



Carbon Inventory Report: **Bennetto Natural Foods Co. Limited**

Trading As Bennetto Natural Foods

Period:	1 Apr 2021 - 31 Mar 2022
Base year:	1 Apr 2020 - 31 Mar 2021
Status:	Quality Reviewed Inventory
Assurance type:	No Assurance
Certification type:	Climate Positive
Last updated date:	2023-07-07



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1 Summary

This carbon inventory was prepared for Bennetto Natural Foods Co. Limited, trading as Bennetto Natural Foods. Thereafter in the report, the organisation will be referred to as Bennetto Natural Foods.

Report period 1 Apr 2021 - 31 Mar 2022

Base year 1 Apr 2020 - 31 Mar 2021

1.1 Organisation Information

Contract manufacturer of chocolate. Sales and distribution of organic Fair Trade dark chocolate.

2 Background

2.1 Statement of Intent

Our organisation is committed to achieving Ekos certification and offsetting 100% or 120% of our emissions while reducing emissions in line with our reduction plan. This certification demonstrates our dedication to sustainability and environmental responsibility, recognising our efforts to reduce our carbon footprint and mitigate the impact of our operations on the planet. It supports our sustainability reporting and helps us communicate our environmental performance to stakeholders and customers. Additionally, the certification provides guidance to continue improving our environmental performance, identifying opportunities for improvement and implementing best practices to achieve carbon neutrality and climate positivity, and drive continuous improvement towards sustainability.

2.2 Communication and dissemination

This inventory was prepared as a management tool for Bennetto Natural Foods 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 Bennetto Natural Foods, 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 4th annual greenhouse gas (GHG) emissions inventory that has been prepared by Bennetto Natural Foods Co. Limited.

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:

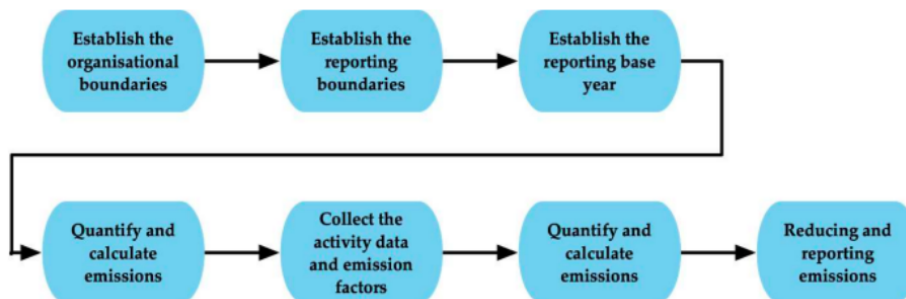


Figure 1: ISO 14064-1 (2018) methodology for measuring a GHG inventory

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 Bennetto Natural Foods'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

No changes to calculation methodology.

During the completion of the 2022 financial year emissions inventory it was identified the manufacturer of the chocolate had provided incorrect product emissions data during the 2021 financial year carbon emissions measurement and reporting process. This error has been corrected within the 2022 financial year emissions inventory report. This error and correction had no impact on the offset requirements due to the product emissions being previously offset by the manufacturer.

4 Reporting boundary

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

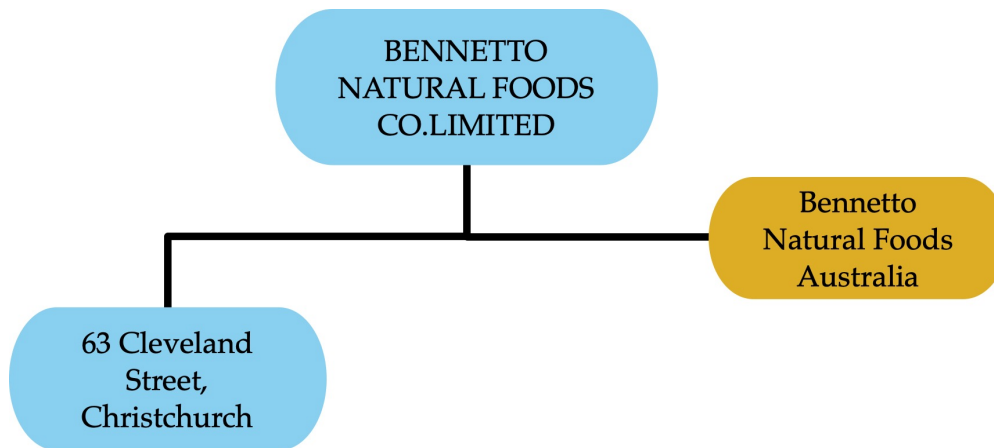


Figure 2: Bennetto Natural Foods's Organisational Boundary.

Table 1: Business units included/excluded

Legal entities (Include any subsidiaries)	Business unit / Location	Activities / Purpose	Included / Excluded	Reason for exclusion
BENNETTO NATURAL FOODS CO. LIMITED	63 Cleveland Street Christchurch		Included	
Bennetto Natural Foods Australia	Australia		Excluded	Seperate legal entity operating outside of the New Zealand Market. Intent behind this measurement project is to understand the emissions profile of the New Zealand based entity.

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	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/Outward Freight	Upstream transport and distribution of goods	Mandatory	Include	None	International inward freight from the Sweden based manufacturer is reported in the Purchased Goods & Services category.
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	Limited level of influence	
Work From Home	Staff working from home	Non-mandatory	Include	None	

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	Wastewater production was excluded based on unavailability of data and immateriality.
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	Include	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	Exclude	Source data difficult/expensive to obtain	
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	Home office emissions captured in Scope 2 emissions calculation. 3PL storage facility included.
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	Include	None	The Life Cycle Analysis of the product emissions included in the Purchased Goods & Services category included end of life emissions.
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	Not Applicable	None	
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 Bennetto Natural Foods'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.

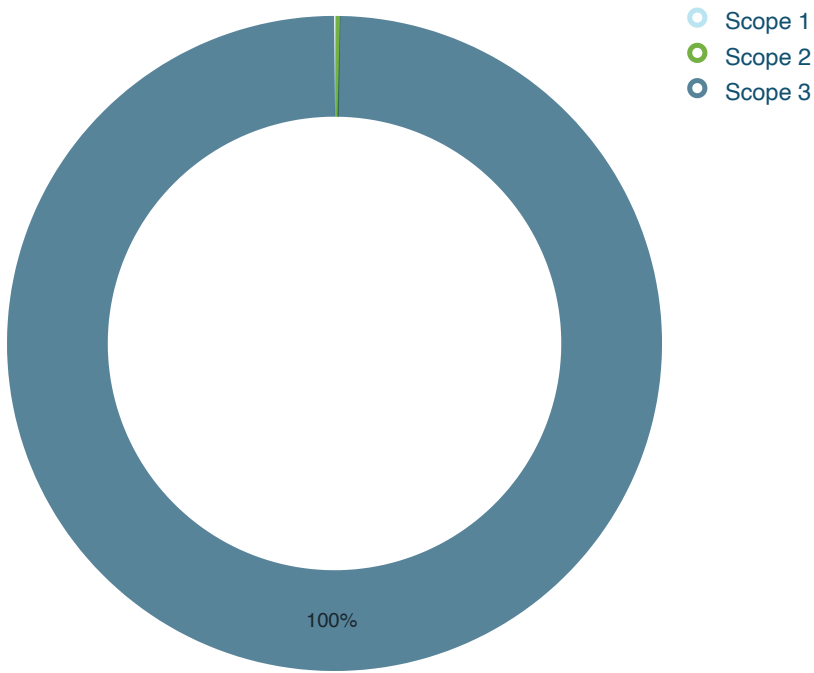
Scope	Emissions Category	tCO ₂ e (location-based)
1	(1) Direct GHG Emissions	0.20
2	(2) Indirect GHG Emissions From Imported Energy	0.37
3	(3) Indirect GHG Emissions From Transportation & Distribution	15.09
3	(4) Indirect GHG Emissions From Products & Services Used By The Organisation	179.68
3	(5) Indirect 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		195.35
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	tCO ₂ e Intensity Metric (location-based)
Number of FTE	1.00	195.35
Gross Revenue (\$Mil)	1.00	195.35
Production (MT)	0.00	0.00



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

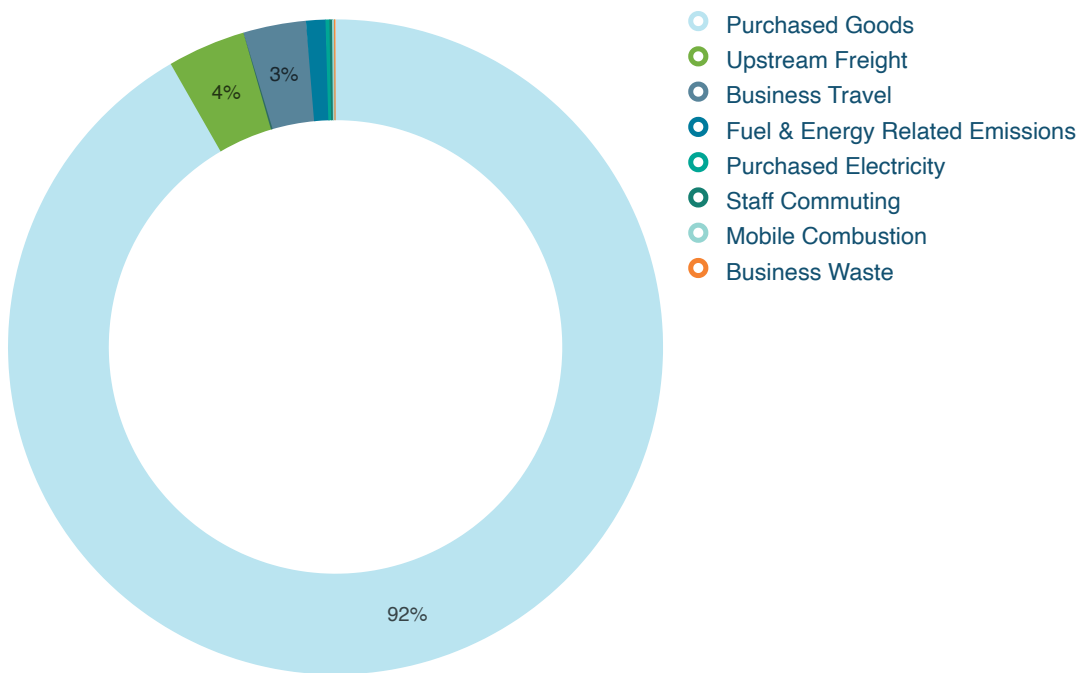
Figure 3: Emissions by Scopes

6.2 Emissions by Activities

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

Table 4: GHG emissions by Scope and Activity groups (location-based)

GHG scope	Factor Groups	Sum of tCO ₂ e	% of Inventory
1	Mobile Combustion	0.20	0.10%
2	Purchased Electricity	0.37	0.19%
3	Purchased Goods	179.01	91.63%
3	Upstream Freight	7.54	3.86%
3	Business Travel	6.04	3.09%
3	Fuel & Energy Related Emissions	1.90	0.97%
3	Staff Commuting	0.25	0.13%
3	Business Waste	0.03	0.02%
Grand Total		195.35	100.00%



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

Figure 4: Emissions by Activity Groups

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

Table 5: GHG emissions sources ranked by largest to smallest (location-based)

Emission Sources	GHG tCO₂e	% of Inventory
Product emissions	179.00	91.63%
International Air Travel - Long Haul International Economy Class	4.20	2.15%
Inward Freight Air Freight - Short Haul (<3,700 km)	3.40	1.74%
Outward Freight Other Freight - Truck	2.16	1.11%
Well to tank emissions	1.87	0.96%
Business Accommodation - Saudi Arabia	1.13	0.58%
Outward Freight Other Freight - Courier Van	0.62	0.32%
Inward Freight - Container Ship - Average	0.59	0.30%
Domestic Air Travel - New Zealand Domestic Economy Class	0.46	0.23%
Electricity - New Zealand (Unit 1)	0.37	0.19%
Outward Freight Air Freight - Short Haul (<3,700 km)	0.30	0.15%
International Air Travel - Short Haul International Economy Class	0.26	0.13%
3PL Storage	0.26	0.13%
Staff Commuting - Petrol	0.22	0.11%
Mobile Combustion distance driven - Large Petrol Post2015Fleet	0.20	0.10%
Outward Freight Air Freight - Long Haul (>3,700 km)	0.17	0.09%
Inward Freight Other Freight - Truck	0.03	0.02%
Electricity T&D Losses	0.03	0.02%
Waste & Wastewater General Waste to Landfill - Without Gas Recovery (Unit 1)	0.03	0.02%
Staff Commuting - Petrol Hybrid	0.02	0.01%
Staff Working From Home	0.01	0.01%
Paper & Board: Paper	0.01	0.00%
Mobile Combustion - Diesel	0.00	0.00%
Mobile Combustion - Petrol	0.00	0.00%
IT Services & Data Storage	0.00	0.00%
Grand Total	195.35	100.00%

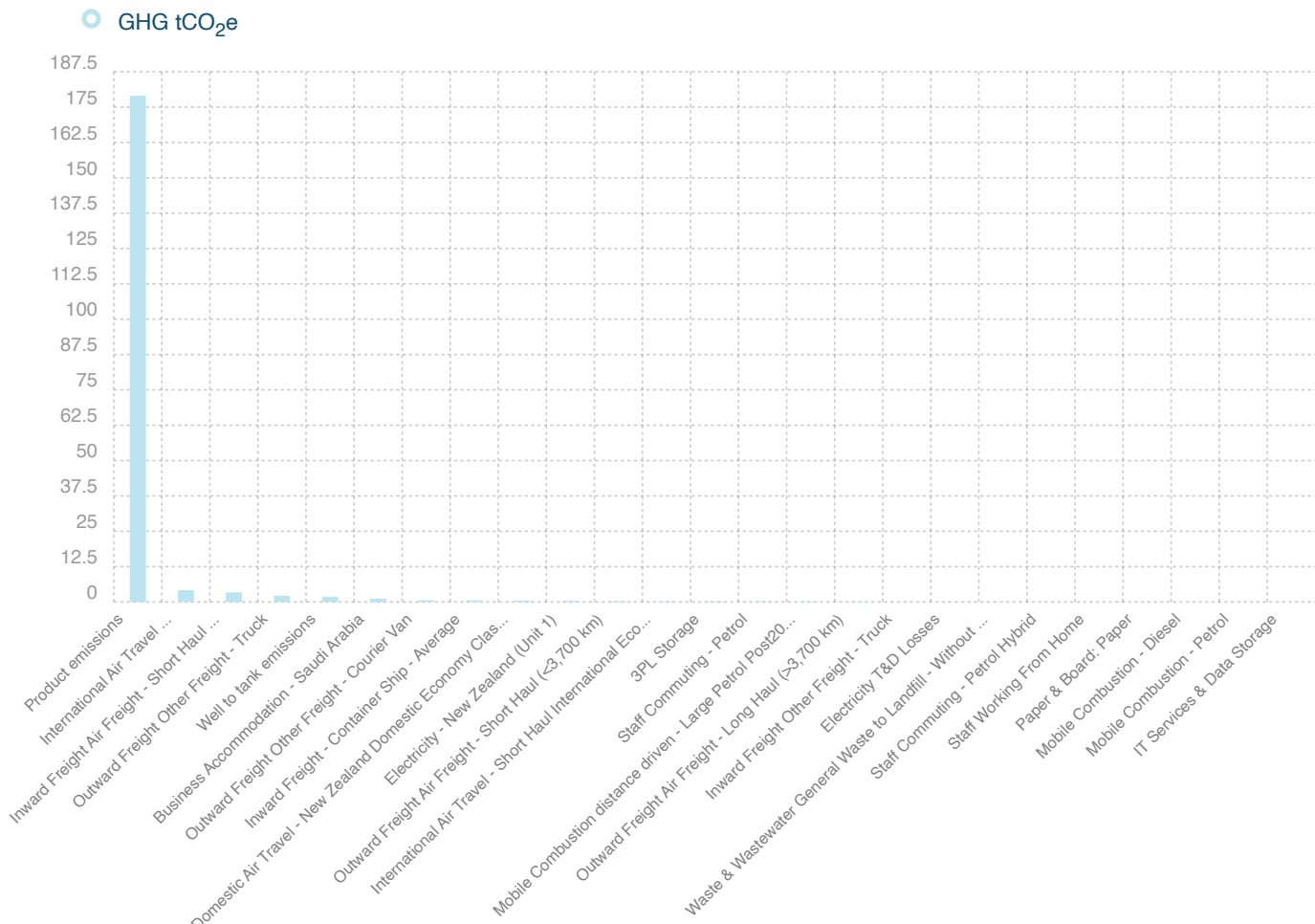


Figure 5: Emissions by Activities (location-based)

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 6 below.

Table 6: Activity data collection - quality and source

Emissions source	Scope	Unit	Data source	Data quality	Any assumptions made
Mobile Combustion - Fuels	1	L			
Mobile Combustion - Vehicles	1	KM	Known Transport Patterns	Poor	Assumption that manual data aggregation is accurate.
Electricity - Electricity Consumption	2	KWH	Supplier invoices	Good	32% of household consumption applied to businesses purposes.
Purchased Goods and Services	3	KG	Internal records	Poor	2021 FY data was applied. This was accepted as the results are immaterial. Data quality improvement systems will need to be put in place for future assessments.
Sea Freight Received	3	TKM	Supplier reports	Medium	
Air Freight Received	3	TKM	Supplier Reports	Medium	
Other Freight Received	3	TKM	Freight Reports	Medium	
Air Freight Sent	3	TKM	GoSweetSport Reports for online orders. Reports from third party logistics supplier for other outward freight.	Good	
Other Freight Sent	3	TKM	GoSweetSport Reports for online orders. Reports from third party logistics supplier for other outward freight.	Medium	Assumed to 100% van based on weight of shipments for online orders. Assumed truck to van ration for other outward freight data.
Waste & Wastewater - Landfill Waste	3	KG	Internal estimation	Poor	Estimation based on volume of bin and frequency of collection.
International Business Flights	3	PKM	Booking information	Low	Assuming no data was missed during the manual data aggregation process.
Domestic NZ Business Flights	3	PKM	Booking information	Low	Assuming no data was missed during the manual data aggregation process.
Business Accommodation	3	Person nights	Booking information	Low	Assuming no data was missed during the manual data aggregation process. Saudi Arabia emissions factor was applied.
Staff Vehicle Mileage	3	KM	Internal sample data based on 1 weeks commuting behaviour	Poor	Assuming the sample data was representative of the annual commuting behaviour.
Staff Working from Home	3	DAYS	Internal sample data based on 1 weeks commuting behaviour	Poor	Assuming the sample data was representative of the annual commuting behaviour.
3PL Storage	3	-	Supplier	Poor	Proportional allocation based on the suppliers FYE 2020
Product emissions	3	-	Supplier	Medium	Emissions provided were calculated through the completion of product carbon measurements.

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
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Emission Sources	tCO ₂ e	tCO ₂	tCH ₄	tN ₂ O
Mobile Combustion - Petrol	0.00	0.00	0.00	0.00
Mobile Combustion - Diesel	0.00	0.00	0.00	0.00
Mobile Combustion distance driven - Large Petrol Post2015Fleet	0.20	0.00	0.00	0.00
Grand Total	0.20	0.00	0.00	0.00

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

Product footprint measurements and pre offset freight emissions verified by myclimate.

8 Emission Performance against previous years

Table 8 and figure 6 below shows emissions comparison against base year and previous year, if applicable.

Table 8: Comparison against base year

Activities	Base year tCO ₂ e (location-based)	Current year tCO ₂ e (location-based)	% Change against base year
Purchased Goods	218.30	179.01	-18.00%
Upstream Freight	4.04	7.54	86.57%
Business Travel	7.80	6.04	-22.52%
Fuel & Energy Related Emissions	1.96	1.90	-3.04%
Purchased Electricity	0.40	0.37	-6.45%
Staff Commuting	0.31	0.25	-19.01%
Mobile Combustion	0.74	0.20	-72.34%
Business Waste	-	0.03	-
Grand Total	233.55	195.35	-16.36%

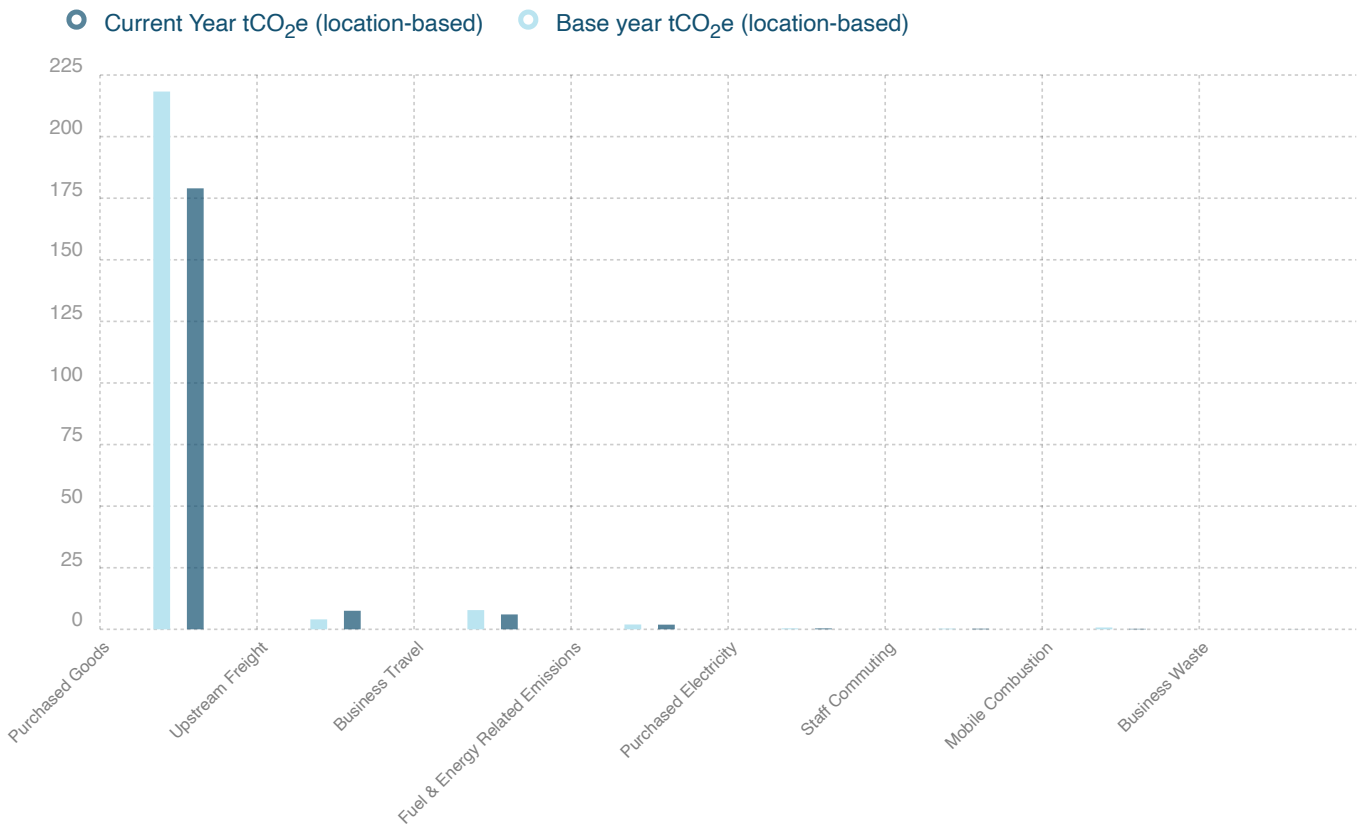


Figure 6: Emissions compared with previous years

9 Emission Reduction Recommendations

A detailed emissions reduction plan will be completed based on the results of the 2023 financial year emissions inventory.

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:

Recognised Offset Deductions		
Emissions Source	Additional Notes	tCO ₂ e deducted
Purchased Goods & Services - Contract Manufacturer	Product carbon footprint measurements verified by myclimate.	179.00
Incoming Freight- 3PL Warehousing	Inward freight from international manufacturer. These emissions are offset by the contract manufacturer and verified by myclimate.	0.26
International Incoming Freight (including WTT emissions)	Inward freight from international manufacturer. These emissions are offset by the contract manufacturer and verified by myclimate.	6.74
Total Recognised Offset Deductions		186.00

VCS Certified Agroforestry and Reforestation carbon credits from Jubilacion Segura Project in Peru.

There were no known instances of double counting of emissions within this inventory.

11 Offsets and Certification

11.1 Certification Type

Bennetto Natural Foods has chosen to apply for Climate Positive Certification.

11.2 Offset amount

Table 9: Offset calculation (location-based)

Total Gross GHG Emissions	Offset requirement		Purchased credits/ Pre-offset	Net offset requirement	Total Credits to offset
195.35	Climate Positive Option (120%)	234.42	186.00	48.42	49.00

11.3 Carbon credits

Bennetto Natural Foods Co. Limited has elected to cancel the following carbon credits:

Offset Type	Description	# Units Cancelled
NZUs - Maruia (Kern Creek Forest Conservation Project)	Offsets have been sourced in the form of Permanent New Zealand Restorative Forest Units (NZUs) produced in the Kern Creek Forest Conservation Project located in the Maruia Valley, Aotearoa New Zealand and verified to the New Zealand Emissions Trading Register. These offsets are retired in the New Zealand Carbon Emissions Trading Register.	49.00

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 - 2022 Emission Factors Workbook and 2022 Emission Factors Flat File

DBEIS - 2022 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, NO_x, 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.