

GREENHOUSE GAS EMISSIONS INVENTORY REPORT

Inventory Scope: Mainfreight Group
Reporting Period: 1 April 2024 to 31 March 2025
Version: 1.0
Status: Assured



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CHAPTER 1: GENERAL DETAILS, PURPOSE AND POLICY

1.1 Introduction

The following document provides the Mainfreight Group of companies' full greenhouse gas (GHG) emissions inventory for the 2025 Financial Year – April 2024 to March 2025.

Mainfreight's reporting processes and emissions classifications are consistent with international protocols and standards. This report has been prepared in accordance with the *International Standards Organisation* standard *ISO 14064-1:2018*. The information provided follows the requirements outlined in Part 9.3.1 and (where applicable) 9.3.2 of the standard.

1.2 Purpose

Mainfreight's intent here is to demonstrate best practice with respect to consistency, comparability and completeness in the accounting of greenhouse gas emissions. This report:

- Relates to emissions for the Mainfreight Group of companies.
- Has been prepared in accordance with the requirements of the ISO 14064-1: 2018 standard.
- Endeavours to use primary data wherever possible but especially surrounding all major emissions sources. Where primary data is not available, a consistent and conservative approach to calculations will be applied.
- Reflects our commitment to better understanding and ultimately improving our operational performance with respect to emissions.
- Excludes specific targets.

1.3 Description of Mainfreight

Mainfreight is a supply chain and logistics provider with 337 branches worldwide offering full solutions across warehousing, international air and ocean freight and domestic forwarding. Mainfreight is a New Zealand Stock Exchange listed company (MFT: NZX). The company is made up of "Mainfreight NZ Limited" (the 'Parent') and its subsidiaries (together the 'Group').

For further information see www.mainfreight.com.

1.3.1 GHG and Sustainability Policies, Strategies and Programmes

Mainfreight's 100-year vision, established in its earliest days, has been a guiding principle in our commitment to sustainability. All decisions are made on the basis that we will be here for another 100 years and are aligned with the key concepts of sustainability: investing in our people and communities, reducing the environmental impact of our activities, supporting our customer, supplier and stakeholder relationships, and developing our growth strategies.

Climate change remains a defining issue for businesses and governments everywhere. For Mainfreight, it begins with accepting that our business is based on an activity that generates greenhouse gas emissions and therefore taking responsibility to reduce those emissions over time, while maintaining our competitiveness and ability to deliver quality services as our customers expect.

Mainfreight's commitment to sustainability, safety, health and the environment has been, and continues to be, a fundamental element of our operating practices and success to date. For more on Mainfreight sustainability please visit: <https://www.mainfreight.com/global/en/global-home/about-us/sustainability.aspx>.

1.4 Persons Responsible

The provided GHG Inventory and Report has been prepared by the New Zealand based team, with significant support from many parties across all major operating regions.

Overall responsibility lies with Graeme Illing, Chief Financial Officer.

Responsibility for the preparation of the report and inventory:

- Jodi McLaren, Business Development & Sustainability – New Zealand

Assisting with background data and supporting information:

- Shaun Morrow, Sustainability Programme Manager – New Zealand
- Charlotte Baken, Sustainability Team – New Zealand
- Alvin Datt, Financial Controller – New Zealand
- Raju Vegesna, Accountant – New Zealand
- Harry Yang, Accountant – New Zealand
- Harrison Irvine, Sustainability Team – Australia
- Paige Rigopoulos, Sustainability Team – Australia
- Ben Keane, Financial Controller – Americas
- Ryan Ogren, Financial Controller – Americas
- Aleksandra Petrovska, Financial Controller – Americas
- Erik Berger, Financial Controller – Americas
- Shirly Liu, Financial Controller – Asia
- Remy Rosendahl, Business Solutions – Europe

1.4.1 Team Training for the Preparation of this Emissions Inventory and GHG Report

Members of the core inventory preparation team are trained on the principles and requirements within the ISO 14064-1:2018 standard.

Each year the inventory preparation team provide regional contributors with a detailed data input template and instructions on collection of data in line with the standard. Workshops are then arranged with each regional team around their contributions.

In 2023, following the preparation and publishing of the 2022 Calendar Year GHG Inventory report a detailed post audit review was conducted. Our emissions reporting processes were then discussed at the Group Financial Controllers meeting held in the Netherlands in late 2023.

1.5 Audience and Dissemination Policy

This report is intended for all Mainfreight stakeholders interested in its greenhouse gas emissions inventory and the associated reporting structure, notation and explanations. It is provided publicly on our website following appropriate third-party verification.

1.6 Reporting Period and Frequency of Reporting

This GHG report covers the financial year 1 April 2024 to 31 March 2025.

GHG reports are produced annually.

1.7 Reporting Standards, Approach and Verification

1.7.1 Compliance with ISO 14064-1:2018

The GHG report for the year ending 31 March 2025 has been prepared in accordance with ISO 14064-1:2018. A reporting index has been provided in Appendix 2.

1.7.2 Audit of GHG Inventory

This inventory has been assured by Toitū Envirocare as part of the New Zealand Climate Related Disclosures Regime. The full Audit Opinion can be found here: <https://www.mainfreight.com/global/en-nz/investor/reports-library/sustainability-information>, within our Sustainability and Climate Report for the 2025 Financial Year.

Level of Assurance	Reasonable for categories 1, 2, 3 and 4, except for category 4 capital goods emission which is limited.
Qualifications	The opinion is unmodified.

CHAPTER 2: ORGANISATIONAL BOUNDARIES

2.1 Consolidation Approach

Mainfreight utilises the ‘operational control’ consolidation method for our emissions inventory. This approach considers all emissions that Mainfreight exercises some control over but not necessarily financial control (all financially controlled entities are also included).

The most significant application of this approach is the inclusion of emissions from our owner drivers, agents, rail providers, shipping lines and airlines that support our service offering to customers.

A small number of franchises, although related to the Mainfreight Group, are not considered under its control and have not been included in the emissions summary. Emissions for transportation services to and from franchises as part of our network are included.

2.2 Organisational Chart

The below organisational chart depicts the operating nature of the Mainfreight Group as is relevant to the emissions summary.

Mainfreight has 337 branches across five regional operations, 4 of which run our 3 key service platforms, with Asia largely focused on the Air & Ocean division along with a small warehousing footprint.

The formal Group Structure is provided as Appendix 3.

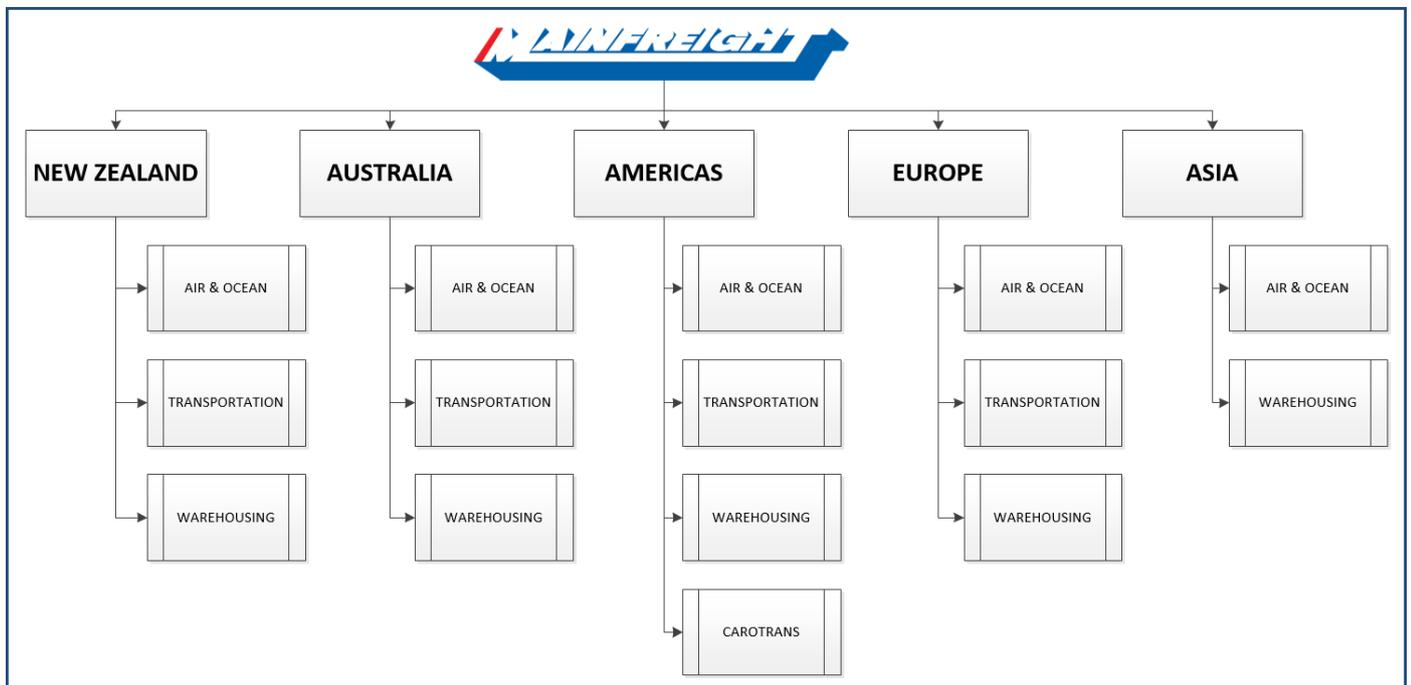


Figure 1: Mainfreight Operational Organisation Chart

CHAPTER 3: REPORTING BOUNDARIES

3.1 Emissions Categories and Classification

Greenhouse gas emissions sources have been identified and grouped in accordance with the ISO 14064-1:2018 standard. This methodology lists six categories of emissions and differs somewhat from categorisation in line with the Greenhouse Gas Protocol’s scopes 1 through 3. A comparison of the categories is provided below.

ISO 14064-1:2018 Category	Greenhouse Gas Protocol Scope
Category 1: Direct GHG emissions and removals	1
Category 2: Indirect GHG emissions from imported energy	2
Category 3: Indirect GHG emissions from transportation	3
Category 4: Indirect GHG emissions from products used by the organisation	
Category 5: Indirect GHG emissions associated with the use of products from the organisation	
Category 6: Indirect GHG emissions from other sources	

Table 1: Emissions categories comparison

3.2 Significance and Materiality

Factors for consideration in assessing significance and materiality include:

- Size of the emissions.
- Mainfreight’s influence on the emission source.
- Difficulty in obtaining data.
- Poor validity in available estimation approaches.

Whilst all the above would be considered in materiality assessments, the criteria that would mandate disclosure of emissions sources as significant is:

- a) Where a single source has estimated emissions likely to be at least 1% of Mainfreight’s total emissions.
- b) Where the total of ‘insignificant’ sources have estimated emissions likely to be at least 5% of Mainfreight’s total emissions, enough of those must be included to bring the excluded total below 5%.

3.3 Summary of Emissions Source Inclusions

Category	Emission Source	Data Source	Methodology & Materiality
1	Biofuels used	Fuel billing	Fuel use in litres
1	Fuel used by owner drivers	Fuel billing	Fuel use in litres
1	Fuel used by company trucks	Fuel billing	Fuel use in litres
1	Fuel used by company cars	Fuel billing	Fuel use in litres
1	Fuel use for mileage expensed	Expense accounts	In kilometres or litres
1	Payload distance if fuel is not available	TMS reports [1]	Tonnes x kilometres
1	Fuel for material handling equipment	Fuel reports [2]	In litres or kilograms
1	One-off refrigerant leakage event	Top up billing	Top up kilograms x by GWP
1	Stationary gas combustion	Gas billing	In cubic metres or litres
2	Electricity	Electricity billing	In kilowatt-hours
3	Tkm Road (third party carriers)	TMS reports	Summary road tonne-kilometres by third party carrier
3	Fuel Use Road (third party carriers)	Invoices	Converted spend to fuel use using average fuel price
3	Tkm Rail	TMS reports [3]	Summary Tkm by mode rail.
3	Tkm and TEU-km Sea	Shipment Weight or Volume & Port-Port distance [4]	Summary of Shipment port-port kilometres x tonnes or shipping containers
3	Tkm Air – Short haul (<1000km), Medium haul (1000-3700km) and Long haul (>3700km)	Shipments & Port-Port distance	Summary of Shipment port-port tonne-kilometres
3	Business Travel	Provider reports on emissions/distance	Direct emissions reports or kilometre summaries
3	Accommodation	Provider reports	Direct reports or per night
3	Rental Cars	Provider reports	Direct emissions, kilometres or fuel use reports
4	Waste – Landfill	Provider reports on weight	Tonnes of general waste (assumed)
4	Waste – Recycling	Provider reports on weight	Tonnes of general recycling
4	Electricity transmission and distribution losses	Electricity billing	Kilowatt-hour input at T&D emission factor
4	WTT emissions associated with fuel extraction and refining	Fuel billing	Fuel x appropriate WTT fuel emission factor
4	Construction	Provider reports	Spend on building construction and fit outs

Table 2: Emissions Source Inclusions

Notes to Table 2

1. We operate our own bespoke Transport Management System (TMS) and run specific queries to produce summary details on tonne-kilometres by mode.
2. Different regions use different fuel types (i.e. LPG vs natural gas) and measures (kilograms vs litres), electric MHE would be accounted for in 2.1.
3. Diesel assumed for all regional rail factors. NZ uses supplier factors.
4. A Port-Port (and Airport-Airport) table has been developed as a reference tool. For international container freight TEU-km is the preferred unit. Our sea freight factors follow Clean Cargo.

3.4 Summary of Emissions Source Exclusions

The following emissions sources have been identified but excluded from the emissions inventory. These sources are not considered significant or material to the context of the inventory or to stakeholders (see 3.2), and/or are not feasible or practical to calculate at the current point in time.

Category	Emission Source	Screening Method & Materiality
1	Fugitive emissions from air conditioning systems including chilled transport	GHG Protocol Screening Tool <i>De minimis (0.57%)</i>
1	Fumigants for treatment of product/equipment for export	Extrapolated from Australian regional data <i>De minimis (0.0004%)</i>
1	Emissions from workshop operations e.g. welding	Qualitative (small, non-core activity) Estimated to be <i>de minimis (0.06%)</i>
2	Emissions from charging electric vehicles offsite	Average Data Method using highest intensity grid factor <i>De minimis (0.62%)</i>
3	Team commuting	GHG Protocol Average Data Method <i>De minimis (0.65%)</i>
3	International pre and post carriage where Mainfreight is not the service provider	Difficult to obtain, considered to be outside of reporting boundaries (neither financial nor operational control)
3	Couriers from warehouses	Average Data Method using NZ Ministry for the Environment average road factor <i>De minimis (0.30%)</i>
4	Goods used by branches (e.g. furniture, stationery, computer equipment, food, uniforms etc.)	Spend-based estimation using thinkstep-anz factors <i>De minimis (0.51%)</i>
4	Customer Consumables	Spend-based estimation using thinkstep-anz factors <i>De minimis (0.77%)</i>
4	Services (e.g. accounting, legal, audits, insurance, repairs & maintenance etc.)	Spend-based estimation using thinkstep-anz factors <i>De minimis (0.30%)</i>
4	Water and Wastewater	Per-capita estimation using NZ Ministry for the Environment factors <i>De minimis (0.03%)</i>
4	Mobile Assets	Spend-based estimation using thinkstep-anz factors <i>De minimis (0.07%)</i>
4	Waste (Other branches in Asia)	Extrapolated from known Asia regional data <i>De minimis (0.00036%)</i>
4	WTT Electricity	Calculated using UK DESNZ factor against total electricity <i>De minimis (0.15%)</i>
	Biogenic emissions excluding biofuels	Average Data Method using UK DESNZ factor <i>De minimis (0.18%)</i>

Table 3: Emissions Source Exclusions

Each of the above screening methods used conservative assumptions and applied available industry emission factors to estimate the emissions for each excluded source. Therefore, we expect our emissions estimates to be higher than what they would be if better data was available.

For example, the two largest excluded sources used the following assumptions:

Emission Source	Conservative Assumptions
Team Commuting	Assumes all team members commute by personal car, does not account for company cars, public transport or active transport modes.
Customer Consumables	Assumes our sites send out as many pallets, cardboard and plastic wrap to customers as we do for all our internal waste streams combined.

Table 4: Screening method assumptions

CHAPTER 4: QUANTIFIED GHG INVENTORY OF EMISSIONS

4.1 Consolidated Statement of Greenhouse Gas Emissions

EMISSIONS	Notes	CO2e TOTAL (Tonnes p.a.)	Carbon	Methane	Nitrous	Hydrofluoro-
			Dioxide (CO2)	Non/Fossil Origin (CH4)	Oxide (N2O)	carbons (HFCs)
	1	GWP	1	27/29.8	273	3943
Direct emissions in tonnes CO2e		340,037	336,178	279	3,527	54
1 Category 1: Direct GHG emissions and removals in tonnes CO2e		340,037	336,178	279	3,527	54
Direct emissions from stationary combustion		1,872	1,869	2	1	-
Direct emissions from mobile combustion		338,112	334,309	277	3,526	-
Direct process and removals from industrial processes		-	-	-	-	-
Direct fugitive emissions from the release of GHGs in anthropogenic systems		54	-	-	-	54
Direct emissions and removals from land use and forest change		-	-	-	-	-
Direct emissions in tonnes of CO2 from biomass						
Indirect emissions in tonnes CO2e		1,316,844				
2 Category 2: Indirect GHG emissions from imported energy	2	18,561				
Indirect emissions from imported electricity		18,561				
Indirect emissions from imported energy		-				
3 Category 3: Indirect GHG Emissions from Transportation		1,175,870				
Emissions from upstream transportation and distribution of goods	NS	-				
Emissions from downstream transportation and distribution of goods		1,167,406				
Emissions from employee commuting	NS	-				
Emissions from client and visitor transport	NS	-				
Emissions from business travels		8,465				
4 Category 4: Indirect GHG emissions associated with the use of products by the organisation		122,413				
Emissions from purchased goods and services	3	89,494				
Emissions from capital goods		26,241				
Emissions from the disposal of solid and liquid waste		6,679				
Emissions from the use of assets	NS	-				
Emissions from other services not described above		-				
5 Category 5: Indirect GHG emissions associated with the use of products from the organisation						
Emissions or removals from the usage of product	NS	-				
Emissions from downstream leased assets	NS	-				
Emissions from end of life stage of the product	NS	-				
Emissions from investments	NS	-				
6 Category 6: Other indirect GHG emissions sources	NS	-				
TOTAL EMISSIONS CATEGORIES 1 - 6		1,656,881				
REMOVALS	4					
Direct removals in tonnes CO2e						
Emissions Liabilities	5					
Total Storage as of year end in tonnes CO2e		8,944				
Other Related Information						
Performance tracking (emissions and removals by metric)			Greenhouse Gas Emissions Inventory Report		5	
Base year GHG emissions, removals and stocks; and adjustments to base year			Greenhouse Gas Emissions Inventory Report		4.6	
Disclosure of most significant sources and sinks			Greenhouse Gas Emissions Inventory Report		3.3	
Emissions Liabilities			Greenhouse Gas Emissions Inventory Report		4.3	
Significance criteria			Greenhouse Gas Emissions Inventory Report		3.2	
Uncertainty assessment			Greenhouse Gas Emissions Inventory Report		4.5	

[NS] Non significant

Figure 2: Consolidated Statement of Greenhouse Gas Emissions (sums may not total due to rounding)

Notes to Consolidated Statement of Greenhouse Gas Emissions

1. *Direct and indirect emissions have been prepared in accordance with the recommendations of Annex B. Gas types CO₂, CH₄, N₂O and HFCs have been included as those relevant to direct emissions. The ISO14064-1:2018 emissions categories relate to the GHG Protocol as follows: Category 1 = Scope 1, Category 2 = Scope 2, Categories 4-6 = Scope 3.*
2. *Electricity emissions have been calculated using the location-based method.*
3. *This includes electricity transmission and distribution losses. WTT (Well to Tank) emissions have also been included as emissions from purchased goods and services.*
4. *This document does not provide any recommendations or requirements for removal.*
5. *Emissions liabilities are denoted here but not included in the emissions total. For further details see section 4.2.*

4.2 Methodologies for the Collection and Quantification of Data

As an enterprise spanning regions across the globe, the collection of emissions data covers a broad range of localities and consequently, service providers and data sources. As a result, source data varies in both format and degree of detail.

The emissions summary represents a best attempt to consolidate and standardise emissions data and provide a detailed explanation of working and estimation in line with the ISO 14064-1:2018 standard.

Due to the short turnaround for report publication at the end of the financial year, not all primary data sources had been issued or available at the time of compiling our inventory. In such cases, we have taken 11 months of actual data and extrapolated this to give an estimation of the full year. Over 90% of our total emissions footprint comes from freight movements, which all use data for the full Apr24-Mar25 period.

Due to their access and understanding of Group reporting and data sources, Mainfreight's finance team have led the data collection efforts to date.

Section 3.3 describes the overview of emissions sources and their respective data sources. Where an estimation approach is required, the best available data and calculation method is applied. Where two or more estimation approaches are considered equally valid, that which produces the more conservative figure is used.

4.2.1 Approach to Emission Factors

Where possible, emission factors are specific to each reporting region. Where specific regional emission factors are not available or applicable, we have taken the most relevant as suggested by the website <https://emissionfactors.com/>. The latest emission factors were used as at the time of our emissions audit on April 15-16, 2025. Some of the below resources may have been updated since. Sources include:

- NZ Ministry for the Environment Guidance for Voluntary GHG Reporting – 2024
- USA EPA - Emission Factors for Greenhouse Gas Inventories 2025
- UK Department for Energy Security and Net Zero 2024
- Australian National Greenhouse Accounts Factors: 2024
- Cornell Hotel Sustainability Benchmarking Index (CHSB) Tool 2023
- The Australian Life Cycle Inventory Database Initiative V1.42
- thinkstep-anz Emission Factors for New Zealand
- KiwiRail Steel Wheels Report
- US Energy Information Administration
- Clean Cargo
- CO₂ emissiefactoren
- IPCC 6th Assessment Report
- IPCC 5th Assessment Report
- Australian Energy Market Operator
- Statista.com
- Corporate Traveller
- EcoTransIT World

4.2.2 Changes in Methodologies on prior year/base year

The 2018 calendar year was the first GHG report published by Mainfreight, it provides the base year for the original assessment and for future years. The following represent changes in methodology with respect to the base year and our commitment to improve the accuracy and breadth of reporting year on year:

- Shift to following our financial year of April to March.
- Emission factor updates.
- Improvements identified from our own post audit review, across data sourcing, quality, completeness and consistency.
- Improved 'follow the freight' for shipment leg level detail across LCL consolidations.

4.2.3 GWP Calculation and Source

Quantities of GHG emissions are expressed as tonnes of CO₂e (Carbon Dioxide Equivalents) using the global warming potentials (GWP) from the IPCC Sixth Assessment Report (AR6). The time horizon is 100 years.

Direct emissions sources (Category 1) are expressed as both CO₂e and their detailed GHG breakdown, including the GWP (Global Warming Potential) value. The most notable GHGs include:

GHG	Chemical Formula	GWP
Carbon dioxide	CO ₂	1
Methane (Fossil Origin)	CH ₄	29.8
Methane (Non-Fossil Origin)	CH ₄	27
Nitrous oxide	N ₂ O	273
Hydrofluorocarbon R410A	R410A	1924

Table 5: Greenhouse Gases and their respective Global Warming Potentials

4.2.4 GHG Liabilities

Mainfreight operates a small number of chilled storage facilities across New Zealand, Australia and Europe.

The refrigerants used to maintain temperature at these sites have extremely high GWP. As a result, despite relatively small volumes, their potential impact could be arguably significant.

GHG liabilities have been included separately in our emissions inventory to denote the risk associated with this pool of emissions were it to be released (by accident or leakage). Emissions liabilities are not included in the totals of our emissions count per the ISO 14064-1:2018 standard.

The provided GHG liabilities for Mainfreight are:

Region	GHG Liability / Site	Refrigerant	GWP	Quantity (kilograms)	GHG Liability (Tonnes)
New Zealand	107 Westney – Chiller System 1, Freezer	R404A	3943	95	374.59
New Zealand	107 Westney – Chiller System 2, ELA & Chillers	R134A	1300	190	247
New Zealand	107 Westney – Chiller System 3, Chillers	R404A	3943	90	354.87
New Zealand	107 Westney – Coolstore Complex 2	R1270	2	14	0.03
New Zealand	Christchurch Airfreight – Chiller	R407F	1674	395	661.23
Europe	Born – Warehousing Chiller	R449A	1397	12	16.76
Europe	Zaltbommel - Warehousing Chiller	R410A	1924	9	17.32
Australia	Epping – Chiller	R404A	3943	50	197.15
Australia	Prestons - Chiller	R410A	1924	27	51.95
Australia	Moorebank - Chiller	R32	677	384	259.97
Australia	Kookaburra - Chiller	R134A	1300	43	55.9
Australia	Regency Park - Chiller	R134A	1300	54	70.2
Australia	MFT Dandenong – Chiller	R410A	1924	304	584.9
Australia	MFT Dandenong – Chiller	R404A	3943	162	638.77
Australia	SpringBank - Chiller	R404A	3943	680	2681.24
Australia	MeadowBank - Chiller	R404A	3943	600	2365.8
Australia	EagleFarm - Chiller	R134A	1300	52	67.6
Australia	EagleFarm - Chiller	R449A	1397	92	128.52
Australia	MFW - Perth - Office & Chiller	R134A	1300	64	83.2
Australia	MFW - Perth - Office & Chiller	R32	677	1	0.68
Australia	MFW - Perth - Office & Chiller	R410A	1924	43	82.73
Australia	MFW - Perth - Office & Chiller	R404A	3943	1	3.94
GROUP	Total				8944.35

Table 6: GHG Liabilities

GWP Sources: [DESNZ 2024](#) and [Cooling Equipment Ltd](#)

Liabilities excluded based on expected values below levels of significance or relevance include:

- Refrigerants within chilled trucks (see section 3.4).
- Refrigerants within air conditioning systems (see section 3.4).
- Diesel in backup generators (covered under category 1 purchased fuel).
- Fire extinguishers (numerous but small holding and low GWPs).

4.2.5 Review, Internal Audit and Improvement

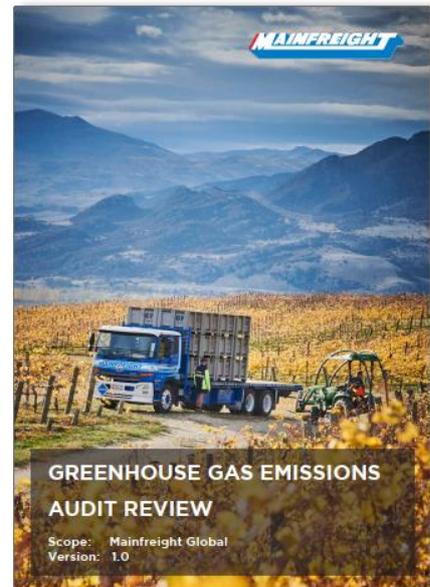
Primary data has been sought for all significant emissions sources. Where data is unavailable or not comparable, conservative estimation methods have been applied such that incentives lie in continually improving the ratio of primary data to estimation approaches.

Preparation of the inventory is done iteratively with several internal draft, check and resubmission stages in the lead up to verification as well as online regional workshops.

In 2023 at the Group Financial Controllers’ meeting, the team ran through a workshop of areas of improvement.

Some improvements identified and enacted include:

- Improved layout of the emissions template – separated into types of activity.
- Addition of emissions categories for different fuel types and units of measure.
- Better data quality and completeness.
- Transition to better units of measure.



4.3 Information Management Procedures

The GHG measurement and reporting process has been developed to ensure conformance to the principles of the ISO 14064-1:2018 standard and to be consistent with the intended use of the GHG inventory.

The procedural elements below are designed to set structure and consistent checks to provide accuracy and completeness of the inventory and address errors and omissions.

Figure 3 outlines the structure and storage approach for documentation. Its intention is to enable relevant access and traceability to the source information of our emissions inventory for our verifiers.

4.3.1 Key Procedural Elements for GHG Information Management

- Regional inventory preparation teams collect source data from third party suppliers and Mainfreight’s finance and transport management systems.
- Data is organised by region and within each region by business unit.
- Documentation is held in an access-controlled folder on Mainfreight’s intranet.
- Data is reviewed and consolidated by the GHG inventory and report preparation team based in New Zealand.
- Emission factors are provided for each region and reviewed annually.
- The emissions inventory and GHG report are independently audited by Toitū Envirocare.
- This GHG report also outlines consideration for the following:
 - Responsibility and authority for inventory development.
 - Review and implementation of training for the inventory development team.
 - Identification of organisational and reporting boundaries.
 - Selection and review of GHG sources and sinks.
 - Details of quantification approaches and consideration to their consistent application.
- Post audit: all data, reports and inventory are copied to an intranet location and archived.

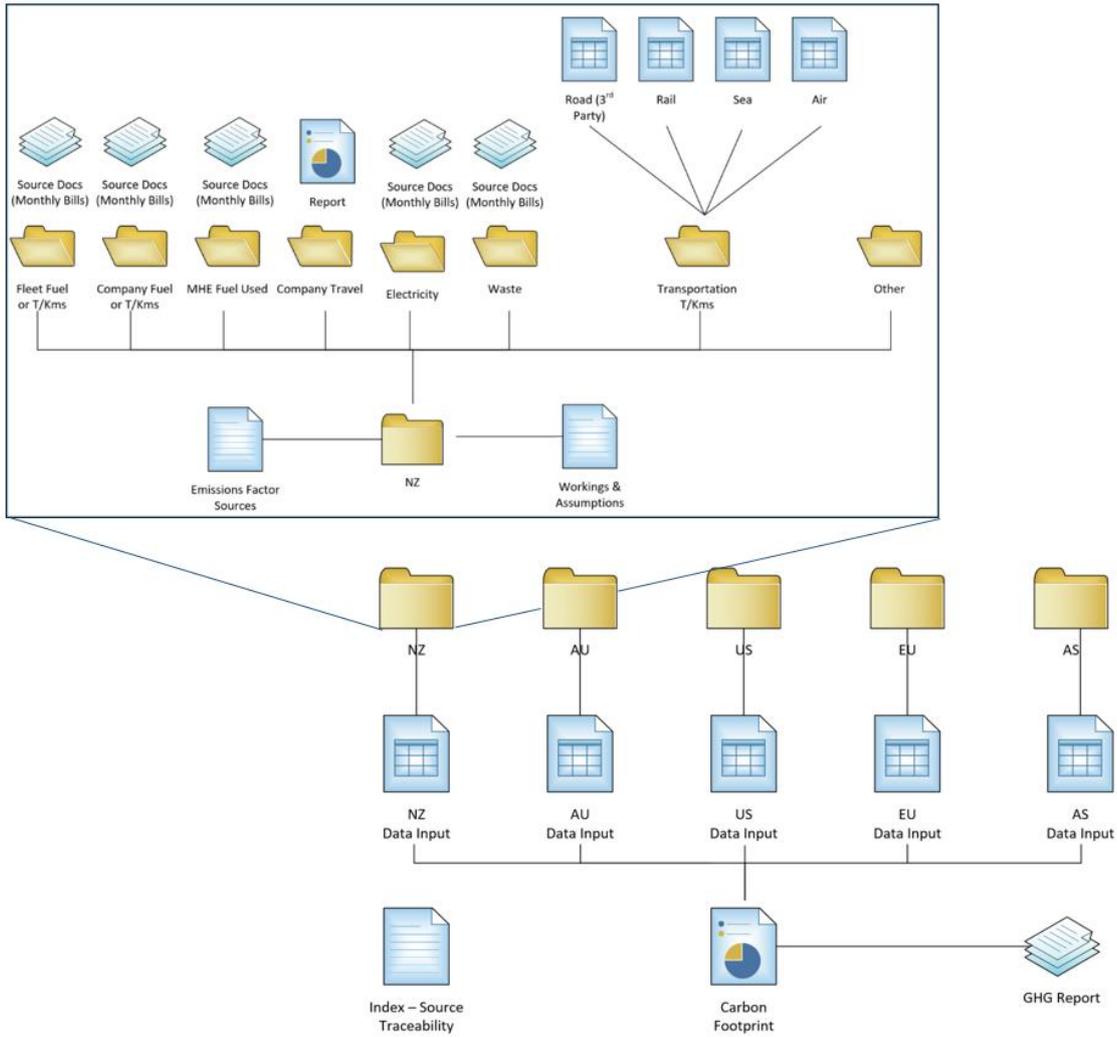


Figure 3: Documentation and Source Information Structure

4.4 Assessment of Uncertainty

GHG quantification is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emission factors and the values needed to combine emission of different gases.

For this 2025 report, a qualitative rather than quantitative assessment of uncertainty has been applied. With the current tools and variety of emission sources, our view is that a quantitative assessment would be complex, time consuming and offer little validity in respect to statistical uncertainty. The applicability of these quantitative assessments will be reviewed in each reporting period.

The emissions inventory provided in 4.1 carries some degree of uncertainty, which can be heavily associated with two core considerations:

1. Complexity in operations, supply chain party interdependency and data availability

International supply chain networks can be notoriously complex, involve numerous different parties and a huge quantity of data (for even a single shipment). Data availability, systems integration and commercial sensitivity can all inhibit how emissions information might be conveyed and interpreted across the chain.

Nonetheless, we are confident our own technology infrastructure and reporting approach has done the best to minimise uncertainty here and/or describe where the limitations in any approach lie.

2. Variety in maturity and sophistication in data from third party suppliers across all operations

With 337 branches operating across some 27 countries, it is necessary to engage with a large number of third-party suppliers for our local needs - in particular, electricity, waste and different fuel sources. Adding further complexity here is different site operating models - for instance lease or rent arrangements that might include electricity or waste.

Our regional teams have done their best to gather and report back in a consistent fashion. However, it should be noted that these emissions sources are relatively small when compared to our direct emissions across supply chains.

In respect to emission categories, we evaluate uncertainty as outlined below:

Category 1:

- *Low Uncertainty* of activity data, which are well established.
- *Moderate Uncertainty* of emission factors, including the use of some default factors.

Category 2:

- *Low Uncertainty* of activity data, with kWh easily available.
- *Moderate Uncertainty* of emission factors, due to regional grid factor variations.

Category 3:

- *Low Uncertainty* of activity data, with highly visible shipment data.
- *Low Uncertainty* of emission factors, due to our large database of mode and lane specific factors.

Category 4:

- *Moderate Uncertainty* of activity data, with a variety of different subcategories, locations, and providers.
- *Moderate Uncertainty* of emission factors, with a diverse range of locations, requiring some regional generalisation.

4.5 Changes to Base Year

The base year for emissions inventory assessments is the 2018 calendar year. There are several underlying reasons for the selection of the 2018 calendar year as the base year:

1. Calendar year has been used rather than financial year.
2. As the earliest reported period, 2018 was selected as the base year.

Given that the length of the reporting period is the same, it is still comparable to our latest financial year reporting.

Recalculation of the base year will only be applied where it is necessary to maintain an effective base year comparison. Recalculation will also consider whether the historical data has the required detail to perform recalculation or whether it is in the right form (i.e. unit of measure) to apply a different emission factor.

There is no change to the base year calculation in this reporting period. Our previous GHG Reports and Inventories can be found on our website:

<https://www.mainfreight.com/global/en-global/investor/reports-library>.

4.6 Removals and Reductions / Increases

4.6.1 Removals

There are no emissions removals to declare in this reporting period.

4.6.2 Emissions Reductions / Increases

Year on year we have recorded a **166,125 metric tonne increase** in carbon dioxide equivalents across our business representing an **11% increase** in gross greenhouse gas emissions. Of the total increase, there were two significant reporting changes added to this year's inventory.

First, the addition of capital goods has added over 26,000 tonnes CO₂e, where this source was not included in prior inventories. This change also accounts over 90% of the variation in operational emissions (up 29,000 tonnes CO₂e).

In addition, a shift towards more conservative, default Australia Road Emission Factors, added approximately 35,000 tonnes CO₂e to our road freight total (without accounting for any change in physical volumes).

The Red Sea disruption, which impacted approximately 12% of sea freight shipments, added over 9,000 tonnes in CO₂e for the period and increased the emissions on affected shipments by over 35%.

General increases in air and sea freight volumes have also contributed over 60,000 tonnes CO₂e and 8,000 tonnes CO₂e respectively to the change in this year's footprint.

Our ongoing performance remains subject to the level of growth within the business, particularly as we continue to attract and win market share. We are nonetheless confident that our climate strategy, coupled with greater availability in new fuels, technologies and partnerships, will create further opportunities for improvement.

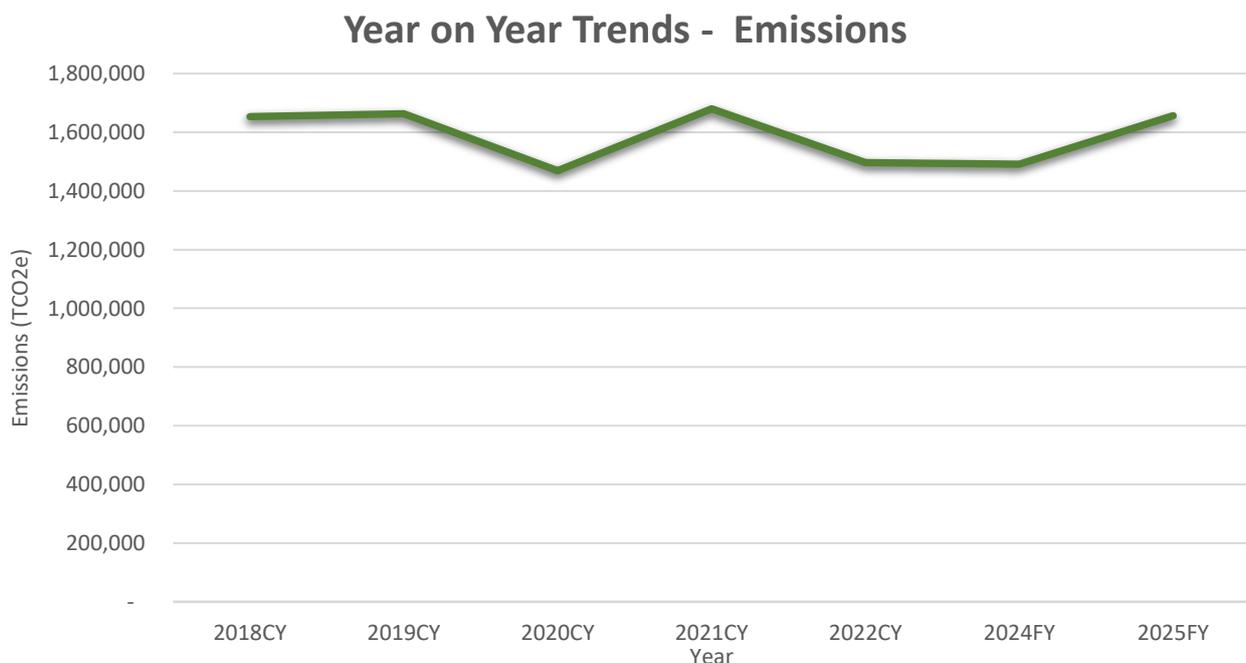


Figure 4: Year on Year Emissions Trends

CHAPTER 5: INTERNAL REPORTING & PERFORMANCE

5.1 Emissions by Category, Gas and Freight Mode

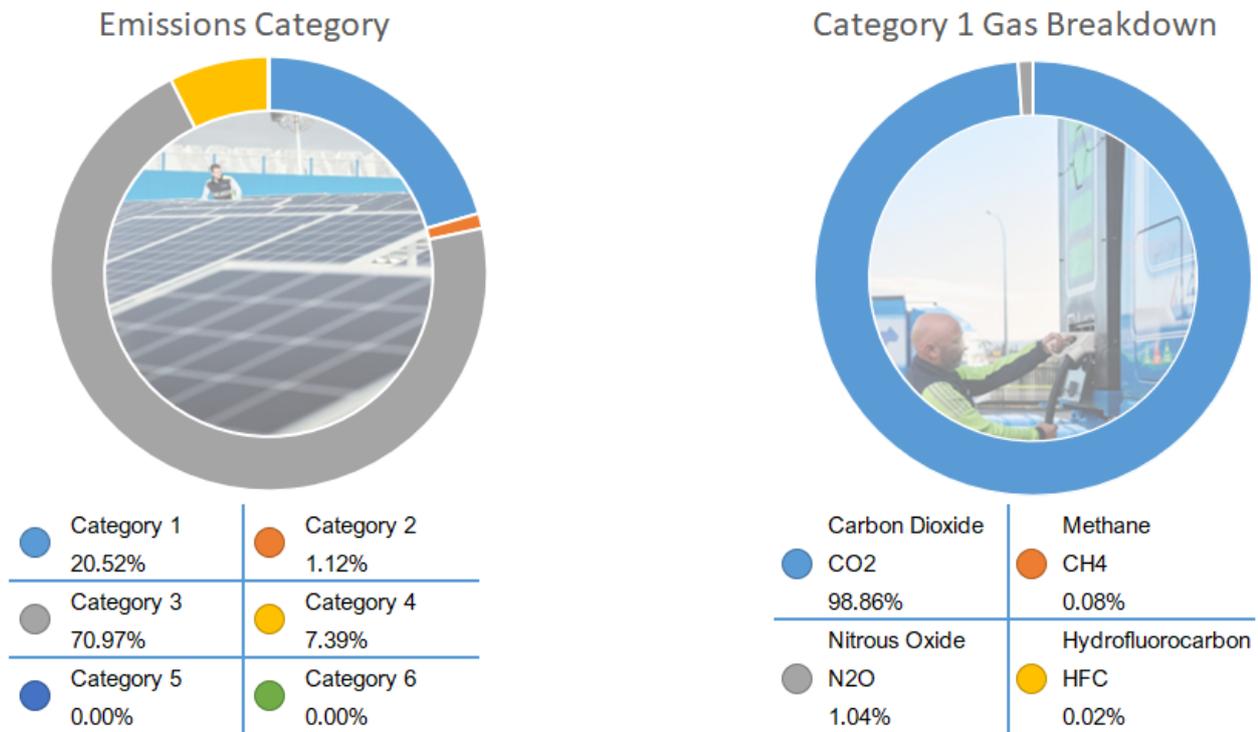


Figure 5: Emissions by Category and Gas Breakdown

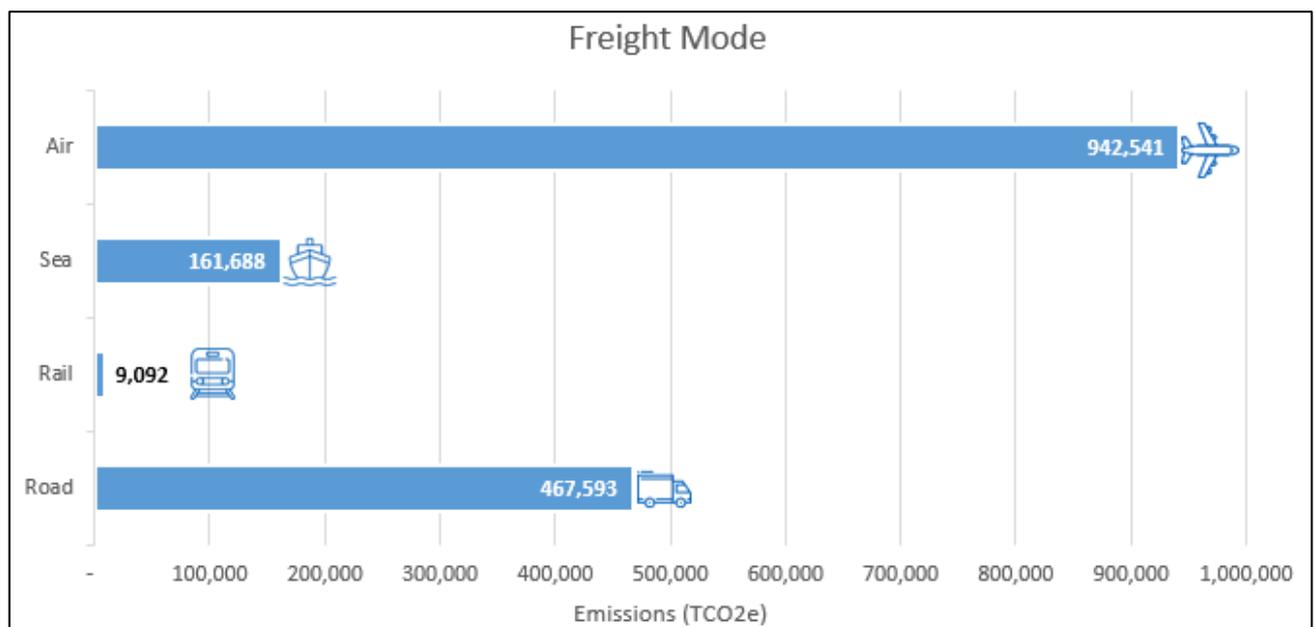


Figure 6: Emissions by Freight Mode

5.2 Emissions by Region (Tonnes CO2e)

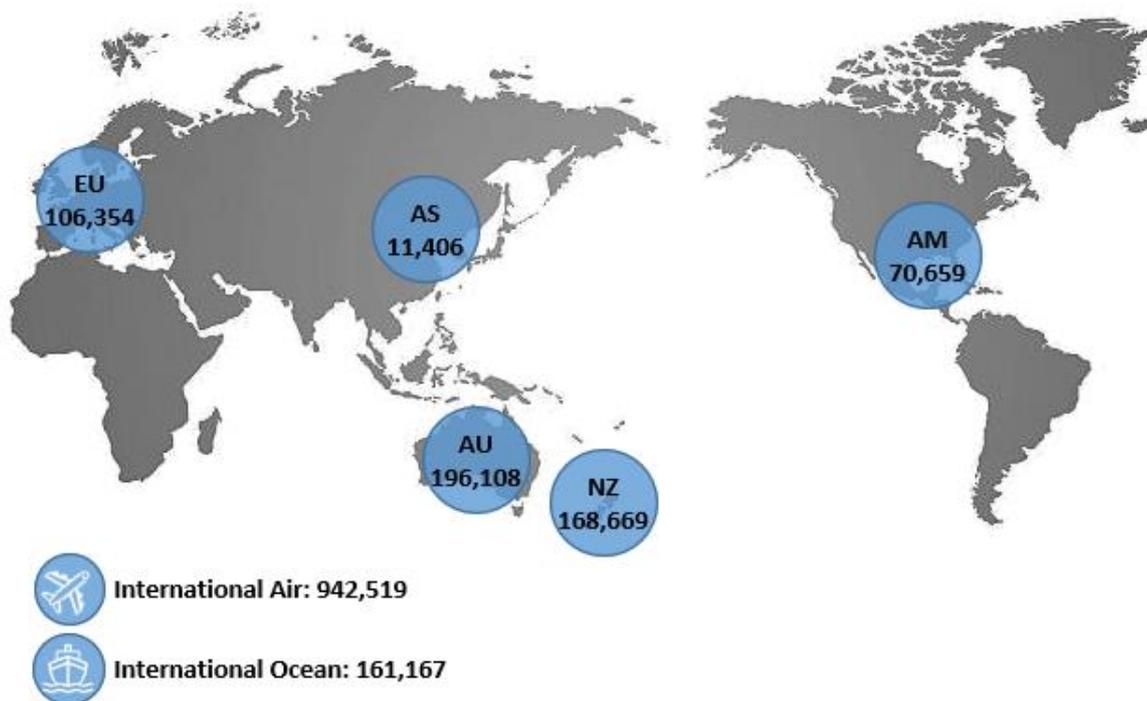


Figure 7: Emissions by Region (sums may not total due to rounding)

Note: The total emissions for each region shown in Figure 7 include domestic air and domestic ocean freight.

5.3 Emissions Intensity Measures

Of our three tracked intensity measures, we have seen:

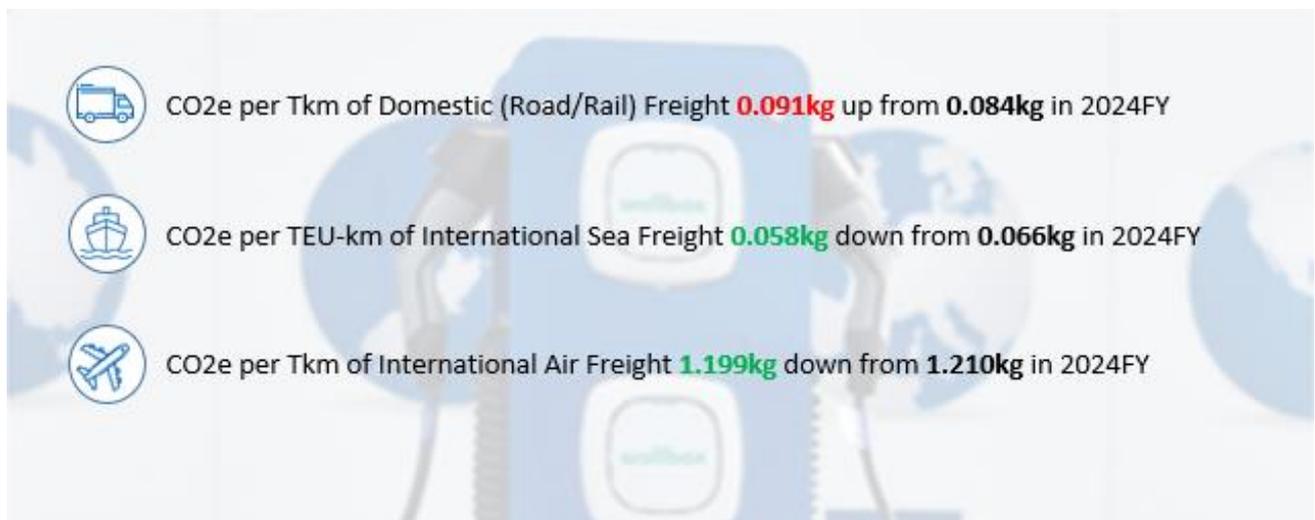


Figure 8: Emissions Intensity Measures

- Our domestic intensity measure has increased (8%), largely due to the change in Australian road emission factors.
- A small decline (1%) in international air freight intensity due to a slight improvement in the proportion of long-haul vs short-haul activity.
- International sea freight intensity has dropped (12%) due to an update in Clean Cargo emission factors for most lanes.

5.4 Freight Emissions by Mode (Year on Year)

Emissions Source	2025FY Tonnes CO2e	2024FY Tonnes CO2e
Road	467,593	409,331
Rail	9,092	9,305
Sea	161,688	144,099
Air	942,541	880,806
Total Freight Emissions	1,580,916	1,443,541
<i>Direct Operational Emissions</i>	75,966	47,215
Total Emissions	1,656,881	1,490,756
<i>Direct Operational Emissions % of Total</i>	4.58%	3.17%

Table 7: Emissions by Mode (sums may not total due to rounding)

5.5 Performance Measures, Targets and Benchmarks

Performance against fixed emissions targets is not currently practical to determine especially given Mainfreight's rate of growth. We do however aim to continuously reduce the emissions intensity of our activities year on year and will assess the relevance of new measures and targets in each reporting period.

APPENDICES

Appendix 1 – ISO 14064-1:2018 Reporting Index

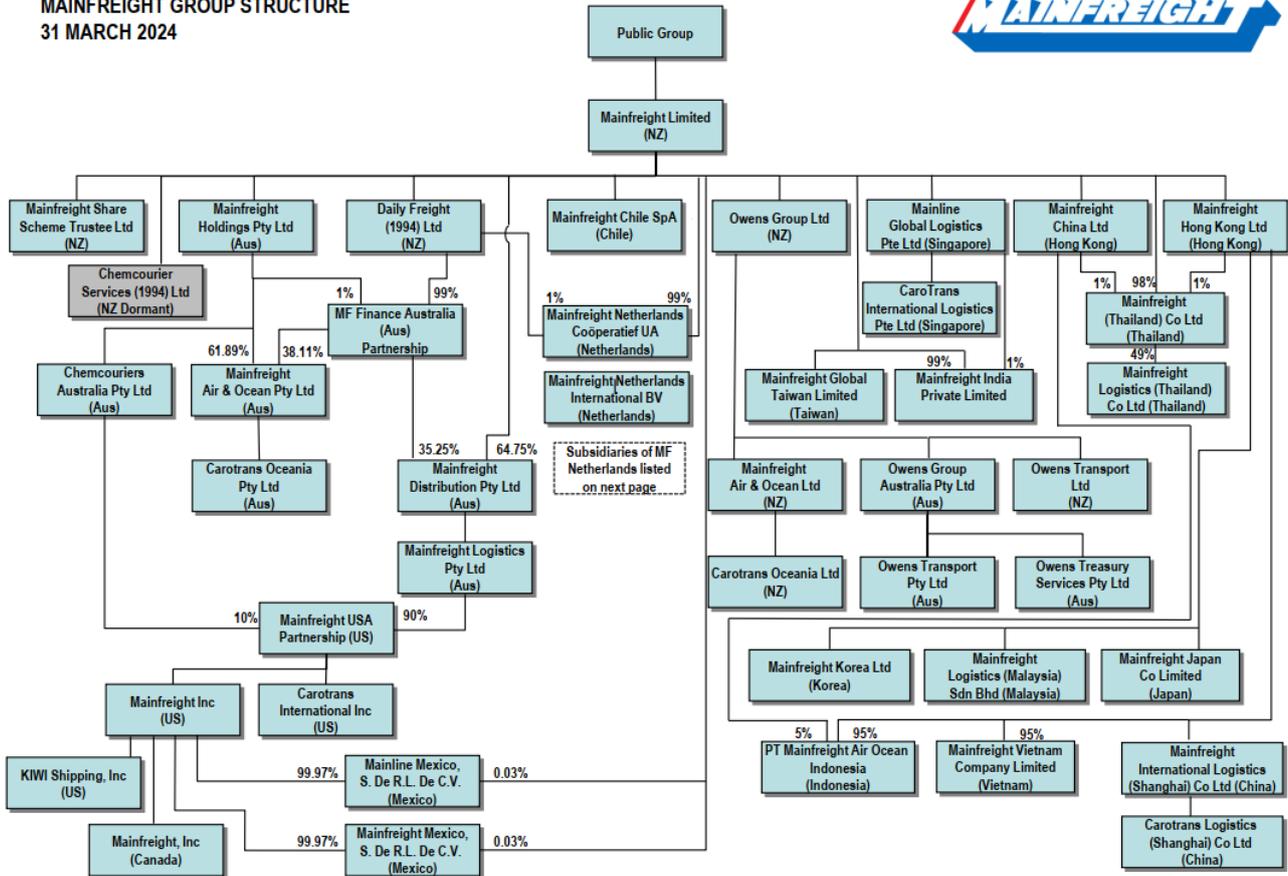
ISO Reporting	Section in this Report
9.3.1 (a)	1.3
9.3.1 (b)	1.4
9.3.1 (c)	1.6
9.3.1 (d)	2
9.3.1 (e)	3
9.3.1 (f)	4.1
9.3.1 (g)	4.1
9.3.1 (h)	4.6
9.3.1 (i)	3.3
9.3.1 (j)	4.1
9.3.1 (k)	4.5
9.3.1 (l)	4.5
9.3.1 (m)	4.2
9.3.1 (n)	4.2
9.3.1 (o)	4.2
9.3.1 (p)	4.4
9.3.1 (q)	4.4
9.3.1 (r)	1.7
9.3.1 (s)	1.7
9.3.1 (t)	4.2

ISO Reporting	Section in this Report
9.3.2 (a)	1.3
9.3.2 (b)	4.6
9.3.2 (c)	4.6
9.3.2 (d)	NA
9.3.2 (e)	4.6
9.3.2 (f)	4.1
9.3.2 (g)	5.3
9.3.2 (h)	5.5
9.3.2 (i)	4.3
9.3.2 (j)	4.6
9.3.2 (k)	4.6

ISO Reporting	Section in this Report
9.3.3	NA

Appendix 2 – Mainfreight Group Structure

MAINFREIGHT GROUP STRUCTURE
31 MARCH 2024



All subsidiaries 100% ownership except where otherwise indicated

MAINFREIGHT GROUP STRUCTURE
Subsidiaries of Mainfreight Netherlands

