

Fiordland Trips and Tramps Ltd

Greenhouse Emission Report 2021

1. INTRODUCTION

This report is the fourth annual greenhouse gas (GHG) emissions¹ inventory report for Fiordland Trips & Tramps Ltd (Trips & Tramps). The inventory is a complete and accurate quantification of the amount of GHG emissions that can be directly attributed to the organisation's operations within the declared boundary and scope for the specified reporting period. The workbook used to provide figures and guide my report were found on the following links;

Measuring business carbon, information, and reference <https://www.tools.business.govt.nz/climate/guides/measure-your-carbon-footprint/>

Ministry for the environment workbook [2020 Measuring Emissions Interactive Workbook \[XLSX 1.2 MB\]](#)

2. STATEMENT OF INTENT

This Inventory forms part of Trips & Tramps commitment to measure and manage our emissions. It is a goal for our company to become carbon neutral and to encourage other local businesses to follow this path, particularly those we use in our operations.

3. ORGANISATION DESCRIPTION

Fiordland Trips & Tramps Ltd is a small, family-run business based in Te Anau on the edge of Fiordland National Park. Steve and Kate Norris are the Directors of Fiordland Trips & Tramps and work full time in the business. They are supported year-round by a Senior Guide and Reservations Manager. Post covid 2020 our work has reduced by approximately 40%, and we now employ an extra 4 full time equivalent staff during the summer season.

Trading as Trips & Tramps the business offers transport and small guided tours, with an emphasis on knowledgeable local guides and quality equipment. Tours can be on a scheduled or private basis. Post covid, our scheduled guided walks on the Milford, Routeburn and Kepler Tracks, packaged as the 'Fiordland Great Walk Package' has been the mainstay of our business. This is only available in the summer months due to access and weather conditions, so our business is increasingly seasonal. We do have the Milford Sound mail contract and take freight year-round, which means we must go regardless of bookings. By the very nature of a small business, we work with other local operators (contractors) to supply additional skill sets and resources to support our activities and products. These can include transport operators such as, boat, or helicopter companies, to food providers for our lunches. Trip & Tramps run a fleet of 9 late-model vehicles catering for 1-16 people.

Trips & Tramps recognises that it operates in a special area of the world, Fiordland National Park and that its operations and resource use will impact the environment. The business is committed to operating in an energy-efficient environment and considers the management of its GHG emissions to be the next step in creating a sustainable business model we can be proud of. It is our aim to use all opportunities for energy savings throughout the business, to establish ourselves as an environmentally responsible organisation.

¹ Throughout this document 'emissions' means GHG emissions

By enabling an energy-conscious culture within the company, we aim to balance our environmental and financial priorities throughout our operations and demonstrate regulatory compliance with existing and future legislation.

4. GHG EMISSION SOURCE INCLUSIONS

The GHG emissions sources included in this inventory were identified with reference to the methodology in the GHG Protocol and ISO14064-1:2006 standards. As adapted from the GHG Protocol, these emissions were classified under the following categories:

- 4.1. Direct GHG emissions (Scope 1): emissions from sources that are owned or controlled by the company.
- 4.2. Indirect GHG emissions (Scope 2): emissions from the generation of purchased electricity, heat and steam consumed by the company.
- 4.3. Indirect GHG emissions (Scope 3): emissions that occur because of the company's activities but from sources not owned or controlled by the company.

The emissions sources in table 1 have been included in the GHG emissions inventory.

Table 1

GHG emission source	GHG emission level scope	Data source	Data Collection unit	Uncertainty (description)
Diesel	Scope 1	Fuelcard report from supplier	L	It is assumed the supplier reports are complete and accurate.
Premium Petrol	Scope 1	Fuelcard report from supplier	L	It is assumed the supplier reports are complete and accurate.
Electricity	Scope 2	Consumption report from landlord	kWh	It is assumed the landlord has provided the correct meter data.
Domestic Travel	Scope 3	Online calculator (www.airmilescalculator.com) for domestic travel distances. Financial report to provide accommodation nights. Online calculation of distance travelled for rental vehicles.	kph	Small amount of activity here as a business. It is assumed data represents a good approximation of the travel, as detailed transactions have not been recorded.
Waste and landfill	Scope 3	From monitoring waste for 1 month and extrapolating (using the fuel data percentage each month).	kg	Hard to get an accurate measurement for this data as difficult to weigh.

5. GHG EMISSION SOURCE EXCLUSIONS

We have chosen to declare the following notable emission sources from our emission inventory.

Table 2

GHG emission source	Reason for exclusion
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Water supply and wastewater treatment	Water is not measurable in the local area. Water conservation is practiced within daily operations. Furthermore, this would not be considered a large resource use, forming less than 1% of the inventory. Given the small, estimated impact on the total, we have chosen to exclude this.
Contractors (helicopter, boat, food providers)	This is difficult to calculate as we do not have access to the data. However, in 2021 we did work out how to calculate our direct helicopter emissions, and this is included in this report. As a business we will endeavour to use companies who share the same environmental values whenever possible.

6. DATA COLLECTION AND UNCERTAINTIES

A calculation methodology has been used for quantifying the emissions inventory using emissions source activity data multiplied by emission or removal factors. All emission factors were sourced from the Ministry for the Environment's 2019 Measuring Emissions: A Guide for Organisations.

7. GHG EMISSION CALCULATIONS AND RESULTS

GHG emissions for the organisation for this measurement period are provided in the GHG Inventory summary section at the start of this report.

Table 1: Summary of total emissions

Total calculated emissions 2018-2021					
Default scope		kg CO ₂ -e			
		2018	2019	2020	2021
Scope 1	Fuel	104636.3	94577.6	58285.7	49417.2
Scope 2	Purchased energy	273.1	348.6	160.8	246.8
Scope 3	Travel	1016.0	1668.2	551.2	592.0
Scope 3	Waste	469.7	469.7	138.2	36.8
Total GHG Inventory Emissions		106395.1	97064.2	59135.9	50292.5
Total scope 1		104636.3	94577.6	58285.7	49417.2
Total scope 2		273.1	348.6	160.8	246.5
Total scope 3		1485.7	2137.9	689.4	628.8

Figure 1: GHG emissions by scope

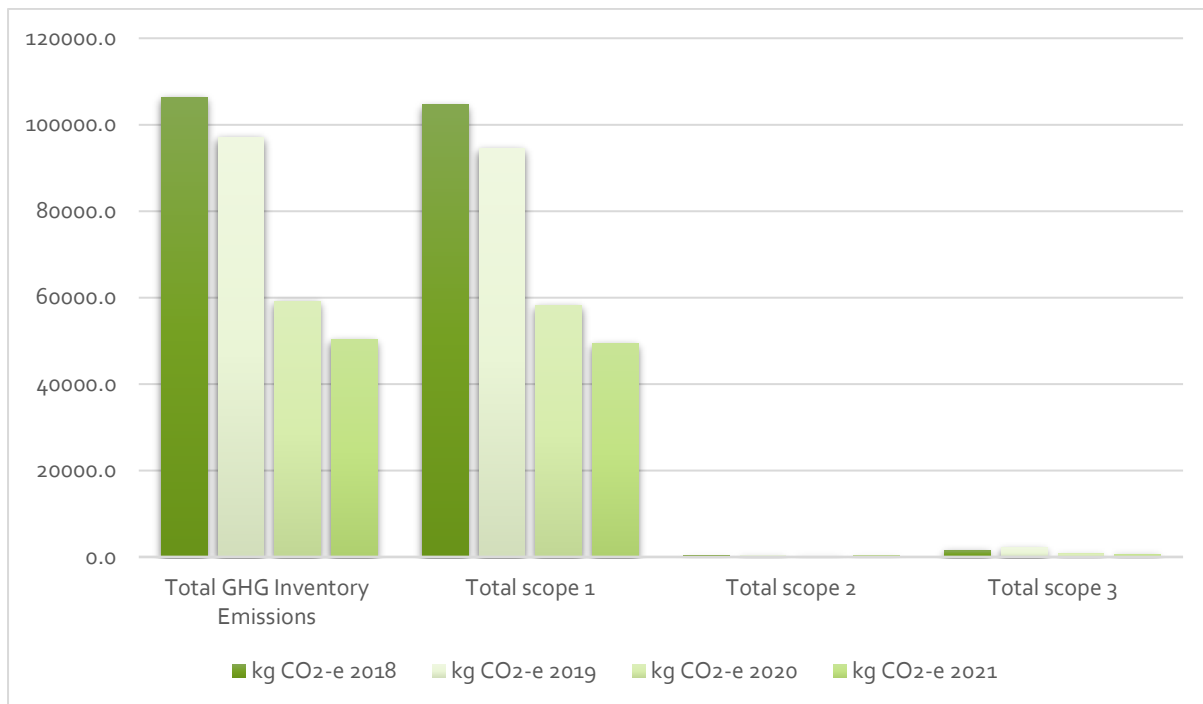
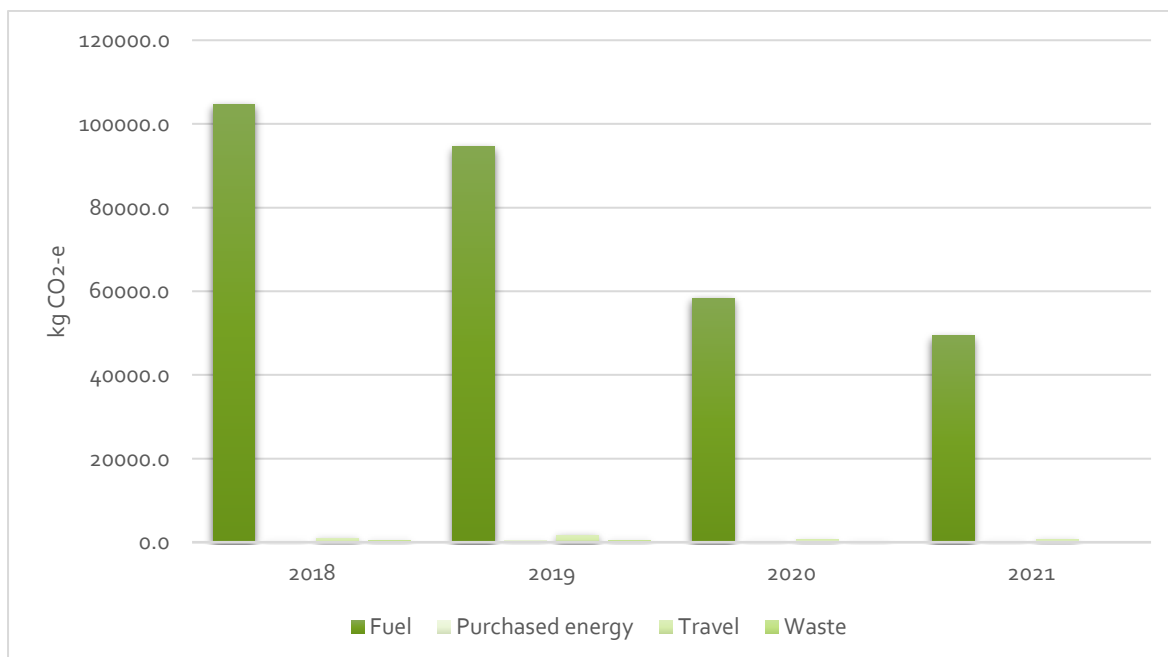


Figure 2: GHG emission by source



8. HELICOPTER CARBON CALCULATOR

In previous calculations, we have not included any helicopter use in our figures, however they are used in the Kepler Heli Hike and on selected private days. As our groups have exclusive use, we can deduct from our accounts flying time, then calculate the corresponding litres of aviation fuel used.

This year we have kept the figure for helicopter emissions separate, however going forward from 2022, we will incorporate this into our total figure.

The Squirrel (6 seats) uses 170 litres, and the Hughes 500 uses 110 litres kerosene-based aviation fuel per hour

2021	Total Flying time (hours)	Total Litres Aviation fuel
Squirrel	30.6	5202
Hughes 500	15.8	1738

The total kgCo₂-e was 22,680.5.

9. CARBON CALCULATOR

To calculate the number of trees required to offset our carbon we have used the calculator on the Tane's Trees website, page link <https://www.tanestrees.org.nz/resource-centre/carbon-calculator/>.

FIORDLAND TRIPS AND TRAMPS CALCULATIONS

Year	Emissions (tCo ₂ equivalent) Trips & Tramps	Emissions (tCo ₂ equivalent) Helicopter	Trees to plant (25% trees and 75% shrubs)
2018	106		479
2019	97		439
2020	59		267
2021	50	23	330

10. OFFSETTING CARBON

The goal is for Trips & Tramps to offset our emissions with a local planting scheme to protect and expand the native forest and waterways. Despite covid impacting our financial resources we have continued to discuss carbon with other businesses and momentum has started to gain for a local project.

So far Trips & Tramps donated 100 plants in August 2020 to the Fiordland Trails Trust to support the Lake 2 Lake Trail.

11. DISCUSSION

This data is increasing our awareness of the impact our business activities have on the natural environment. Trips & Tramps has always taken a leading role in environmentally sustainable practices; however, we acknowledge now is the time for action.

Covid-19 and the decrease in travel has seen a corresponding decline in our footprint. As our business evolves to meet the new demand, we have relied more on external operators to assist with the transport of our guests (e.g., helicopter and water taxis on the guided walks). This year we worked out how to incorporate helicopter flying time into our emission calculations.

The uncertainty of the global pandemic has had major implications on our financial and mental capacity to act on aspirations to offset our carbon footprint. It is hoped in 2022 we will further ideas and projects that will move us towards our goal of being carbon neutral.

Throughout our carbon journey we continue to share our knowledge and motivate other businesses, particularly our contractors to begin their journey. In March 2021 Kate spoke at a local event to the Te Anau community about our companies journey so far. For the full article see <https://www.stuff.co.nz/environment/climate-news/124552545/dreaming-of-a-carbonfree-community-in-fiordland>.

Despite all the challenges Trips & Tramps is committed to the carbon journey. With the return of international visitors and the increasing urgency to combat climate change, now is the time to act. We believe every small business has a part to play.

12. REFERENCES

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

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