



# GREENHOUSE GAS EMISSIONS INVENTORY AND MANAGEMENT REPORT

Toitū carbonreduce programme

Prepared in accordance with ISO 14064-1:2018 and the Technical Requirements of the Programme



Macpac Limited

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Dated: 12 October 2022

Verification status: Reasonable for categories 1 and 2 & Limited for categories 3 and 4s

Measurement period: 01 July 2021 to 30 June 2022

Base year period: 01 July 2019 to 30 June 2020

Approved for release by:

A handwritten signature in black ink, appearing to read "Cathy Seaholme".

Cathy Seaholme, Managing Director - Macpac

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This report shall not be used to make public greenhouse gas assertions without independent verification and issue of an assurance statement by Toitū Envirocare.

## AVAILABILITY

Open dissemination of this report to the public, via Macpac's website.

## REPORT STRUCTURE

The Inventory Summary contains a high-level summary of this year's results and from year 2 onwards a brief comparison to historical inventories.

Chapter 1, the Emissions Inventory Report, includes the inventory details and forms the measure step of the organisation's application for Programme certification. The inventory is a complete and accurate quantification of the amount of GHG emissions and removals that can be directly attributed to the organisation's operations within the declared boundary and scope for the specified reporting period. The inventory has been prepared in accordance with the requirements of the Programme<sup>1</sup>, which is based on the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) and ISO 14064-1:2018 Specification with Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals<sup>2</sup>. Where relevant, the inventory is aligned with industry or sector best practice for emissions measurement and reporting.

Chapter 2, the reduction plan and progress report, forms the manage step part of the organisation's application for Programme certification.

See Appendix 1 and the related Spreadsheet for detailed emissions inventory results, including a breakdown of emissions by source and sink, emissions by greenhouse gas type, and non-biogenic and bio-genic emissions. Appendix 1 also contains detailed context on the inventory boundaries, inclusions and exclusions, calculation methodology, liabilities, and supplementary results.

This overall report provides emissions information that is of interest to most users but must be read in conjunction with the inventory workbook for covering all of the requirements of ISO 14064-1:2018.

<sup>1</sup> Programme refers to the Toitū carbonreduce and the Toitū net carbonzero programmes.

<sup>2</sup> Throughout this document 'GHG Protocol' means the *GHG Protocol Corporate Accounting and Reporting Standard* and 'ISO 14064-1:2018' means the international standard *Specification with Guidance at the Organizational Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals*.

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## EXECUTIVE SUMMARY

This is the annual greenhouse gas (GHG) emissions inventory and management report for Macpac New Zealand Limited covering the measurement period 01 July 2021 to 30 June 2022.<sup>3</sup>

This is the annual GHG emissions inventory and management report for Macpac covering the measurement period 01 July 2021 - 30 June 2022.

**Table 1: Inventory summary**

Category (ISO 14064-1:2018)	Scopes (ISO 14064-1:2006)	2020	2021	2022
Category 1: Direct emissions	Scope 1	2.75	9.79	12.55
Category 2: Indirect emissions from imported energy (location-based method*)	Scope 2	1,567.11	1,682.57	1,780.08
Category 3: Indirect emissions from transportation	Scope 3	2,208.47	1,308.17	1,195.96
Category 4: Indirect emissions from products used by organisation	Scope 3	251.10	234.16	234.64
Category 5: Indirect emissions associated with the use of products from the organisation	Scope 3	0.00	0.00	0.00
Category 6: Indirect emissions from other sources	Scope 3	0.00	0.00	0.00
<b>Total direct emissions</b>		<b>2.75</b>	<b>9.79</b>	<b>12.55</b>
<b>Total indirect emissions*</b>		<b>4,026.69</b>	<b>3,224.90</b>	<b>3,210.69</b>
<b>Total gross emissions*</b>		<b>4,029.43</b>	<b>3,234.68</b>	<b>3,223.23</b>
Category 1 direct removals		0.00	0.00	0.00
Purchased emission reductions		0.00	0.00	0.00
<b>Total net emissions</b>		<b>4,029.43</b>	<b>3,234.68</b>	<b>3,223.23</b>

\*Emissions are reported using a location-based methodology. See section 1.2.1 for details.1.2.1

<sup>3</sup> Throughout this document "emissions" means "GHG emissions".

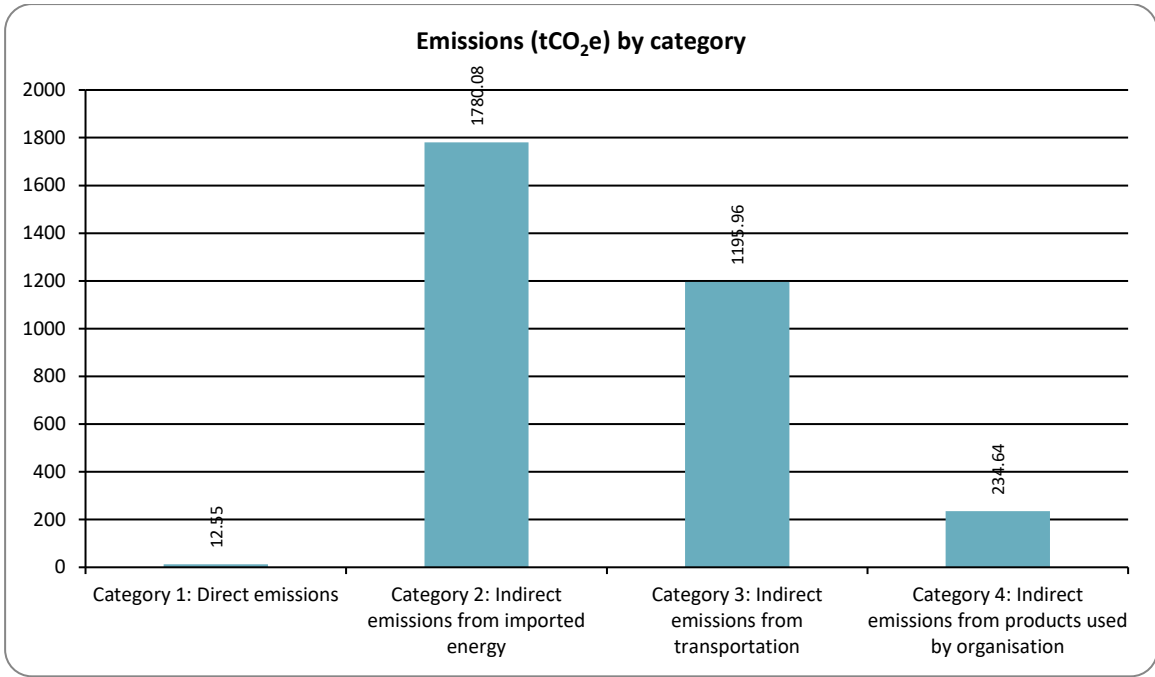


Figure 1: Emissions (tCO<sub>2</sub>e) by Category for this measurement period

# CHAPTER 1: EMISSIONS INVENTORY REPORT

## 1.1. INTRODUCTION

This report is the annual greenhouse gas (GHG) emissions inventory and management report for Macpac Limited.

The purpose of this report is to measure and manage operational greenhouse gas (GHG) emissions, as a function of Macpac's Better Business programme.

The inventory report and any GHG assertions are expected to be verified by a Programme-approved, third-party verifier. The level of assurance is reported in a separate Assurance Statement provided to the directors of the certification entity.

## 1.2. EMISSIONS INVENTORY RESULTS

**Table 2: GHG emissions inventory summary for this measurement period**

Measurement period: 01 July 2021 to 30 June 2022.

Category	Toitū carbon mandatory boundary (tCO <sub>2</sub> e)	Additional emissions (tCO <sub>2</sub> e)	Total emissions (tCO <sub>2</sub> e)
Category 1: Direct emissions	12.55 Petrol regular	0.00	12.55
Category 2: Indirect emissions from imported energy (location-based method*)	1,780.08	0.00	1,780.08
Category 3: Indirect emissions from transportation	1,195.96 Air travel domestic (average), Air travel long haul (average), Air travel short haul (average), Freight (pre-verified tCO <sub>2</sub> -e), Freight Air travel long haul (average), Freight Air travel short haul (average), Freight Road all trucks (average), Freight Road van (average), Freight Shipping container (average), Petrol regular, Taxi (regular), Freight Air travel Domestic (average)	0.00	1,195.96
Category 4: Indirect emissions from products used by organisation	232.02 Electricity distributed T&D losses, Waste landfilled LFGR Mixed waste, Waste landfilled No LFGR Mixed waste, International Electricity (ACT) T & D losses, International Electricity (NSW) T & D losses, International Electricity (QLD) T & D losses, International Electricity (SA) T & D losses, International Electricity (TAS) T & D losses, International Electricity (VIC) T & D losses, International Electricity (WA) T & D losses, Waste to Landfill Commercial and industrial waste	2.62 Waste disposal recycling of Paper	234.64
Category 5: Indirect emissions associated with the use of products from the organisation	0.00	0.00	0.00

Category	Toitū carbon mandatory boundary (tCO <sub>2</sub> e)	Additional emissions (tCO <sub>2</sub> e)	Total emissions (tCO <sub>2</sub> e)
Category 6: Indirect emissions from other sources	0.00	0.00	0.00
<b>Total direct emissions</b>	<b>12.55</b>	<b>0.00</b>	<b>12.55</b>
<b>Total indirect emissions*</b>	<b>3,208.06</b>	<b>2.62</b>	<b>3,210.69</b>
<b>Total gross emissions*</b>	<b>3,220.61</b>	<b>2.62</b>	<b>3,223.23</b>
Category 1 direct removals	0.00	0.00	0.00
Purchased emission reductions	0.00	0.00	0.00
<b>Total net emissions</b>	<b>3,220.61</b>	<b>0.00</b>	<b>3,223.23</b>
<b>Emissions intensity</b>		<b>Mandatory emissions</b>	<b>Total emissions</b>
Operating revenue (gross tCO <sub>2</sub> e / \$Millions)		16.20	16.22

\*Emissions are reported using a location-based methodology. See section 1.2.1 for details.1.2.1

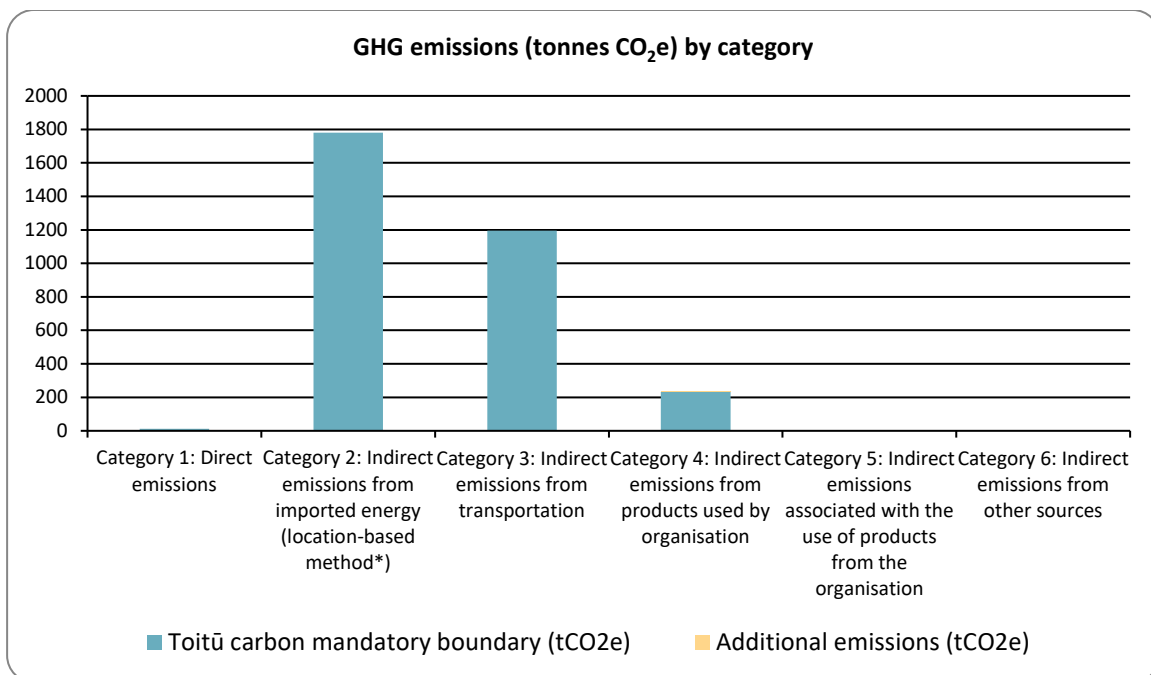


Figure 2: GHG emissions (tonnes CO<sub>2</sub>e) by category



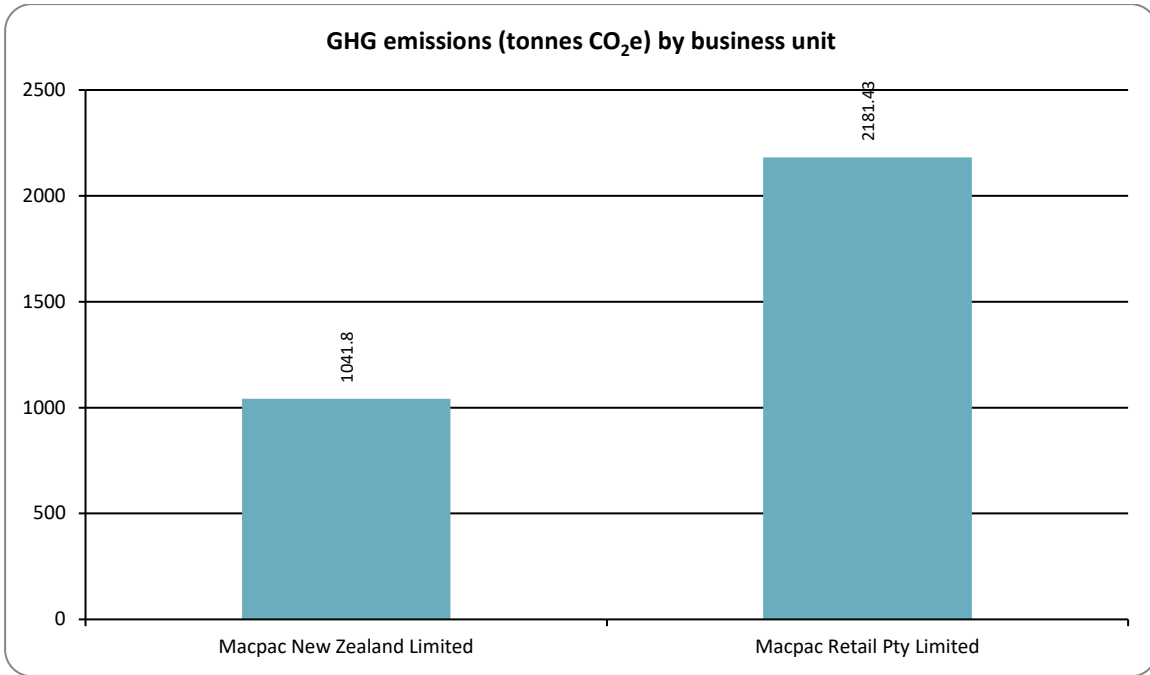


Figure 3: GHG emissions (tonnes CO<sub>2</sub>e) by business unit

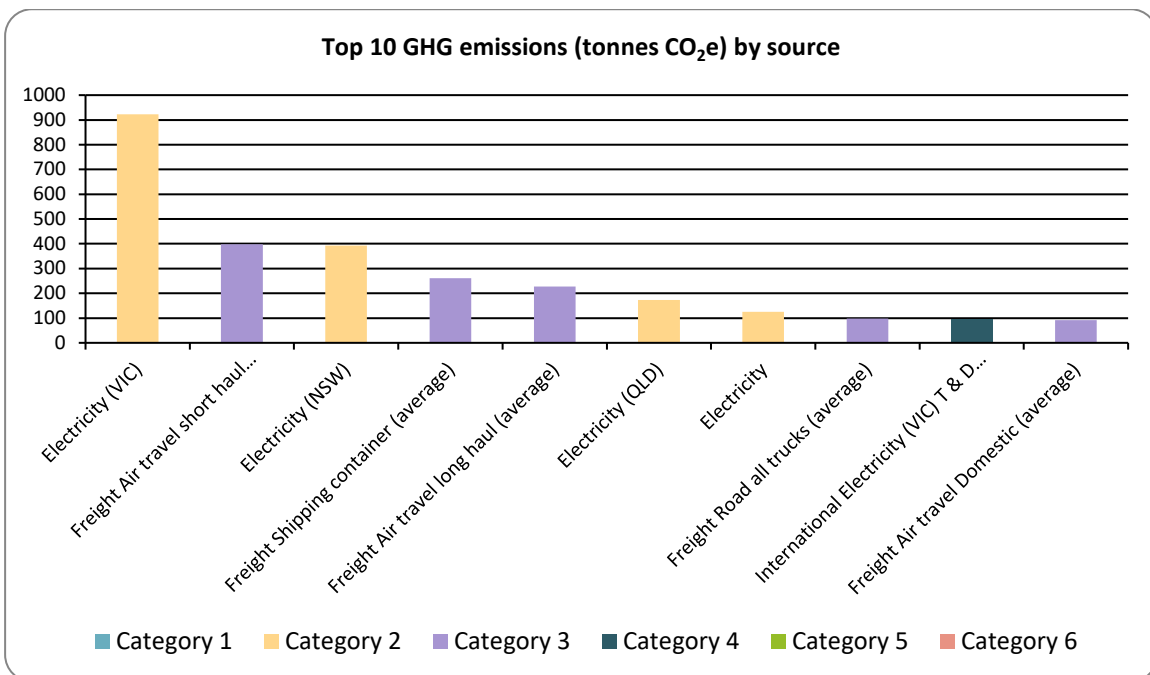


Figure 4: Top 10 GHG emissions (tonnes CO<sub>2</sub>e) by source

### 1.2.1. Dual reporting of indirect emissions from purchased and generated energy

All purchased and generated energy emissions are dual reported using both the location-based method and market-based method. Dual reporting illustrates the role of supplier choice, onsite renewable energy generation and contractual instruments in managing indirect emissions from energy alongside any ongoing energy efficiency and reduction efforts.

Macpac aligns to location-based reporting for tracking energy related emissions and reductions over time.

**Table 3. Dual reporting of indirect emissions from imported energy**

Category	Location-based methodology (tCO <sub>2</sub> e)
Category 1: Direct emissions	12.55
Category 2: Indirect emissions from imported energy	1,780.08
Category 3: Indirect emissions from transportation	1,195.96
Category 4: Indirect emissions from products used by organisation	234.64
Category 5: Indirect emissions associated with the use of products from the organisation	0.00
Category 6: Indirect emissions from other sources	0.00
<b>Total direct emissions</b>	<b>12.55</b>
<b>Total indirect emissions</b>	<b>3,210.69</b>
<b>Total gross emissions</b>	<b>3,223.23</b>
Category 1 direct removals	0.00
<b>Total net emissions</b>	<b>3,223.23</b>

## 1.3. ORGANISATIONAL CONTEXT

### 1.3.1. Organisation description

Macpac is wholly owned by Super Retail Group Limited. Macpac has an operating revenue of \$198.7 million, a network of 85 retail stores throughout New Zealand and Australia, as well as an online store and wholesale distribution networks in Japanese and European markets.

Macpac was founded in 1973 by Bruce McIntyre, a true outdoorsman. His philosophy was to make high quality, durable outdoor gear that would withstand the rigors of New Zealand's backcountry- which is a notoriously harsh environment. Bruce's vision has remained true over Macpac's nearly 50 year history. Macpac customers are mountain climbers, campers, hikers and more broadly, anyone who loves outdoor adventures and travel. Macpac has a reputation for using high quality materials, designing for durability and technical excellence across a broad range of outdoor apparel and equipment, allowing its customers to embrace the great outdoors.

### **Commitment to certification**

As Macpac's retail footprint expands, we feel an increased urgency to responsibly reduce our impact on communities and the planet.

Although Macpac's philosophy remains that sustainability starts with quality products that last, the team recognizes that operational emissions are a major source of its impact on the planet.

Macpac is committed to understanding all its emissions sources. Macpac aims to manage their reduction in order to operate in an emissions and energy-efficient environment. Macpac considers the management of its GHG emissions to be a principal component of its 'Better Business' programme. Macpac aims to achieve Toitū carbonreduce certification as proof of this commitment. Further, verification of the measurement process provides the structure necessary to set credible reduction targets

### **GHG Reporting**

Macpac's 'Better Business' programme aims to address several impacts, including those generated through manufacturing. The Toitū carbonreduce report is the primary tool used for assessing emissions generated from its own operations.

### **Climate Change Impacts**

The impacts of climate change on the outdoor retail sector is only starting to come to light. Although some climate change risks are known, such as the impact of more frequent and extreme weather events on global shipping or availability of raw materials, the reality is, it is not yet possible to anticipate the full extent of potential impacts on this sector. Macpac anticipates the need to constantly review its products to ensure resilience to the changing climate.

### **Parent Company Targets**

Super Retail Group, Macpac's parent company, is currently reviewing its carbon reduction goals at the time of this report. Finalised goals cannot yet be included.

## **1.3.2. Statement of intent**

This inventory forms part of the organisation's commitment to gain Toitū carbonreduce certification. The intended uses of this inventory are:

### **Intended use and users**

This will be used to report on Macpac's emissions to Macpac employees, as part of the ESG framework at Super Retail Group, and the general public.

## **1.3.3. Person responsible**

Pen Turnbull and Linell Lottering is responsible for overall emission inventory measurement and reduction performance, as well as reporting results to top management. Cathy Seaholme and Kevin Paul have the authority to represent top management and has financial authority to authorise budget for the Programme, including Management projects and any Mitigation objectives.

### **State any other people/entities involved**

No other persons were involved.

### **Top management commitment**

Macpac's business strategy includes a commitment by the Managing Director and senior leadership team to reduce emissions. Being a Better Business means consideration of the broader business practices, including but not just limited to the management of emissions. The business' strategic development and aspiration for the way business is done, includes a strong commitment to sustainability, and consideration of the impacts of decisions across the supply chain, stores, consumers, etc. Macpac is a business that is committed to doing good, while also delivering returns for shareholders, believing that both are achievable with the right focus and commitment of the team.

## Management involvement

The Leadership group provides resources for the collection and processing of data and inventory report development. The authors of this report are supported by designated teams from across the business, ensuring that the inventory process is embedded in long-term strategy. e.g. Supply Chain, Finance and Property teams provide data.

### 1.3.4. Reporting period

**Base year measurement period: 01 July 2019 to 30 June 2020**

**Measurement period of this report: 01 July 2021 to 30 June 2022**

Annually

The period 1 July 2021 - 30 June 2022 was chosen to match the cadence of Macpac's financial year.

### 1.3.5. Organisational boundary and consolidation approach

An operational control consolidation approach was used to account for emissions.<sup>4</sup>

Organisational boundaries were set with reference to the methodology described in the GHG Protocol and ISO 14064-1:2018 standards.

#### Justification of consolidation approach

The criteria used by Macpac to define organisational boundaries consisted of mapping their organisational chart to show not only the legal structure but also those sites with operational control that fall outside the legal ownership boundaries.

#### Organisational structure

Figure 5 shows what has been included in the context of the overall structure.

All company operations are managed from the Support Office located at 4 Mary Muller Drive, Hillsborough, Christchurch New Zealand. This location is leased and also houses Macpac's Distribution Centre.

New Zealand based operations fall under Macpac New Zealand Limited, with Australian operations including accounts payable operating under Macpac Retail Pty Limited.

Macpac operates bricks and mortar stores across New Zealand and Australia, but in all cases, lease the premises.

The parts of the structure (business units) in black are within this emissions inventory. The parts of the structure in orange are excluded.

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<sup>4</sup>control: the organisation accounts for all GHG emissions and/or removals from facilities over which it has financial or operational control. equity share: the organisation accounts for its portion of GHG emissions and/or removals from respective facilities.

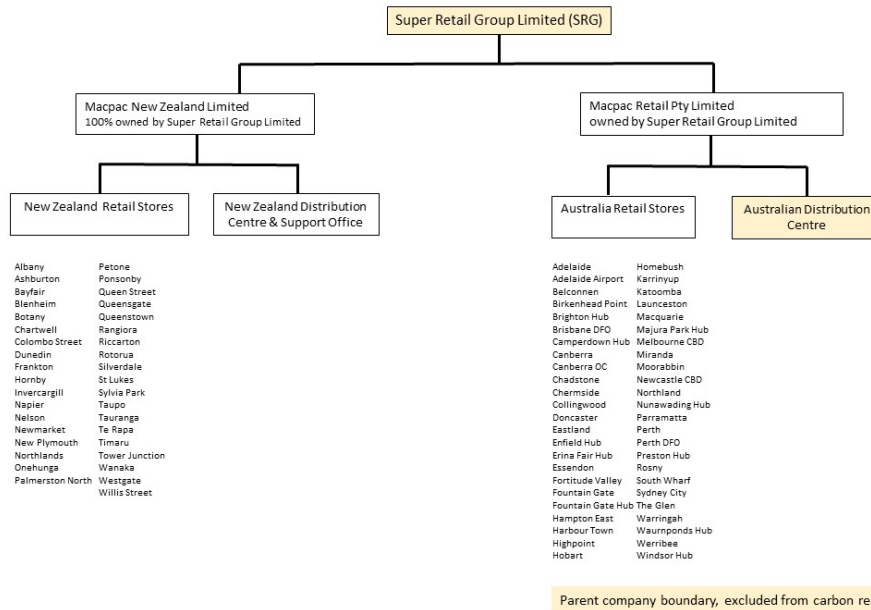


Figure 5: Organisational structure

Table 4. Brief description of business units, sites and locations included in this emissions inventory

Company/Business unit/Facility	Physical location	Description
Macpac New Zealand Limited	4 Mary Muller Drive, Hillsborough, Christchurch 8022	Support office and adjoining Distribution Centre, where all operations for Macpac are managed. Site is leased but Macpac has operational control.
Macpac Retail Pty Limited	No physical location	Entity exists to manage the financial responsibilities of the Australian retail store network
New Zealand retail stores	See list on organisational chart	Macpac leases all retail locations but has operational control.
Australia retail stores	See list on organisational chart	Macpac leases all retail locations but has operational control.

### 1.3.6. Excluded business units

There are no excluded business units

## CHAPTER 2: EMISSIONS MANAGEMENT AND REDUCTION REPORT

### 2.1. EMISSIONS REDUCTION RESULTS

Macpac has met its FY22 overall reduction target.

Regarding air freight short-haul (downstream), Macpac has lowered emissions by 58% from FY21 figures and achieved a reduction of 75.6% from the base year, FY20. This majority of this reduction can be attributed to having a fully operational Distribution Centre in Australia which allows more direct shipping from manufacturing destinations rather than via Macpac's Christchurch NZ Distribution Centre.

Regarding purchased electricity, our base year emissions intensity was 11.2. Our FY22 goal was for a 5% reduction. In FY22 Macpac achieved an emissions intensity of 9.0, equating to a 19.6% reduction.

**Table 5: Comparison of historical GHG inventories**

Category	2020	2021	2022
Category 1: Direct emissions	2.75	9.79	12.55
Category 2: Indirect emissions from imported energy (location-based method*)	1,567.11	1,682.57	1,780.08
Category 3: Indirect emissions from transportation	2,208.47	1,308.17	1,195.96
Category 4: Indirect emissions from products used by organisation	251.10	234.16	234.64
Category 5: Indirect emissions associated with the use of products from the organisation	0.00	0.00	0.00
Category 6: Indirect emissions from other sources	0.00	0.00	0.00
<b>Total direct emissions</b>	<b>2.75</b>	<b>9.79</b>	<b>12.55</b>
<b>Total indirect emissions*</b>	<b>4,026.69</b>	<b>3,224.90</b>	<b>3,210.69</b>
<b>Total gross emissions*</b>	<b>4,029.43</b>	<b>3,234.68</b>	<b>3,223.23</b>
Category 1 direct removals	0.00	0.00	0.00
Purchased emission reductions	0.00	0.00	0.00
<b>Total net emissions</b>	<b>4,029.43</b>	<b>3,234.68</b>	<b>3,223.23</b>
<b>Emissions intensity</b>			
Operating revenue (gross tCO <sub>2</sub> e / \$Millions)	28.91	19.64	16.22
Operating revenue (gross mandatory tCO <sub>2</sub> e / \$Millions)	28.89	19.63	16.20

\*Emissions are reported using a location-based methodology. See section 1.2.1 for details.1.2.1

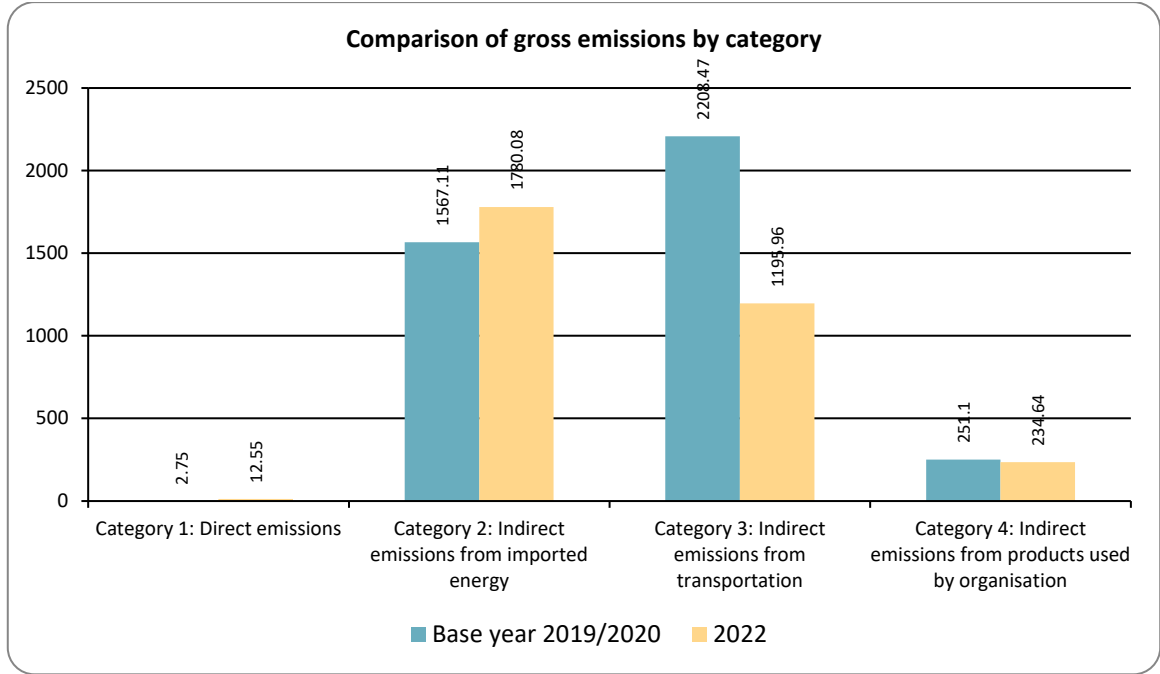


Figure 6: Comparison of gross emissions by category between the reporting periods



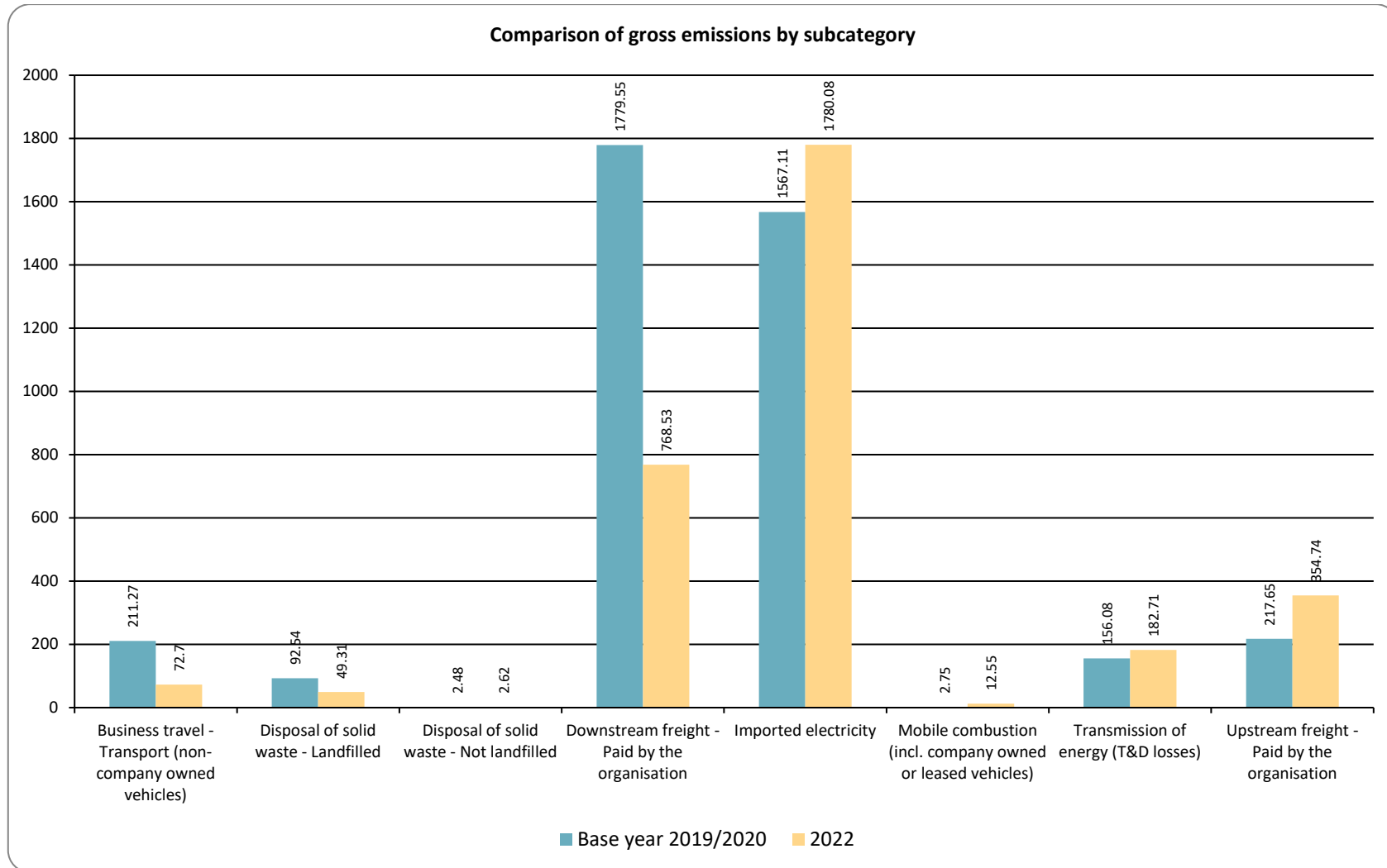


Figure 7: Comparison of gross emissions by subcategory between the reporting periods



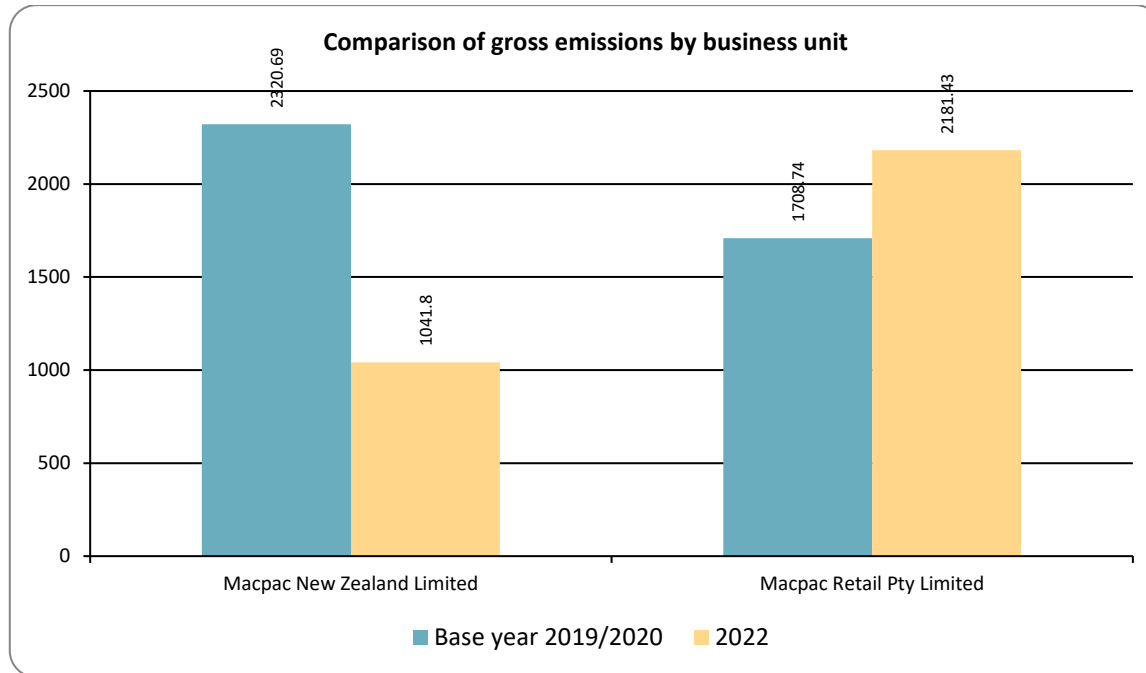


Figure 8: Comparison of gross emissions by business unit between the reporting periods

Performance against target has not been provided

Figure 9: Performance against target since base year

Table 6. Performance against plan

Target name	Baseline period	Target date	Type of target (intensity or absolute)	Current performance (tCO <sub>2</sub> e)	Current performance (%)	Comments
Reduce Category 3 emissions relating to 'Freight Air Travel short-haul (downstream)' by 20%	1 July 2019 - 30 June 2020	FY22	Absolute	397.78	-75.60%	None
Reduce Category 2 emissions by 5%	1 July 2019 - 30 June 2020	FY22	Intensity	9	-19.60%	None

## 2.2. SIGNIFICANT EMISSIONS SOURCES

### **Significant sources**

Top emissions sources remain air freight short-haul (downstream) and purchased electricity.

### **Activities responsible for generating significant emissions**

The majority of air freight short-haul emissions are generated from exporting product from the Distribution Centre in New Zealand to retail stores in Australia. It should be noted, that any global crisis with shipping delays has the potential to increase the need for air freighting product as an alternative to shipping.

Purchased electricity emissions relate to Macpac's operations - support office, distribution centre and the network of retail stores. It should be noted that stores located in Victoria and New South Wales, Australia contribute the majority of electricity-related emissions.

### **Influences over the activities**

Although Macpac has access to a distribution centre in Australia, when there is a global crisis with shipping, Macpac is exposed to increasing air freight for Australia-bound product via its main distribution centre in New Zealand.

The majority of Macpac's Australian stores are located in the states of Victoria and New South Wales. Compounding this emissions source, is the fact that the state of Victoria has the highest emissions factor for purchased electricity. Macpac is developing impact reduction policies to drive energy efficient upgrades and practices across all operations, including all retail stores.

### **Significant sources that cannot be influenced**

Not applicable.

## 2.3. EMISSIONS REDUCTION TARGETS

The organisation is committed to managing and reducing its emissions in accordance with the Programme requirements. Table 7 provides details of the emission reduction targets to be implemented. These are 'SMART' targets (specific, measurable, achievable, realistic, and time-constrained).

Macpac has achieved its FY22 reduction targets.

Regarding air freight short-haul, Macpac has lowered its emissions by 58% against FY21.

Regarding purchased electricity, Macpac has reduced its FY22 emissions intensity to 9.0.

**Table 7. Emission reduction targets**

Target name	Baseline period	Target date	Type of target (intensity or absolute)	Categories covered	Target		KPI	Responsibility	Rationale
Reduce Category 3 emissions relating to 'Freight Air Travel short-haul (downstream)' by 20%	1 July 2019 - 30 June 2020	2022	Absolute	Category 3	20%	Base year emissions (tCO <sub>2</sub> e): 1,633.162 Target year emissions (tCO <sub>2</sub> e): 1,306.53	Absolute	Linell Lottering & Pen Turnbull	Achievable through the application of the reduction projects discussed further below.
Reduce Category 2 emissions by 5%	1 July 2019 - 30 June 2020	2022	Intensity	Category 2	5%	Base year purchased electricity emissions intensity (based on turnover KPI): 11.2  Target for purchased electricity emissions intensity (based on turnover KPI): 10.6	Intensity	Linell Lottering & Pen Turnbull	Achievable through the application of the reduction projects discussed further below.

## 2.4. EMISSIONS REDUCTION PROJECTS

In order to achieve the reduction targets identified in Table 7, specific projects have been identified to achieve these targets, and are detailed in Table 8 below.

**Table 8. Projects to reduce emissions**

Objective	Project	Responsibility	Completion date	Potential co-benefits	Potential unintended consequences	Actions to minimise unintended consequence
Reduce Category 2 emissions in Australia	Investigate options for purchasing electricity from renewable sources	Sustainability Manager, Super Retail Group	30/06/2023	None	None anticipated	n/a

Table 9 highlights emission sources that have been identified for improving source the data quality in future inventories.

**Table 9. Projects to improve data quality**

Emissions source	Actions to improve data quality	Responsibility	Completion date
Freight	Work with 2 main providers of courier freight in New Zealand to obtain more accurate data on distance and weight for online fulfilment	Pen Turnbull	30/06/2023
Freight	Work with the main providers of courier freight in Australia to obtain more accurate data on distance and weight for online fulfilment	Pen Turnbull	30/06/2023
Refrigerant gases	Implement reporting requirement on make and model of Macpac owned assets and those under Macpac operational control that store refrigerants	Property and Finance Teams	31/12/2022

The emissions inventory chapter identified various emissions liabilities (see Liabilities section). Table 10 details the actions that will be taken to prevent GHG emissions from these potential emissions sources.

**Table 10. Projects to prevent emissions from liabilities**

Liability source	Actions to prevent emissions	Responsibility	Completion date
Air conditioning units at retail stores	Regular servicing to prevent damage to units	Property Team	Ongoing

## 2.5. STAFF ENGAGEMENT

Staff to be made aware of the emissions reduction commitments through communication on Workplace.

For the major emissions sources, key staff that either a) provide emission source data, and/or b) have a major influence on the management of the emission source activities, will be required to attend periodic training or presentations with the aim to reduce those emissions within the reduction targets.

## 2.6. KEY PERFORMANCE INDICATORS

**Table 11. Key Performance Indicators (KPIs).**

KPI	Rationale of using the additional KPI
\$million operating revenue	Mandatory programme requirement

## 2.7. MONITORING AND REPORTING

Macpac will conduct quarterly analysis of emissions relating to Electricity Purchased and Freight air short haul (downstream) with reporting to the Macpac Leadership team. In addition, Macpac will provide an annual report of the above to the Macpac Leadership team against reduction targets. All monitoring and reporting will be conducted by Linell Lottering & Pen Turnbull. In addition, Macpac reports on Categories 1 and 2 emissions annually to its parent company Super Retail Group.



## APPENDIX 1: DETAILED GREENHOUSE GAS INVENTORY

Additional inventory details are disclosed in the tables below, and further GHG emissions data is available on the accompanying spreadsheet to this report (Appendix1-Data Summary Macpac New Zealand Limited.xls).

**Table 12. Direct GHG emissions and removals, quantified separately for each applicable gas**

Category	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	NF <sub>3</sub>	SF <sub>6</sub>	HFC	PFC	Desflurane	Sevoflurane	Isoflurane	Emissions total (tCO <sub>2</sub> e)
Stationary combustion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile combustion (incl. company owned or leased vehicles)	12.07	0.13	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.55
Emissions - Industrial processes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Removals - Industrial processes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leakage of refrigerants	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Treatment of waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Treatment of wastewater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions - Land use, land-use change and forestry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Removals - Land use, land-use change and forestry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fertiliser use	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Addition of livestock waste to soils	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Addition of crop residue to soils	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enteric fermentation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Addition of lime to soils	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Open burning of organic matter	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total net emissions</b>	<b>12.07</b>	<b>0.13</b>	<b>0.35</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.55</b>

**Table 13. Non-biogenic, biogenic anthropogenic and biogenic non-anthropogenic CO<sub>2</sub> emissions and removals by category**

<b>Category</b>	<b>Anthropogenic biogenic CO<sub>2</sub> emissions</b>	<b>Anthropogenic biogenic (CH<sub>4</sub> and N<sub>2</sub>O) emissions (tCO<sub>2</sub>e)</b>	<b>Non-anthropogenic biogenic (tCO<sub>2</sub>e)</b>
Category 1: Direct emissions	0.00	0.00	0.00
Category 2: Indirect emissions from imported energy	0.00	0.00	0.00
Category 3: Indirect emissions from transportation	0.00	0.00	0.00
Category 4: Indirect emissions from products used by organisation	0.00	5.60	0.00
Category 5: Indirect emissions associated with the use of products from the organisation	0.00	0.00	0.00
Category 6: Indirect emissions from other sources	0.00	0.00	0.00
<b>Total gross emissions</b>	<b>0.00</b>	<b>5.60</b>	<b>0.00</b>

## A1.1 REPORTING BOUNDARIES

### A1.1.1 Emission source identification method and significance criteria

The GHG emissions sources included in this inventory are those required for Programme certification and were identified with reference to the methodology described in the GHG Protocol and ISO 14064-1:2018 standards as well as the Programme Technical Requirements.

The method for identifying sources and sinks included personal communications with relevant staff, relevant trade partners, a review of operational expenditure records, a review of asset registers, and site walkarounds.

Significance of emissions sources within the organisational boundaries has been considered in the design of this inventory. The significance criteria used comprise:

- All direct emissions sources that contribute more than 1% of total Category 1 and 2 emissions
- All indirect emissions sources that are required by the Programme.

No changes to the significance criteria have been made since this inventory was initially developed in the base year.

### A1.1.2 Included sources and activity data management

As adapted from ISO 14064-1, the emissions sources deemed significant for inclusion in this inventory were classified into the following categories:

- **Direct GHG emissions (Category 1):** GHG emissions from sources that are owned or controlled by the company.
- **Indirect GHG emissions (Category 2):** GHG emissions from the generation of purchased electricity, heat and steam consumed by the company.
- **Indirect GHG emissions (Categories 3-6):** GHG emissions that occur as a consequence of the activities of the company but occur from sources not owned or controlled by the company.

Table 14 provides detail on the categories of emissions included in the GHG emissions inventory, an overview of how activity data were collected for each emissions source, and an explanation of any uncertainties or assumptions made based on the source of activity data. Detail on estimated numerical uncertainties are reported in Appendix 1.

Macpac has endeavored to maintain strict and consistent reporting methods. Where data was not readily available or wasn't available in a format that accommodates reporting, Macpac attempted to work with relevant stake-holders to improve data collation for future reporting.



**Table 14. GHG emissions activity data collection methods and inherent uncertainties and assumptions**

GHG emissions category	GHG emissions source or sink subcategory	Overview of activity data and evidence	Explanation of uncertainties or assumptions around your data and evidence	Use of default and average emissions factors	Pre-verified data
Category 1: Direct emissions and removals	Direct emissions from mobile combustion	Petrol use in company fleet with data coming from GL reports supplied by Finance dept	It is assumed all reports are accurate and captured within our internal financial systems	We used cost of fuel rather than litres of fuel, as our internal processes does not allow us to capture litres of fuel used	No
Overall assessment of uncertainty for Category 1 emissions and removals			Medium		
Category 2: Indirect GHG emissions from imported energy	Indirect emissions from imported electricity	Data provided by third party management company	It is assumed data source represents a complete and accurate account of all purchases	n/a	No
	Electricity distributed T&D losses	Data provided by third party management company	It is assumed data source represents a complete and accurate account of all purchases	n/a	No
Overall assessment of uncertainty for Category 2 emissions and removals			Low		
Category 3: Indirect GHG emissions from transportation	Emissions from upstream transport and distribution for goods	Freight provider's annual activity reports supplied via email	It is assumed all supplier reports are complete and accurate	n/a	No
	Emissions from downstream transport and distribution for goods	Freight provider's annual activity reports supplied via email	It is assumed all supplier reports are complete and accurate	n/a	No

GHG emissions category	GHG emissions source or sink subcategory	Overview of activity data and evidence	Explanation of uncertainties or assumptions around your data and evidence	Use of default and average emissions factors	Pre-verified data
	Emissions from Business travel	Business travel data coming from GL report supplied by Finance dept, and travel service provider	It is assumed travel service provider and GL reports are complete and accurate.	Where kms travelled cannot be captured in internal GL report, e.g. taxi, dollars spent was used.	No
Overall assessment of uncertainty for Category 3 emissions and removals			Low		
Category 4: Indirect GHG emissions from products used by organization	Emissions from the disposal of solid waste	Provider's activity reports supplied via email	It is assumed all supplier reports are complete and accurate. Where weight data was incomplete, assumptions were made based on industry averages. In instances of unusual activity data, control checks have been applied to verify accuracy & context.	n/a	No
Overall assessment of uncertainty for Category 4 emissions and removals			Medium		



### A1.1.3 Excluded emissions sources and sinks

Emissions sources in Table 15 have been identified and excluded from this inventory.

**Table 15. GHG emissions sources excluded from the inventory**

Business unit	GHG emissions source or sink	GHG emissions category	Reason for exclusion
Macpac New Zealand Limited	Refrigerants	Category 1	No activity data available for retail stores in New Zealand
Macpac Retail Pty Limited	Refrigerants	Category 1	No activity data available for retail stores in Australia
Macpac New Zealand Limited	Freight road truck upstream	Category 3	No activity data available for stock shipped by road from manufacturing location to origin port city. Emissions likely to be de minimis as ports are always selected by their close proximity to manufacturing site
Macpac New Zealand Limited	Waste	Category 3	No activity data available for retail stores where the waste is managed by the landlord or council. Where possible, estimates are applied to council services, where comparable values exist.
Macpac Retail Pty Limited	Freight road truck downstream	Category 3	No activity data available for stock shipped by road from New Zealand local port to warehouse. Emissions likely to be de minimis as ports are always selected by their proximity to warehouse

## A1.2 QUANTIFIED INVENTORY OF EMISSIONS AND REMOVALS

### A1.2.1 Calculation methodology

A calculation methodology has been used for quantifying the emissions inventory based on the following calculation approach, unless otherwise stated below:

$$\text{Emissions} = \text{activity data} \times \text{emissions factor}$$

The quantification approach(es) has not changed since the previous measurement period

All emissions were calculated using Toitū emanage with emissions factors and Global Warming Potentials provided by the Programme (see Appendix 1 - data summary.xls). Global Warming Potentials (GWP) from the IPCC fifth assessment report (AR5) are the preferred GWP conversion<sup>5</sup>.

Where applicable, unit conversions applied when processing the activity data has been disclosed.

There are systems and procedures in place that will ensure applied quantification methodologies will continue in future GHG emissions inventories.

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<sup>5</sup> If emission factors have been derived from recognised publications approved by the programme, which still use earlier GWPs, the emission factors have not been altered from as published.

## A1.2.2 Liabilities

### A1.2.2.1 GHG STOCKS HELD

HFCs<sup>6</sup>, PFCs and SF<sub>6</sub> represent GHGs with high global warming potentials. Their accidental release could result in a large increase in emissions for that year, and therefore the stock holdings are reported under the Programme (Table 16).

**Table 16. HFCs, PFCs and SF<sub>6</sub> GHG emissions liabilities**

GHG gas stock held	Quantity (kg)	Potential liability (tCO <sub>2</sub> e)
HCFC-22 (R-22, Genetron 22 or Freon 22)	11.50	20.82
HFC-134a	1.93	2.76
HFC-32	41.70	28.15
R-410A	524.11	1,094.31
R-438A	0.00	0.00
R-600A	1.85	0.00
<b>Total</b>	<b>581.09</b>	<b>1,146.04</b>

### A1.2.3 Supplementary results

Holdings and transactions in GHG-related financial or contractual instruments such as permits, allowances, verified offsets or other purchased emissions reductions from eligible schemes recognised by the Programme are reported separately here.

<sup>6</sup> HFC stock liabilities for systems under 3 kg can be excluded.

## APPENDIX 2: SIGNIFICANCE CRITERIA USED

**Table 17. Significance criteria used for identifying inclusion of indirect emissions**

Emission source	Magnitude	Level of influence	Risk or opportunity	Sector specific guidance	Outsourced	Employee engagement	Intended Use and Users	Include in inventory?	
Toitū carbon programme boundary sources:									
a) All Category 1 and 2 emissions	n/a	n/a	n/a	n/a	n/a	n/a	Yes	Include	Intended Use and Users
b) Category 3 emissions associated with business travel and freight paid for by the organisation	n/a	n/a	n/a	n/a	n/a	n/a	Yes	Include	Intended Use and Users
c) Category 4 emissions associated with waste disposed of by the organisation, and transmissions and distribution of electricity and natural gas, where appropriate	n/a	n/a	n/a	n/a	n/a	n/a	Yes	Include	Intended Use and Users
d) Any Sector specific mandatory emissions sources as outlined by the Programme	n/a	n/a	n/a	n/a	n/a	n/a	Yes	Include	Intended Use and Users
Sources beyond the Toitū carbon programme boundary:									
Advertising and Market Research Services	Moderate (1-5% of estimated total)	Low	None identified	No	Yes	Yes	Yes	Exclude	Level of influence
Banking and Finance services	Moderate (1-5% of estimated total)	Low	None identified	No	No	No	No	Exclude	Level of influence
Computer products	Moderate (1-5% of estimated total)	Low	None identified	No	No	No	No	Exclude	Level of influence

Emission source	Magnitude	Level of influence	Risk or opportunity	Sector specific guidance	Outsourced	Employee engagement	Intended Use and Users	Include in inventory?	
Employment services	<i>De minimis</i> (<1% of estimated total)	Low	None identified	No	Yes	No	No	Exclude	Magnitude
Entertainment	<i>De minimis</i> (<1% of estimated total)	Low	None identified	No	No	Yes	Yes	Exclude	Magnitude
Furniture (Office and retail fit-out)	Significant (>5% of estimated total)	Moderate	None identified	No	No	Yes	Yes	Exclude	Lack of reportable data
Other professional, scientific and technical services	Moderate (1-5% of estimated total)	Low	None identified	No	No	No	No	Exclude	Level of influence
Paper and Paper products	Moderate (1-5% of estimated total)	Moderate	Opportunities	No	No	Yes	Yes	Exclude	Lack of reportable data
Printing	Moderate (1-5% of estimated total)	Moderate	Opportunities	No	No	Yes	Yes	Exclude	Lack of reportable data
Repair and maintenance	<i>De minimis</i> (<1% of estimated total)	Low	None identified	No	No	No	No	Exclude	Magnitude
Staff commuting	Moderate (1-5% of estimated total)	Low	Opportunities	No	No	Yes	Yes	Exclude	Lack of reportable data
Staff working from home	<i>De minimis</i> (<1% of estimated total)	Low	New business model opportunity	No	Yes	Yes	Yes	Exclude	Magnitude

Emission source	Magnitude	Level of influence	Risk or opportunity	Sector specific guidance	Outsourced	Employee engagement	Intended Use and Users	Include in inventory?	
Textile manufacturing	Significant (>5% of estimated total)	Moderate	Opportunities	Yes	No	Yes	Yes	Exclude	Lack of reportable data
Warehousing and storage services	<i>De minimis</i> (<1% of estimated total)	Low	None identified	No	Yes	No	No	Exclude	Level of influence
Wearing apparel	Significant (>5% of estimated total)	Low	Opportunities	Yes	No	No	No	Exclude	Lack of reportable data



## APPENDIX 3: CERTIFICATION MARK USE

Macpac may use the certification marks on their websites - Australia and New Zealand, TV's in store, social media channels such as LinkedIn and Instagram, electronic direct mail to customer databases.

## APPENDIX 4: REFERENCES

International Organization for Standardization, 2018. ISO 14064-1:2018. Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas 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.

World Resources Institute and World Business Council for Sustainable Development, 2015 (revised). The Greenhouse Gas Protocol: Scope 2 Guidance. An amendment to the GHG Protocol Corporate Standard. WBCSD: Geneva, Switzerland.

## APPENDIX 5: REPORTING INDEX

This report template aligns with ISO 14064-1:2018 and meet Toitū carbonreduce programme Organisation Technical Requirements. The following table cross references the requirements against the relevant section(s) of this report.

Section of this report	ISO 14064-1:2018 clause	Organisational Technical Requirement rule
<a href="#">Cover page</a>	9.3.1 b, c, r 9.3.2 d,	TR8.2, TR8.3
<a href="#">Availability</a>	9.2 g	
<a href="#">Chapter 1: Emissions Inventory Report</a>		
<a href="#">1.1. Introduction</a>	9.3.2 a	
<a href="#">1.2. Emissions inventory results</a>	9.3.1 f, h, j 9.3.3	TR4.14, TR4.16, TR4.17
<a href="#">1.3. Organisational context</a>	9.3.1 a	
<a href="#">1.3.1. Organisation description</a>	9.3.1 a	
<a href="#">1.3.2. Statement of intent</a>		TR4.2
<a href="#">1.3.3. Person responsible</a>	9.3.1 b	
<a href="#">1.3.4. Reporting period</a>	9.3.1 l	TR5.1, TR5.8
<a href="#">1.3.5. Organisational boundary and consolidation approach</a>	9.3.1.d	TR4.3, TR4.5, TR4.7, TR4.11
<a href="#">1.3.6. Excluded business units</a>		
<a href="#">Chapter 2: Emissions Management and Reduction Report</a>		
<a href="#">2.1. Emissions reduction results</a>	9.3.1 f, h, j, k 9.3.2 j, k	TR4.14, TR6.18
<a href="#">2.2. Significant emissions sources</a>		
<a href="#">2.3. Emissions reduction targets</a>		TR6.1, TR6.2, TR6.4, TR6.6, TR6.8,



Section of this report	ISO 14064-1:2018 clause	Organisational Technical Requirement rule
<a href="#">2.4. Emissions reduction projects</a>	9.3.2 b	TR6.8, TR6.11, TR6.12, TR6.13, TR6.14, TR6.15
<a href="#">2.5. Staff engagement</a>		TR6.1, TR6.9
<a href="#">2.6. Key performance indicators</a>		TR6.19
<a href="#">2.7. Monitoring and reporting</a>	9.3.2 h	TR6.2
<a href="#">Appendix 1: Detailed greenhouse gas inventory</a>	9.3.1 f, g	TR4.9, TR4.15
<a href="#">A1.1 Reporting boundaries</a>		
<a href="#">A1.1.1 Emission source identification method and significance criteria</a>	9.3.1 e	TR4.12, TR4.13
<a href="#">A1.1.2 Included emissions sources and activity data collection</a>	9.3.1 p, q 9.3.2 i	TR5.4, TR5.6, TR5.17, TR5.18,
<a href="#">A1.1.3 Excluded emissions sources and sinks</a>	9.3.1 i	TR5.21, TR5.22, TR5.23
<a href="#">A1.2 Quantified inventory of emissions and removals</a>		
<a href="#">A1.2.1 Calculation methodology</a>	9.3.1 m, n, o, t	
<a href="#">A1.2.2 Historical recalculations</a>		
<a href="#">A1.2.3 Liabilities</a>		
<a href="#">A1.2.3.1 GHG stocks held</a>		TR4.18
<a href="#">A1.2.3.2 Land-use liabilities</a>	9.3.3.	TR4.19
<a href="#">A1.2.4 Supplementary results</a>		
<a href="#">A1.2.4.1 Carbon credits and offsets</a>	9.3.3.3	
<a href="#">A1.2.4.2 Purchased or developed reduction or removal enhancement projects</a>	9.3.2 c	
<a href="#">A1.2.4.3 Double counting and double offsetting</a>		
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<a href="#">Appendix 5: Reporting index</a>		