2022 at www.aut.ac.nz[2]. For further information on the structure of the organisation see figure 1 and table 1.

The University is also a 100% shareholder in AUT Foundation and AUT Ventures Ltd and is a 50% and 15% shareholder in AUT Millennium and the Waterfront Theatre respectively.

Sustainability at AUT

The mission in the University's Sustainability Plan is to create great graduates for a sustainable world. Collectively it is committed to ensuring that students have opportunities to develop sustainability related knowledge, that students will have opportunities for interdisciplinary collaboration on the world's most intransigent problems, through action orientated research and finally that these activities will be undertaken on campuses that are operating with ever decreasing carbon footprints in response to SDG13, climate action.

The university has set an ambitious goal of halving its CO_2e footprint by 2025 using 2018 as its baseline.

A focus on GHG measurement and gaining ISO14064 certification provides credibility that the organisation is committed to reducing its footprint in line with global targets.

REPORTING PERIOD COVERED

ISO14064-1 9.3.1 (c,l)

This GHG inventory report covers the financial year 1 January 2022 to 31 December 2022. This is our fourth report and 2018 is our baseline year. A calendar year was chosen to align with our financial reporting cycles. The frequency of this report will be annual.

ORGANISATIONAL BOUNDARIES

ISO14064-1 9.3.1 (d)

The organisational boundaries were set with reference to the methodology described in the ISO 14064-1:2018 standard. The standard allows for two distinct approaches to be used to consolidate GHG emissions: the equity share or control (either financial or operational) approaches.

The operational control approach was used to account for emissions. This approach was used to account for emissions over which the University has control and can influence reductions in line with its targets.

[2] Link to 2022 Annual Report: https://www.aut.ac.nz/about/auts-leadership/official-aut-publications

The criteria AUT used to define organisational boundaries consisted of mapping the organisational chart to show legal structure of all entities residing beneath AUT. Table 1 and figure 1 describe how each entity is considered and shows what has been included in the context of the organisational profile. In figure 1, the part of the structure in green indicates what has been included and those highlighted in orange what has been excluded.

ISO 14064-1 requires that different activities and emissions are categorised into 'facilities' in line with Annex to provide data in its disaggregated form to provide transparency and flexibility to meet reporting requirements.

A facility is an operation which by its processes and geography can be separately accounted for. ISO14064 defines facility as: "***a single installation, set of installations or production processes (stationery or mobile), which can be defined within a single geographical boundary, organisational unit or production process***"[3]

While the university operates from three campuses and it has several subsidiaries which are included in this report, they cannot be easily separated into facilities. AUT Foundation and AUT Ventures occupy space within the university campuses and are as such included in the total emissions. The City, South and North campuses which form Auckland University of Technology have not been separated out in this report. The Warkworth Observatory and the Mangere Refugee Centre are both excluded from the organisational boundary.

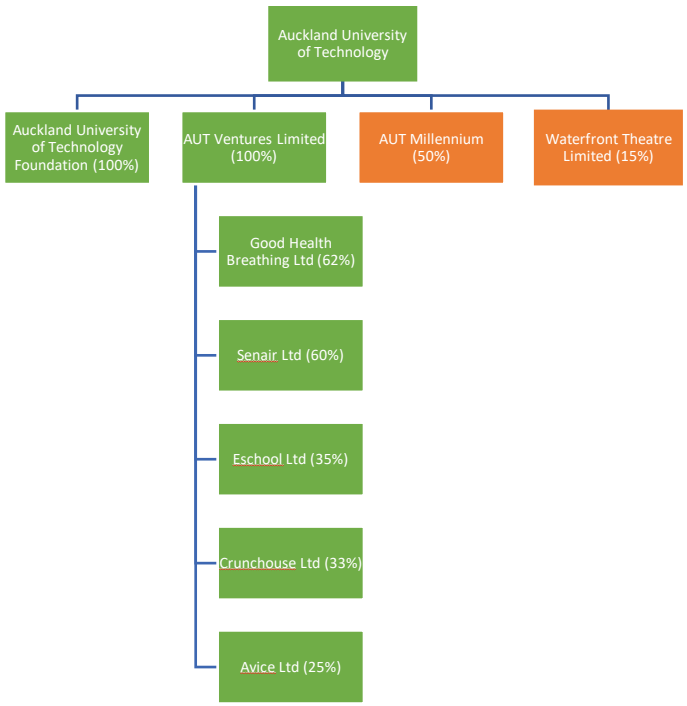

Figure 1: AUT Structure highlighting what is included in the reporting boundaries

Defining the individual facilities

A brief description of each of the facilities (including which legal entities are included within them) follows:

Table 1: Description of AUT Structure and Facilities

Facility	Description
AUT	This includes the three Auckland campuses. The university operates out of 47 buildings and used 15.9 GWh of electricity, 3.3 GWh gas, with 19,124 EFTS students and 2,418 FTE staff. The three campuses are: • City campus

[3] ISO 14064-1:2018€ section 3.4.1

	• North campus • South campus AUT staff also occupy offices at AUT Millennium. Further information about AUT can be found on AUT's website
AUT Millennium	New Zealand's leading health, sport and exercise tertiary education provider managed by the AUT Millennium Ownership Trust.
AUT Ventures	The commercialisation arm of AUT which provides access to the university's IP portfolio, research consultants, commercial research and investment opportunities.
AUT Foundation	An independent charitable trust established in 1987 set up to manage donations to the university.
ASB Waterfront Theatre	Auckland theatre located in Wynyard Quarter and is the home of the Auckland Theatre Company. AUT is a funder and one of the founding partners.

INVENTORY SUMMARY

ISO14064-1 9.3.1 (f)

A description of AUT emissions is outlined in table 2 and 3 and figure 2 and 3 below.

Table 2: Summary of emissions (tCO_2e) by sources for the period 1/1/2022 to 31/12/2022

	Source	**CO_2e (tonnes)**	**Percentages**
Category 1	Fuel (L)	47	0.6%
	Refrigerants (kg)	269	3.6%
	Natural Gas (kWh)	634	8.4%
	LPG (kg)	1	0.0%
Category 2	Electricity (kWh)	1903	25.3%
Category 3	Freight (Road)(tonnes)	0	0.0%
	Air Travel (tonnes)	462	6.1%
	Taxis ($)	3	0.0%
	Mileage (km)	50	0.7%
	Rental Cars (km)	3	0.0%
	Hotels (stay nights)	18	0.2%
	Commuter Travel (SOV km)	3449	45.8%
	WFH (days)	113	1.5%
	Shuttle Bus (km)	145	1.9%
Category 4	Waste (tonnes)	109	1.4%
	Transmission & Distribution Losses (kWh)	214	2.8%
	Paper Consumption (tonnes)	25	0.3%
	Water & Wastewater (kL)	45	0.6%
	Data Centres (kWh)	39	0.5%
	Grand total	**7534**	**100.0%**

Table 3: Summary emissions and removals (tCO_2e) by category for the period 1/1/2022 to 31/12/2022

Category	All measured emissions (tCO2e)
Category 1 direct emissions	952
Category 2 indirect emissions (imported energy)	1,903
Category 3 indirect emissions (transportation)	4,246
Category 4 indirect emissions (products used by organisation)	432
Category 5 indirect emissions (use of products from the organisation)	-
Category 6 indirect emissions (other sources)	-
Total direct emissions	**952**
Total indirect emissions	6,581
Total gross emissions	7,534
Category 1 direct removals	-
Certified renewable energy certificates	-
Total net emissions	**7,534**

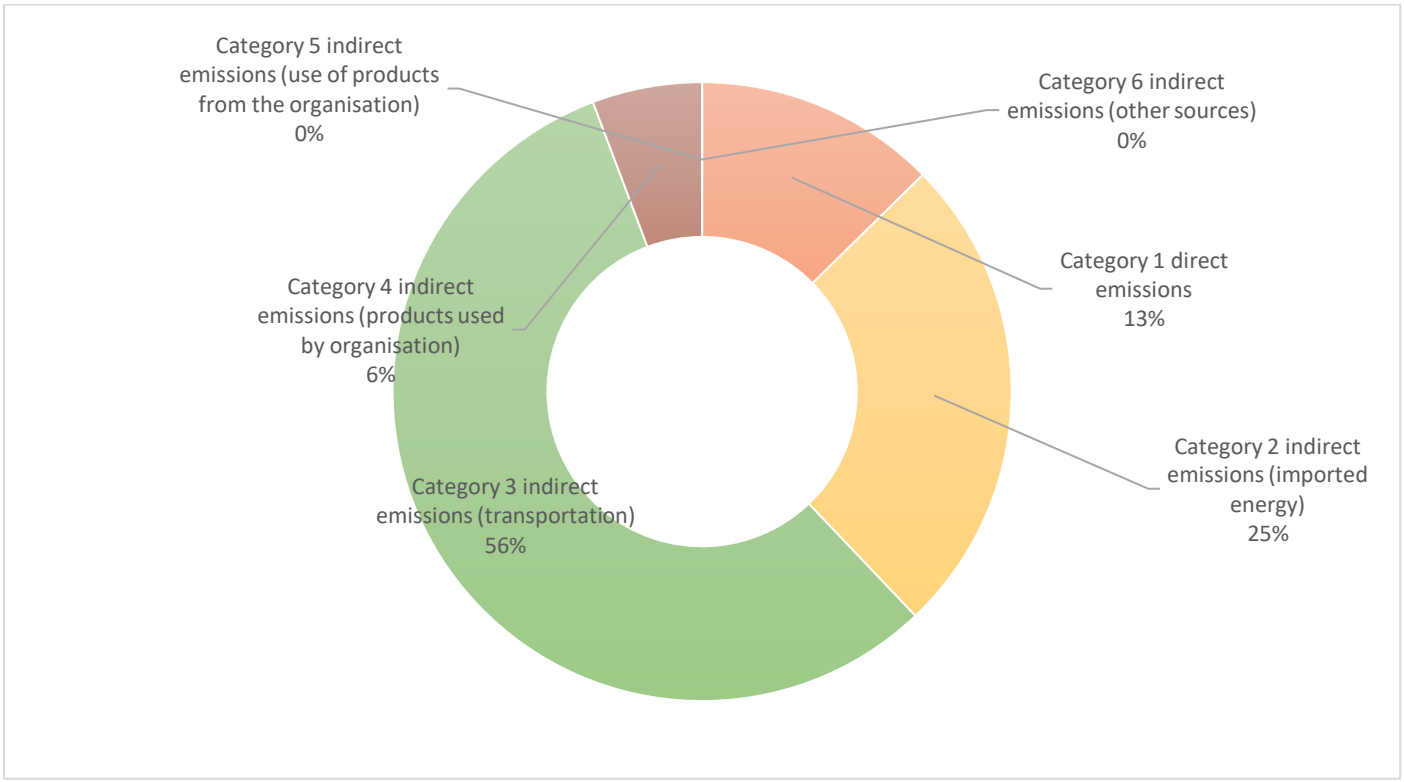

Figure 2: Emissions by Category for all measured emissions for 1/1/2022 – 31/12/2022

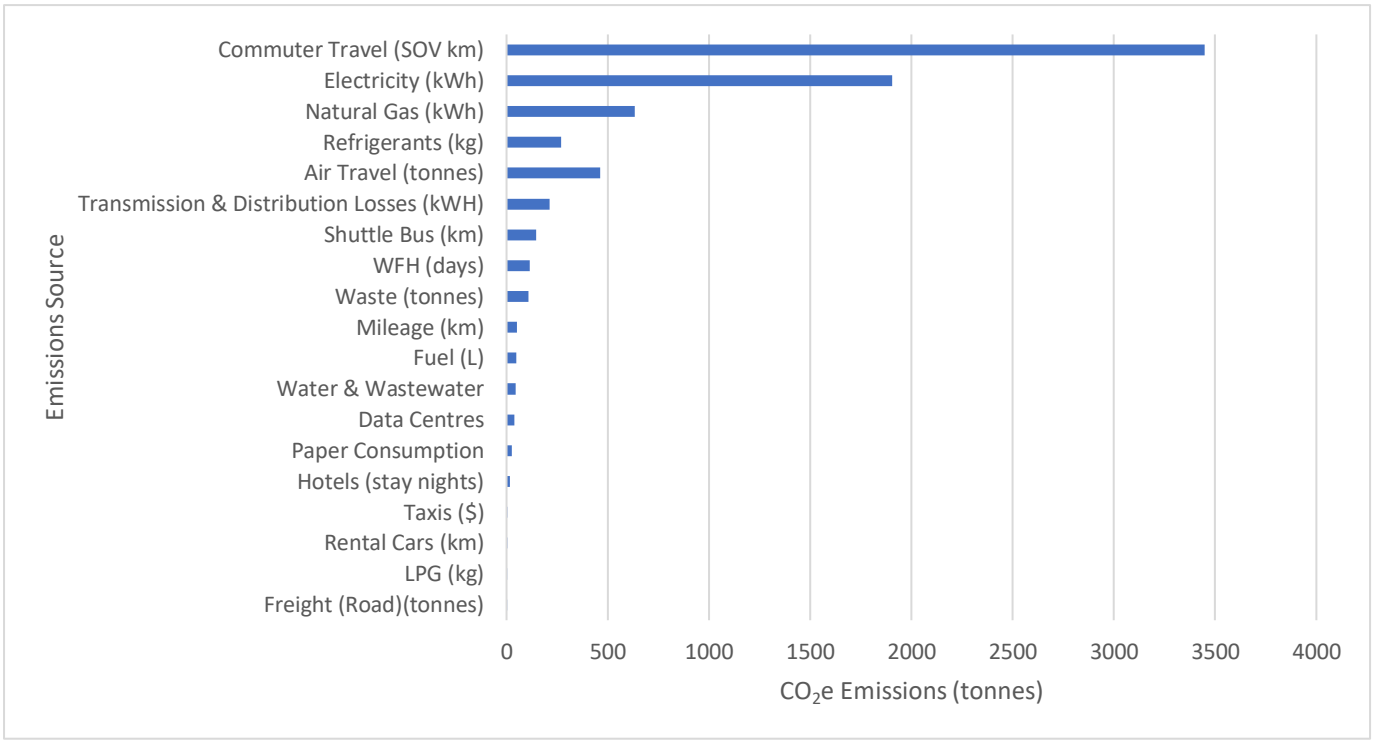

Figure 3: 2022 GHG emissions by source

Category	CO_2e	CO_2	CH_4	N_2O	HFCs	SF
Category 1	952	680	47	1	280	0
Category 2	1903	1856	44	3	0	0
Category 3	4246	778	6	9	0	0
Category 4	434	179	168	22	0	0

Table 4: Breakdown of GHG emissions by category.

** Totalling individual GHG numbers may not add to total CO2e due to rounding and a lack of GHG emission factors for some emission sources.*

OPERATIONAL BOUNDARIES

ISO14064-1 9.3.1 (e)

GHG emissions sources for AUT were measured using the 12-month period 1 Jan 2022 – 31 December 2022 which is our financial year.

The following categories are used:

- Direct GHG emissions/removals (Category1): GHG emissions that are operationally controlled by the organisation:
- Indirect GHG emissions from imported energy (Category 2): GHG emissions from the generation of purchased electricity, heat or steam consumed by the company.
- Indirect emissions from Transportation (Category 3)
- Indirect emissions from products used by the organisation (Category 4)
- Products used from organisation (Category 5)

- Other indirect emissions (Category 6)

Sources and sinks were identified through regular discussions with the NZ and Australia Tertiary Sector, annual Tertiary Education Facilities Management Association (TEFMA) reporting and a screening tool was used to identify monetary spend and associated carbon emissions.

Key considerations around what sources to include were the magnitude, level of influence, risk/opportunity, sector guidance, outsourcing, stakeholder engagement, ISO14064 requirements and others.

All required category 1 and 2 emissions are included. Category 3 and 4 emissions are included where data is available. Only data that is deemed *de minimis* (less than 1%) or where exclusion has been approved has been excluded.

SUMMARY OF EMISSION SOURCE INCLUSIONS

ISO14064-1 9.3.1 (g & m), 9.3.2 (f)

Table 4 below provides a summary of the emissions sources included in the GHG inventory. It also describes the methodology used and level of uncertainty.

Table 5: Summary of Inclusions

Category	GHG emissions source	Data source	Data collection unit	Methodology, data quality, uncertainty
Category 1	Natural Gas	Gas consumption in offices, kitchens.	EnergyPro, finance and usage portal for utilities.	Accurate records from billing information captured in EnergyPro.
	LPG	Gas consumed by BBQ,	Invoices	Usage captured through gas purchases.
	Mobile combustion	Fuel used by AUT fleet	Fuel card (Cardlink)	Litres of fuel purchased on fuel card
		Car rentals	Rental provider	Start/end odometer readings from rental company.
	Fugitive emissions	Fugitive emissions from AC systems	Maintenance records	Aquaheat provide data
Category	**GHG emissions source**	**Data source**	**Data collection unit**	**Methodology, data quality, uncertainty**
Category 2	Electricity	Electricity consumed in offices, lecture theatres, cafes etc	EnergyPro, finance and usage portal for utilities.	Accurate records from the billing system.
Category	**GHG emissions source**	**Data source**	**Data collection unit**	**Methodology, data quality, uncertainty**
Category 3 operational	Transportation	Freight (Paper)	OfficeMax Carbon Emissions Report (Verified)	OfficeMax pre-verified data.
		Air Travel	Orbit Travel environmental report.	Orbit provides kms travelled, class of travel and departure date. AUT applies emissions factors for all domestic, short haul and long haul travel, including the radiative forcing emission factors.
		Taxis	Data provided by finances team.	Accurate records from finances team

		Mileage	Data provided by the finances team	Accurate records from finances team
		Hotels	Orbit Travel environmental report.	Orbit provides Environmental report which uses departure date providing accurate data verified by Toitu Envirocare.
		Commuter Travel	Data based on Auckland Transport's biennial travel survey	Data based on biennial survey
		Shuttle Bus	Pacific Tourways invoices	Data based on monthly invoices & no. trips per month.
		WFH	Based on 20% WFH days	Uses MfE methodology for working out number of WFH days for total staff. This is based on a 46-week year and considers number of days in lockdown & assumes 20% WFH outside of lockdown. Accurate WFH data has not been captured yet. People counting technology will be used in future.
Category	**GHG emissions source**	**Data source**	**Data collection unit**	**Methodology, data quality, uncertainty**
Category 4	Purchased goods & services	Waste	Data provided by Northland Waste monthly report, Reclaim portal & Green Gorilla	Waste & commingled recycling estimates provided by supplier based on no. of pickups. Paper recycling based on actual weights.
		Transmission & Distribution Losses	EnergyPro, finance and usage portal for utilities.	Emissions based on electricity & gas use using MfE average emissions factors for NZ.
		Paper Consumption	Reclaim portal. CarbonZero certified. Iron Mountain portal.	Accurate records from Reclaim & Iron Mountain portal based on invoices
		Water & Wastewater	EnergyPro, finance and usage portal for utilities.	Accurate records based on invoice system in EnergyPro
		Data Centres	Data provided by Datacom & Microsoft	Accurate emissions based on Microsoft scope 1,2 & 3. Datacom based on kWh used by racks & % of total.

GHG EMISSIONS AND EXCLUSIONS

ISO14064-1 9.3.1 (i)

Table 6: Table of Category 1 and 2 exclusions

Category	GHG emissions source	Data source	Reason for exclusion	% of total category 1 & 2 inventory
	Stationary combustion			
Category 1	Diesel	Testing of backup generators	Estimates available from maintenance officers& is excluded as considered *de minimis*.	Less than 1%

	Fertiliser	Fertiliser Usage	Data is de minimis based on previous years

Table 7: Table of Category 3,4, 5 and 6 exclusions

Category	GHG emissions source	Data source	Reason for exclusion
Category 3 operational	Transportation	Freight (Other than paper)	Data has not been obtained yet. Work is underway with key suppliers & will be available in the future.
		Air Travel (International students)	Data not available for this report. Will be considered for future reports.
		Vehicle rentals for students trips not booked through Orbit	Data not available and considered to be de minimus
		Student trips (students' vehicles)	Data not available and considered to be de minimus.

COMPARISON TO PREVIOUS INVENTORIES

Greenhouse gas emissions for the current reporting period are detailed in figures 4 – 7 and table 6. There is a decrease of 7,534 tCO_2e compared to 2018, the base year. All emissions sources decreased except for data centres and refrigerants, where significant work was done to HVAC systems on WE building.

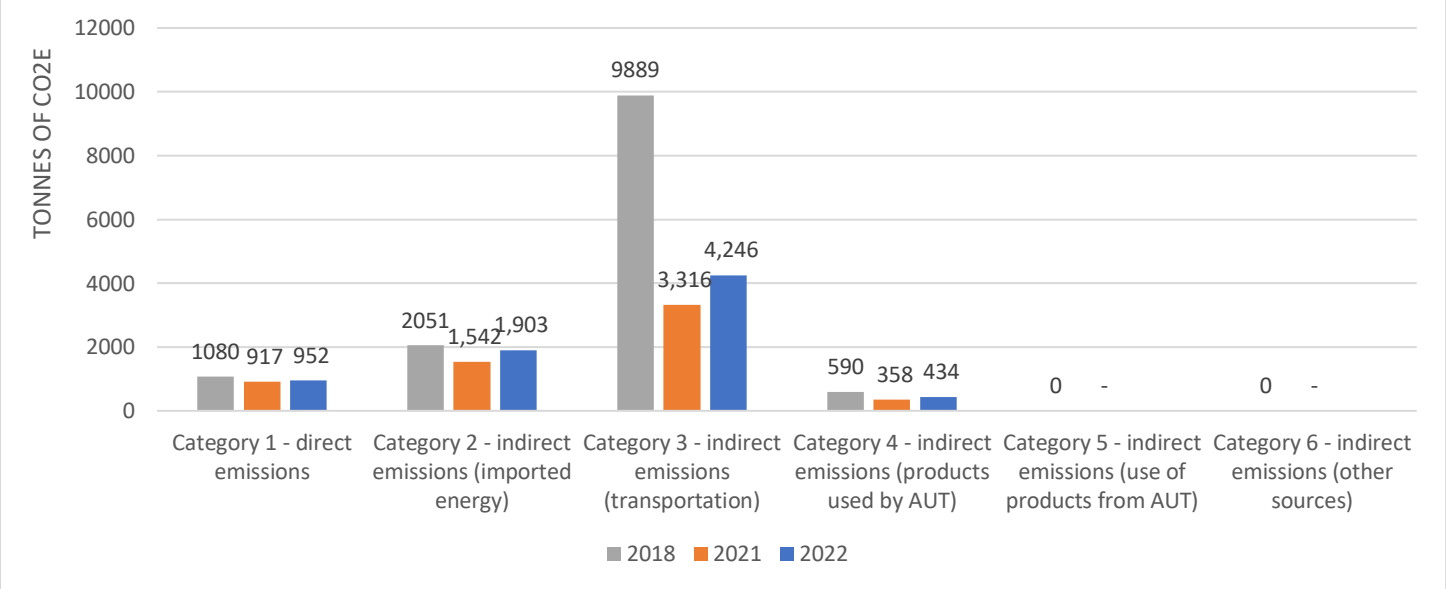

Figure 4: Comparison of gross CO_2e emissions by category in 2018, 2021 & 2022

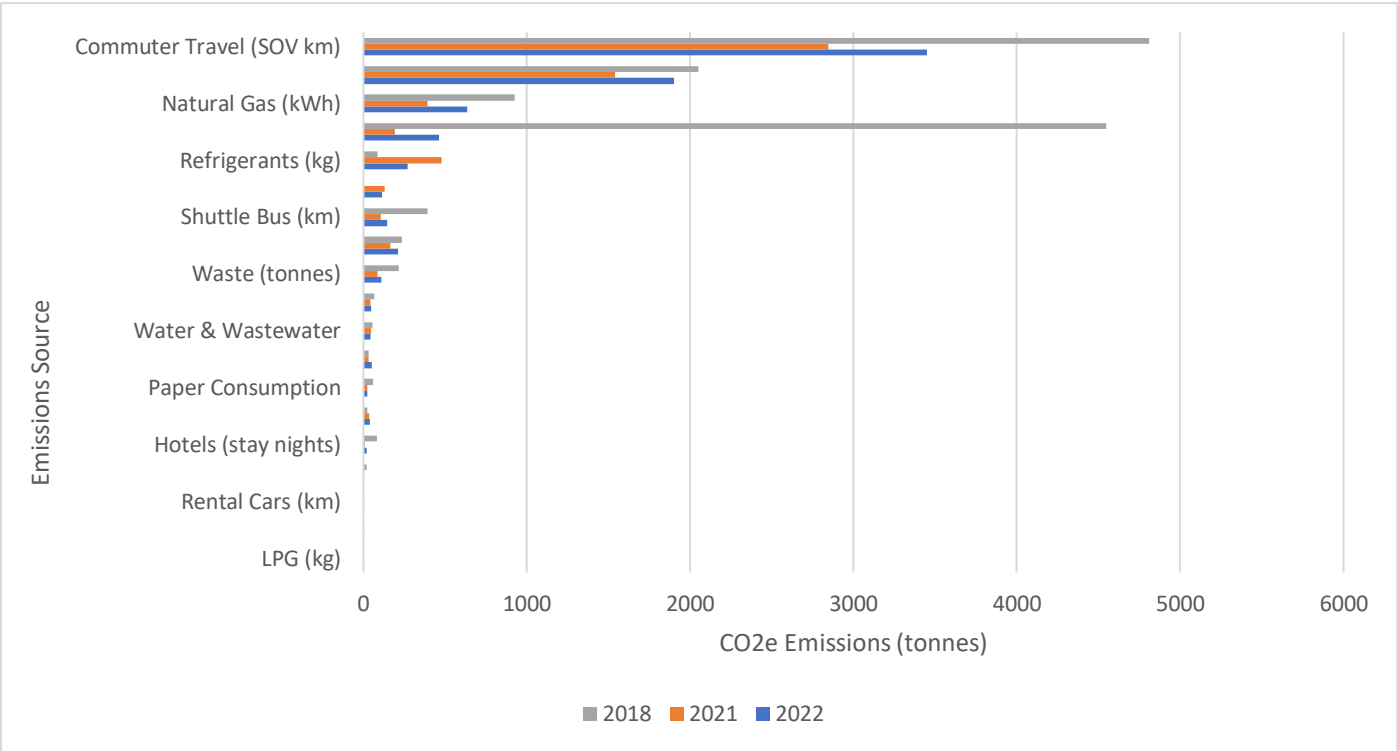

Figure 5: Comparison of gross emissions by source between reporting years

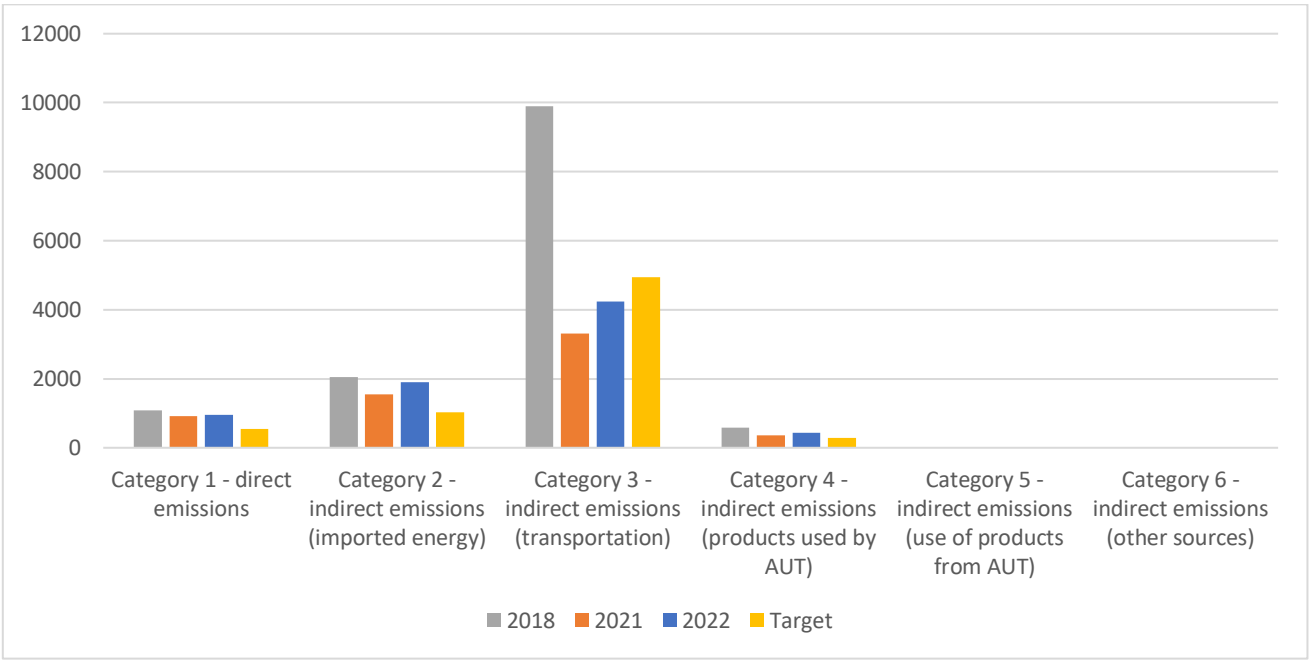

Figure 6: Comparison of emissions by category for 2018, 2021 & 2022 to target year

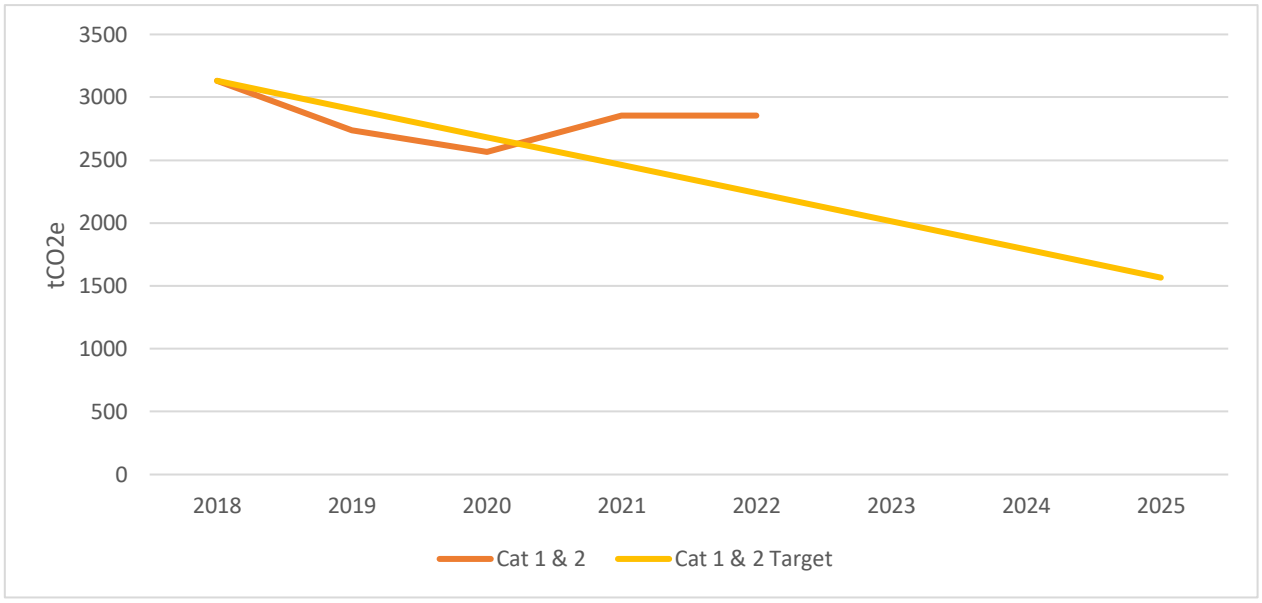

Figure 7: Reduce total category 1 and 2 emissions

All category 1 & 2 emissions sources, except refrigerants, decreased when compared to the 2018 baseline. The increase in refrigerants was due to replacement of HVAC equipment on WE building.

AUT's campuses and buildings were open from January 2022, however not all staff and students were back on campus until the beginning of May. Electricity and natural gas are two major contributors to AUT's CO_2e emissions and energy efficiency work continued in 2022, mainly energy efficient lighting and the removal of a major gas boiler to be replaced with efficient heat pump technology. New Zealand's international air travel restrictions were lifted in July 2022 and despite this in 2022 AUT's air travel emissions were 10% of what they were in 2018. Prior to travel restrictions being lifted AUT introduced an international air travel policy and financial budgets have been restricted, both of which significantly contributed to low air travel emissions.

Category	Emissions Sources	Base Year 2018 (tCO2e)	2021 (tCO2e)	2022 (tCO2e)
Category 1 direct emissions	Diesel, Petrol, Refrigerants, Natural gas, LPG	1080	917	952
Category 2 indirect emissions (imported energy)	Electricity	2051	1542	1903
Category 3 indirect emissions (transportation)	Freight, Ait Travel, Taxis, Mileage claims, Hotels, Car rentals, commuter travel, WFH, Shuttle Bus	9889	3316	4246
Category 4 indirect emissions (products used by organisation)	Waste, Transmission & Distribution losses, Paper consumption, Water, Data centres, Fertilizers	590	358	432
Category 5 indirect emissions (use of products from the organisation)		0	0	0
Category 6 indirect emissions (other sources)		0	0	0
Total direct emissions		**1080**	**917**	**952**
Total indirect emissions		**12,530**	5215	6581
Total gross emissions		**13,610**	6133	
Category 1 direct removals		0	0	0
Certified renewable energy certificates		0	0	0
Total net emissions		**13,610**	**6133**	**7534**

Table 8: Comparison GHG emissions by category 2018 vs 2021 vs 2022

SIGNIFICANT EMISSION SOURCES

In 2022, our most significant emissions sources (in order) were commuter travel, electricity, natural gas, and air travel. There is ongoing work in all these areas. The scope 3 emissions associated with freight will increase as we work more closely with our suppliers to access emissions associated with freight.

Our ongoing relationship with EECA has ensured annual GHG reductions for gas and electricity has decreased against 2018, along with the effects of the pandemic. Waste to landfill is set to halve with the introduction of a new sort and collection methodology for waste in 2023. Work on AUT's energy reduction plan commenced in 2022 and is to be completed in 2023. It will provide greater detail on how AUT can further reduce emissions.

PERSONS RESPONSIBLE

ISO14064-1 9.3.1 (b)

The GHG Inventory has been prepared by Liam West, Sustainability Graduate and Lucy McKenzie, Director of Sustainability at AUT. The Inventory is the responsibility of the Director of Sustainability. With a significant target to halve CO_2e emissions by 2025 the completion of the Inventory and the baseline provides the necessary information to progress forwards to achieve the target.

The Sustainability team, the Estates operations staff and suppliers have provided background and supporting information. They are:

- ICT – Data Centres
- Hitesh Patel (Energypro) – Energy and Water
- Kenneth Kim – Waste, Recycling and Organic Waste
- Sally Vallely – Fleet, Shuttle Bus
- Orbit – Air Travel, Hotels and Rentals
- Office Max – Paper and Freight
- AUT Finance – Taxis, Mileage

INFORMATION MANAGEMENT PROCEDURES

ISO14064-1 9.3.2 (i)

AUT has drafted GHG information management processes that ensure conformance with the principles of ISO14064 and the GHG Protocol: to ensure consistency with the intended use of the GHG inventory: provide routine and consistent checks to ensure completeness and accuracy: identify and address errors and omissions: and manage and store documentation in a safe and accessible manner. A procedure document has been developed to ensure consistent, accurate and complete data is provided.

The key information management procedures:

- Source data is collected directly from the AUT suppliers or from AUT's financial system;
- The data is stored in the TEAMS folder and reviewed by the Sustainability team;
- Emissions factors and conversion factors are maintained by the Sustainability team;
- The GHG inventory is compiled using activity data and emissions factors;
- The report is reviewed to identify opportunities to reduce emissions and improve the information management process; and
- CO_2e emissions information is provided to AUT Council, AUT's Executive Leadership Team and included on the AUT sustainability webpage.

DATA COLLECTION, QUANTIFICATION AND UNCERTAINTIES

ISO14064-1 9.3.1 (m, n, o & t)

Table 3 provides a summary of the GHG inclusions, and the methodology and uncertainties associated with this information. The data was coordinated by the Sustainability team and sourced from operations staff, the finances team and suppliers. The electricity was measured and reported using the location-based method.

Data and supporting documentation were centrally filed and collated in a Teams folder accessible by key stakeholders. The core data is consolidated on a spreadsheet. The emission factors and supporting methodologies are taken from the Ministry for the Environment's guide. 'Measuring Emissions: a Guide for organisations: 2022 detailed guide"[4]. Where this information was not available, emissions factors were taken from the Department of Environment, Food and Rural Affairs[5] (Defra, United Kingdom). Emissions factors for purchased goods and services have been sourced from Motu[6]. Global warming potentials for refrigerants were taken from the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report[7] (AR4).

All CO_2e are reported in tonnes and broken into their constituent greenhouse gases where data is available.

There have been no changes in methodologies used for reporting.

LEVEL OF UNCERTAINTY

ISO14064-1 9.3.1 (p, q)

There is an inherent level of uncertainty with most data sources. Verifiable data has been used wherever this is available. A more conservative approach has been taken where there is a higher level of uncertainty.

[4] Ministry for the Environment. 2022. Measuring emissions: A guide for organisations: 2022 detailed guide. Wellington: Ministry for the Environment. https://environment.govt.nz/assets/publications/Measuring-emissions-guidance-August-2022/Detailed-guide-PDF-Measuring-emissions-guidance-August-2022.pdf

[5] Department for Business, Energy & Industrial Strategy, UK Government Greenhouse gas reporting conversion factors 2020. https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020

[6] Romanos, Carl; Suzi Kerr & Campbell Will, 2014. 'Greenhouse Gas Emissions in NZ. A Preliminary Consumption-Based Analysis', Motu Working Paper 14-05, Motu Economic & Public Policy Research, Wellington. https://www.motu.nz/our-research/environment-and-resources/emission-mitigation/emissions-trading/greenhouse-gas-emissions-in-new-zealand-a-preliminary-consumption-based-analysis/

[7] https://www.ipcc.ch/assessment-report/ar4/

DOUBLE COUNTING

There is no double counting to report in 2022.

BASE YEAR

ISO14064-1 9.3.1 (k)

2018 is our baseline year. Reporting occurs from 1 January to 31 December and is in line with our financial year.

CHANGES TO HISTORIC BASE YEAR

ISO14064-1 9.3.1 (l)

Changes will be made to the baseline year's data if significant changes occur such as changes in emissions factors or substantial changes in scope.

GREENHOUSE REMOVALS AND REDUCTIONS

ISO14064-1 9.3.1 (h) and 9.3.2 (b, c, j & k)

The University has set an absolute target to halve its emissions by 2025 based on the 2018 baseline. A key focus this year has been on developing an energy reduction plan and securing funding for a significant energy reduction project. This work has been enabled by AUT's Collaboration Agreement with EECA. A list of current initiatives is listed in the table below.

Table 9: Emissions reduction actions 2022

Initiatives	**Detail**
Energy efficiency	AUT accessed $2.3 million of external decarbonisation funding to replace four gas fired boilers and chillers with heat pumps as well as ongoing efficient, lighting upgrades. Development of Energy Reduction Plan.
Waste reduction	Rolled out organic waste bins throughout the City campus, progressed a new waste contract with greater diversion requirements, promoted plastic Free July.
Engagement with staff and students	Green Impact programme & sustainability newsletter for staff and students, free compost workshops, free e-bike rides, bike maintenance workshops for staff and students, a herb and vegetable planting workshop.
Transport	Development of AUT's Commuter Travel Plan in conjunction with staff and student stakeholders from across AUT. One of the primary aims of the Plan is to reduce CO_2e emissions associated with and staff and student commuter travel.
Air Travel	Introduction of international air travel policy.

Halving our carbon footprint by 2025 is a significant challenge which is only set to increase once work commences on our supply chain. Initial work is focussed on improved efficiency, upgrades to old technology, integrating circular economy principles to our purchases and better construction using carbon accounting framework.

AUT has no removals to report for this financial period. AUT has not implemented any biogenic CO_2e removals or storage in 2022. Biogenic CO_2 emissions are not measured or reported on in this report.

ASSESSMENT OF PERFORMANCE AGAINST KPIs

ISO14064-1 9.3.2 (h)

This year is the fourth year that the GHG emissions are being reported on. This is being benchmarked against a 2018 baseline and the 2025 target of halving gross emissions.

OFFSETS

ISO14064-1 9.3.3

There are no offsets applied to this inventory. Current thinking is that budget will be used for operational and capital upgrades to reduce emissions.

COMPLIANCE WITH ISO14064-1

ISO14064-1 9.3.1 (r)

The GHG Inventory report has been compiled in accordance with ISO14064-1. A matrix is attached in Appendix 2.

AUDIT OF GHG INVENTORY

ISO14064-1 9.3.1 (s)

An internal review has been conducted by key staff at AUT to get reasonable confidence that the assertions and data are correct. This inventory has been independently verified by McHugh & Shaw Limited. The level of assurance is reasonable for ISO Cat 1 & 2 (Scope 1 & 2) and limited for ISO Cat 3 & 4 (Scope 3).

APPENDIX 1: AUT STRUCTURE 2022

Company Name	Emissions source	Legal Structure & Partners	Economic Interest held by AUT	Operational control	Comment
Auckland University of Technology	Yes	Parent company	100%	Yes	Includes City, North and South campuses
Auckland University of Technology Foundation			100%	Yes	Included in AUT emissions as operate from City campus.
AUT Ventures Limited			100%	Yes	Start-ups. Included in AUT emissions as operate from City campus
-Good Health Breathing Limited			60%	Yes	
-Senair Limited			62%	Yes	
-eSchool Limited			35%	Yes	
-Crunchouse Limited			33%	Yes	
-Avice Limited			25%	Yes	
AUT Millennium			50%	No	Not included as AUT does not have operational control over facility
Waterfront Theatre Limited			15%	No	Not included as AUT does not have operational control over facility

APPENDIX 2: MATRIX TO ISO14064-1:2018 STANDARD

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