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Carbon Inventory Report:

ZJV (NZ) Ltd

Trading As ZipTrek

Period:	1 Apr 2022 - 31 Mar 2023
Base year:	1 Apr 2018 - 31 Mar 2019
Status:	Quality Reviewed Inventory
Assurance type:	No Assurance
Certification type:	Net Zero Carbon
Last updated date:	2024-06-18

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1 Summary

This carbon inventory was prepared for ZJV (NZ) Ltd, trading as ZipTrek.

Thereafter in the report, the organisation will be referred to as ZipTrek.

Report period 1 Apr 2022 - 31 Mar 2023

Base year 1 Apr 2018 - 31 Mar 2019

1.1 Organisation Information

Ziptrek offers an exhilarating zipline eco-adventure situated 450m above Queenstown. Guests hang out in magnificent treehouses, breathe pristine mountain air and glide through the treetops on a series of ziplines with spectacular views. Ziptrek's knowledgeable guides manage everything technical, while guests enjoy a thrilling tour with an environmental focus.

2 Background

2.1 Statement of Intent

Ziptrek Ecotours recognise the crucial role every business must play in creating a Future-Fit Society – one that is environmentally restorative, socially just and economically inclusive – and we are committed to playing our part. We aspire to become Future-Fit Business because we believe that our long-term success is tied to the value we provide to society. That means we must eliminate all of the potential negative impacts associated with what we buy, what we sell, and what we do.

2.2 Communication and Dissemination

This inventory was prepared as a management tool for ZJV (NZ) Ltd to:

- Assist it in managing its response to climate change and its reduction of GHG emissions.
- Be a communication tool that demonstrates to stakeholders that the organisation has identified its emissions profile,
- Is aware of the significant issues related to climate change and is taking action to mitigate these issues, including offsetting unavoidable emissions.

The users of this report will include, but are not limited to, the staff, manager and Board of ZJV (NZ) Ltd, its shareholders and members. The summary of this inventory will be made available to all stakeholders on request.

3 Reporting Methodology and Compliance Standards

3.1 Methods & Emissions Factor Sources

This report is the 5th annual greenhouse gas (GHG) emissions inventory that has been prepared by ZipTrek.

It was prepared in accordance with;

- The International Standards Organisation's process for calculating and reporting GHG emissions: ISO 14064-1 (2018).
- World Resource Institute's "Greenhouse gas protocol"

The calculation method used to quantify the GHG emissions was the activity data multiplied by the appropriate emission factor:

Tonnes CO2e = Total GHG activity x appropriate emission factor

Ekos' GHG calculation tool (Online based) was used for the calculation of emissions for this inventory.

GHG emission factors were generally sourced from New Zealand's Ministry for the Environment. Where appropriate emission factors were not available, other reliable sources such as international government agencies or published research were used. Full reference sources are listed in the Reference section of this report.

The methodology used is illustrated in figure 1 below:

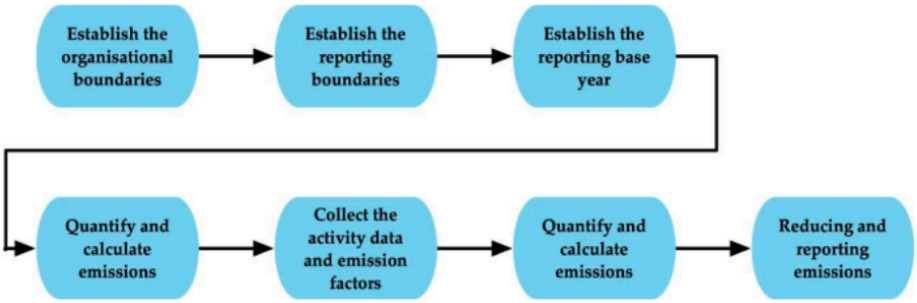


Figure 1: ISO 14064-1 (2018) methodology for measuring a GHG inventory

3.2 Consolidation Approach

The organisational boundary identifies which facilities or subsidiaries are included or excluded from the carbon inventory. Emissions from all aspects of the organisation are consolidated to determine the total volume. Consolidation is done using one of these methods:

- Control, whereby all emissions over which the organisation has either financial or operational control are included in the inventory
- Equity share, whereby the organisation only includes emissions for the portion of the facilities and business that the organisation owns.

The consolidation method used in this inventory to determine ZipTrek's emissions is Control - Operational.

3.3 Base Year Recalculation Policy

Base year data may need to be revised when material changes occur and have an impact on calculated emissions. When the changes are estimated to represent more than 5% of Scope 1, 2 or 3 emissions, or when there are significant changes to the reporting boundaries or calculation methodology, Ekos' policy is to recalculate base year data with explanation.

3.4 GHG Information Management and Monitoring Procedures

The organisation is responsible for appropriate document retention, archiving and record keeping for each emissions source. Ekos' annual review requirement is in place to ensure any errors and omissions in the GHG Inventory report is addressed.

3.5 Changes to Methodology

Changes to methodology include:
1. ZipTrek had an upper office space in this period. The kWh was provided on leaser information and allocation percentage.
2. Staff Commute was based on FY22 data and an FTE intensity metric percentage allocation. This methodology is being improved for FY24.

4 Reporting Boundary

The below diagram describes the organisational boundary and outlines the business units that are included and excluded in this inventory.

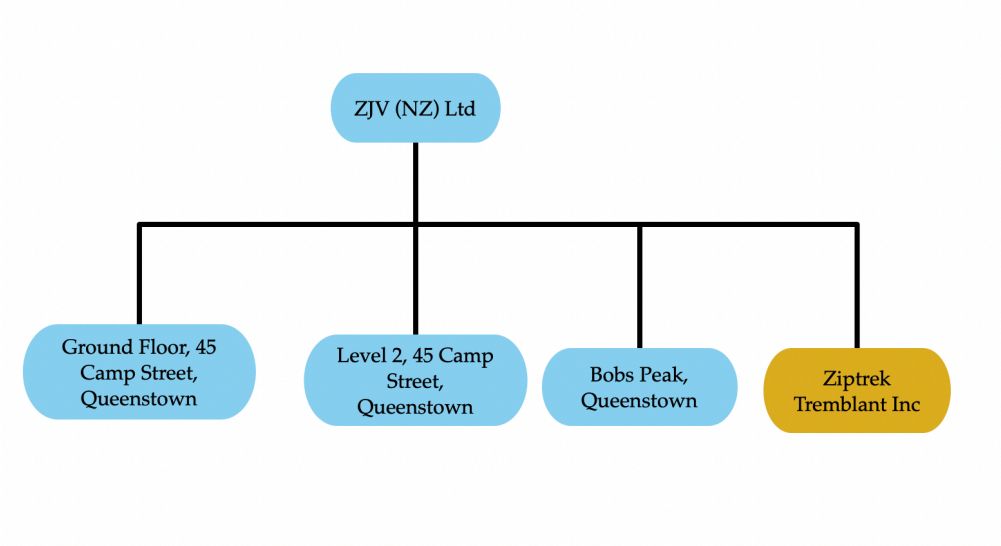


Figure 2: ZipTrek's Organisational Boundary.

Table 1: Business units included/excluded

Legal entities (Include any subsidaries)	Business unit / Location	Activities / Purpose	Included / Excluded	Reason for exclusion
ZJV (NZ) Ltd	Ground floor, 45 Camp St, Queenstown	Operations	Included	
ZJV (NZ) Ltd	Level 2, 45 Camp St, Queenstown	Administration	Included	
ZJV (NZ) Ltd	Ziptrek course, Bob's Peak, Queenstown	Course/activity area	Included	
ZipTrek EcoTours Incorporated	Whistler	Tourism activities	Excluded	Excluded from organisational boundary as one of the intentions behind this measurement is to determine the carbon footprint of the New Zealand based operations.
ZipTrek Tremblant Incorporated	Tremblant	Tourism activities	Excluded	Excluded from organisational boundary as one of the intentions behind this measurement is to determine the carbon footprint of the New Zealand based operations.

5 Reporting Scopes

5.1 Include/ Excluded Categories

ISO 14064-1(2018) categorises emissions as follows:

- Scope 1 - (Category 1) Direct GHG emissions and removals.
- Scope 2 - (Category 2) Indirect GHG emissions from imported energy, heat or steam generated elsewhere.
- Scope 3 - (Category 3) Indirect GHG emissions from transportation.
- Scope 3 - (Category 4) Indirect GHG emissions from products used by organization.
- Scope 3 - (Category 5) Indirect GHG emissions associated with the use of products from the organization.
- Scope 3 - (Category 6) Indirect GHG emissions from other sources.

In compliance with the ISO Standard, the organisation has included all relevant direct and indirect emissions in this GHG inventory.

*As per ISO14064-1 clause 5.2.3, Ekos shall define its own pre-determined criteria for significance. The following qualitative criteria for Non-mandatory status have been considered;

1. Source data likely to be difficult/expensive to obtain and
2. The accuracy of the quantified emissions likely to be poor due to nature of the emissions factor or
3. The large amount of assumptions likely to result in unreliable emissions total.

The included/excluded emissions sources are shown in the following table:

Table 2: emissions categories included and justification if excluded

ISO & GHG Protocol Categories	Example of Emissions Sources	Ekos' Position	Include/ Exclude	Exclusion Criteria	Notes
Category 1) Direct GHG emissions and removals: (GHG Protocol scope 1)					
Stationary Combustion	Coal, diesel and gas use for heating, generation of energy etc	Mandatory	Include	None	No LPG was used in FY23. The LPG is used for heaters which are not always empty in winter.
Mobile Combustion	Fuel use for company owned vehicles, forklift/mowers or if you lease vehicles but have operational control.	Mandatory	Include	None	
Chemical & Industrial Processes	Use of CO2 or nitrous oxide in bottling, packaging, beer taps etc	Mandatory	Not Applicable	None	
Fugitive Emissions	Top up of refrigerant gases when maintaining any fridges, freezers or Air-conditioning units	Mandatory	Not Applicable	None	
Land Use & Land Use Changes	Fertiliser use and animals (ruminants) on land.	Mandatory	Not Applicable	None	
Category 2) Indirect GHG emissions from imported energy: (GHG Protocol scope 2)					
Purchased Electricity	Electricity use in all facilities	Mandatory	Include	None	
Category 3) Indirect GHG emissions from transportation: (GHG Protocol scope 3)					
Inward/Outward Freight	Upstream transport and distribution of goods	Mandatory	Include	None	Core freight activity captured.
Business Travel	Business travel (flights, accommodation etc)	Mandatory	Include	None	
Staff Commuting	Employee commuting, including emissions related to the transportation of employees from their homes to their workplaces.	Non-mandatory	Include	None	
Downstream Transport & Distribution of Goods	Downstream transport and distribution for goods, freight services that happen throughout the supply chain but not paid for by the organization	Non-mandatory	Not Applicable	None	
Work From Home	Staff working from home	Non-mandatory	Exclude	Insignificant/ de minimis	

Table 2: emissions categories included and justification if excluded continued.

ISO & GHG Protocol Categories	Example of Emissions Sources	Ekos' Position	Include/ Exclude	Exclusion Criteria	Notes
Category 4) Indirect GHG emissions from products used by organization: (GHG Protocol scope 3)					
Waste Generated in Operations	Waste generated in operations (solid waste to landfill and wastewater to water treatment plants)	Mandatory	Include	None	
Fuel and Energy related Activities (T&D Losses)	Fuel and energy related activities (T&D losses for electricity & natural gas)	Mandatory	Include	None	
Fuel and Energy related Activities (WTT Emissions for Fuel)	Coal, diesel and gas use for heating, generation of energy etc	Mandatory	Include	None	
Emissions From Purchased Goods	Emissions from purchased goods, i.e. contract growers or processing to your key production	Non-mandatory	Not Applicable	None	
Emissions from the Use of Services	Emissions from the use of services (i.e. IT servers, consulting, cleaning, maintenance, bank)	Non-mandatory	Include	None	
Capital Goods	Capital goods	Non-mandatory	Not Applicable	None	
Upstream Leased Assets	Upstream leased assets (leased vehicles - fuel use should be reported under scope 1, leased office space - the electricity use is passed on by the landlord to the company, therefore should be included in scope 2.)	Non-mandatory	Include	None	Captured in Scope 2.
Category 5) Indirect GHG emissions associated with the use of products from the organization: (GHG Protocol Scope 3)					
Downstream Leased Assets	Downstream leased assets (If you own a rental car or camper van company, you should include the customer's fuel use of the vehicles. If you own warehouses and office buildings, you should include all scope 1& 2 emissions of lease's use of the asset)	Mandatory	Not Applicable	None	
Processing of the Sold Product	Emissions from the Processing of the sold product	Non-mandatory	Not Applicable	None	
Use Stage of the Product	Emissions from the use stage of the product	Non-mandatory	Not Applicable	None	
End of Life Stage of the Product	Emissions from end of life stage of the product	Non-mandatory	Not Applicable	None	
Franchises	Franchises (To be considered only if already included under the consolidation approach. Scope 1 and 2 of each franchisee requires collection)	Non-mandatory	Not Applicable	None	
Investments	Investments (Mandatory for financial industries such as Banks and Investment Fund organisations., Non-mandatory for other sectors)	Non-mandatory	Exclude	Limited level of influence	Excluded based on intent behind the measurement process and the impact this had on the organisational boundary.
Category 6) Indirect GHG emissions from other sources:					
Any other relevant emissions	Any relevant emissions which do not fall within the other categories	Non-mandatory	Not Applicable	None	

6 Greenhouse Gas (GHG) Emissions Profile

Data was collected by ZipTrek's staff with guidance where required from Ekos. The table below provides an overview of the data collected for each emission source. All emissions were calculated using Ekos-developed calculator.

6.1 Emissions Summary

Table 3: Emissions Summary by GHG Scopes and ISO Categories.

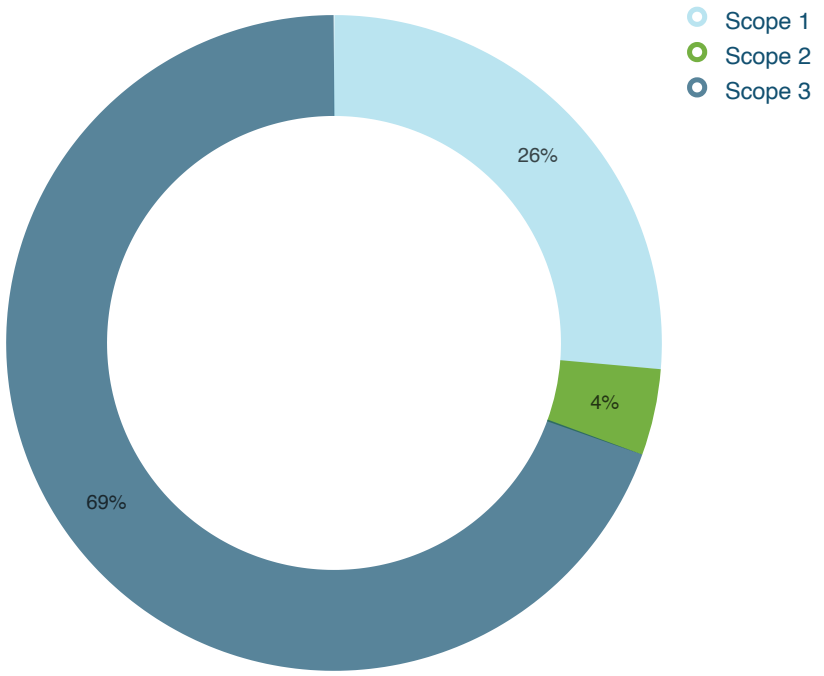
Scope	Emissions Category	tCO_2e (location-based)
1	(1) Direct GHG Emissions	8.82
2	(2) Indirect GHG Emissions From Imported Energy	1.43
3	(3) Indirect GHG Emissions From Transportation & Distribution	16.56
3	(4) Indirect GHG Emissions From Products & Services Used By The Organisation	6.72
3	(5) Indirect GHG Emissions From The Use Of The Organisation's Products	0.00
3	(6) Indirect GHG Emissions From Other Sources	0.00
Total Gross GHG Emissions		**33.52**
GHG Removals/ Sinks		NR

Electricity emissions are usually calculated and reported using the location-based methodology, which is the average generation emissions for the region or the national grid. The standard requires the electricity to be also reported using the market-based methodology where this is relevant or available, this is commonly known as “dual reporting". In this report, if market-based factor is available and used in the inventory, dual reporting will occur in Table 3 of the report. Thereafter, the emissions will be represented in only the method that is most relevant.

Table 4 shows the emissions intensity, if emissions intensity metrics were provided.

Table 4: Emissions Intensity Summary

Emission Intensity Metrics	Input	tCO2e per Intensity Metric (Location based)
Number of FTE	27.00	1.24
Gross Revenue ($Mil)	0.00	0.00
Production (MT)	0.00	0.00



Note: labels for less than 2% are not displayed.

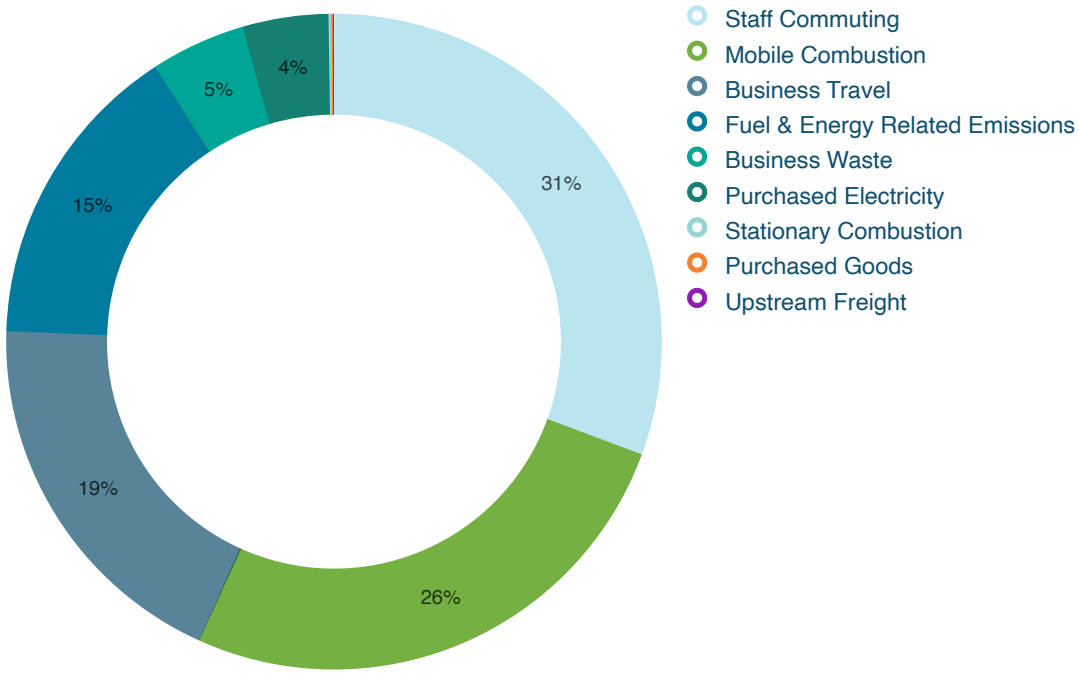
Figure 3: Emissions by Scopes

6.2 Emissions by Activities

Table 5 and Figure 4 below shows the emissions by Activity groups and the % it represents.

Table 5: GHG emissions by Scope and Activity groups

GHG scope	Factor Groups	Sum of tCO_2e	% of Inventory
1	Mobile Combustion	8.77	26.16%
1	Stationary Combustion	0.05	0.15%
2	Purchased Electricity	1.43	4.26%
3	Staff Commuting	10.27	30.62%
3	Business Travel	6.29	18.76%
3	Fuel & Energy Related Emissions	5.13	15.31%
3	Business Waste	1.56	4.67%
3	Purchased Goods	0.02	0.07%
3	Upstream Freight	0.00	0.00%
Grand Total		**33.52**	**100.00%**



Note: labels for less than 2% are not displayed.

Figure 4: Emissions by Activity Groups

Table 6 and Figure 5 below identifies the organisation's top emissions sources by ranking the largest to the smallest.

Table 6: GHG emissions sources ranked by largest to smallest

Emission Sources	GHG tCO_2e	% of Inventory
Staff Commuting - Petrol	6.07	18.11%
Mobile Combustion - Diesel	5.48	16.34%
Well to tank emissions	4.97	14.82%
Staff Commuting - Diesel	4.19	12.51%
International Air Travel - Short Haul International Business Class	3.54	10.56%
Mobile Combustion - Petrol (regular)	3.29	9.81%
Domestic Air Travel - New Zealand Domestic Economy Class	2.75	8.20%
Waste & Wastewater General Waste to Landfill - Without Gas Recovery (Unit 1)	1.56	4.67%
Electricity - New Zealand (Main Site - Ground Floor)	1.26	3.77%
Electricity - New Zealand (Offices - Upper Floor)	0.17	0.49%
Electricity T&D Losses	0.17	0.49%
Stationary Combustion - Petrol (regular)	0.05	0.15%
IT Services & Data Storage	0.02	0.07%
Inward Freight Other Freight - Courier Van	0.00	0.00%
Grand Total	**33.52**	**100.00%**

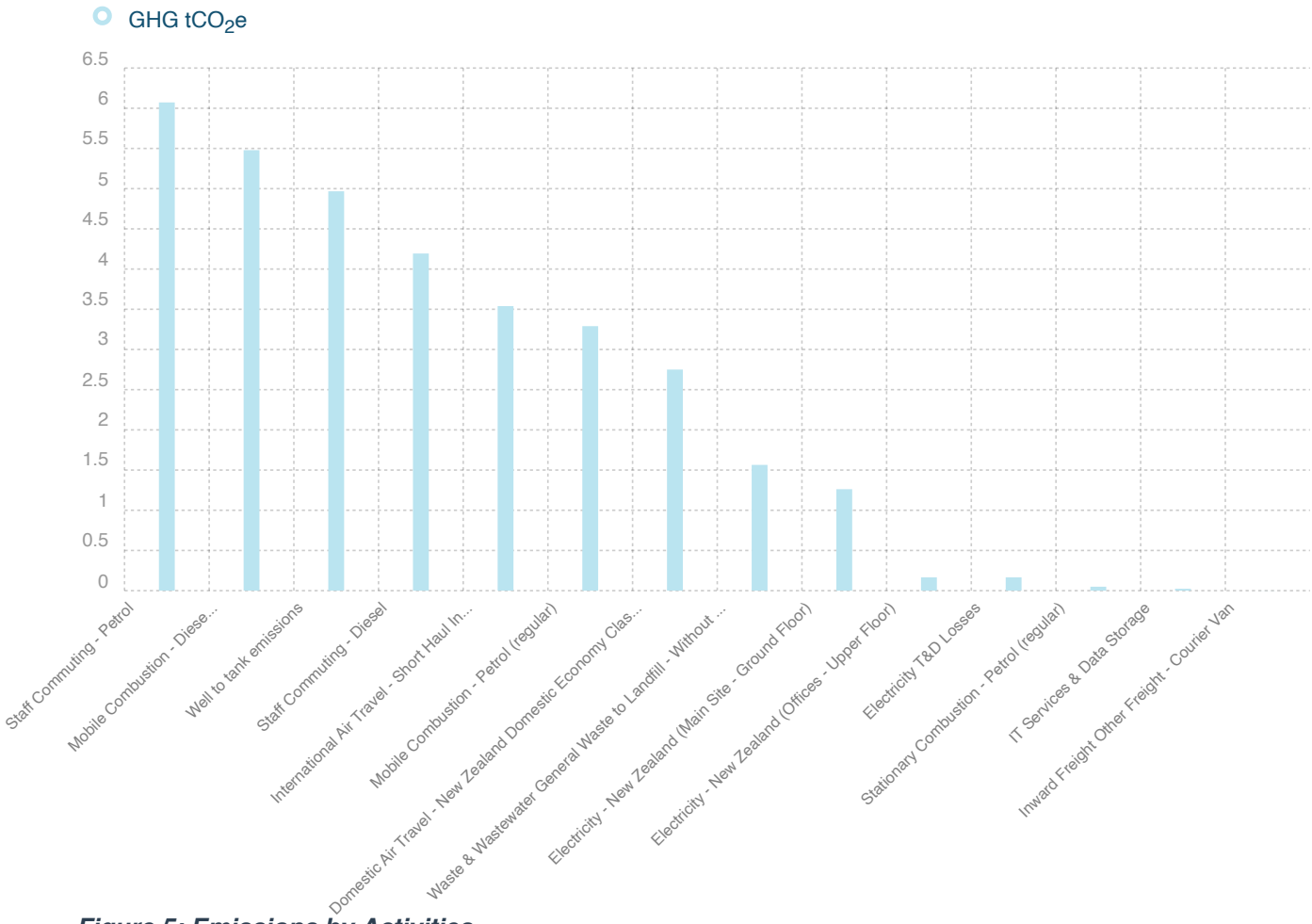


Figure 5: Emissions by Activities

7 Data Quality, Uncertainties and Assumptions

Activity data was obtained from a range of sources, and the data quality are ranked and outlined in Table 7 below.

Table 7: Activity data collection - quality and source

Emissions source	Scope	Unit	Data source	Data quality	Any assumptions made
Regular Petrol Consumption (excluding transport)	1	L	Internal records	Low	No receipt due to upload error in Xero, amount based on general fill amounts - 2 x 10l jerry can fills.
Mobile Combustion - Fuels	1	L	Invoices	Good	
Electricity - Electricity Consumption	2	KWH	Invoices and leaser records	Low	Unit 1 is good quality data. Unit 2 is low quality because it is a percentage allocation of kWh estimate for the Upper Floor offices.
Purchased Goods and Services	3	KG	IT records	Good	
Other Freight Received	3	TKM	Internal records	Low	Freight records are low and only capture estimate of main movements.
Waste & Wastewater - Landfill Waste	3	KG	Supplier invoices	Good	
International Business Flights	3	PKM	Supplier records	Good	
Domestic NZ Business Flights	3	PKM	Supplier invoices	Good	
Staff Vehicle Mileage	3	KM	Previous internal records	Low	Based on FY22 figures then applied FTE metric for % difference.

The client source data is rated on a scale of Good, Medium, Low to Poor. The rating is given based on assessing the data source against our Data quality matrix. The classification is based on determining two criteria of uncertainties; Data completeness and Data accuracy. The higher the level of uncertainty due assumptions in the calculation or lack of data for the period, then the lower the quality of the data.

Where accurate data is not available, it is appropriate to estimate to ensure that a comprehensive inventory measurement is completed. Estimates must be carried out on a scientifically derived basis to ensure accuracy.

It is recommended that the organisation works to improve the data collections processes for any items listed above as having low data quality or high assumptions. This will increase the quality of the carbon inventory report in the future. These improvements should start as soon as possible/or as appropriate.

7.1 Scope 1 Emissions By Gas Type

ISO 14064-1 requires Direct emissions to be reported separately, showing emissions contribution by the 6 Kyoto GHG gas types. The breakdown by CO2, CH4 and N2O is shown in Table 7 below. Breakdown by HFCs, PFCs and SF6 will be shown in Table 7a, if applicable. If none displayed it is not applicable or none occurred.

Table 7: Direct emissions breakdown by gas types

GHG scope	1

Emission Sources	tCO_2e	tCO2	tCH4	tN2O
Stationary Combustion - Petrol (regular)	0.05	0.05	0.00	0.00
Mobile Combustion - Diesel	5.48	5.39	0.01	0.08
Mobile Combustion - Petrol (regular)	3.29	3.15	0.04	0.10
Grand Total	**8.82**	**8.59**	**0.05**	**0.17**

7.2 Other Emissions

Fugitive emissions - (refrigerants)

No sites have reported any top-ups of gas for this reporting period. Air conditioning is excluded from the inventory where offices are leased.

There are no operations that use PFC, NF3 or SF6.

Combustion of Biomass - (e.g wood pellets)

No known combustion of biomass occurred from the operation during this measure period and therefore no emissions from the combustion of biomass are included in this inventory.

Land use and Land use change

No deforestation has been undertaken by the organisation on land it owns during this measurement period. Therefore no emissions from deforestation are included in this inventory.

Pre-verified data

No pre-verified data is included within the inventory.

8 Emission Performance Against Previous Years

Table 9 and figure 6 below shows emissions comparison against base year and previous year, if applicable.

Table 9: Comparison against base year

Activities	Base year tCO_2e (location-based)	Previous year tCO_2e (location-based)	Current year tCO_2e (location-based)	% Change against base year	% Change against previous year
Staff Commuting	-	7.16	10.27	-	43.46%
Mobile Combustion	15.33	6.25	8.77	-42.80%	40.19%
Business Travel	43.08	5.79	6.29	-85.40%	8.58%
Fuel & Energy Related Emissions	0.15	4.69	5.13	3,321.81%	9.38%
Business Waste	0.08	0.34	1.56	1,855.57%	358.18%
Purchased Electricity	1.97	2.27	1.43	-27.53%	-37.19%
Stationary Combustion	0.67	0.38	0.05	-92.67%	-87.22%
Purchased Goods	-	0.03	0.02	-	-20.00%
Upstream Freight	-	0.00	0.00	-	965.76%
Grand Total	61.28	26.92	33.52	-45.30%	24.51%

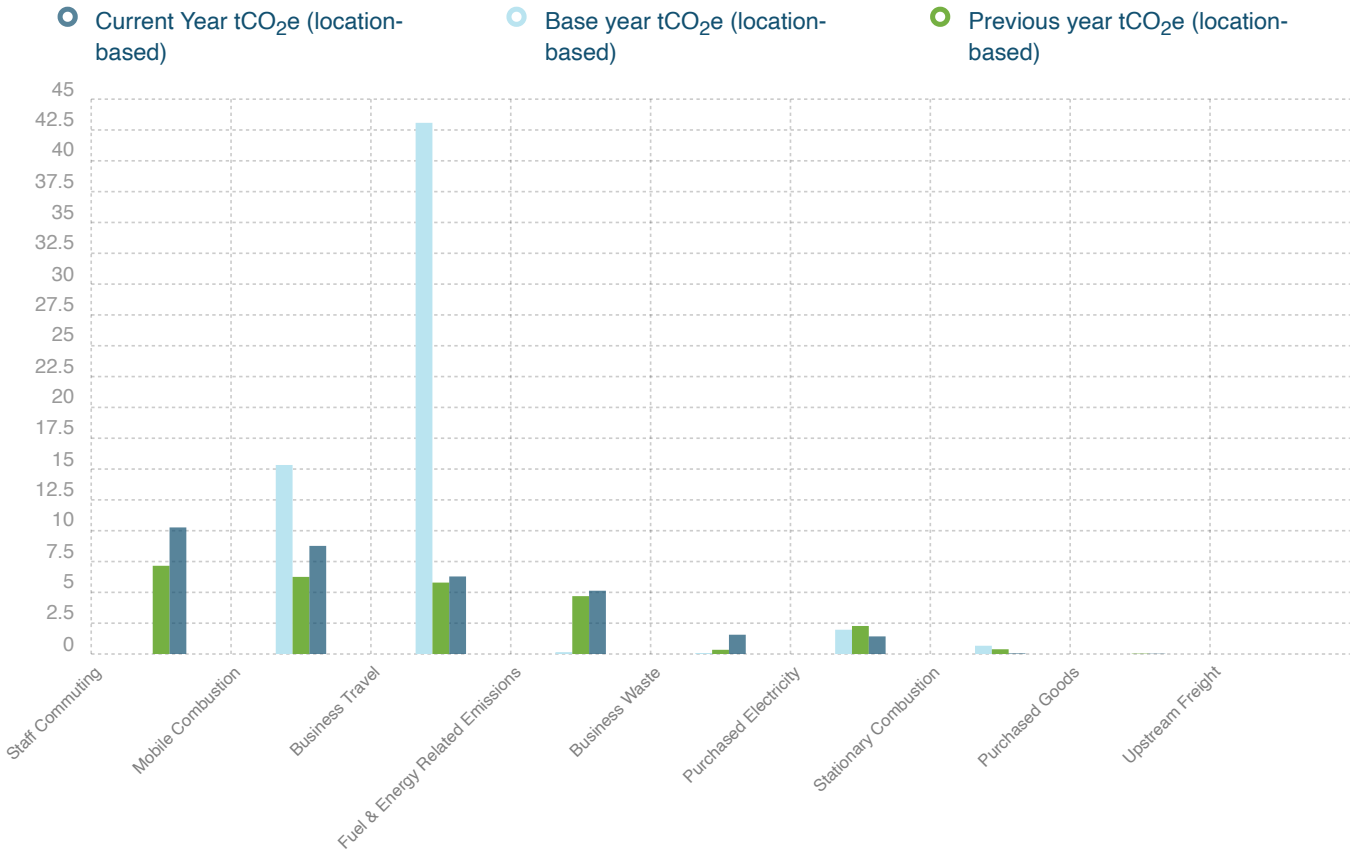


Figure 6: Emissions compared with previous years

Staff Commuting has increased from the previous period due to an increase in FTEs.
Mobile Combustion has increased from the previous year due to FY22 being a covid year with reduced operations.
Waste has also increased due to increased operations after previous covid year,
Business Travel has decreased from the base year as ZipTrek have updated business strategies since Covid.

9 Emission Reduction Recommendations

Please refer to a separate, detailed reduction plan prepared by the organisation which documents the targets, responsibilities, actions and top level management commitment.

10 Double Counting and Pre-offsets

Double counting can sometimes occur when emissions have been included and potentially offset in the GHG emissions inventories of two different organisations, e.g. a company and one of its suppliers/contractors. This is particularly relevant to indirect (Scope 2 and 3) emissions sources.

There may also be instances where an organisation uses the product or service of another company who has already measured and offset their product/service.

The programme recognises organisation, product or services which has been identified by the programme as having completed measurement and offset their emissions and in this case, the double counted emissions will be reported but do not require offset.

There were instances of recognised offset deductions in this inventory, and these are described below:

Table 10: Recognised offset deductions

Recognised Offset Deductions		
Emissions Source	**Additional Notes**	**tCO_2e deducted**
Air NZ Pre-Offsets	This was based on Ekos' calculations of $-spent on Air NZ offsets with applied conversion factor.	1.61
Total Recognised Offset Deductions		**1.61**

In regards to double counting and Staff Commuting, the KM includes the staff van which likely includes a portion of fuel included in Scope 1. This is inextricable. Staff Commute data is being updated for the FY24 period.

11 Offsets and Certification

11.1 Certification Type

ZipTrek has chosen to apply for Net Zero Carbon Certification.

11.2 Offset Amount

Table 10: Offset calculation

Total Gross GHG Emissions	Offset requirement		Purchased credits/ Pre-offset	Net offset requirement	Total Credits to offset
33.52	Zero Carbon Option (100%)	33.52	1.61	31.91	32.00

11.3 Carbon Credits

ZipTrek has elected to cancel the following carbon credits:

Table 11.1: Carbon credits

Offset Type	Description	# Units Cancelled
NZUs – Flax Hills	Offsets have been sourced in the form of Permanent New Zealand Restorative Forest Units (NZUs) produced in 69 hectares of retired farmland in Kaikoura, Aotearoa New Zealand and verified to the New Zealand Emissions Trading Register. These offsets are retired in the New Zealand Carbon Emissions Trading Register.	32.00

12 References & Other Information

12.1 Standards

International Organization for Standardization, 2006. ISO14064-1:2018. Greenhouse gases – Part 1: Specification with guidance at the organisation level for quantification and reporting of greenhouse gas GHG emissions and removals. ISO: Geneva, Switzerland.

World Resources Institute and World Business Council for Sustainable Development, 2004 (revised). The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard. WBCSD: Geneva, Switzerland.

12.2 Emission Factors

MfE - 2023 Emission Factors Workbook.

DESNZ - 2023 UK Government GHG Conversion Factors for Company Reporting

Radiative Forcing - Aviation GHG emission calculations take into account the greenhouse gases covered by the UNFCCC Paris Agreement relevant to aviation (carbon dioxide, methane and nitrous oxide). There are also additional global warming impacts of aviation emissions called "radiative forcing" (RF). These include water vapour, NOx, and contrails. Some voluntary carbon offset suppliers make inclusion of RF mandatory and others exclude it. This is because of the scientific uncertainties associated with the methodology for accurately calculating radiative forcing.

Following the MFE methodology, Ekos uses a radiative forcing multiplier of 1.9 for all flight related activity

Uplift factor - does not apply to domestic air travel. However, it has been applied to international air travel. (section 7.5.4 and 7.5.5 of the MfE Emissions detailed Guide 2023).

Well to Tank factors were sourced from DESNZ and is automatically applied to relevant activity data. WTT Business travel EF is 'with RF'.

All NZ electricity factor are location-based unless otherwise stated.