

NVIRO LIMITED

2023-24 Carbon Footprint Report

Neutral Carbon Zone Analysis and Report on
Organisational and Operational Emissions

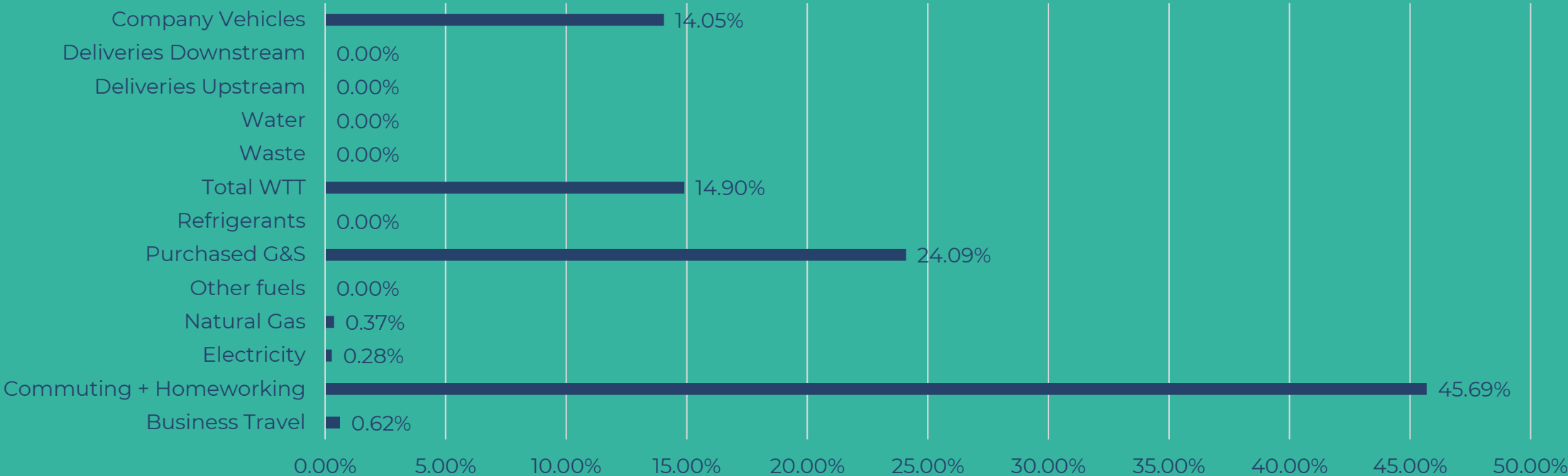


Executive Summary

This report details NVIRO Limited carbon footprint for the financial year 2023-24.

The analysis shows that NVIRO Limited's carbon emissions for the period amounted to **1,499.16 tonnes of CO₂e**. The largest single source of emissions was Commuting and Homeworking (45.69%), followed by Purchased Goods and Services (24.09%), Energy and Fuel related Activities (Well-to-Tank and Transmission & Distribution) (14.90%), and Company Vehicles (14.05%), as illustrated below.

Percentage of Carbon Emissions by Activities, 2023-24



Intensity Metrics

In addition to reviewing the absolute footprint, this report also benchmarks emissions “per £ million turnover” and “per full time employee (FTE)”. As opposed to absolute metrics, these intensity metrics provide relative tCO₂e figures for organisational carbon footprints. This allows for comparison between companies, but can also provide a useful alternative to absolute figures. For example, if a company is growing rapidly the absolute tCO₂e figure may increase, however the intensity metric will be useful in highlighting relative improvements in carbon intensity.

Emissions	Annual figure
Total Footprint (KgCO ₂ e)	1,499,156.76
FTE	1,008.00
Revenue (GBP)	23,486,711.00
Total Footprint / FTE	1,487.26
Total Footprint / Million Revenue	63,830.00





Introduction

NVIRO Limited retained Neutral Carbon Zone to measure their organisational carbon footprint. .

NVIRO is a specialist provider of clean, hygienic, and safe environments for the education and local government sectors across London, the South, and the South East. In addition to routine cleaning, the company offers specialist services ranging from carpet and upholstery care to decontamination and crisis cleaning.

This section outlines the processes and methodology used in this project. It explains the calculation principles and sets the operational boundaries of the footprint. The following section presents an in-depth analysis of all the emissions sources. This report includes Scope 1 Direct Emissions, Scope 2 Energy Indirect Emissions and Scope 3 Other Indirect Emissions.


The reporting period is 1st May 2023 to 30th April 2024.



Standard & Scope


FOOTPRINTING PROCESS

A carbon footprint assessment measures the carbon emissions generated by your organisation's activities. The carbon footprint report is the critical first stage of a comprehensive and commercially focused carbon management plan. To measure your carbon emissions, this report follows the methodology of the internationally recognised standard ISO-14064-2006.




SCOPE 1

Direct emissions - Emissions from greenhouse gas sources owned or controlled by the organisation.



SCOPE 2

Energy indirect emissions - Emissions from the generation of imported electricity, heat or steam consumed by the organisation.



SCOPE 3

Other indirect emissions - Emissions which are consequences of an organisation's activities but arise from sources that are owned or controlled by other organisations.

ISO 14064 requires the measurement of carbon emissions arising from Scope 1 and 2. While not mandatory, inclusion of Scope 3 emissions is advised as it can lead to a greater understanding of the company's wider impacts.

In this report, the term 'carbon emissions' not only includes carbon dioxide (CO₂), but all other greenhouse gases (GHG) covered under the Kyoto Protocol: methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC) and sulphur hexafluoride (SF₆).



SCOPE OF THE FOOTPRINT

ORGANISATIONAL BOUNDARY

In accordance with ISO 14064, the approach used in this footprint is based on the principle of operational control. Under the control approach we accounted for 100% of the GHG emissions from operations over which NVIRO has control. Control can be defined in either financial or operational terms.

- The financial control approach – NVIRO has financial control over an operation if it has the ability to direct the financial and working policies of the organisation with a view to gaining economic benefits from its activities.
- The operational control approach – NVIRO has operational control over an organisation if it or one of its subsidiaries has the full authority to introduce and implement its working policies at the business.

Operational control approach has been used for NVIRO's footprint calculation.

OPERATIONAL ACTIVITIES

Activities Included in the Scope for the Footprint

In accordance with ISO 14064 the organisational boundaries for this carbon footprint were company vehicles, natural gas, fuels, refrigerants, electricity, business travel, commuting, homeworking, water, waste, purchased goods and services and well-to-tank.

Activities Excluded from the Scope of the Footprint

No activity deemed to be a significant driver of carbon emissions has been excluded from the scope of this footprint.



DATA ACCURACY

The data provided by NVIRO covers the period from 1st May 2023 to 30th April 2024. The majority of data was primary, but some data was secondary and extrapolated using benchmark approaches. Neutral Carbon Zone collated the supplied data and summarised it in a single summary spreadsheet.



Natural Gas – Consumption data was provided as kWh.



Water – consumption was provided by NVIRO as actual data in cubic meters.



Electricity – Consumption data was provided as kWh.



Company Vehicles – Distance travelled in miles was provided by NVIRO for their company-owned vehicles.



Commuting and Homeworking – data was derived from a recent staff survey which received 380 responses (38%). Benchmarks were created from the collected data and extrapolated out to predict where there was a shortfall in primary data.



Business Travel – Data was provided as spend; therefore, no Well-To-Tank has been calculated.



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Other Fuels – N/A



Refrigerants – N/A



Upstream Deliveries – N/A



Downstream Deliveries – N/A



Purchased Goods and Services – Spend data was supplied and applied to EPA emissions categories.



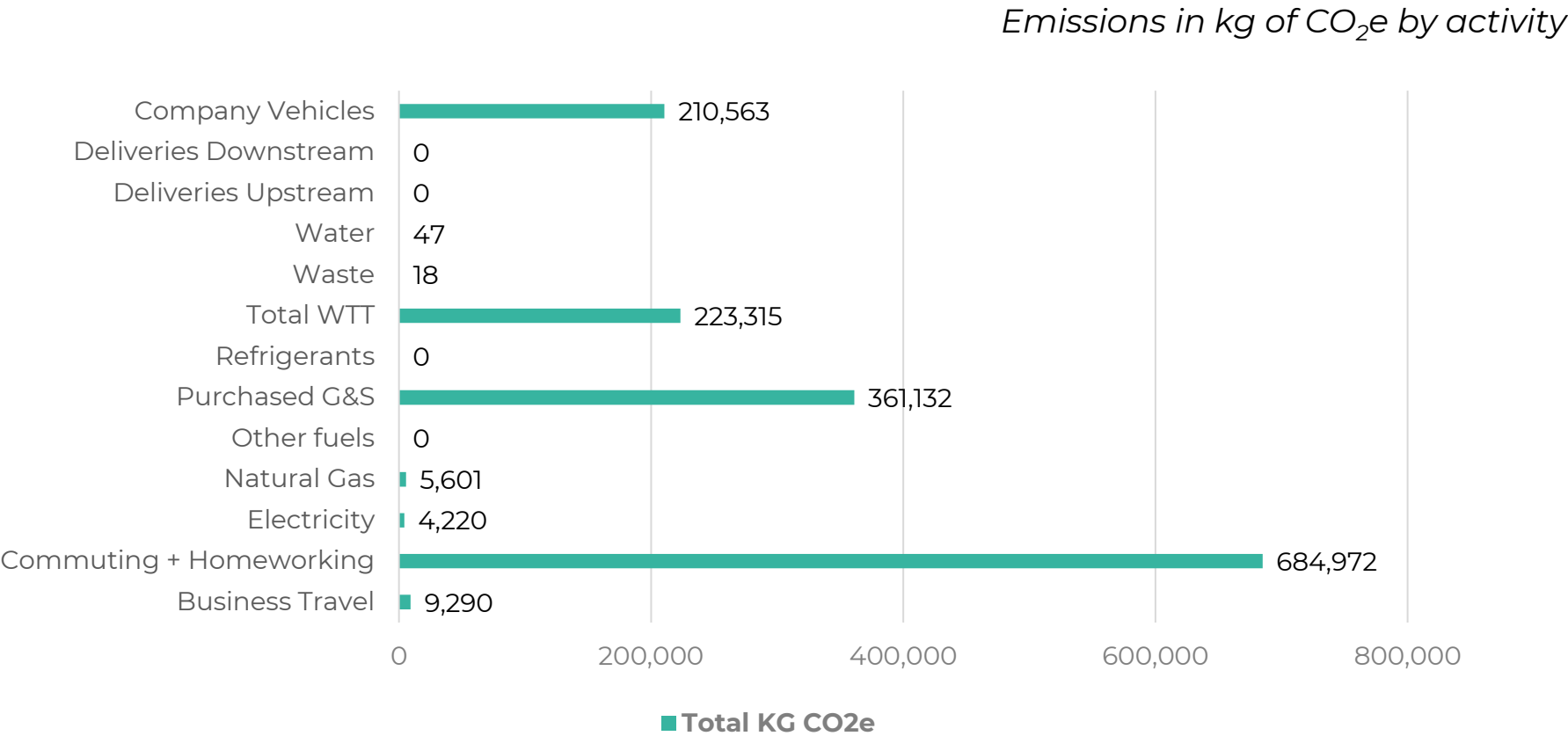
Waste – Data was provided by NVIRO as actual tonnes.



Results

EMISSIONS BY ACTIVITY

The results of the project show that NVIRO's carbon footprint for 2023-24 was **1,499.16 tonnes of CO₂e**. A breakdown of emissions by activity is shown in the chart below:



Commuting and Homeworking in Scope 3 accounted for the largest proportion of emissions at 684.97 tCO₂e (45.69%), followed by Purchased Goods and Services 361.13 tCO₂e (24.09%), Energy and Fuel related Activities (Well-to-Tank and Transmission & Distribution) 223.32 tCO₂e (14.90%), and Company Vehicles 210.56 tCO₂e (14.05%).



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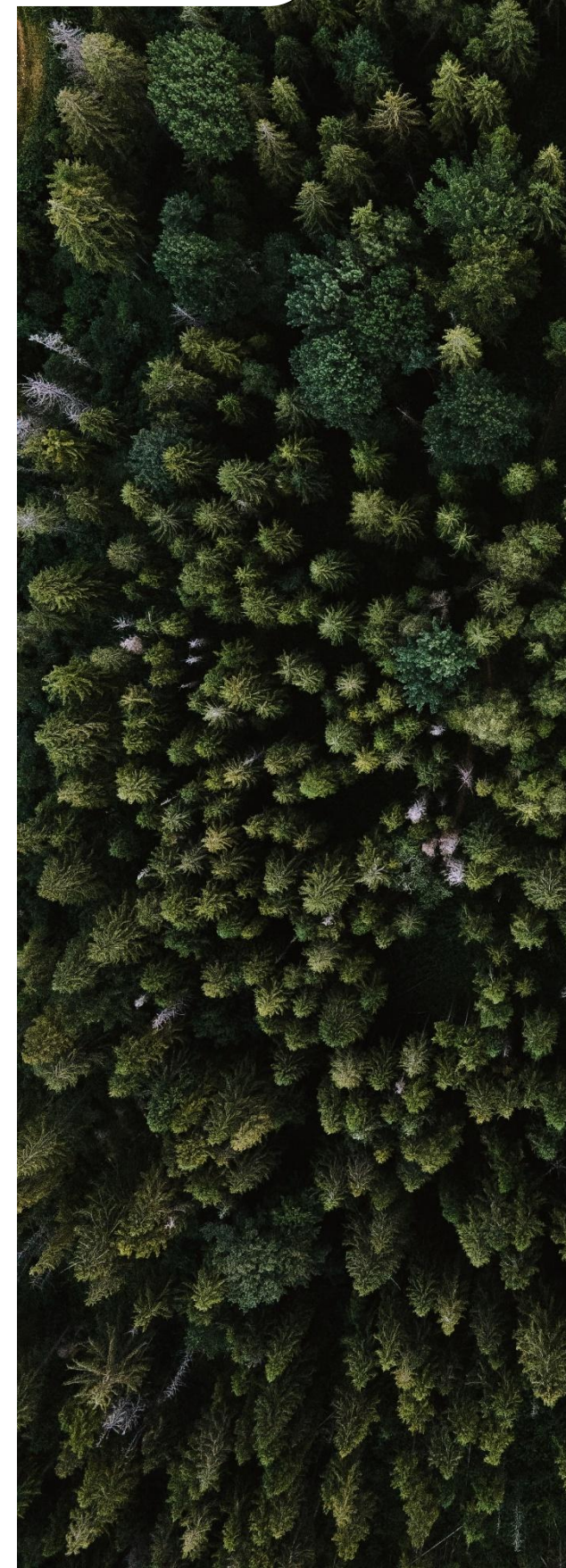
SUMMARY OF RESULTS



CARBON FOOTPRINT BY ACTIVITY

NVIRO's organisational carbon footprint by type of emission and activity.

Scope	Category	Total KgCO2e	% of total emissions scope wise	% of total emissions
Scope-1	Natural Gas	5,601	2.59%	0.37%
	Other fuels	-	0.00%	0.00%
	Refrigerants	-	0.00%	0.00%
	Company Vehicles	210,563	97.41%	14.05%
	Total Scope-1	216,164	100.00%	14.42%
Scope-2	Electricity	4,220	100.00%	0.28%
	Total Scope-2	4,220	100.00%	0.28%
Scope - 3	Business Travel	9,290	0.73%	0.62%
	Commuting + Homeworking	684,972	53.56%	45.69%
	Waste	18	0.001%	0.001%
	Water	47	0.004%	0.003%
	Deliveries Upstream	-	0.00%	0.00%
	Deliveries Downstream	-	0.00%	0.00%
	Purchased G&S	361,132	28.24%	24.09%
	WTT-Natural Gas	925	0.07%	0.06%
	WTT-Electricity	1,309	0.10%	0.09%
	WTT-Company Cars	51,667	4.04%	3.45%
	WTT-Commuting + Homeworking	169,415	13.25%	11.30%
Total Scope-3	1,278,773	100.00%	85.30%	
TOTAL KgCO2e		1,499,157		





SCOPE 1 - DIRECT EMISSIONS

Direct Emissions arise from the generation of greenhouse gases in company-owned or leased assets. In most businesses these arise from consumption of gas in buildings (heating & hot water) and fuels in company-owned vehicles. They also arise as a result of other heating fuels, chemical reactions and gas leakage (fugitive emissions) during manufacturing, production and from air conditioning systems.

Direct Emissions amounted to **216.16 tonnes of CO₂e** or 14.42% of NVIRO's total footprint and stems from the usage of Company Vehicles and Natural Gas.

SCOPE 2 - INDIRECT ENERGY EMISSIONS

Indirect Energy Emissions arise from the generation of imported electricity, heat or steam consumed by the company. For NVIRO, indirect energy emissions stemmed from the consumption of electricity for lighting, cooling, IT and other electrical equipment. NVIRO's Scope 2 emissions amounted to **4.22 tonnes of CO₂e** or 0.28% of the total footprint.

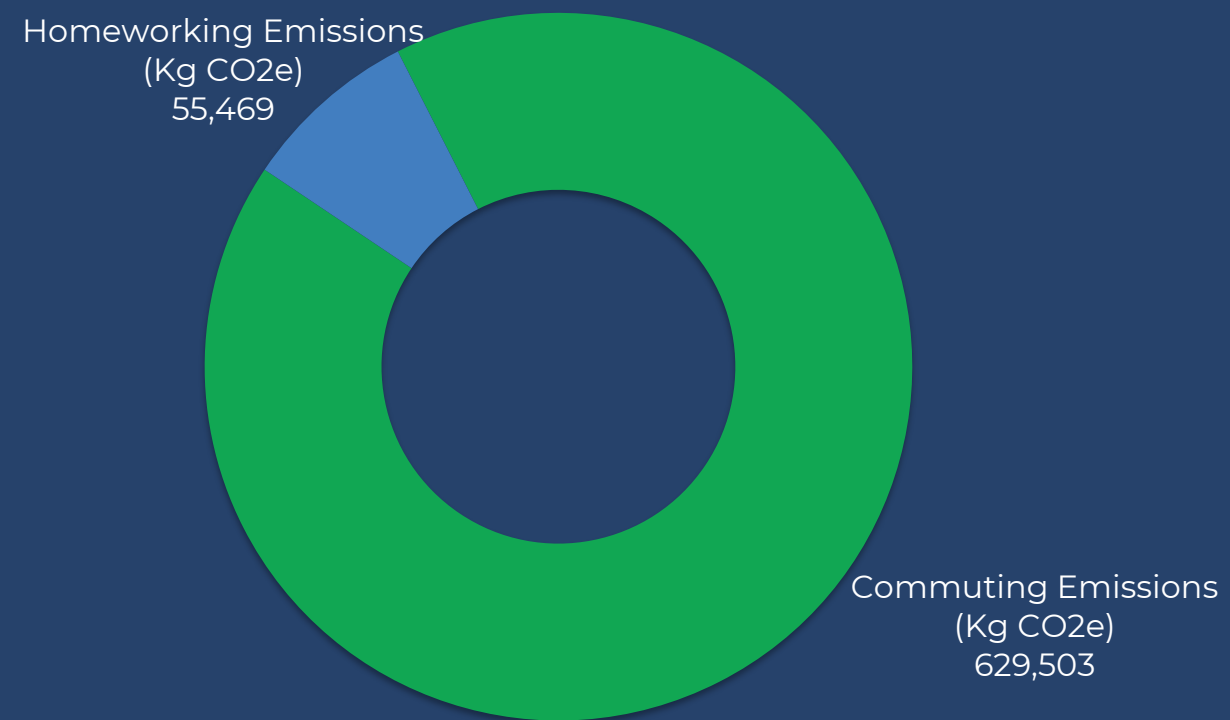


SCOPE 3 – INDIRECT OTHER EMISSIONS

The sources of Other Indirect Emissions comprised 85.30% of total emissions or 1,278.77 tonnes of carbon dioxide equivalent. This arises mainly from Commuting and Homeworking and Purchased Goods and Services.

EMPLOYEE COMMUTING AND HOMEWORKING

The category of employee commuting covers both the emissions from commuting made by NVIRO staff to work and emissions associated with homeworking. This category totalled 684.97 tonnes of CO₂e or 45.69% of total emission. The graph below shows the split in emissions between commuting and homeworking.



Employee Commuting vs Homeworking Emissions Split



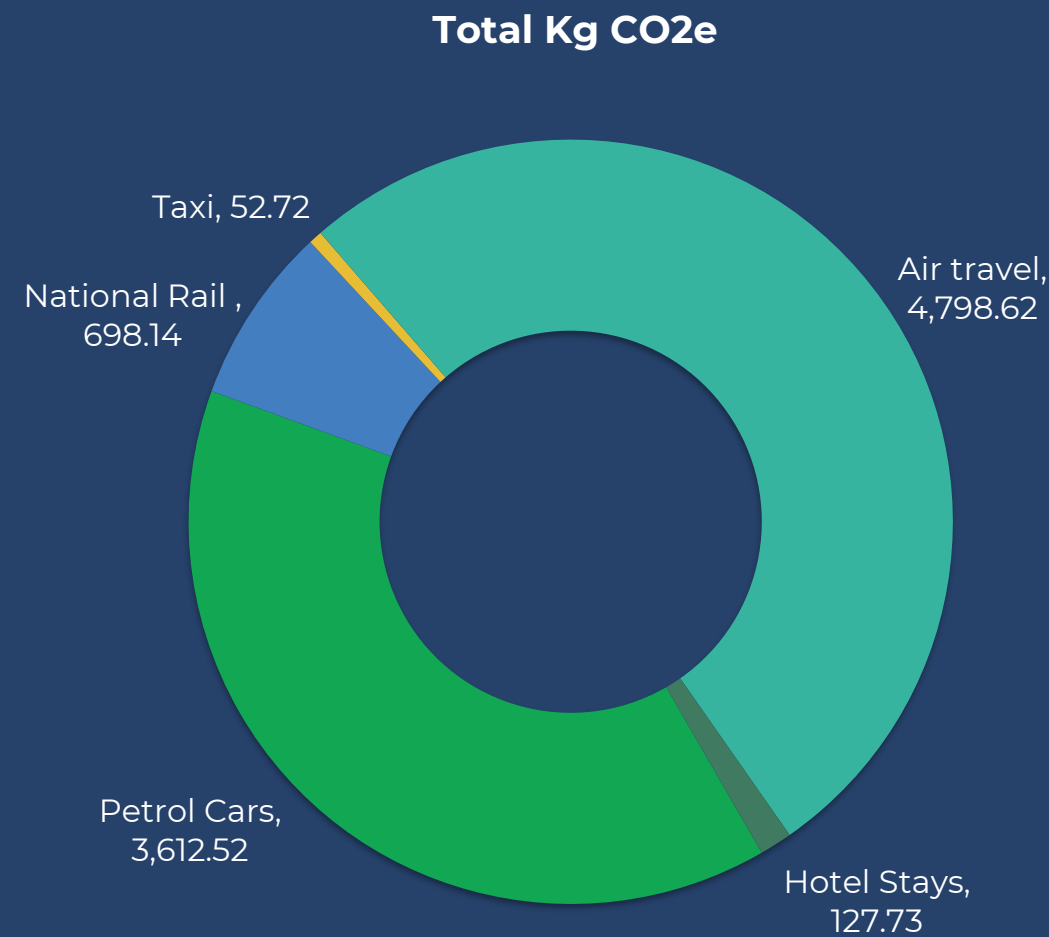
Commuting data emissions based on commuting mode and distance travelled.

Mode of Transport	Distance	Total KgCO ₂ e
Petrol Cars	669,923	174,534
Diesel Cars	565,594	151,073
Hybrid Cars	56,850	9,901
Petrol Vans	7,718	2,434
Diesel Vans	811,360	226,331
Motorcycle	2,573	471
National Rail	76,550	4,369
Underground	9,566	428
Bus	476,077	57,057
Taxi	8,678	2,906
Walk/Cycle	503,146	-
Total	3,188,035	629,503.10

SCOPE 3 – INDIRECT OTHER EMISSIONS Cont..

BUSINESS TRAVEL

Business journeys made by NVIRO staff resulted in 9.29 tonnes of CO₂e (0.62% of total emissions). These emissions mostly stem from air travel and cars.



Business Travel Split



WASTE

In the financial year 2023-24, NVIRO produced 2.81 tonnes of waste resulting in 0.018 tCO₂e, 0.001% of the total footprint. The table below outlines the split in waste type and emissions.

Waste Type	Tonnage	Emissions kgCO ₂ e
Mixed Recycling	2.81	18.01
General Waste to landfill	-	-
TOTAL	2.81	18.01

WATER

Water consumption amounted to approximately 138m³. Emissions associated with supply and treatment of water therefore resulted in 0.047 tonnes of CO₂e or 0.003% of the total footprint.

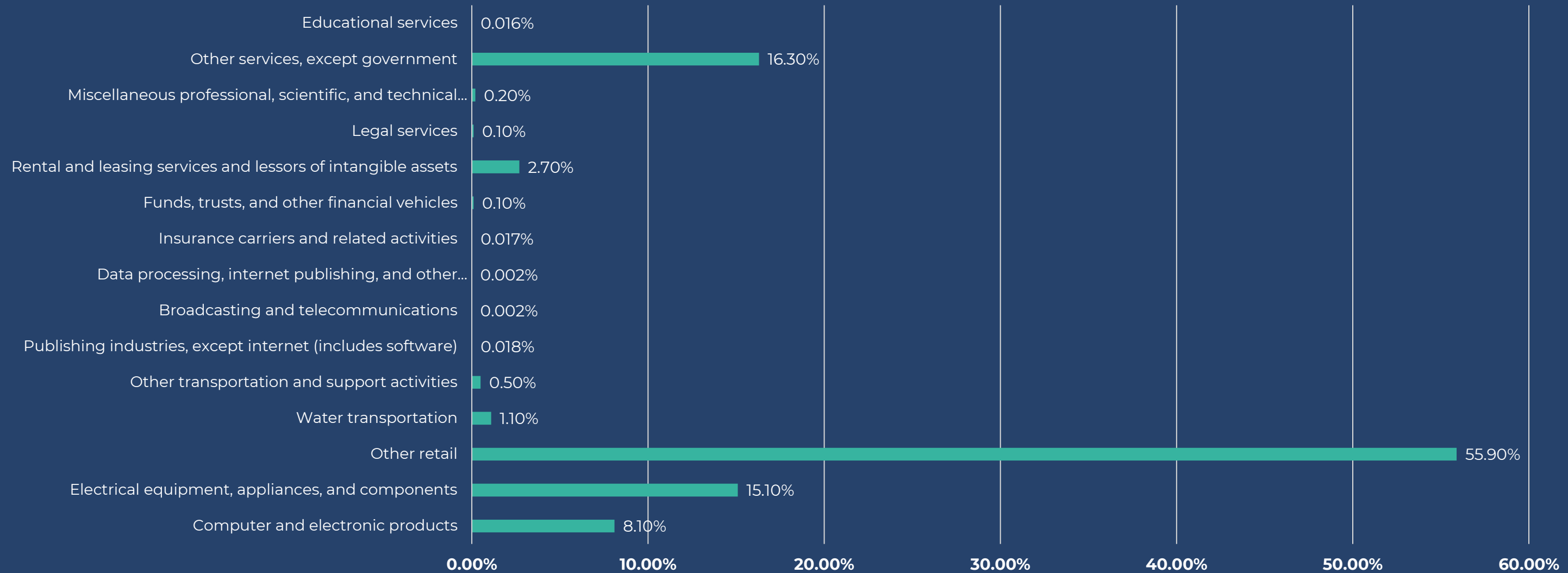
SCOPE 3 – INDIRECT OTHER EMISSIONS Cont..



PURCHASED GOODS & SERVICES

Goods and services purchased by NVIRO resulted in 361.13 tonnes of CO₂e (24.09% of total emissions).

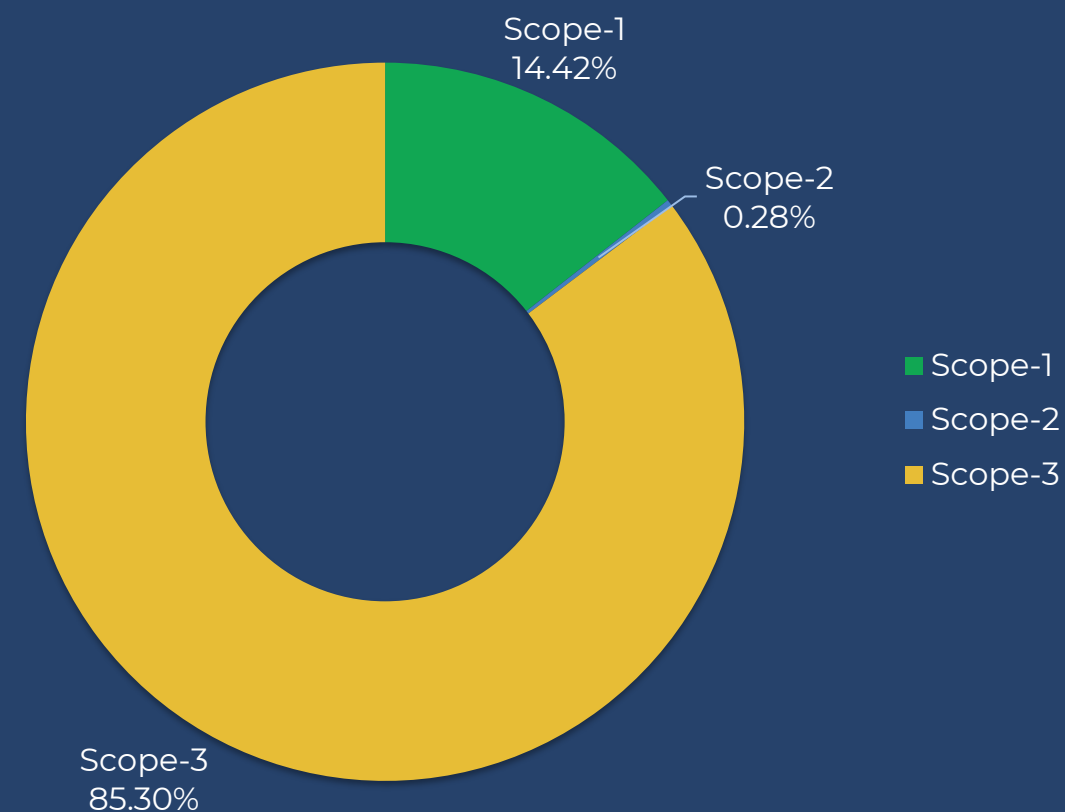
Emissions breakdown by category for P G&S



SCOPE 3 – INDIRECT OTHER EMISSIONS Cont..

WELL-TO-TANK (WTT) AND TRANSMISSION & DISTRIBUTION (T&D)

WTT and T&D emissions are those emissions associated with the upstream processes of extracting, refining, and transporting raw fuel and energy to the vehicles, assets, or other process under scrutiny. NVIRO's WTT and T&D emissions amounted to 223.32 tCO₂e or 14.90% of the total footprint, and is made up of gas and electricity consumption, as well as fuel consumption relating to business travel, employee commuting, and deliveries. Note that this emissions driver is dependent on other categories, and therefore rises and falls with other scopes. For example, as more fuels like gas must be extracted, processed, and transported to NVIRO company site, more well-to-tank emissions are released.



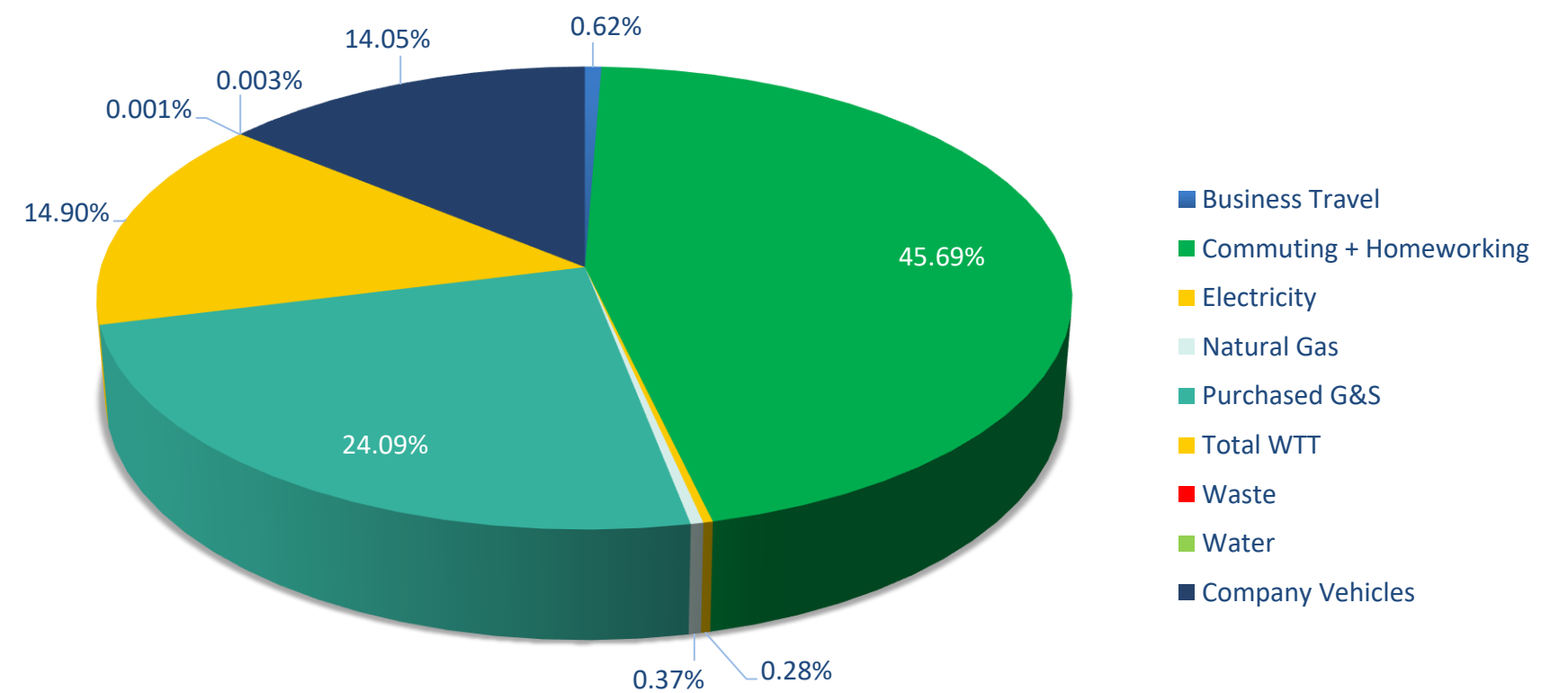
Emissions split by Scope





Conclusions & Recommendations

Neutral Carbon Zone has analysed NVIRO's footprint and are able to provide the following recommendations to reduce emissions. These recommendations are ordered in terms of priority, starting with the highest emissions activity. If undertaken, these recommendations have potential to significantly reduce NVIRO' carbon footprint.



Emissions in kgCO₂e by Category



CONCLUSIONS & RECOMMENDATIONS

Ø Employee commuting and homeworking is the largest emissions driver at 45.69% of emissions. Emissions can be reduced by encouraging greater use of public transport i.e., buses, overground and underground where possible and/or car-share schemes, walking/cycling and other active transport options to reduce the use of more carbon intensive modes of transport such as petrol and diesel personal vehicles.

Ø Purchased Goods & Services was the second largest emissions driver. It accounts for approximately 24.09% of total emissions. NCZ recommends that NVIRO carries out an in-depth supply-chain analysis in order to identify the specific individual impacts of the goods and services being purchased and highlight any potential efficiencies that are available and/or currently appropriate to be implemented. This can be facilitated through NCZ Platinum certification.

Ø Well to Tank emissions, the third largest emissions driver (14.90%), will subsequently fall with the reduction in other energy and fuel related activities.

Ø Company vehicles was the fourth largest emissions driver (14.05%). Neutral Carbon Zone therefore recommends NVIRO consider a transition analysis of their vehicle fleet towards hybrid and/or electric vehicles wherever feasible. Emissions can also be further reduced by avoiding any unnecessary use of fossil fueled vehicles where less emission intensive options are available and practical, including greater use of public transport, car-share schemes and active transport (walking and cycling) should be considered wherever practical and/or appropriate.



CONCLUSIONS & RECOMMENDATIONS Cont..

∅ Business travel is the fifth highest emitter and accounts for 0.62% of total emissions. Data was supplied as spend data. Establishing a process to track fuel use and/or distances travelled by type is recommended. Additionally, consideration into alternative options regarding modes of transport and route/requirement analysis can be influential in the reduction of emissions in this category.

∅ Natural Gas represents 0.37% of the total organisational emissions for the period. NCZ recommends further analysis into the use of gas within the business premises to investigate the opportunities for further efficiencies, reduced consumption and potential alternatives to be considered. NCZ also recommends including green tariffs in the next energy contract tender to maximise the opportunities for carbon and fossil fuel reliance reduction.

∅ Purchased electricity accounted for 0.28% of total emissions. This can be reduced further by switching to a 100% renewable energy tariff for purchased electricity and investigating the opportunities for the reduction in electricity consumption.

∅ Waste accounts for 0.001% of total emissions. In order to reduce emissions associated with waste, NVIRO would need to focus on waste reduction measures where possible. In order to understand how this can be done most effectively, a greater understanding of type of waste and disposal is needed. NVIRO could also consider a zero waste to landfill policy.

Scope Categories	Best Practice Data/Evidence
Business Travel	Data relating to the actual distances travelled/number of hotel stay nights
Commuting + Homeworking	100% survey response rate
Company Vehicles	Data relating to litres of fuel consumed and evidence of fuel purchases (for example fuel card reports)
Electricity	Consumption provided as kWh and evidence of consumption (for example landlord reports or invoices)
Natural Gas	Consumption provided as kWh and evidence of consumption (for example landlord reports or invoices)
Other fuels	Consumption provided in correct units and evidence of consumption (for example supplier reports or invoices)
Purchased G&S	Emissions data specific for each supplier
Refrigerants	Data relating to and maintenance reports provided as evidence showing the amount of top-up during the reporting period
Waste	Consumption provided in correct units and evidence of the amount of waste generated and disposal routes (for example supplier reports or invoices)
Water	Consumption provided in correct units and evidence of consumption (for example landlord reports or invoices)
Deliveries Downstream/Upstream	Data relating to and evidence of the distance travelled and weight of deliveries (for example supplier reports or invoices)

