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Carbon Inventory Report:
ZJV (NZ) Ltd

Period:	1 Apr 2021 - 31 Mar 2022
Base year:	1 Apr 2018 - 31 Mar 2019
Status:	Unverified Inventory
Assurance type:	N/A
Certification type:	Net Zero Carbon
Last updated date:	2022-08-10

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1 Summary

This carbon inventory was prepared for ZJV (NZ) Ltd.

Report period 1 Apr 2021 - 31 Mar 2022

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 first annual greenhouse gas (GHG) emissions inventory that has been prepared by ZJV (NZ) Ltd

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:

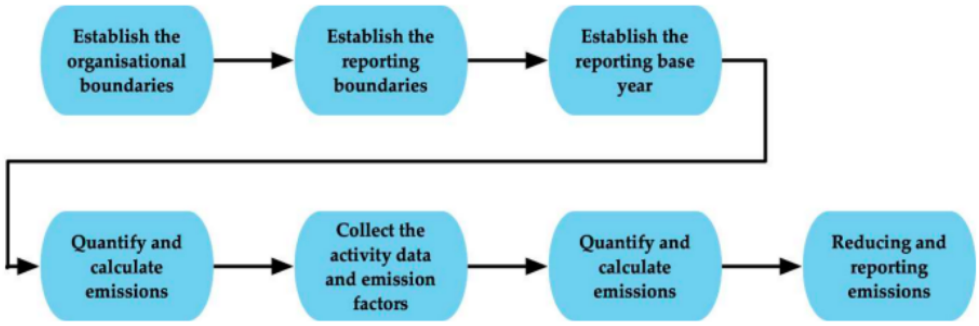

Figure 1: ISO 14064-1 (2018) methodology for measuring a GHG inventory

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 ZJV (NZ) Ltd'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.

4 Reporting boundary

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

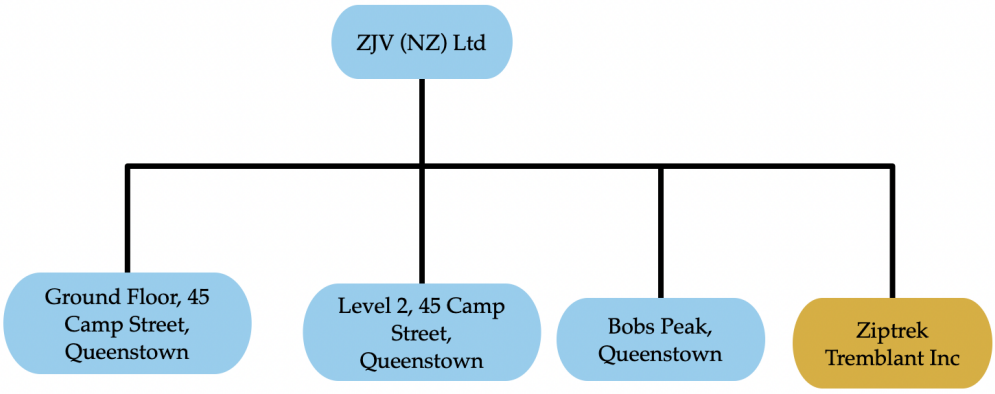

Figure 2: ZJV (NZ) Ltd's Organisational Boundary.

Table 1: Business units included/excluded

Legal entities (Include any subsidaries)	Business unit / Location	Included / excluded	Reason for exclusion
ZJV (NZ) Ltd	Ground Floor, 45 Camp Street Queenstown	Included	
ZJV (NZ) Ltd	Level 2, 45 Camp Street, Queenstown	Included	
ZJV (NZ) Ltd	Bobs Peak, Queenstown	Included	
Ziptrek Ecotours Inc	Whistler	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 Inc	Tremblant	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 ISO1464-1 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	Not Applicable	None	
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 Freight	Upstream transport and distribution of goods	Mandatory	Include	None	
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	Exclude	Source data difficult/ expensive to obtain	Also very limited level of influence over reductions in this emissions source.
Work Frome Home	Staff working from home	Non-mandatory	Include	None	

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

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 emissions calculation.
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	TBC	TBC	

6 Greenhouse Gas (GHG) emissions profile

Data was collected by ZJV (NZ) Ltd'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
1	(1) DIRECT GHG EMISSIONS	6.64
2	(2) INDIRECT GHG EMISSIONS FROM IMPORTED ENERGY	2.27
3	(3) INDIRECT GHG EMISSIONS FROM TRANSPORTATION & DISTRIBUTION	13.81
3	(4) INDIRECT GHG EMISSIONS FROM PRODUCTS & SERVICES USED BY THE ORGANISATION	3.72
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		**26.45**
GHG Removals/ sinks		0.00
Purchased credits/ Pre-offset		1.94
Total Net GHG Emissions		**24.51**

Emission Intensity Summary		
Emission Intensity Metrics	**Input**	**tCO_2e Intensity Metric**
Number of FTE	13	2.03
Gross Revenue ($Mil)	0	0.00
Production (MT)	0	0.00

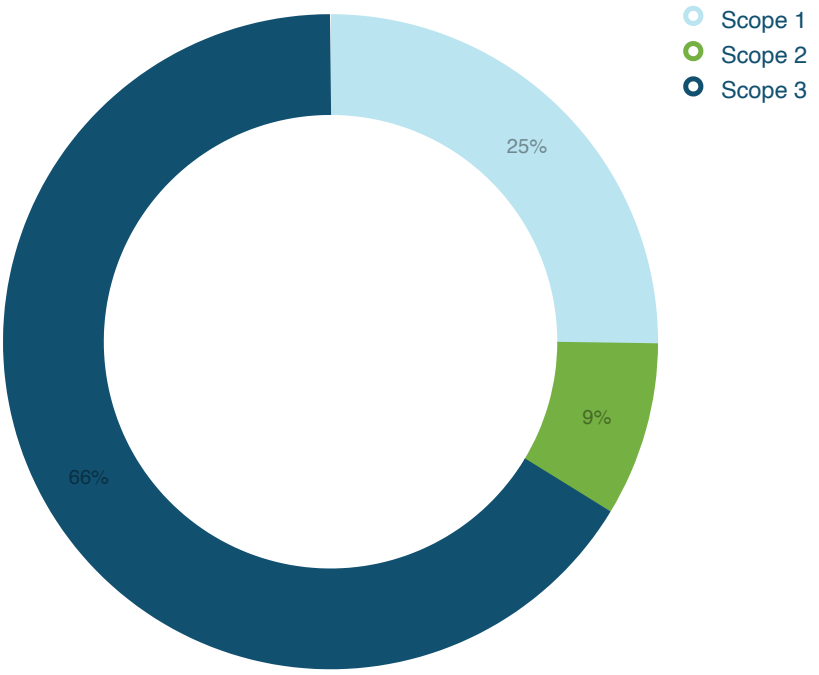

Figure 3: Emissions by Scopes

6.2 Emissions by Activities

Table 4: GHG emissions by Scope and Activity groups

GHG scope	Factor Groups	Sum of tCO_2e	% of Inventory
1	Mobile Combustion	6.25	24%
1	Stationary Combustion	0.38	1%
2	Purchased Electricity	2.27	9%
3	Staff Commuting	7.16	27%
3	Business Travel	5.90	22%
3	Fuel & Energy Related Emissions	4.11	16%
3	Business Waste	0.34	1%
3	Purchased Goods	0.03	0%
3	Upstream Freight	0.00	0%
Grand Total		**26.45**	**100.00%**

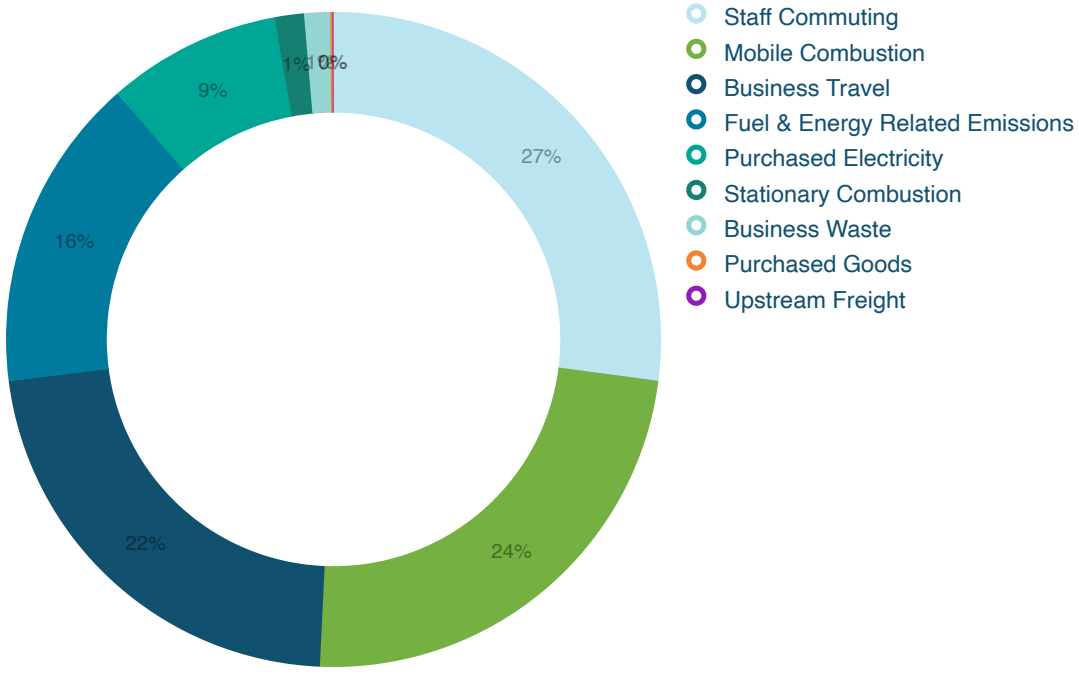

Figure 4: Emissions by Activity Groups

Table 5: GHG emissions sources ranked by largest to smallest

Row Labels	GHG tCO_2e	% of Inventory
Staff Commuting - Petrol	4.26	16%
Mobile Combustion - Diesel	3.90	15%
Well to tank emissions	3.67	14%
Domestic Air Travel - New Zealand Domestic Economy Class	3.57	14%
Staff Commuting - Diesel	2.81	11%
Mobile Combustion - Petrol	2.35	9%
Electricity - New Zealand (Unit 2)	1.78	7%
Staff Commuting	1.63	6%
Electricity - New Zealand (Unit 1)	0.49	2%
Stationary Combustion - LPG	0.38	1%
Waste & Wastewater General Waste to Landfill - Without Gas Recovery (Unit 1)	0.34	1%
International Air Travel - Short Haul International Average	0.30	1%
Well to Tank Emissions	0.26	1%
Electricity T&D Losses	0.21	1%
Business Accommodation - Australia	0.16	1%
Staff Working From Home	0.09	0%
Business Accommodation - New Zealand	0.06	0%
Business Travel - Rental cars	0.05	0%
Business Accommodation - New Zealand	0.05	0%
IT Services & Data Storage	0.03	0%
Business Accommodation - New Zealand	0.03	0%
Business Travel - Taxi	0.02	0%
Business Accommodation - New Zealand	0.01	0%
Business Accommodation - New Zealand	0.01	0%
Inward Freight Other Freight - Courier Van	0.00	0%
Grand Total	**26.45**	**100.00%**

GHG tCO_2e

6.3 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 6 below. Breakdown by HFCs, PFCs and SF6 will be shown in Table 6.1, if applicable. If none displayed it is not applicable or none occurred.

Table 6: Direct emissions breakdown by gas types

GHG scope	1

Row Labels	tCO_2e	tCO2	tCH4	tN2O
Stationary Combustion - LPG	0.38	0.38	0.00	0.00
Mobile Combustion - Petrol	2.35	2.25	0.08	0.03
Mobile Combustion - Diesel	3.90	3.84	0.06	0.01
Grand Total	**6.64**	**6.47**	**0.14**	**0.03**

6.4 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 pallets)

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.

7 Data Quality, Uncertainties and Assumptions

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.

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

The client source data is rated on a scale of High, 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.

Table 7: Activity data collection - quality and source

Emissions source	Scope	Unit	Data source	Data quality	Any assumptions made
LPG Consumption	1	KG	Supplier Invoices	Good	
Mobile Combustion - Fuels	1	L	Invoices	Good	
Electricity - Electricity Consumption	2	KWH	Invoices	Good	
Purchased Goods and Services	3	KG	IT Department	Good	
Other Freight Received	3	TKM	Receipts	Good	
Waste & Wastewater - Landfill Waste	3	KG	Supplier Records	Good	
International Business Flights	3	PKM	Receipts	Good	
Domestic NZ Business Flights	3	PKM	Receipts	Good	Air NZ pre offset conversion from $ spend to tCO2e.
Business Accommodation	3	Person nights	Invoices	Good	
Business Travel Taxi Money	3	$	Receipts	Good	
Business Travel Rental Cars	3	KM	Recipts	Good	Assumed Fuel Type to be Petrol
Staff Vehicle Mileage	3	KM	Staff Survey	Poor	One weeks data was extrapolated through the measurement period.
Staff Working from Home	3	DAYS	Staff Survey	Poor	One weeks data was extrapolated through the measurement period.
Staff Commuting	3	-	Staff Survey	Poor	One weeks data was extrapolated through the measurement period.
Well to Tank Emissions	3	-	Staff Survey	Poor	One weeks data was extrapolated through the measurement period.

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.

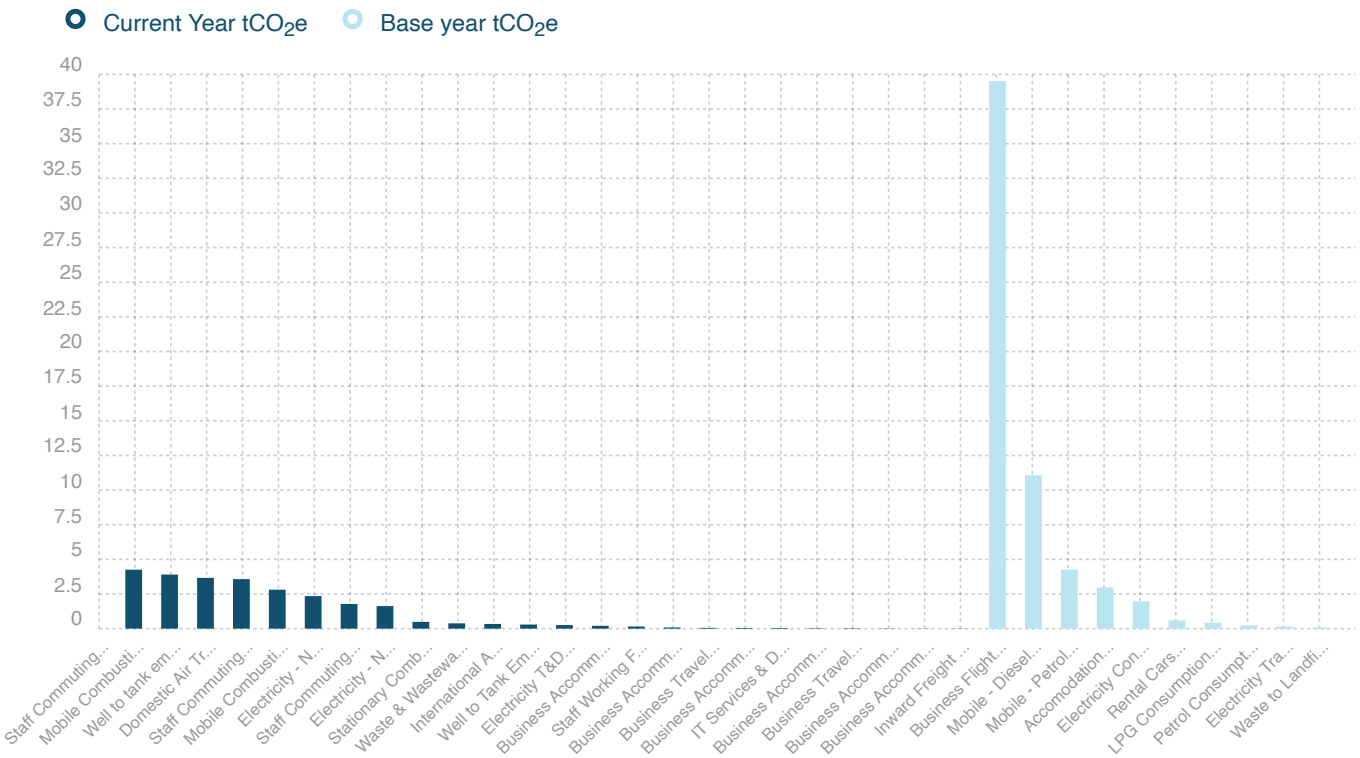

Figure 6: Emissions compared with previous years

8 Emission Performance against previous years

Table 8: Comparison against base year

Activities	Base year tCO_2e	Current year tCO_2e	% Change against base year
Staff Commuting - Petrol	-	4.26	-
Mobile Combustion - Diesel	-	3.90	-
Well to tank emissions	-	3.67	-
Domestic Air Travel - New Zealand Domestic Economy Class	-	3.57	-
Staff Commuting - Diesel	-	2.81	-
Mobile Combustion - Petrol	-	2.35	-
Electricity - New Zealand (Unit 2)	-	1.78	-
Staff Commuting	-	1.63	-
Electricity - New Zealand (Unit 1)	-	0.49	-
Stationary Combustion - LPG	-	0.38	-
Waste & Wastewater General Waste to Landfill - Without Gas Recovery (Unit 1)	-	0.34	-
International Air Travel - Short Haul International Average	-	0.30	-
Well to Tank Emissions	-	0.26	-
Electricity T&D Losses	-	0.21	-
Business Accommodation - Australia	-	0.16	-
Staff Working From Home	-	0.09	-
Business Accommodation - New Zealand	-	0.06	-
Business Travel - Rental cars	-	0.05	-
Business Accommodation - New Zealand	-	0.05	-
IT Services & Data Storage	-	0.03	-
Business Accommodation - New Zealand	-	0.03	-
Business Travel - Taxi	-	0.02	-
Business Accommodation - New Zealand	-	0.01	-
Business Accommodation - New Zealand	-	0.01	-
Inward Freight Other Freight - Courier Van	-	0.00	-
Business Flights	39.51	-	-
Mobile - Diesel	11.07	-	-
Mobile - Petrol	4.26	-	-
Accomodation	2.97	-	-
Electricity Consumption	1.97	-	-
Rental Cars	0.60	-	-
LPG Consumption	0.43	-	-
Petrol Consumption	0.24	-	-
Electricity Transmission & Distribution Line Losses	0.15	-	-
Waste to Landfill	0.08	-	-
Grand Total	61.28	26.45	-57%

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.

Ekos require participants of its programmes to undertake actions to reduce their operational carbon emissions. These actions should be based on ZJV (NZ) Ltd's emission hotspots. These will usually be the highest emission sources. However there may be other relevant opportunities to reduce emissions directly, or to influence the supply chain to do the same. ZJV (NZ) Ltd will need to prepare a detailed reduction plan with targets for the short, medium and long term based on the results of the 2023 financial year measurement. This plan will need to detail the specific reduction activities required, and demonstrated a top level management commitment. In the meantime, the following emissions reduction opportunities are a good place to start. Staff Commuting (Petrol) emissions were the highest contributor to the overall carbon footprint at 16.1%. Well to Tank Emissions were the second highest contributor at 14.9%. Company Vehicles (Diesel) were the third highest contributor at 14.8%. Domestic Air Travel was the fourth highest contributor at 13.5%. Whilst these activities are the highest contributors, ZJV (NZ) Ltd also has high levels of control over these emitting activities. This means ZJV (NZ) Ltd has a high level of influence over emissions reductions within these activities. Ekos suggests the following emissions reduction opportunities be explored; Staff Commuting: Incentivising staff to commute via active transport modes (where appropriate). This could be done by allowing employees who are able to actively commute to clock on from the start of their active commute. Encouraging the use of low carbon commuting modes. This could be achieved by leasing a fleet of e-bikes for staff to use to get to and from work. Encouraging and incentivising carpooling. Company Vehicles: In the short term, efficiency should be optimised through regular servicing and efficient driving practices. A medium to long term transition to electric or hybrid models is encouraged. Domestic Air Travel: The implementation and strict application of an 'only fly when essential policy'. Well to Tank Emissions: Well to tank emissions include the emissions associated with the production and distribution of fuel and energy. Any direct reduction in the following emissions sources will also result in an indirect reduction in Well to Tank Emissions; Stationary Fuels Company Vehicles Electricity Consumption Staff Commuting Business Travel

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 does not require offset.

Pre offset flight emissions of 0.77tCO2e were excluded from the offsetting total. Pre offset electricity emissions of 1.94tCO2e were excluded from the offsetting total.

11 Offsets and Certification

11.1 Certification Type

ZJV (NZ) Ltd has chosen to apply for Net Zero Carbon Certification.

11.2 Offset amount

Table 9: Offset calculation

Total Gross GHG Emissions	GHG Removals/ sinks	Purchased credits/ Pre-offset	Total GHG amount to offset
26.45	0	1.94	24.51

Offset Total	# Credits
Zero Carbon Option (100%)	25

11.3 Carbon credits

ZJV (NZ) Ltd has elected to cancel the following carbon credits:

NZUs - Maruia (Kern Creek Forest Conservation Project).

Offsets have been sourced from New Zealand Carbon Units (NZUs) produced in the Kern Creek Forest Conservation Project located Maruia Valley, New Zealand. These offsets are retired in the New Zealand Carbon Register.

12 References & Other information

12.1 Standards

International Organization for Standardization, 2006. ISO14064-1:20018. 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 - 2022 Emission Factors Workbook and 2022 Emission Factors Flat File

DBEIS - 2021 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 2022)

Well to Tank factors were sourced from DBEIS 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.