



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

Prepared by (lead author): Linell Lottering

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Verification status: Reasonable for categories 1 & 2 and Limited for remaining categories

Measurement period: 01 July 2024 to 30 June 2025

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 audit opinion 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 Programme¹, 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

¹ Programme refers to the Toitū carbonreduce, Toitū net carbonzero and the Toitū climate positive programmes.

Quantification and Reporting of Greenhouse Gas Emissions and Removals². 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.

² 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*.

CONTENTS

COPYRIGHT	2
Disclaimer	2
Availability	2
Report Structure	2
Contents	4
Tables.....	5
Figures	5
Executive summary.....	6
Chapter 1: Emissions Inventory Report	8
1.1. Introduction.....	8
1.2. Emissions inventory results.....	8
1.2.1. Dual reporting of indirect emissions from purchased and generated energy	10
1.3. Organisational context	11
1.3.1. Organisation description	11
1.3.2. Statement of intent	12
1.3.3. Person responsible	12
1.3.4. Reporting period.....	13
1.3.5. Organisational boundary and consolidation approach	13
1.3.6. Excluded business units.....	15
Chapter 2: Emissions Management and Reduction Report.....	16
2.1. Emissions reduction results.....	16
2.2. Significant emissions sources	22
2.3. Emissions reduction targets	22
2.4. Emissions reduction projects	23
2.5. Staff engagement	25
2.6. Key performance indicators	25
2.7. Monitoring and reporting.....	25
Appendix 1: Detailed greenhouse gas inventory.....	26
A1.1 Reporting boundaries.....	28
A1.1.1 Emission source identification method and significance criteria	28
A1.1.2 Included sources and activity data management	28
A1.1.3 Excluded emissions sources and sinks	31
A1.2 Quantified inventory of emissions and removals.....	31
A1.2.1 Calculation methodology.....	31
A1.2.2 Supplementary results	32
A1.2.2.1 Double counting and double offsetting	32
Appendix 2: Significance criteria used.....	33
Appendix 3: Certification mark use	36
Appendix 4: References.....	37
Appendix 5: Reporting index	38

TABLES

Table 1: Inventory summary.....	6
Table 2: Emissions inventory summary for this measurement period.....	8
Table 3: Dual reporting of indirect emissions from imported energy	11
Table 4: Brief description of business units, sites and locations included in this emissions inventory...	15
Table 5: Comparison of historical GHG inventories.....	16
Table 6: Performance against plan	21
Table 7: Emission reduction targets	23
Table 8: Projects to reduce emissions	24
Table 9: Projects to improve data quality.....	25
Table 10: Key Performance Indicators (KPIs).....	25
Table 11: Direct GHG emissions and removals, quantified separately for each applicable gas	26
Table 12: Non-biogenic, biogenic anthropogenic and biogenic non-anthropogenic CO ₂ emissions and removals by category	27
Table 13: GHG emissions activity data collection methods and inherent uncertainties and assumptions	29
Table 14: GHG emissions sources excluded from the inventory	31
Table 15: Significance criteria used for identifying inclusion of indirect emissions	33

FIGURES

Figure 1: Emissions (tCO ₂ e) by Category for this measurement period	7
Figure 2: Emissions (tCO ₂ e) by category	9
Figure 3: Emissions (tCO ₂ e) by business unit.....	10
Figure 4: Top 10 emissions (tCO ₂ e) by source	10
Figure 5: Organisational structure.....	14
Figure 6: Comparison of gross emissions (tCO ₂ e) by category between the reporting periods.....	17
Figure 7: Comparison of gross emissions (tCO ₂ e) by subcategory between the reporting periods	18
Figure 8: Comparison of gross emissions (tCO ₂ e) by business unit between the reporting periods.....	19
Figure 9: Performance against target since base year.....	20

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 2024 to 30 June 2025.³

This is the annual GHG emissions inventory and management report for Macpac covering the measurement period 01 July 2024 - 30 June 2025.

Table 1: Inventory summary

Category (ISO 14064-1:2018)	Scopes (ISO 14064-1:2006)	2020	2024	2025
Category 1: Direct emissions (tCO ₂ e)	Scope 1	2.75	43.65	76.80
Category 2: Indirect emissions from imported energy (location-based method*) (tCO ₂ e)	Scope 2	1,590.50	0.00	0.00
Category 2: Indirect emissions from imported energy (market-based method*) (tCO ₂ e)		0.00	1,719.13	1,889.09
Category 3: Indirect emissions from transportation (tCO ₂ e)	Scope 3	2,208.47	1,137.24	1,160.53
Category 4: Indirect emissions from products used by organisation (tCO ₂ e)		254.02	296.56	300.49
Category 5: Indirect emissions associated with the use of products from the organisation (tCO ₂ e)		0.00	0.00	0.00
Category 6: Indirect emissions from other sources (tCO ₂ e)		0.00	0.00	0.00
Total direct emissions (tCO₂e)		2.75	43.65	76.80
Total indirect emissions* (tCO₂e)		4,052.99	3,152.93	3,350.11
Total gross emissions* (tCO₂e)		4,055.74	3,196.58	3,426.92
Category 1 direct removals (tCO ₂ e)		0.00	0.00	0.00
Total net emissions (tCO₂e)		4,055.74	3,196.58	3,426.92

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

³ Throughout this document “emissions” means “GHG emissions”. Unless otherwise stated, emissions are reported as tonnes of carbon dioxide equivalent (tCO₂e).

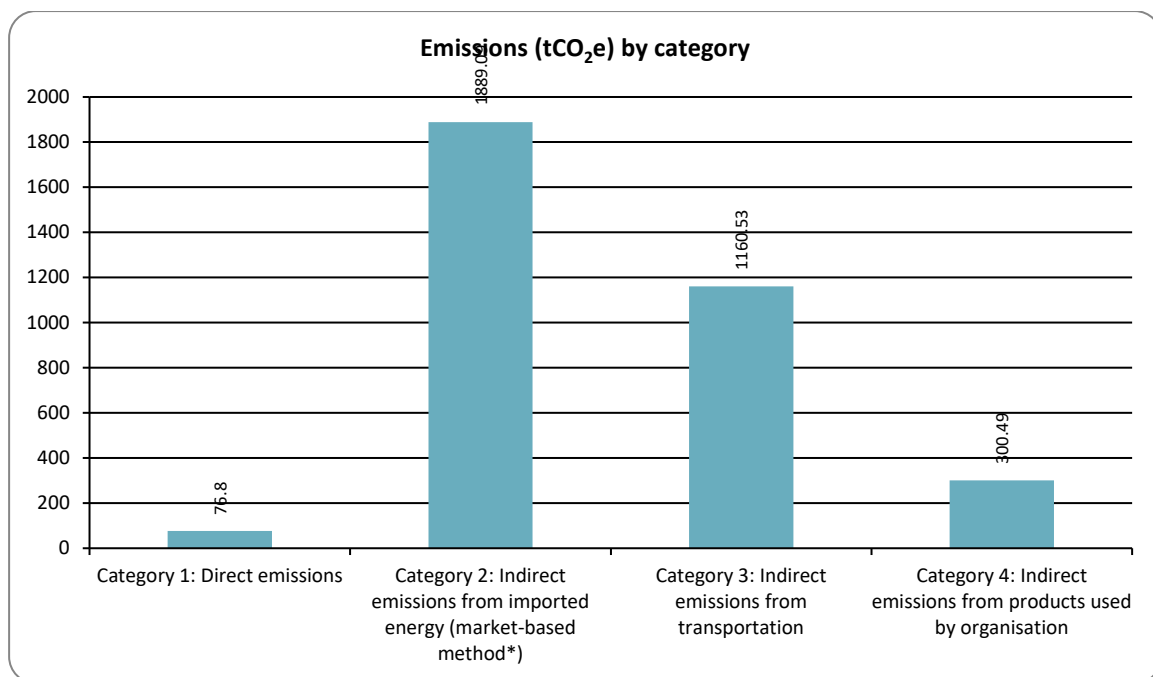


Figure 1: Emissions (tCO₂e) by Category for this measurement period

CHAPTER 1: EMISSIONS INVENTORY REPORT

1.1. INTRODUCTION

This report is the annual greenhouse gas (GHG) emissions inventory and management report for Macpac New Zealand 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 Audit Opinion provided to the directors of the certification entity.

1.2. EMISSIONS INVENTORY RESULTS

Table 2: Emissions inventory summary for this measurement period

Measurement period: 01 July 2024 to 30 June 2025.

Category	Toitū carbon mandatory boundary (tCO ₂ e)	Additional emissions (tCO ₂ e)	Total emissions (tCO ₂ e)
Category 1: Direct emissions	76.80 Diesel, Petrol regular	0.00	76.80
Category 2: Indirect emissions from imported energy (market-based method*)	1,889.09 Electricity - Annual factor, Electricity (ACT), Electricity (NSW), Electricity (QLD), Electricity (SA), Electricity (TAS), Electricity (VIC), Electricity (WA)	0.00	1,889.09
Category 3: Indirect emissions from transportation	1,158.88 Air travel domestic (average), Air travel long haul (business), Air travel long haul (econ+), Air travel short haul (econ), Air travel short haul b/f class, Freight (pre-verified tCO ₂ -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)	1.65 Freight Shipping Ro-Ro ferry (freight, average)	1,160.53
Category 4: Indirect emissions from products used by organisation	298.96 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	1.54 Waste disposal recycling of Paper, Waste disposal recycling of Plastic	300.49

Category	Toitū carbon mandatory boundary (tCO ₂ e)	Additional emissions (tCO ₂ e)	Total emissions (tCO ₂ e)
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
Total direct emissions	76.80	0.00	76.80
Total indirect emissions*	3,346.93	3.18	3,350.11
Total gross emissions*	3,423.73	3.18	3,426.92
Category 1 direct removals	0.00	0.00	0.00
Total net emissions	3,423.73	3.18	3,426.92
Operating revenue (gross tCO ₂ e / \$Millions)		14.80	14.81

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

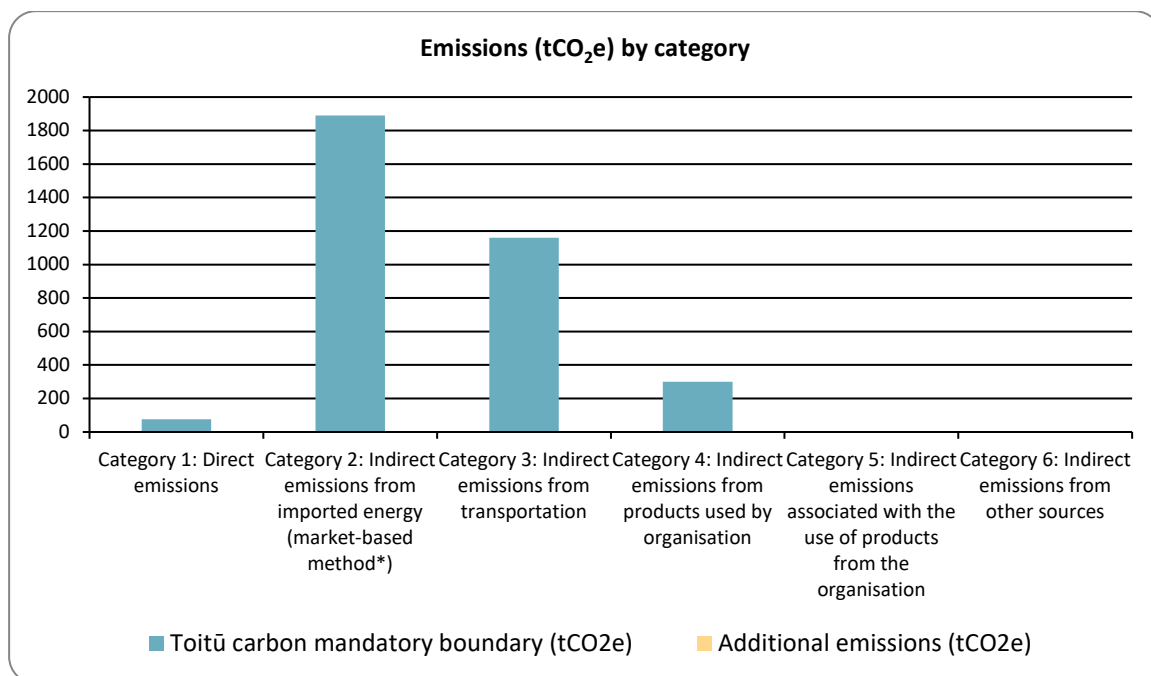


Figure 2: Emissions (tCO₂e) by category

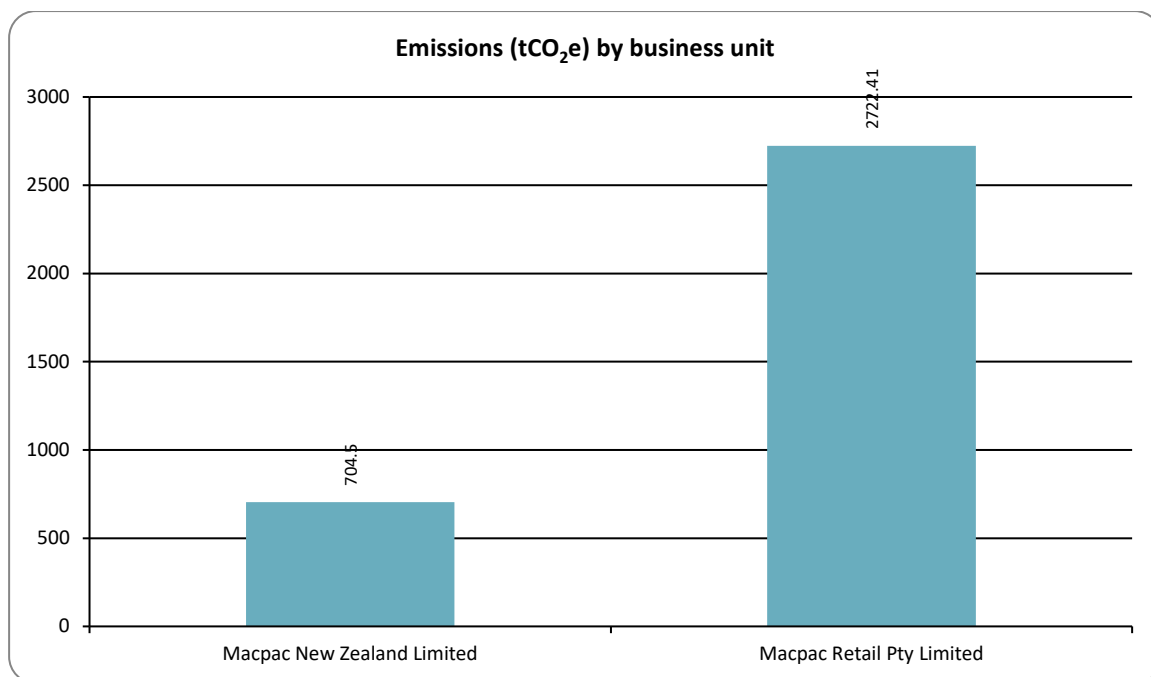


Figure 3: Emissions (tCO₂e) by business unit

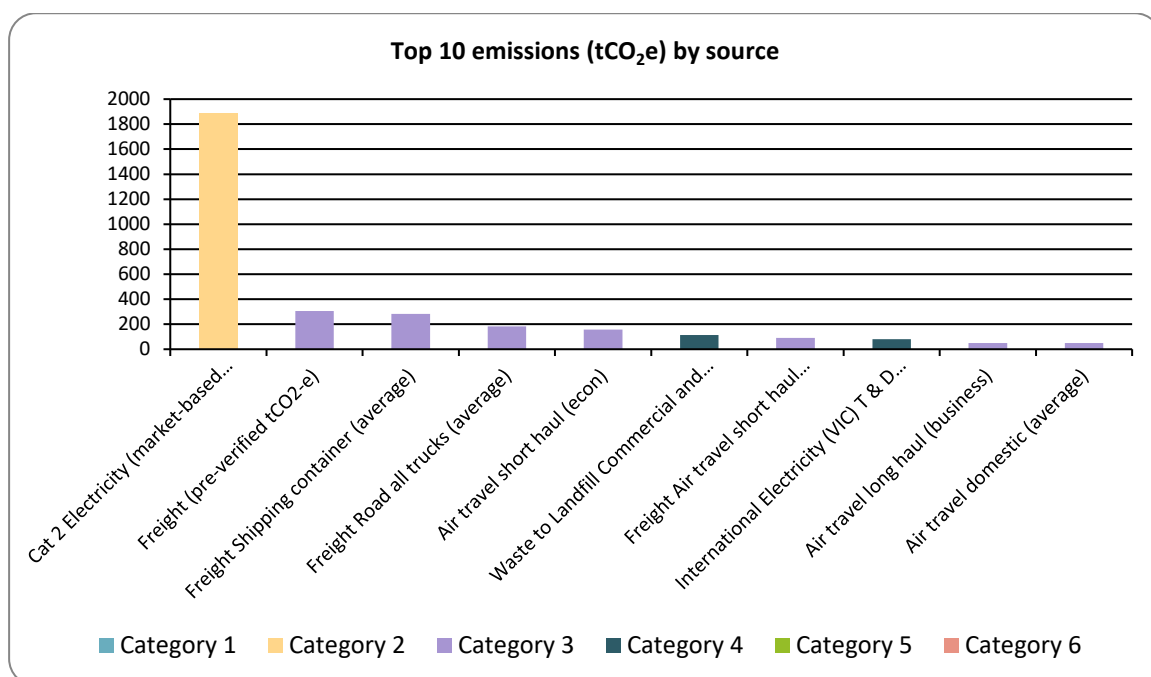


Figure 4: Top 10 emissions (tCO₂e) by source

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.

From the 2022 inventory, Macpac aligns to market-based reporting for tracking energy related emissions and reductions over time.

From 2023, Macpac NZ utilises Meridian's 100% Certified Renewable Energy product for the majority of its NZ operations.

Contractual instruments are any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation, or for unbundled attribute claims. This includes Renewable Energy Certificates.

Contractual instruments are applicable for this reporting period.

Its move to Meridian's Certified Renewable Energy product sees the New Zealand businesses purchase renewable energy certificates to verify that the amount of electricity used throughout the company's operations is matched on an annual basis with electricity produced from Meridian's certified hydro stations and wind farms. The renewable energy certification process applies operations throughout New Zealand, including offices, the majority of Macpac stores, and Distribution Centre.

Table 3. Dual reporting of indirect emissions from imported energy

Category	Location-based methodology (tCO ₂ e)	Market-based methodology (tCO ₂ e)
Category 1: Direct emissions	76.80	76.80
Category 2: Indirect emissions from imported energy	1,691.04	1,889.09
Category 3: Indirect emissions from transportation	1,160.53	1,160.53
Category 4: Indirect emissions from products used by organisation	300.49	300.49
Category 5: Indirect emissions associated with the use of products from the organisation	0.00	0.00
Category 6: Indirect emissions from other sources	0.00	0.00
Total direct emissions	76.80	76.80
Total indirect emissions	3,152.06	3,350.11
Total gross emissions	3,228.87	3,426.92
Category 1 direct removals	0.00	0.00
Total net emissions	3,228.87	3,426.92

1.3. ORGANISATIONAL CONTEXT

1.3.1. Organisation description

Macpac is wholly owned by Super Retail Group Limited. Macpac has a network of more than 100 retail stores throughout New Zealand and Australia, as well as an online store and wholesale distribution networks in the Japanese market.

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 over 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.

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

Macpac's focus on reduction of Scope 2 emissions aligns with our parent company. Super Retail Group has set a goal of achieving net zero emissions for both Scope 1 and Scope 2 emissions by 2030 and outlines two key levers to reach this goal: energy efficiency and green energy procurement.

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.

Other schemes and requirements

This inventory will not be used to report into or align with any other compliance scheme or industry sector requirements.

1.3.3. Person responsible

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

Nonny Caro

n/a

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 2024 to 30 June 2025

Annually

The period 1 July 2024 - 30 June 2025 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.⁴

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.

⁴control: 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.

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

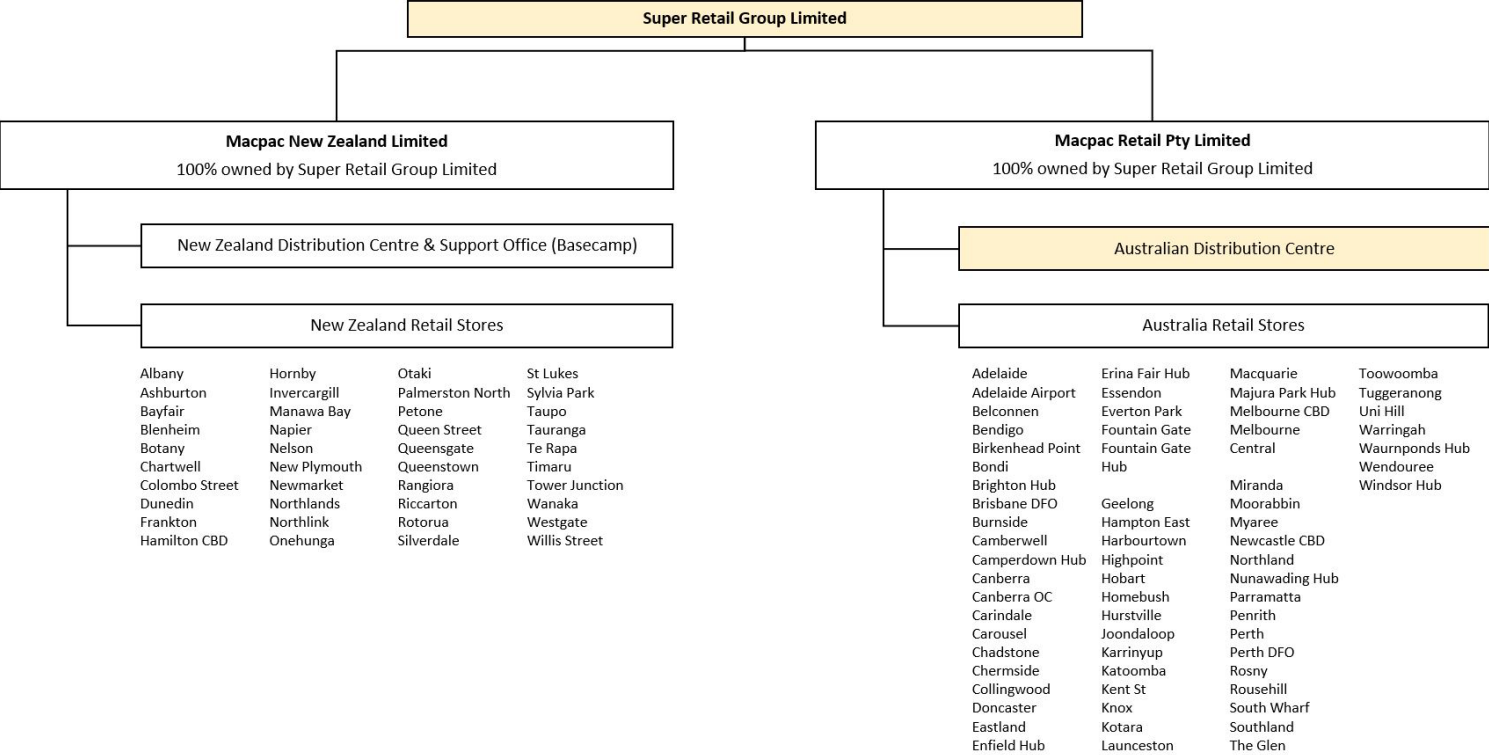


Figure 5: Organisational structure

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 achieved strong reductions against its emissions reduction targets.

In the context of short-haul air freight (downstream), Macpac has significantly surpassed its 10% reduction target, delivering an absolute reduction of 79.7% against the baseline. This reflects the structural change achieved through shifting freight away from air to sea and road transport.

For Category 2 electricity emissions across 12 retail stores in Australia, Macpac has achieved an absolute reduction of 6.7%, against a 20% reduction target by 2025. Progress is below the anticipated trajectory, primarily due to delays in efficiency upgrades, though savings are expected to increase as these are completed.

In New Zealand operations, Macpac has delivered a 95% reduction in electricity emissions through renewable energy purchasing. While slightly short of the full 100% target, this represents a near-complete decarbonisation of the New Zealand retail electricity footprint.

Table 5: Comparison of historical GHG inventories

Category	2020	2021	2022	2023	2024	2025
Category 1: Direct emissions (tCO ₂ e)	2.75	9.79	12.55	22.18	43.65	76.80
Category 2: Indirect emissions from imported energy (location-based method*) (tCO ₂ e)	1,590.50	1,697.99	1,605.42	0.00	0.00	0.00
Category 2: Indirect emissions from imported energy (market-based method*) (tCO ₂ e)	0.00	0.00	0.00	1,854.19	1,719.13	1,889.09
Category 3: Indirect emissions from transportation (tCO ₂ e)	2,208.47	1,308.17	1,195.16	1,566.15	1,137.24	1,160.53
Category 4: Indirect emissions from products used by organisation (tCO ₂ e)	254.02	236.91	234.00	276.42	296.56	300.49
Category 5: Indirect emissions associated with the use of products from the organisation (tCO ₂ e)	0.00	0.00	0.00	0.00	0.00	0.00
Category 6: Indirect emissions from other sources (tCO ₂ e)	0.00	0.00	0.00	0.00	0.00	0.00
Total direct emissions (tCO₂e)	2.75	9.79	12.55	22.18	43.65	76.80
Total indirect emissions* (tCO₂e)	4,052.99	3,243.06	3,034.58	3,696.76	3,152.93	3,350.11
Total gross emissions* (tCO₂e)	4,055.74	3,252.85	3,047.13	3,718.95	3,196.58	3,426.92
Category 1 direct removals (tCO ₂ e)	0.00	0.00	0.00	0.00	0.00	0.00
Total net emissions (tCO₂e)	4,055.74	3,252.85	3,047.13	3,718.95	3,196.58	3,426.92
Emissions intensity						
Operating revenue (gross tCO ₂ e / \$Millions)	29.10	19.75	15.33	17.19	14.37	14.81
Operating revenue (gross mandatory tCO ₂ e / \$Millions)	29.08	19.74	15.32	16.90	14.34	14.80

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

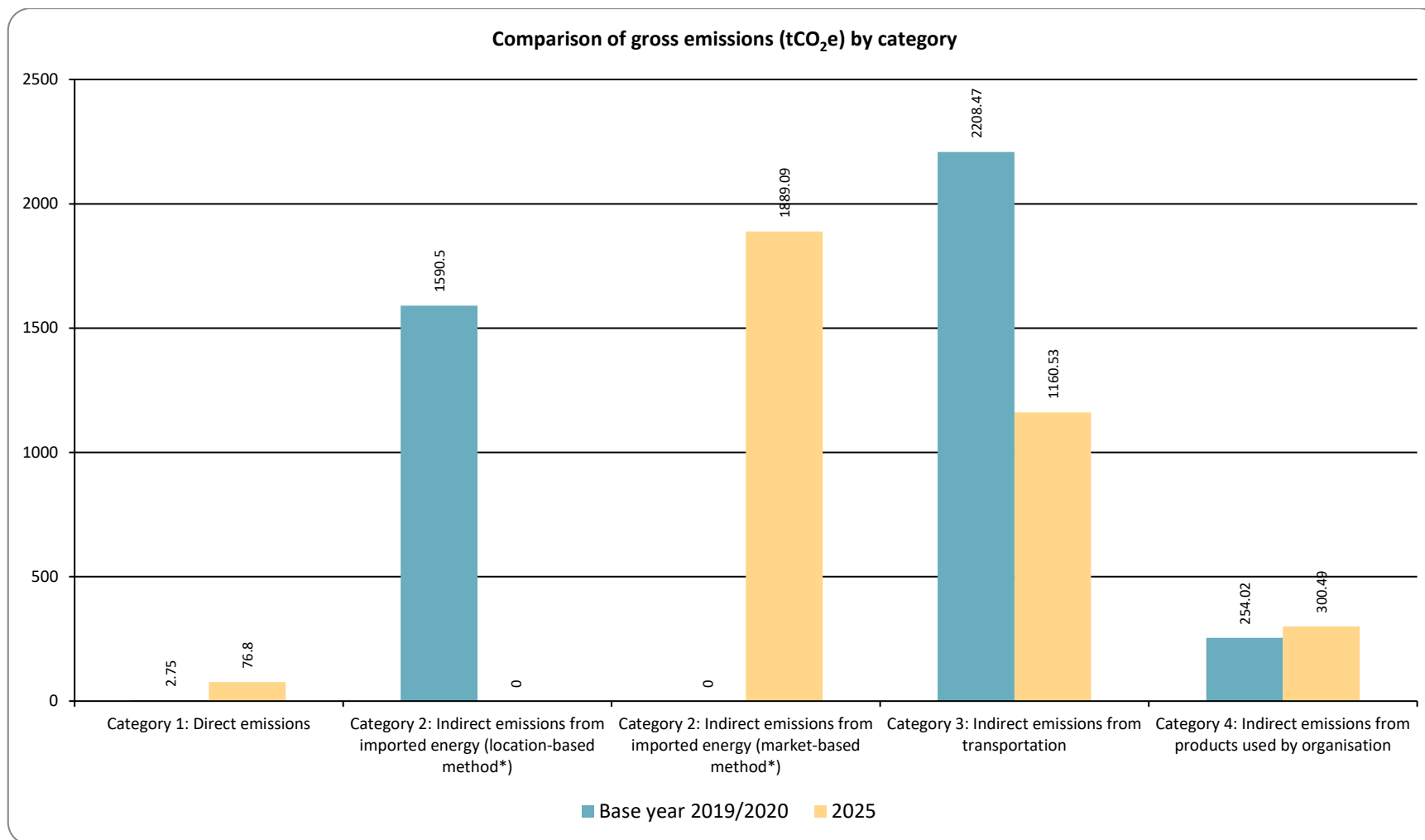


Figure 6: Comparison of gross emissions (tCO₂e) by category between the reporting periods

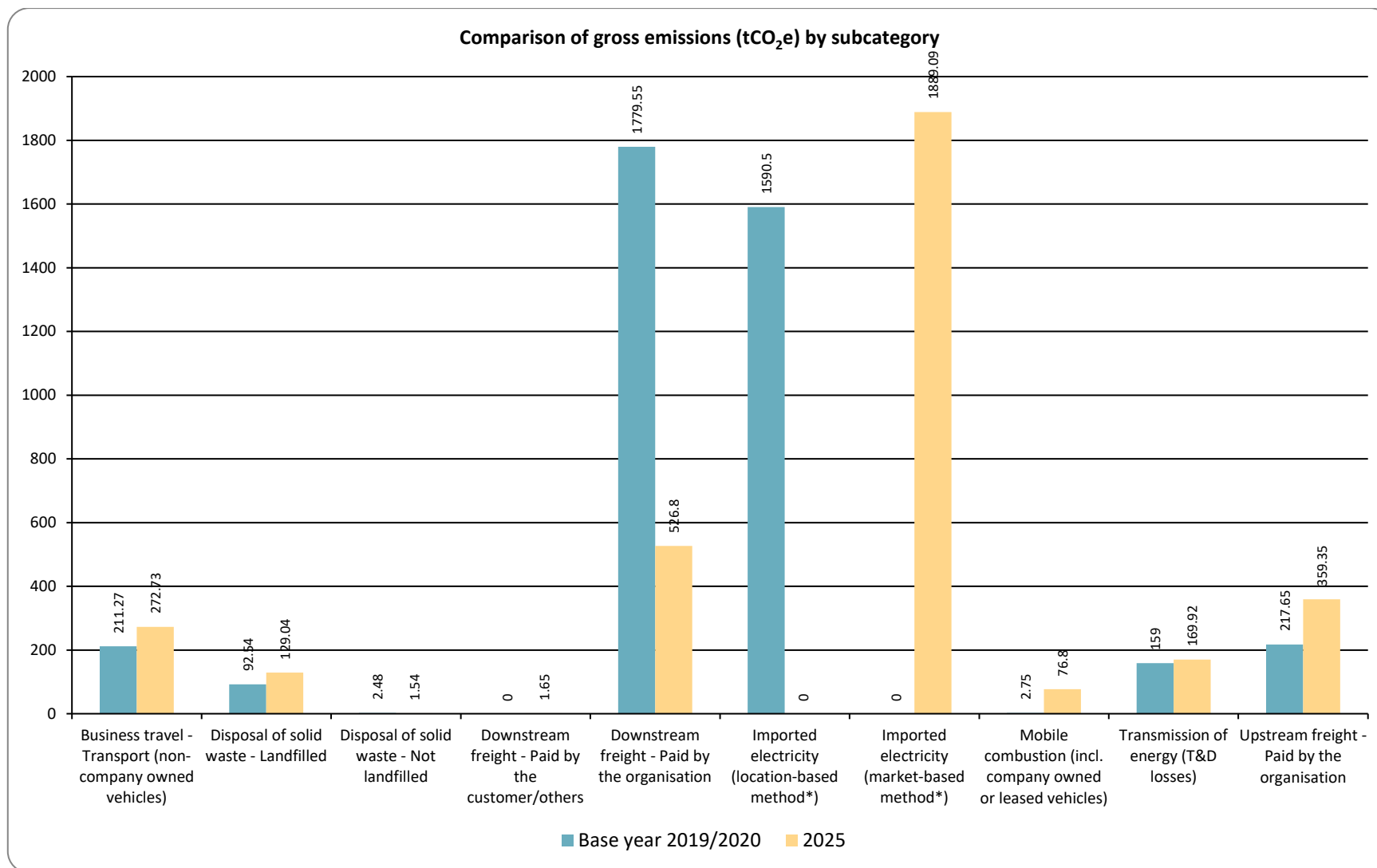


Figure 7: Comparison of gross emissions (tCO₂e) by subcategory between the reporting periods

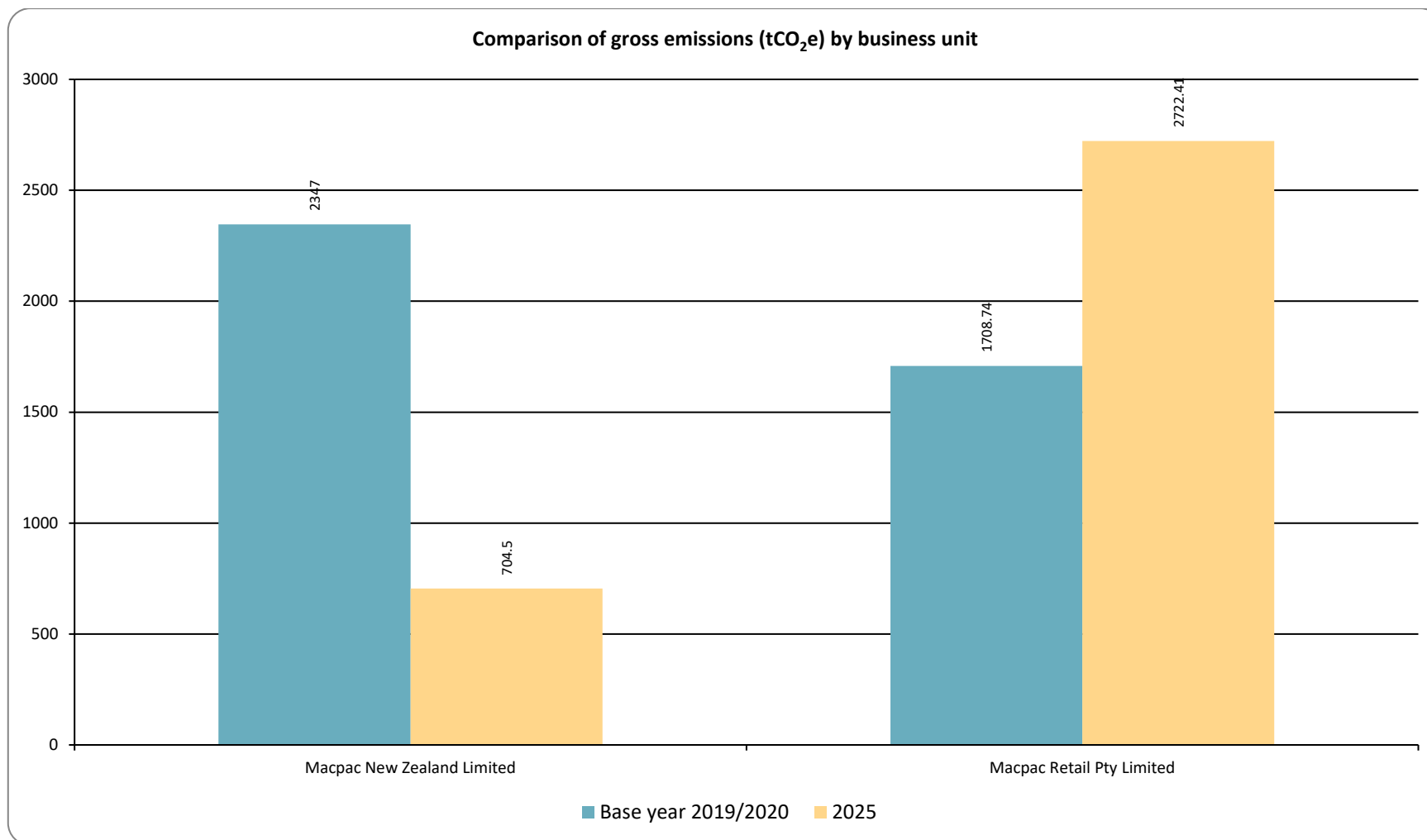


Figure 8: Comparison of gross emissions (tCO₂e) by business unit between the reporting periods

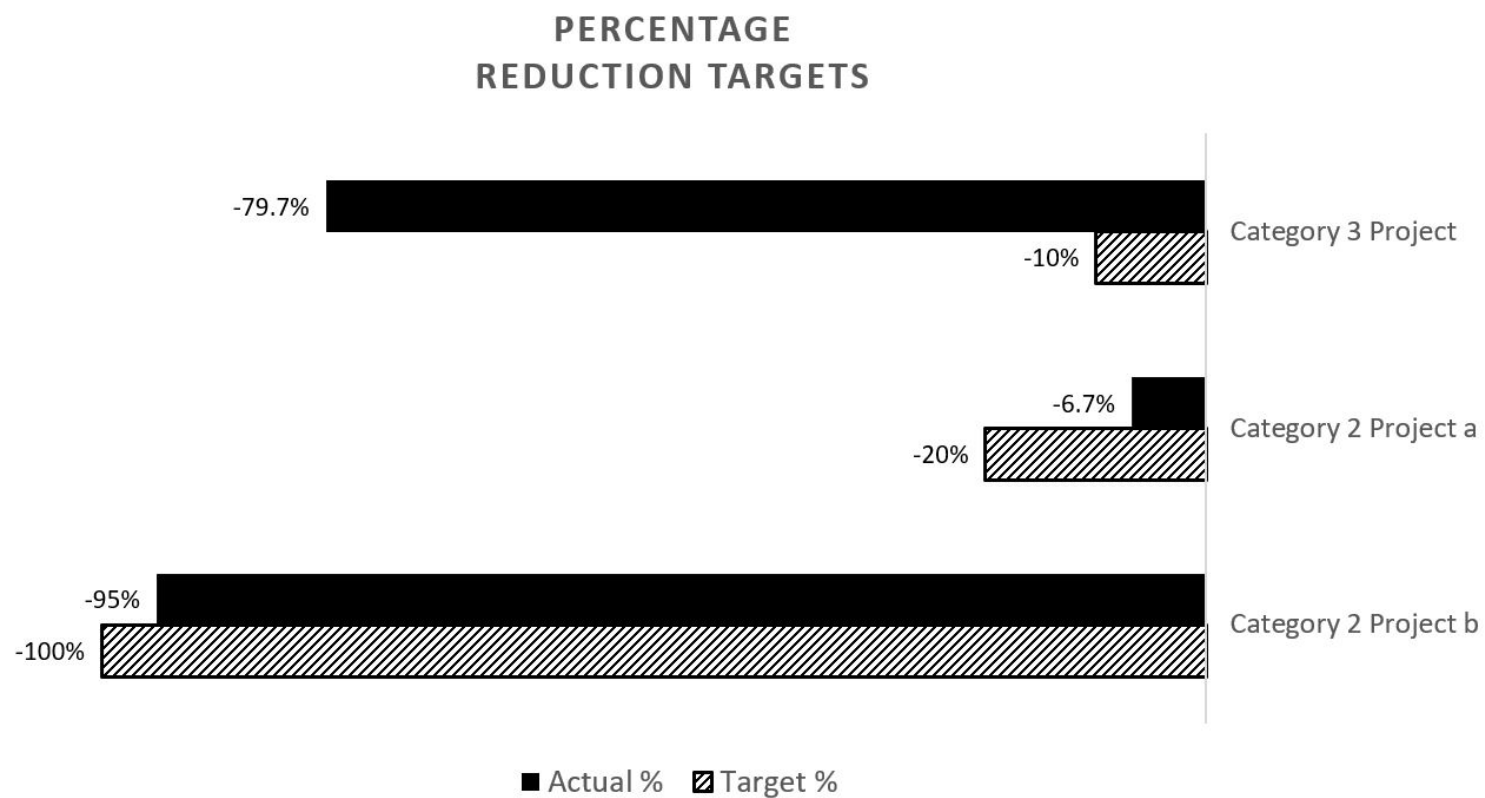


Figure 9: Performance against target since base year

Table 6. Performance against plan

Target name	Baseline period	Target date	Type of target (intensity or absolute)	Current performance (tCO ₂ e)	Current performance (%)	Comments
Reduce Category 3 emissions relating to 'Freight Air Travel short-haul (downstream)' by 10%	1 July 2021 - 30 June 2022	FY25	Absolute	81.75	-79.7%	Target significantly exceeded due to structural shift away from airfreight.
Reduce Category 2 emissions for 12 high emitting retail stores by 20%	1 July 2022 - 30 June 2023	FY25	Absolute	406.99	-6.7%	Progress behind trajectory due to delays in efficiency upgrades.
Switch to renewable energy for NZ-based operations (100% reduction target)	1 Jul 2022 – 30 Jun 2023	FY23	Absolute	-	-95.0%	Substantial progress achieved through renewable procurement. Minor residual emissions remain.

2.2. SIGNIFICANT EMISSIONS SOURCES

Significant sources

Macpac's top emissions source by far is purchased electricity for Australian stores. This is of particular relevance since the company has ambitious growth plans for the next few years.

Also of immediate importance is the legacy emission source of air freight short-haul (downstream), which the company has gradually addressed with significant success, since the start of the program.

Activities responsible for generating significant emissions

Emissions attributed to purchased electricity are connected to various facets of Macpac's operations, encompassing the support office, distribution center, and the network of retail stores. It's important to emphasize that the stores situated in Victoria and New South Wales, Australia, are the primary contributors to electricity-related emissions. It's worth noting that the majority of Macpac stores in Australia are concentrated within these two states.

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.

Influences over the activities

Beyond the implementation of resource efficiency upgrades, Macpac has limited ability to reduce electricity use for Australian stores.

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.

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's targets are driven by internal sustainability goals.

Macpac has made strong progress against its emissions reduction targets.

In the context of short-haul air freight (downstream), Macpac has delivered a 79.7% reduction in emissions, far surpassing the 10% reduction target. This reflects the structural shift away from air freight towards lower-emission transport modes.

For purchased electricity across Australian retail stores, Macpac has achieved a 6.7% reduction, against a 20% target. While progress is below the anticipated trajectory, reductions have been supported by the ongoing decarbonisation of the Australian grid and efficiency measures, with further gains expected as upgrades are rolled out.

In New Zealand operations, emissions from purchased electricity have been reduced by 95% through the switch to renewable energy, nearly achieving the full decarbonisation target.

Table 7. Emission reduction targets

Target name	Baseline period	Target date	Type of target (intensity or absolute)	Categories covered	Target		KPI	Responsibility	Rationale
Category 2 Project	1 July 2024 - 30 June 2025	FY26 (project completion)	Absolute	Category 2	144,000 kWh	Annualised saving of ~144,000 kWh. (Equivalent emissions reduction to be updated once baseline is confirmed)	Absolute	Super Retail Group	Achievable through the application of the reduction projects discussed further below.
Category 3 Project relating to 'Freight Air Travel short-haul (downstream)'	1 July 2024 - 30 June 2025	FY28 (project completion)	Absolute	Category 3	10%	Base year emissions (tCO ₂ e): 81.75 Target year emissions (tCO ₂ e): 73.57	Absolute	Macpac	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 from Australian stores	Prioritise high energy intensity (kWh/m ²) and high consumption (kWh/annum) sites for LED lighting upgrades, while retaining the flexibility to include other stores where upgrades are commercially viable. The baseline will be determined through electrician stock-take of existing lighting fittings and their rated consumption, with projected savings calculated by comparing these against the specifications of new LED fittings under typical operating hours. This programme is expected to deliver an ongoing annual reduction of approximately 144,000 kWh across the portfolio, with savings verified through engineering calculations rather than utility invoices.	Property ESG and Compliance Manager, Super Retail Group	Ongoing	None	None anticipated	n/a
Reduce Category 3 emissions Freight Air Travel short-haul (downstream)	Reduce shipment of product by air from NZ distribution centre to AU distribution centre to ship more product directly to AU.	GM of Supply Chain, Macpac	Ongoing	Cost saving	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 main providers of courier freight in New Zealand to obtain more accurate data on distance and weight for online fulfilment	Linell Lottering	Ongoing
Freight	Work with the main providers of courier freight in Australia to obtain more accurate data on distance and weight for online fulfilment	Linell Lottering	Ongoing
Refrigerant gases	Implement reporting requirement on make and model of Macpac owned assets and those under Macpac operational control that store refrigerants	Linell Lottering	Ongoing

2.5. STAFF ENGAGEMENT

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 10. 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 annual analysis of emissions relating to Electricity Purchased and Freight air short haul (downstream) with reporting to the Macpac Leadership team.

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 11. Direct GHG emissions and removals, quantified separately for each applicable gas

Category	CO ₂	CH ₄	N ₂ O	NF ₃	SF ₆	HFC	PFC	Desflurane	Sevoflurane	Isoflurane	Emissions total (tCO ₂ 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)	75.96	0.18	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.80
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
Fugitive Emissions	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
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
Enteric fermentation	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
Electricity generated and consumed onsite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Medical gases	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Exported electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total net emissions	75.96	0.18	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.80

Table 12. Non-biogenic, biogenic anthropogenic and biogenic non-anthropogenic CO₂ emissions and removals by category

Category	Anthropogenic biogenic CO ₂ emissions	Anthropogenic biogenic (CH ₄ and N ₂ O) emissions (tCO ₂ e)	Non-anthropogenic biogenic (tCO ₂ e)
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	16.29	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
Total gross emissions	0.00	16.29	0.00

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 13 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 endeavoured 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 13. 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 in all cases	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	In some cases
	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	In some cases

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 14 have been identified and excluded from this inventory.

Table 14. 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 certain retail stores in New Zealand
Macpac Retail Pty Limited	Refrigerants	Category 1	No activity data available for certain 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	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.

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 conversion⁵.

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.

⁵ 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 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.

A1.2.2.1 DOUBLE COUNTING AND DOUBLE OFFSETTING

There are various definitions of double counting or double offsetting. For this report, it refers to:

- Parts of the organisation have been prior offset.
- The same emissions sources have been reported (and offset) in both an organisational inventory and product footprint.
- 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 (Categories 2 and 3) emissions sources.
- Programme approved 'pre-offset' products or services that contribute to the organisation inventory
- The organisation generates renewable electricity, uses or exports the electricity and claims the carbon benefits.
- Emissions reductions are counted as removals in an organisation's GHG emissions inventory and are counted or used as offsets/carbon credits by another organisation.

Double counting / double offsetting has been included in this inventory.

Details

Emissions for taxi travel related to annual Retail Conference Event that has been verified by Toitū have been included for this report. Taxi travel to the value of NZ\$15,996.00

APPENDIX 2: SIGNIFICANCE CRITERIA USED

Table 15. Significance criteria used for identifying inclusion of indirect emissions

	Magnitude	Level of influence	Risk or opportunity	Sector specific guidance	Outsourcing	Employee engagement	Intended Use and Users	Include in inventory?	Primary reason for decision to include or exclude
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

	Magnitude	Level of influence	Risk or opportunity	Sector specific guidance	Outsourcing	Employee engagement	Intended Use and Users	Include in inventory?	Primary reason for decision to include or exclude
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
Employment services	De minimus (<1% of estimated total)	Low	None identified	No	Yes	No	No	Exclude	Magnitude
Entertainment	De minimus (<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

	Magnitude	Level of influence	Risk or opportunity	Sector specific guidance	Outsourcing	Employee engagement	Intended Use and Users	Include in inventory?	Primary reason for decision to include or exclude
Printing	Moderate (1-5% of estimated total)	Moderate	Opportunities	No	No	Yes	Yes	Exclude	Lack of reportable data
Repair and maintenance	De minimus (<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	De minimus (<1% of estimated total)	Low	New business model opportunity	No	Yes	Yes	Yes	Exclude	Magnitude
Textile manufacturing	Significant (>5% of estimated total)	Moderate	Opportunities	Yes	No	Yes	Yes	Exclude	Lack of reportable data
Warehousing and storage services	De minimus (<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 and annual public reporting documents.

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
Cover page	9.3.1 b, c, r 9.3.2 d, 9.2 g	TR8.2, TR8.3
Availability		
Chapter 1: Emissions Inventory Report		
1.1. Introduction	9.3.2 a	
1.2. Emissions inventory results	9.3.1 f, h, j 9.3.3	TR4.14, TR4.16, TR4.17
1.3. Organisational context	9.3.1 a	
1.3.1. Organisation description	9.3.1 a	
1.3.2. Statement of intent		TR4.2
1.3.3. Person responsible	9.3.1 b	
1.3.4. Reporting period	9.3.1 l	TR5.1, TR5.8
1.3.5. Organisational boundary and consolidation approach	9.3.1 d	TR4.3, TR4.5, TR4.7, TR4.11
1.3.6. Excluded business units		
Chapter 2: Emissions Management and Reduction Report		
2.1. Emissions reduction results	9.3.1 f, h, j, k 9.3.2 j, k	TR4.14, TR6.18
2.2. Significant emissions sources		
2.3. Emissions reduction targets		TR6.1, TR6.2, TR6.4, TR6.6, TR6.8, TR6.8, TR6.11, TR6.12, TR6.13, TR6.14, TR6.15
2.4. Emissions reduction projects	9.3.2 b	TR6.1, TR6.9 TR6.19
2.5. Staff engagement		TR6.2
2.6. Key performance indicators	9.3.2 h	TR4.9, TR4.15
2.7. Monitoring and reporting	9.3.1 f, g	
Appendix 1: Detailed greenhouse gas inventory		
A1.1 Reporting boundaries		
A1.1.1 Emission source identification method and significance criteria	9.3.1 e	TR4.12, TR4.13
A1.1.2 Included emissions sources and activity data collection	9.3.1 p, q 9.3.2 i	TR5.4, TR5.6, TR5.17, TR5.18,
A1.1.3 Excluded emissions sources and sinks	9.3.1 i	TR5.21, TR5.22, TR5.23
A1.2 Quantified inventory of emissions and removals		
A1.2.1 Calculation methodology	9.3.1 m, n, o, t	
A1.2.2 Historical recalculations		
A1.2.3 GHG Storage and liabilities		
A1.2.3.1 GHG stocks held on site		TR4.18
A1.2.3.2 Land-use liabilities	9.3.3.	TR4.19
A1.2.4 Supplementary results		
A1.2.4.1 Carbon credits and offsets	9.3.3.3	
A1.2.4.2 Purchased or developed reduction or removal enhancement projects	9.3.2 c	
A1.2.4.3 Double counting and double offsetting		
Appendix 2: Significance criteria used	9.3.1.e	TR4.12
Appendix 3: Certification mark use		TR3.6
Appendix 4: References		
Appendix 5: Reporting index		

