



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



Waikato Regional Council

Prepared by (lead author): Martin Lynch, Co-Lab Energy & Carbon Manager

Dated: 09 January 2023

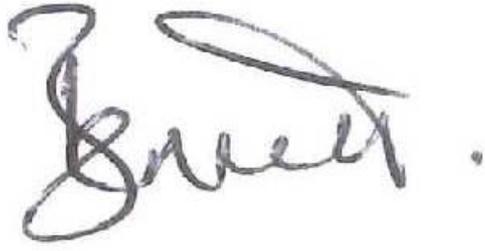
Verification status: **Toitū Envirocare certification team to complete**

Measurement period: 01 July 2021 to 30 June 2022

Base year period: 01 July 2016 to 30 June 2017

Approved for release by:



A handwritten signature in black ink, appearing to read "Karen Bennett". The signature is fluid and cursive, with a period at the end.

Karen Bennett, Manager of the Chief Executive's Office

DISCLAIMER

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This work shall not be used for the purpose of obtaining emissions units, allowances, or carbon credits from two or more different sources in relation to the same emissions reductions, or for the purpose of offering for sale carbon credits which have been previously sold.

The consolidation approach chosen for the greenhouse gas inventory should not be used to make decisions related to the application of employment or taxation law.

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

The report will be published on Waikato Regional Council's website at <https://www.waikatoregion.govt.nz/council/about-us/our-performance>, and reported to a governance committee of council.

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 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.

¹ Programme refers to the Toitū carbonreduce and the Toitū carbonzero programmes.

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

Disclaimer.....	3
Availability.....	3
Report Structure.....	3
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	11
1.3. Organisational context	12
1.3.1. Organisation description	12
1.3.2. Statement of intent.....	14
1.3.3. Person responsible.....	15
1.3.4. Reporting period.....	15
1.3.5. Organisational boundary and consolidation approach	15
1.3.6. Excluded business units.....	17
Chapter 2: Emissions Management and Reduction Report.....	18
2.1. Emissions reduction results	18
2.2. Significant emissions sources.....	24
2.3. Emissions reduction targets.....	25
2.4. Emissions reduction projects	27
2.5. Staff engagement.....	30
2.6. Key performance indicators.....	30
2.7. Monitoring and reporting.....	32
Appendix 1: Detailed greenhouse gas inventory	33
A1.1 Reporting boundaries.....	36
A1.1.1 Emission source identification method and significance criteria.....	36
A1.1.2 Included sources and activity data management	36
A1.1.3 Excluded emissions sources and sinks	40
A1.2 Quantified inventory of emissions and removals.....	40
A1.2.1 Calculation methodology	40
A1.2.2 GHG Storage and liabilities.....	40
A1.2.2.1 GHG stocks held on site	40
A1.2.3 Supplementary results	41
A1.2.3.1 Double counting and double offsetting	41
Appendix 2: Significance criteria used	42
Appendix 3: Certification mark use.....	43
Appendix 4: References	44
Appendix 5: Reporting index	45

TABLES

Table 1: Inventory summary.....	6
Table 2: GHG 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 ...	16
Table 5: Comparison of historical GHG inventories.....	18
Table 6: Performance against plan.....	23
Table 7: Emission reduction targets.....	26
Table 8: Projects to reduce emissions.....	28
Table 9: Projects to improve data quality.....	30
Table 10: Projects to prevent emissions from liabilities.....	30
Table 11: Direct GHG emissions and removals, quantified separately for each applicable gas.....	33
Table 12: Non-biogenic, biogenic anthropogenic and biogenic non-anthropogenic CO ₂ emissions and removals by category.....	35
Table 13: GHG emissions activity data collection methods and inherent uncertainties and assumptions.....	37
Table 14: GHG emissions sources excluded from the inventory.....	40
Table 15: Total storage as of year end with potential GHG emissions liabilities.....	41
Table 16: Significance criteria used for identifying inclusion of indirect emissions.....	42

FIGURES

Figure 1: Emissions (tCO ₂ e) by Category for this measurement period.....	7
Figure 2: GHG emissions (tonnes CO ₂ e) by category.....	9
Figure 3: GHG emissions (tonnes CO ₂ e) by business unit.....	10
Figure 4: Top 10 GHG emissions (tonnes CO ₂ e) by source.....	10
Figure 5: Top 10 GHG emissions (tonnes CO ₂ e) by source excluding Public Transport.....	11
Figure 6: Organisational Structure.....	10
Figure 7: Comparison of gross emissions by category between the reporting periods.....	10
Figure 8: Comparison of gross emissions by subcategory between the reporting periods.....	20
Figure 9: Comparison of gross emissions by business unit between the reporting periods.....	21
Figure 10: Performance against target since base year.....	22

EXECUTIVE SUMMARY

This is the annual greenhouse gas (GHG) emissions inventory and management report for Waikato Regional Council covering the measurement period 01 July 2021 to 30 June 2022.³

Table 1: Inventory summary

Category (ISO 14064-1:2018)	Scopes (ISO 14064-1:2006)	2017	2021	2022
Category 1: Direct emissions	Scope 1	806.75	625.79	596.75
Category 2: Indirect emissions from imported energy (location-based method*)	Scope 2	714.99	226.00	258.23
Category 3: Indirect emissions from transportation	Scope 3	147.13	7,063.49	7,004.19
Category 4: Indirect emissions from products used by organisation		4.09	24.78	30.24
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		806.75	625.79	596.75
Total indirect emissions*		866.21	7,314.26	7,292.65
Total gross emissions*		1,672.95	7,940.06	7,889.40
Category 1 direct removals		0.00	0.00	0.00
Purchased emission reductions		0.00	0.00	0.00
Total net emissions		1,672.95	7,940.06	7,889.40

*Emissions are reported using a location-based methodology. See section 1.2.1 for details.0

³ Throughout this document "emissions" means "GHG emissions".

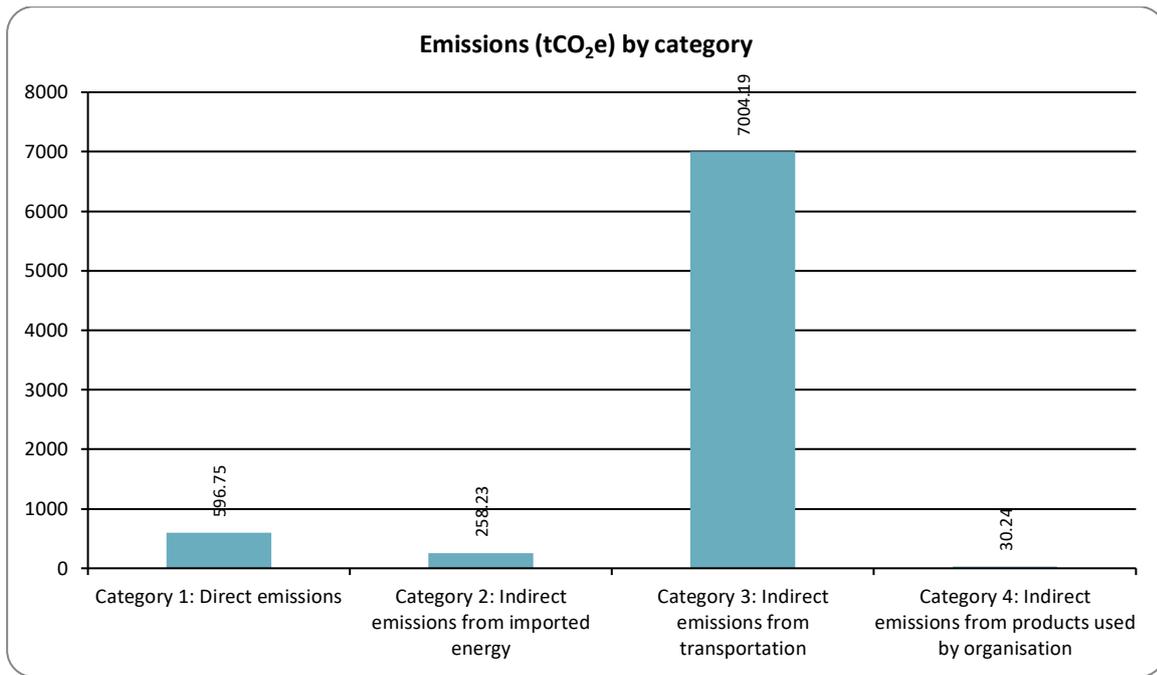


Figure 1: Emissions (tCO₂e) by Category for this measurement period

CHAPTER 1: EMISSIONS INVENTORY REPORT

1.1. INTRODUCTION

This report is the annual greenhouse gas (GHG) emissions inventory and management report for Waikato Regional Council.

The purpose of this report is to quantify the GHG emissions that can be directly attributed to Waikato Regional Council's operations within the declared boundary and scope for the July 2021 to June 2022 period. The inventory is aligned with industry or sector best practice for emissions measurement and reporting and is part of an ongoing commitment to measure and reduce emissions on a regular basis.

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 ₂ e)	Additional emissions (tCO ₂ e)	Total emissions (tCO ₂ e)
Category 1: Direct emissions	596.75 Diesel, Natural Gas distributed commercial, Petrol premium, Petrol	0.00	596.75
Category 2: Indirect emissions from imported energy (location-based method*)	258.23 Electricity	0.00	258.23
Category 3: Indirect emissions from transportation	59.19 Air travel domestic (average), Taxi (regular and subsidised)	6945.00 Public Transport, Accommodation	7,004.19
Category 4: Indirect emissions from products used by organisation	30.24 Electricity distributed T&D losses, Natural Gas distributed T&D losses, Waste landfilled LFGR Mixed waste	0.00	30.24
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	596.75	0.00	596.75
Total indirect emissions*	347.65	6945.00	7,292.65
Total gross emissions*	944.40	6945.00	7,889.40

Category	Toitū carbon mandatory boundary (tCO ₂ e)	Additional emissions (tCO ₂ e)	Total emissions (tCO ₂ e)
Category 1 direct removals	0.00	0.00	0.00
Purchased emission reductions	0.00	0.00	0.00
Total net emissions	944.40	6945.00	7,889.40
Emissions intensity			
		Mandatory emissions	Total emissions
Operating revenue (gross tCO ₂ e / \$Millions)		5.76	48.08

*Emissions are reported using a location-based methodology. See section 1.2.1 for details.0

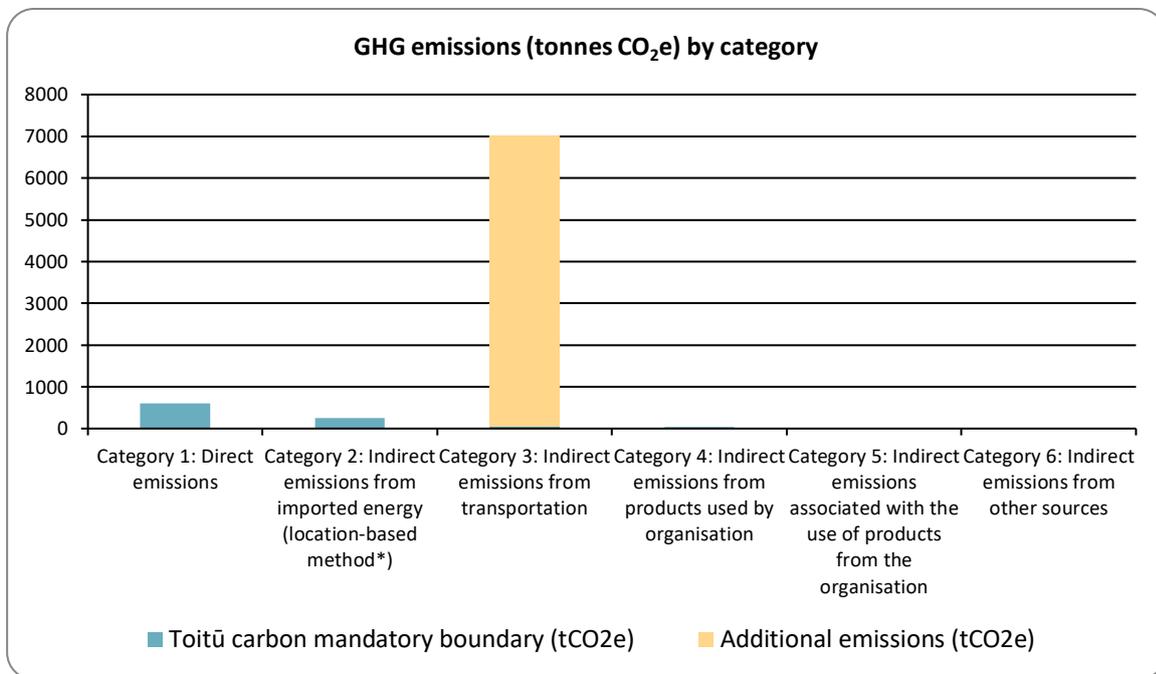


Figure 2: GHG emissions (tonnes CO₂e) by category

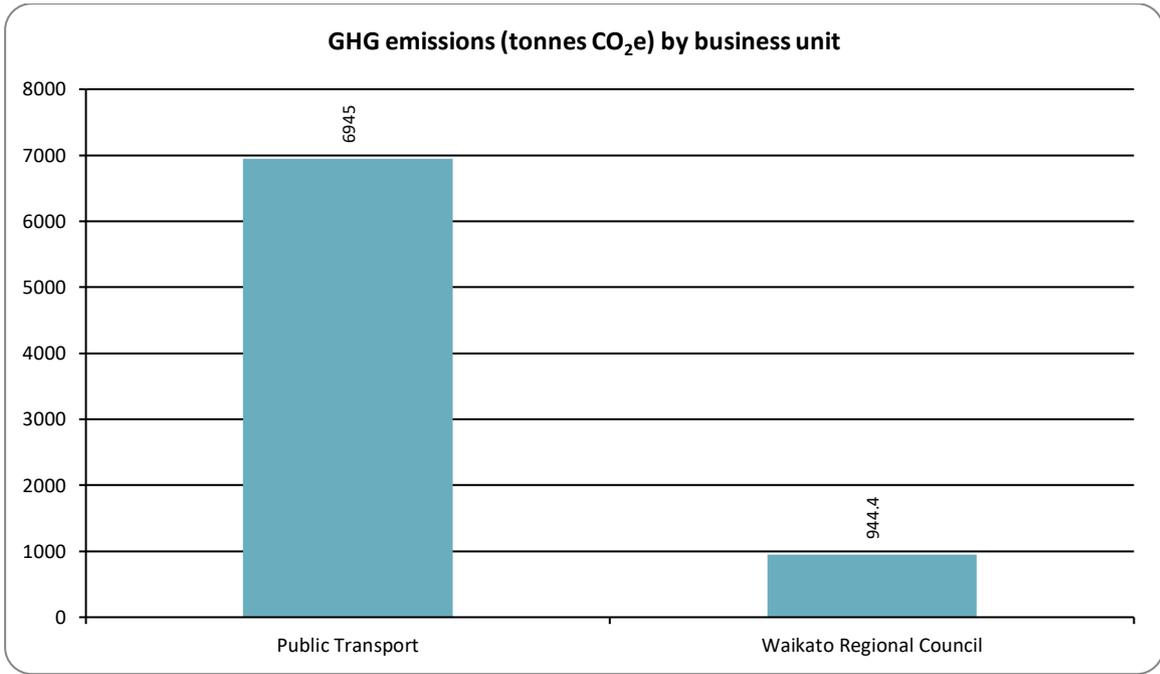


Figure 3: GHG emissions (tonnes CO₂e) by business unit

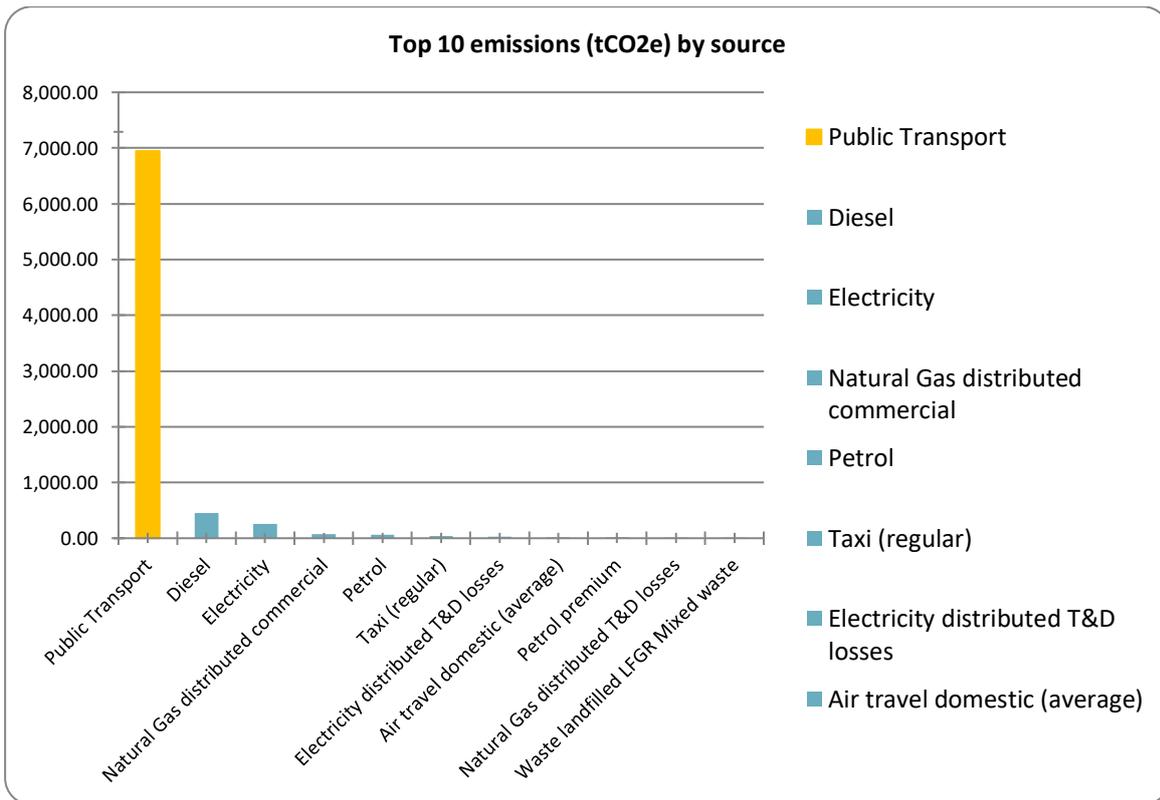


Figure 4: Top 10 GHG emissions (tonnes CO₂e) by source

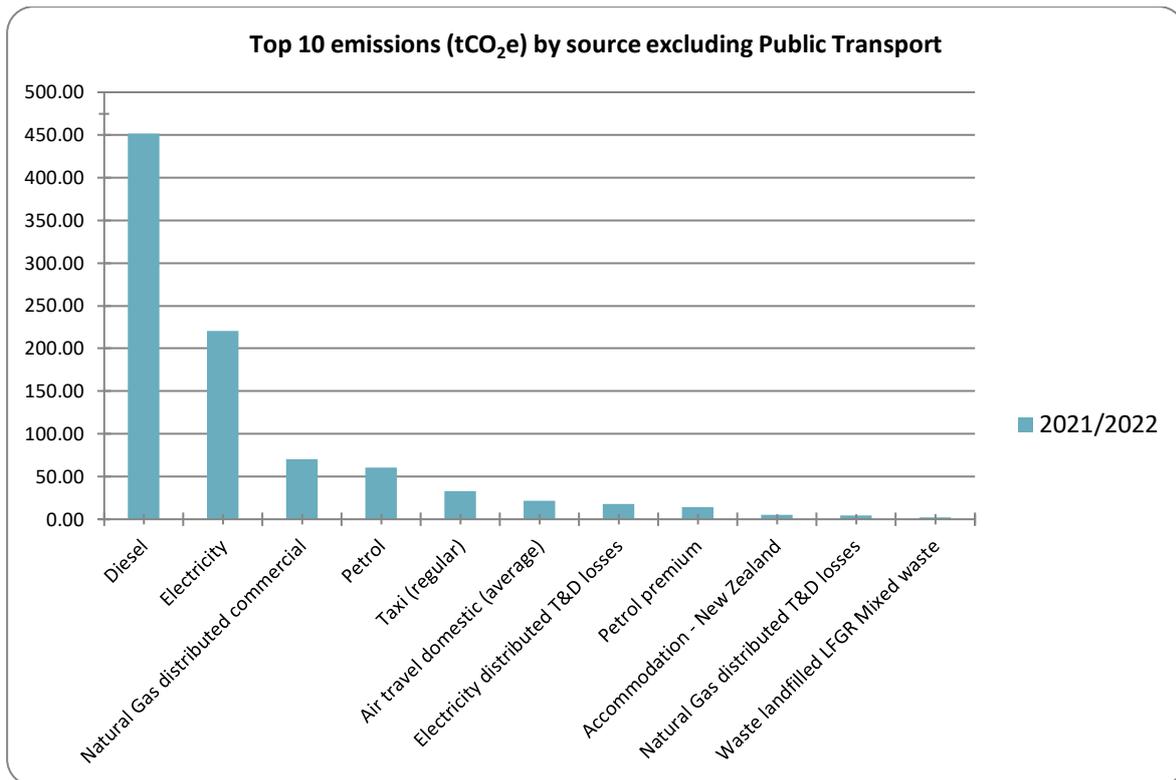


Figure 5: Top 10 GHG emissions (tonnes CO₂e) by source excluding Public Transport

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.

Waikato Regional Council 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 ₂ e)	Market-based methodology (tCO ₂ e)
Category 1: Direct emissions	596.75	596.75
Category 2: Indirect emissions from imported energy	258.23	238.19
Category 3: Indirect emissions from transportation	7,004.19	7,004.19
Category 4: Indirect emissions from products used by organisation	30.24	30.24
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	596.75	596.75

Category	Location-based methodology (tCO ₂ e)	Market-based methodology (tCO ₂ e)
Total indirect emissions	7,292.65	7,272.62
Total gross emissions	7,889.40	7,869.36
Category 1 direct removals	0.00	0.00
Total net emissions	7,889.40	7,869.36

1.3. ORGANISATIONAL CONTEXT

1.3.1. Organisation description

The Waikato Regional Council (WRC) is the local government body representing the Waikato region, the fourth largest region in New Zealand. The Waikato region comprises more than 2.5 million hectares of land and 10,000km² of coastal marine area. WRC's work, functions and priorities are mandated by legislation or community direction.

We are responsible for:

- Governance and management of natural and physical resources – such as land, air, freshwater, biodiversity, infrastructure and the coastal marine area – on which our primary sector and export economy are based.
- Strategic planning at the regional scale delivered through statutory instruments such as the Regional Policy Statement, the Regional Land Transport Plan, the Regional Pest Management Plan, Regional Plan and Regional Coastal Plan, civil defence and emergency management, and non-statutory instruments such as regional economic development strategies.
- Provision of regional scale infrastructure, such as flood protection assets that protect billions of dollars' worth of urban areas, roading infrastructure and productive farmland.
- Transport planning and provision to keep our region moving economically and socially.
- Regional-scale response to, and assessment of, natural hazards, including floods, earthquakes and tsunamis, to protect communities and assets.
- Biosecurity/biodiversity activities to safeguard the productive and export-earning capacity of the natural environment, a key foundation to a sustainable economy, and to support indigenous biodiversity.
- Obtaining, storing and evaluating information so we know how well the region is doing environmentally and economically.
- Managing catchments in a holistic way.

Fourteen elected council members represent the region's interests. Councillors work in committees and make decisions and recommendations on a wide range of matters that are reported to or decided on by the full council once a month.

Our Executive Leadership Team (ELT) has overall responsibility for implementing council decisions and ensuring the effective and efficient performance of the organisation. The executive includes the Chief Executive, six directors with directorate responsibilities for Customer, Community and Services, Finance and Business Services, Integrated Catchment Management, Resource Use, Science, Policy and Information, and Regional Transport Connections. The Manager of the Chief Executive's Office and the Manager of People and Capability are also ELT members.

Waikato Regional Council is based in Kirikiriroa Hamilton, with regional offices in Taupō, Paeroa and Whitianga, and works depots in Tuakau, Te Aroha and Horotiu. The council employed approximately 546 full time equivalent staff during the year under review.

Commitment to certification

Council's mission “working together to build a Waikato region that has a healthy environment, strong economy and vibrant communities” signals the council’s commitment to valuing our natural capital and the ecosystem services it provides for people’s wellbeing and economic activity. Sustainability principles and values are interwoven into our policies, the services we provide, and the way we operate.

Each triennium, the council sets its strategic direction, responding to stakeholder priorities and the drivers that will affect the region and the operating environment for the council over the next three to five years. The strategic direction then guides the council’s ongoing conversations with its community and the work programmes and budgets which are agreed through the Long Term Plan (Mahere Whānui). The United Nations Sustainable Development Goals were the starting point for the council’s 2016-2019 Strategic Direction and the updated Waikato Regional Council Strategy 2020-2030 has further embedded climate change consideration, mitigation and adaptation in all aspects of council's operations and services. Our six strategic priorities in our 2020-2030 strategy are:

WATER – because water is the source of life

CLIMATE – because we want a better tomorrow

BIODIVERSITY AND BIOSECURITY – because protecting nature protects our future

COASTAL AND MARINE – because we can turn the tide

SUSTAINABLE INFRASTRUCTURE – because we need to build with nature in mind

TRANSPORT CONNECTIONS – because connected communities are stronger.

For the CLIMATE strategic priority, our goals for success are:

- A climate change lens is applied to decision making, laying the platform for a new way of doing business.
- Climate change risk is proactively and appropriately communicated.
- Annual climate change inventories demonstrate improvements year on year.

Council established a Climate Action Committee for the 2019/2022 triennium, however at the time of preparing this report, the Council was reviewing its future committee structure with consideration being given to the incorporation of climate response and responsibilities into all committee terms of reference. In the 2020/21 reporting period, a Climate Action Roadmap Discussion Document (Te Mahere Aarai Aahuarangi) was developed and approved. The roadmap is an evidence-based discussion document identifying nine priority pathways the council could take to respond to climate change, which will be reviewed and updated on a regular basis.

As well as having many direct and indirect effects on the communities we work in, climate change will directly affect the work of the Waikato Regional Council.

In New Zealand, regional councils have statutory responsibilities regarding climate adaptation, particularly with a view to natural hazards, infrastructure and assets management. In addition, it has been recognised that regional and local councils can also contribute to climate mitigation and transition to a low carbon economy, and address the opportunities and risks that climate change presents.

WRC is a signatory to the Local Government New Zealand’s 2017 Leaders Climate Change Declaration outlining the key commitments and actions that councils plan to undertake to support action on climate change. We are working with others to lead the transition to a low carbon, climate resilient Waikato Region. Aligned to this, WRC completes a regional greenhouse gas inventory periodically, to enhance its understanding of the region’s carbon profile and facilitate discussion regarding options and pathways for transition to a lower carbon regional economy.

Council has committed to pursuing a leadership approach to both climate change mitigation and adaptation and accordingly all decisions of Council are required to include an assessment of climate change implications.

At a corporate level, WRC has committed to managing and reducing greenhouse gas emissions. For our corporate activities, we aim to:

- Reduce CO₂e emissions by 68% by 2030
- Achieve net zero CO₂e emissions by 2050.

This emissions management and reduction programme applies only to WRC's corporate activities and does not include regional policy interventions.

As well as reducing our emissions to help mitigate climate change, we will also need to adapt our services and operations to changing weather and climate conditions. To manage and reduce greenhouse gas emissions and other environmental impacts of our operations, the Waikato Regional Council encourages staff (and the wider Waikato community) to engage with sustainability issues and initiatives. The organisation also seeks to ingrain environmental best practices into all operations, systems and decision-making.

GHG Reporting

This report is an important annual measure that we undertake to assess how we are progressing towards our climate change targets.

Climate Change Impacts

Climate change affects many aspects of our organisation's activities and our six strategic priorities. A changing climate challenges the integrity of our regional infrastructure, our operational processes, increases risk to our communities and the way in which we must prepare and respond for the future. It will require increased resources, capability and skills from our organisation to manage the impacts of climate change.

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

The Essential Intended use of the inventory is compliance with Toitū carbonreduce programme certification.

The Essential Intended users of the inventory are The Toitū certifier and our elected members and senior council staff.

The inventory allows us to understand our GHG emission sources from activities the organisation undertakes and the degree to which they contribute to our total emissions. Going forward, WRC will use this information to implement policy and adjust our operations to minimise emissions from our activities. Additionally, the intended users of the inventory will expand to include our elected members, staff, iwi partners, stakeholders and the Waikato community (general information).

Other schemes and requirements

This inventory is also intended to inform relevant decision-making relating to the organisation's commitments to sustainability and environmental best practice.

1.3.3. Person responsible

The Manager of the Chief Executive's Office is responsible for overall emission inventory measurement and management and reporting results to the Council. Financial approvals for management projects are through the Council's Long Term Plan and Annual Planning processes.

State any other people/entities involved

The Manager of the Chief Executive's Office is supported by the Emissions and Energy Reduction Group, comprising staff members with functional responsibility for emissions management and reduction. This group is supported by an energy management reduction specialist provided through the Waikato councils' shared services arrangement, CoLab. Further expertise and support is provided by contractors and external organisations (including eBench and Toitū) on an as required basis.

Top management commitment

Waikato Regional Council aims for sustainability to be integral to all activities, including its customer and stakeholder relationships and approach to risk management. Sustainability is part of the organisational values of doing the right thing for people and planet, and making a positive difference to Waikato and New Zealand by making sure our activities add value environmentally, socially, economically, and culturally. As part of its commitment to improving its sustainability performance, the council has committed to managing and reducing emissions, and reporting on progress, through participation in the Toitū carbonreduce programme.

Management involvement

Executive management provides the necessary resources to enable collection and preparation of this data and reporting to Councillors.

1.3.4. Reporting period

Base year measurement period: 01 July 2016 to 30 June 2017

Our Base Year period of July 2016 to June 2017 was selected because it represents the first year in which we had access to a materially complete set of data to calculate the inventory.

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

Our inventory reporting is done annually.

Our inventory reporting is aligned to our financial year July to June. This allows us to readily compare emissions reporting with our financial measures.

1.3.5. Organisational boundary and consolidation approach

An operational control consolidation approach was used to account for emissions.⁴

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.

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 operational control consolidation approach is the best fit for our organisation. We account for 100% of the emissions from operations that we control. We do not account for emissions from operations in which we own a financial interest but have no control. Where we have operational control we are able to introduce and implement operating policies which enable us to reduce emissions.

Waikato Regional Council does have financial interests in a small number of other organisations, however these have relatively small emissions which are not material when compared to Council. The Council does not have the ability to implement operating policies at these organisations.

For wider information purposes, Council has chosen to report emissions from regional public transport (since July 2020). This sits outside our mandatory organisational emissions.

Organisational structure

Figure 6 shows what has been included in the context of the overall structure.

The structure identifies our business units which have control over our operational emissions. Councillors lead high level decision-making for the organisation. The Office of the Chief Executive oversees management of the organisation and fulfilling the decisions made by Council through six directorates. Each Directorate employs staff and contractors.

In addition to emissions arising from the Waikato Regional Council organisational activities we report emissions from two further region-wide activities:

- 1) Public Transport - this includes emissions generated by public transport vehicles delivered or co-delivered by Waikato Regional Council. It only includes the emissions from combusted fuel. Any other emissions associated with the delivery of regional public transport are accounted for within Figure 5.
- 2) Mobility Service - this is a subsidised taxi service for qualifying community members funded by Waikato Regional Council.

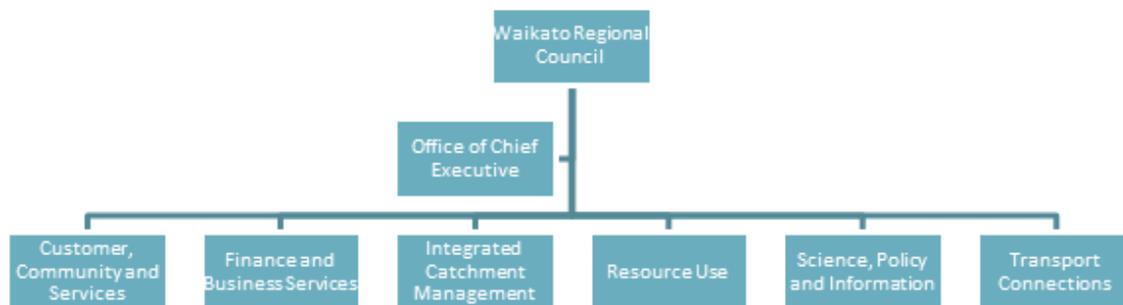


Figure 6: Organisational structure

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

Company/Business unit/Facility	Physical location	Description
WRC Head Office	160 Ward Street, Hamilton Central, Kirikiriroa Hamilton, 3204	Corporate headquarters for Council staff and accommodates the majority of staff across a 8,000m ² tenancy.
Paeroa Office	13 Opatito Road, Paeroa, 3600	Regional office for Council staff and field workers.

Company/Business unit/Facility	Physical location	Description
Taupo Office	100 Horomatangi Street, Taupo 3551	Regional office for Council staff and field workers.
Whitianga Office	33-35 Albert Street, Whitianga, 3510	Regional office for Council staff and field workers.
Te Aroha Depot	5 Terminus Street, TeAroha	Regional depot for Council staff and field workers.
Tuakau Depot	2650 River Road, Tuakau	Regional depot for Council staff and field workers.
Flood Pumps	Waikato Region	Located across farmland to prevent flooding

1.3.6. Excluded business units

Waikato Regional Council aims to enhance environmental, social, cultural and economic outcomes through its sustainable procurement policy and approach to the engagement and management of contractors. While sustainable practices and performance are a key consideration in all contracts, some of our smaller contractor activities have not been included as part of this inventory due to insufficient data. Contractor activities included into reporting since July 2020 include public transport (regional bus service and Te Huia train), and taxi use associated with the Mobility Service (regional taxi subsidy service for qualifying community members).

These are included as part of our transition to the reporting standards aligning with ISO 14064-1:2018, where organisations look more broadly at the scope of their inventory and include a wider range of indirect emissions.

Fugitive emissions resulting from land drainage services delivered by Waikato Regional Council have also been investigated. This information will be updated in future emissions inventories, as understanding of fugitive emissions from Drained Organic Soils increases and more accurate data is collected.

CHAPTER 2: EMISSIONS MANAGEMENT AND REDUCTION REPORT

2.1. EMISSIONS REDUCTION RESULTS

Our emission's reduction target for the July 2021 to June 2022 period was a 35% reduction on our Base Year inventory of 1,673 TCO₂e (excluding Public Transport). Actual emissions reported for the July 2021 to June 2022 period were 945 TCO₂e. This was a 44% reduction in emissions against Base Year but represented a slight increase of 0.5% in emissions compared to the previous year (July 2020 to June 2021). Overall, Waikato Regional Council is on track to meet its emission reduction target.

Table 5: Comparison of historical GHG inventories

Category	2017	2018	2019	2020	2021	2022
Category 1: Direct emissions	806.75	739.91	656.10	719.14	625.79	596.75
Category 2: Indirect emissions from imported energy (location-based method*)	714.99	546.89	315.38	264.41	226.00	258.23
Category 3: Indirect emissions from transportation	147.13	128.48	196.17	102.08	7,063.49	7,004.19
Category 4: Indirect emissions from products used by organisation	4.09	4.18	2.81	2.61	24.78	30.24
Category 5: Indirect emissions associated with the use of products from the organisation	0.00	0.00	0.00	0.00	0.00	0.00
Category 6: Indirect emissions from other sources	0.00	0.00	0.00	0.00	0.00	0.00
Total direct emissions	806.75	739.91	656.10	719.14	625.79	596.75
Total indirect emissions*	866.21	679.54	514.36	369.10	7,314.26	7,292.65
Total gross emissions*	1,672.95	1,419.45	1,170.47	1,088.24	7,940.06	7,889.40
Category 1 direct removals	0.00	0.00	0.00	0.00	0.00	0.00
Purchased emission reductions	0.00	0.00	-192.00	0.00	0.00	0.00

Category	2017	2018	2019	2020	2021	2022
Total net emissions	1,672.95	1,419.45	978.47	1,088.24	7,940.06	7,889.40
Emissions intensity						
Operating revenue (gross tCO ₂ e / \$Millions)	13.71	11.31	8.65	7.01	48.59	48.08
Operating revenue (gross mandatory tCO ₂ e / \$Millions)	13.71	11.31	8.65	7.01	5.69	5.76

*Emissions are reported using a location-based methodology. See section 1.2.1 for details.0

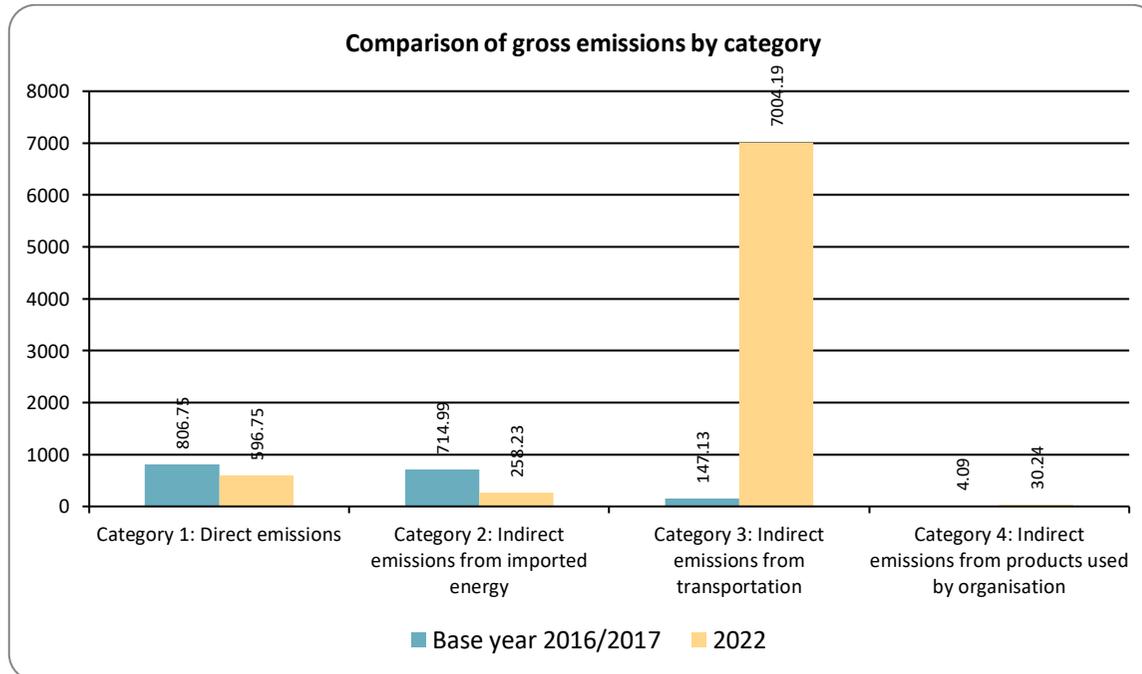


Figure 7. Comparison of gross emissions by category between the reporting periods

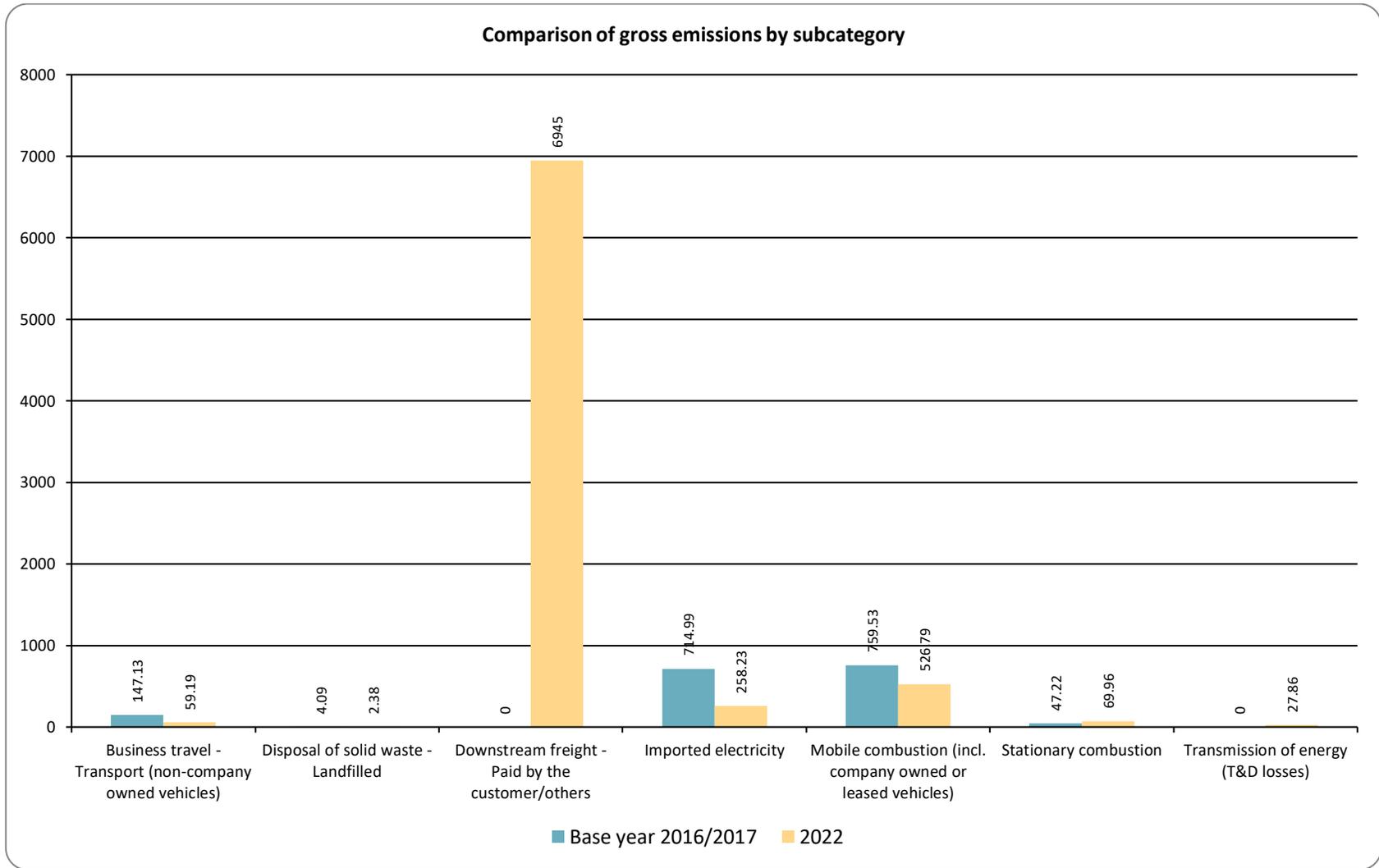


Figure 8: Comparison of gross emissions by subcategory between the reporting periods



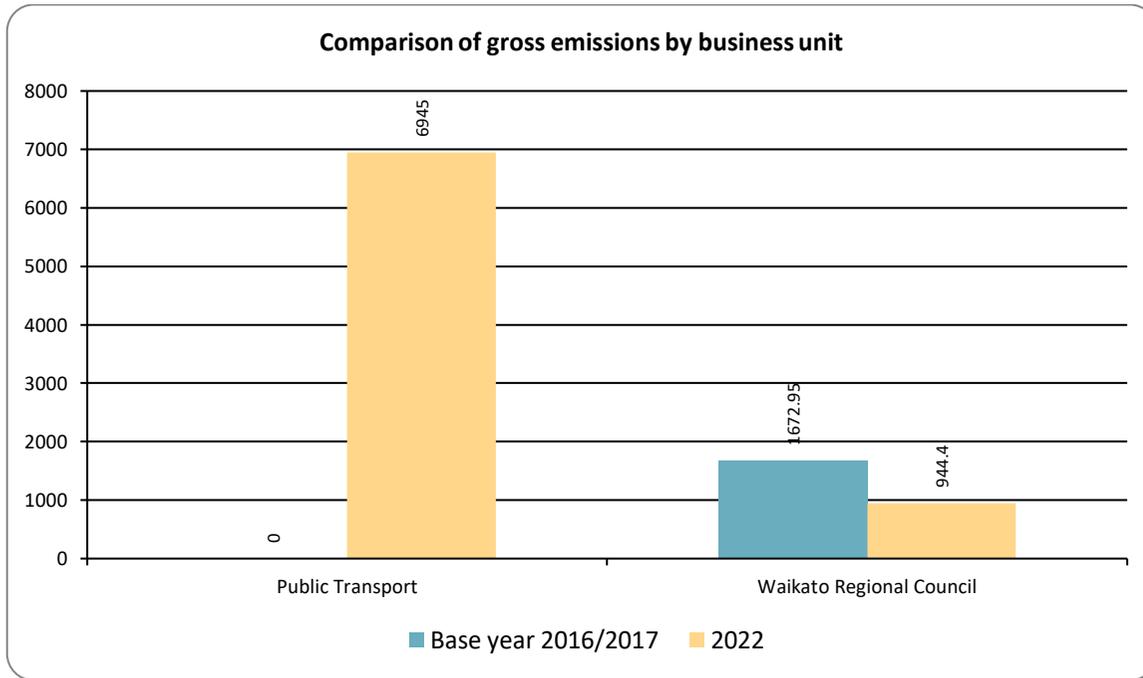


Figure 9: Comparison of gross emissions by business unit between the reporting periods



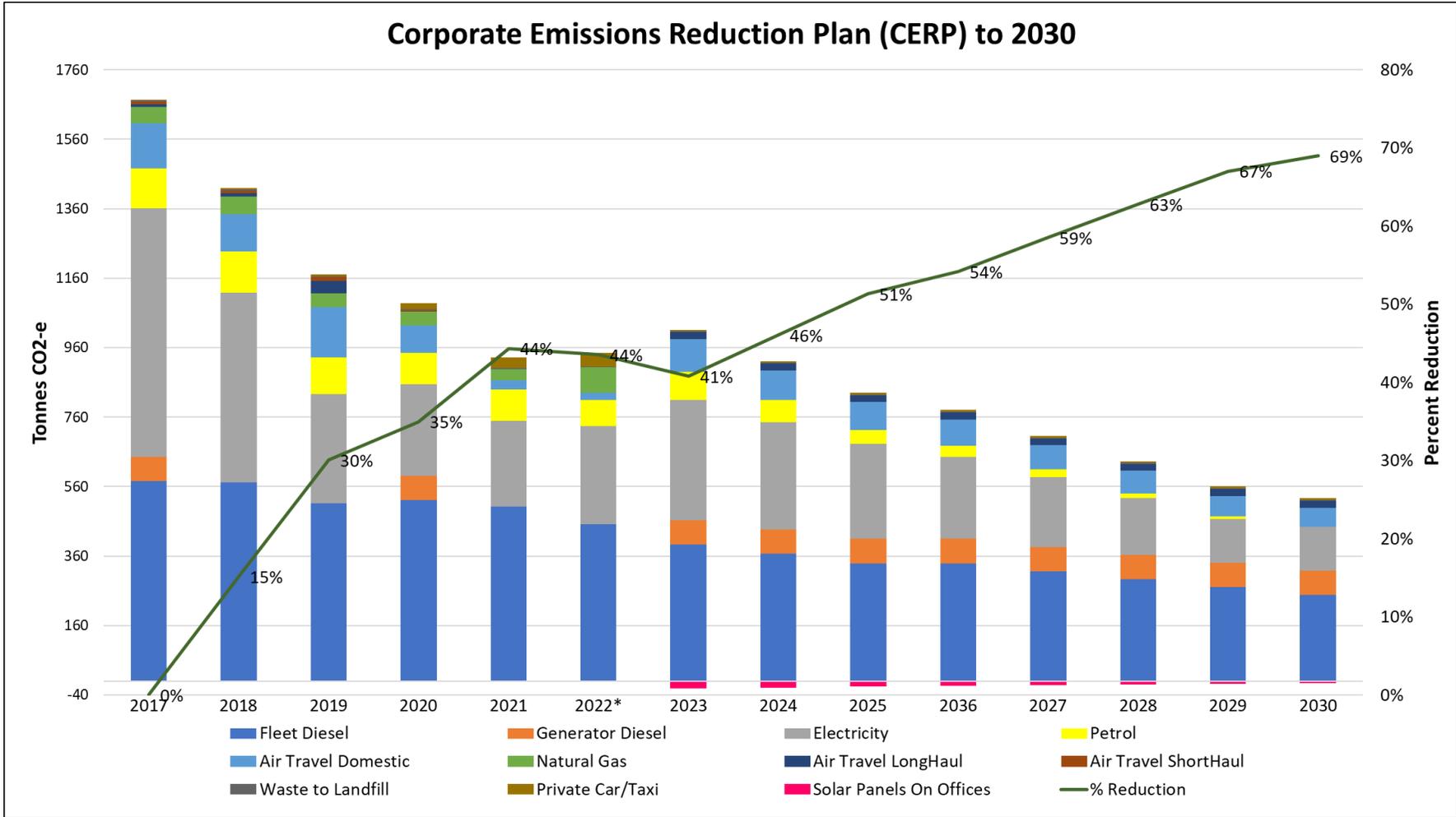


Figure 10: Performance against target since base year



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 total category 1 to 2 emissions in compliance to Toitū Rule R6.4a	1/07/16 to 30/06/17	30/06/2024	Absolute	945	-44%	Exceeding target
Reduce category 3 Toitū programme boundary emissions (supplementary to Toitū Rules)						
Electricity	1/07/16 to 30/06/17	30/06/2024	Absolute	282	-61%	This includes distribution losses. Exceeding target.
Diesel	1/07/16 to 30/06/17	30/06/2024	Absolute	452	-30%	Below target reduction requirements.
Petrol	1/07/16 to 30/06/17	30/06/2024	Absolute	60	-47%	Below target reduction requirements.
Air Travel (all)	1/07/16 to 30/06/17	30/06/2024	Absolute	21	-86%	Exceeding target



2.2. SIGNIFICANT EMISSIONS SOURCES

Significant sources

Emissions from Waikato Regional Councils regional public transport service were first included in the 2020-21 reporting period. In 2020-21, fuel emissions from the regional bus service were 6,600 TCO₂e and in 2021-22 they were 6,145 TCO₂e, as a result of a reduced timetable. Emissions from the Te Huia passenger service rose from 410 TCO₂e in 2020-21 to 800 TCO₂e this reporting period. The increase is due to a full year's operation. A strategy towards net zero emissions from public transport services has been committed to in the Regional Public Transport Plan 2022 - 2032. This transition is anticipated to be underway from 2023 onwards.

Compared to the emissions from public transport services, Waikato Regional Council's operational emissions are relatively small. For the purpose of analysis, only operational emissions are considered in the remainder of this section. The Emissions Inventory and Management Report identifies the most significant ongoing emissions sources as diesel and electricity (50% & 25% of operational emissions respectively). Emissions from natural gas and petrol each contributed a further 9% to the emissions portfolio. Aside from natural gas, Waikato Regional Council has direct control over these emission sources, and is using a mix of behaviour, operational and investment interventions to reduce emissions from these areas.

Emissions from fleet diesel have continued to fall year on year and are now only 70% of Base Year emissions. Emissions from electricity increased this year (in large part due to an increased emissions factor). However the consolidation of staff into a single purpose built head office tenancy designed for energy efficiency resulted in a significant reduction in electricity use for staff accommodation. Emissions from natural gas have risen from 31 TCO₂e in 2020-21 to 74 TCO₂e in 2021-22. This is part of the new head office tenancy whereby the organisation pays for a share of the building's boiler plant energy based on tenancy floor area. We compared the energy intensity of the old office accommodation space with the energy intensity of the new head office tenancy and found that it had reduced from 126kWh/m² to 100kWh/m² (year one of operation).

Emissions from fleet petrol have fallen and are now only 53% of Base Year emissions. There has been significant work undertaken in rationalisation of vehicles and greater use of hybrid engines leading to better fuel economy, with full electric vehicles also being introduced. Covid restrictions on travel have also had some impact on vehicle use. Air travel is no longer a significant emission source, having reduced to just 14% of pre Covid levels, however we anticipate this will rise in the future.

Activities responsible for generating significant emissions

Public transport emissions arise from diesel fuel used in buses and the locomotives on the Te Huia passenger line. Most of the emissions are from diesel use in buses due to the greater number of trips and distance travelled.

Activities that contribute to use of diesel are the vehicle fleet, diesel generation for flood pumps where electricity supply is not available, and for mobile plant. Petrol use arises from the passenger fleet and some plant equipment. Electricity use is predominately from the operation of flood pumps across the various drainage schemes. Depending on rainfall, electricity use can vary considerably from year to year. Aside from flood pump electricity, the next major electricity load is Waikato Regional Council's new head office tenancy in Ward Street Hamilton. The tenancy building has a natural gas fired hot water boiler which supports the entire heating and cooling load. Natural gas usage is allocated to Council on the basis of its tenancy floor area.

Influences over the activities

In regards public transport emissions, there is a strong drive to encourage the public to utilise these services over and above existing levels. In the short-term this may increase emissions of this public service but has the benefit of reducing emissions in private vehicles. In the longer term, low carbon energy sources combined with new technology including electric buses means public transport emissions will reduce.

Council has a large number of utility vehicles in its fleet. The functional ability of these vehicles is necessary to gain safe access onto farmland and remote sites. These vehicles typically need a large carrying/towing capacity and may be fitted out for particular tasks. Council has been investigating and implementing a number of initiatives to minimise fuel use. In the future, use of hybrid engines and electric or hydrogen fuel sources should reduce fuel emissions further.

As noted previously, flood pump electricity use is greatly impacted by rainfall and flooding events. Flood pump systems are relatively long lived assets and efficiency falls away over time. A number of pump systems are presently being renewed and where possible energy efficient pumps are being installed. Council made a considerable reduction in building electricity use in the last 12 months by consolidating multiple office locations into the Ward Street tenancy. The tenancy is adjacent to Hamilton's Transport Centre giving staff easy access to public transport and the building includes electric vehicle chargers which are allocated to Council's passenger fleet.

Significant sources that cannot be influenced

The gas fired boiler in the Ward Street tenancy is new and will likely have a lifespan of twenty years. The emissions may be somewhat reduced if additional optimisation of the heating and cooling system can be achieved. However generally speaking these emissions are now locked in.

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).

Our targets are supported by the Council's Corporate Emissions Reduction Plan (CERP), which was developed to provide medium to long-term planning for emissions reductions. The CERP provides detailed analysis and yearly reduction targets to 2030, with actions to reduce absolute emissions by 68% by 2030.

Targets for emissions reduction are developed to coincide with updates for the Long Term Plan (LTP), which take place every three years. Progress will be monitored continuously and reviewed on an annual basis to ensure the organisation is staying on track to meet these targets.

Our original target was to reduce emissions intensity by 2% per year from the base year, which may involve steady reductions and/or larger reductions followed by maintenance of reductions. Note: reductions are to be compared to base year, rather than the previous year.

However, in recent years we have also been exploring the development of targets that are more aligned with science-based target setting (especially considering that the original target has been exceeded considerably for each year we have been reporting for the CEMARS/Toitū carbonreduce programme).

The review of the LTP took place in June 2021. According to the CERP, the organisation needed to achieve at least a 26% reduction in emissions compared to the base year. WRC exceeded this target considerably, with the organisation reporting emissions at 45.7% lower than the base year.

Table 7 shows specific sub-targets at a more detailed level, by emission source. By achieving each sub-target, the aggregated results will mean we achieve our original target for the total inventory. The current targets were developed in October 2020 as part of the CERP.

In respect of its corporate emissions (which excludes those emissions reported as public transportation), WRC has met and exceeded its 2022 target of a 35% reduction compared to the base year.

Table 7. Emission reduction targets

Target name	Baseline period	Target date	Type of target (intensity or absolute)	Categories covered	Target		KPI	Responsibility	Rationale
Reduce total category 1 to 2 emissions in compliance to Toitū Rule R6.4a Reduce category 3 Toitū programme boundary emissions (supplementary to Toitū Rules)	1/07/16 to 30/06/17	30/06/2024	Absolute	Category 1 to 4 combined	-45%	Base year emissions (tCO ₂ e): 1,673 Target year emissions (tCO ₂ e): 908	n/a (not applicable , no intensity target set)	Karen Bennett, Manager Chief Executive's Office	Achievable through the application of reduction projects discussed further below.
Electricity	1/07/16 to 30/06/17	30/06/2024	Absolute	Category 2	-56%	Base year emissions (tCO ₂ e): 715 Target year emissions (tCO ₂ e): 310	n/a (not applicable , no intensity target set)	Karen Bennett, Manager Chief Executive's Office	Achievable through the application of reduction projects discussed further below.
Diesel	1/07/16 to 30/06/17	30/06/2024	Absolute	Category 1	-32%	Base year emissions (tCO ₂ e): 646 Target year emissions (tCO ₂ e): 436	n/a (not applicable , no intensity target set)	Karen Bennett, Manager Chief Executive's Office	Achievable through the application of reduction projects discussed further below.
Petrol	1/07/16 to 30/06/17	30/06/2024	Absolute	Category 1	-45%	Base year emissions (tCO ₂ e): 114	n/a (not applicable , no intensity target set)	Karen Bennett, Manager Chief Executive's Office	Achievable through the application of reduction projects discussed further below.

Target name	Baseline period	Target date	Type of target (intensity or absolute)	Categories covered	Target		KPI	Responsibility	Rationale
						Target year emissions (tCO ₂ e): 63			
Air Travel (all)	1/07/16 to 30/06/17	30/06/2024	Absolute	Category 3	-28%	Base year emissions (tCO ₂ e): 145 Target year emissions (tCO ₂ e): 105	n/a (not applicable , no intensity target set)	Karen Bennett, Manager Chief Executive's Office	Achievable through the application of 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
Reduction of emissions from electricity	Installation of up to five enclosed Archimedes screw pumps. We expect the high efficiency design will reduce our emissions through less energy consumption.	ICM Unit Manager	Ongoing. To date one pump has been installed and the second site agreed upon.	The use of Archimedes screw pumps for ongoing flood protection of farmland will enable the safe passage of native fish (tuna/eels). This pump design offers many benefits over conventional pumping assets: they rotate very slowly, deliver very high efficiency, and their design means the screw does not inflict damage on fish, even significantly large tuna/eels.	None anticipated	n/a
	Relocate staff from multiple Hamilton offices to an energy efficient tenancy in Ward St Hamilton.	Team Leader Property and Fleet Services	31/07/2021	The new office is located adjacent to the Hamilton Transport Centre improving access to public transport. The basement of the building has been fitted with electric vehicle chargers which will support Council's transition to an electric fleet.	None anticipated	n/a
	Installation of solar arrays at the Ward St tenancy and Paeroa office.	Team Leader Property and Fleet Services	30/06/2023	The solar arrays are expected to deliver a positive financial return over their lifetime and promote the use of localised renewable energy generation.	None anticipated	n/a
Reduction of vehicle fuel use	Engagement campaign and training offered in fuel efficient driving. Includes only using specialist vehicles (V8, landcruiser and SUVs) for specialist tasks. Includes minimising unnecessary trips and putting in place easy access to alternative modes of transport.	Team Leader Property and Fleet Services and WRC Communications	Annual Campaign	Staff may incorporate these skills into use of their private vehicles.	None anticipated	n/a

Objective	Project	Responsibility	Completion date	Potential co-benefits	Potential unintended consequences	Actions to minimise unintended consequence
	Actively manage fleet utilisation and vehicle numbers, regular service and maintaining of vehicles.		Ongoing	Reduce costs to WRC	Ensure that service delivery is not compromised.	Working closely with departments and the management team to address issues.
	Transition WRC fleet to lower emissions vehicles. This includes hybrid on a business as usual basis and electric cars as funding allows. At a later date it may include purchasing electric 4WD vehicles (assuming safety and other functional requirements are met).	Team Leader Property and Fleet Services and WRC Communications	Ongoing	Reduce operating costs to WRC	Ensure that safety and functionality is not compromised.	Working closely with departments and the management team to address issues.
Reduction of natural gas use	The Ward St base building services include a gas fired boiler for heating which is not a low carbon emission source. Investigate WRC's heating and ventilation controls to minimise use of natural gas.	Team Leader Property and Fleet Services	30/06/2023	Reduce operating costs to WRC	None anticipated	n/a
Reduction of air travel	Investigate whether an air travel emissions budget for WRC is necessary, or if targets be achieved through voluntary measures (see below).	Executive Team	30/06/2023	Reduce operating costs to WRC	Ensure that staff can continue to deliver the required outcomes	



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
Fugitive emissions from drainage of organic soils	Work with a number of stakeholders to better understand emissions and increase data certainty. Considerable progress has been made.	Soil scientists from Science, Policy and Information Directorate	30/06/2024
Waste	Annual waste audit, collect data from waste management contractors. Has been somewhat delayed due to Covid and transition to new building.	Team Leader Property and Fleet Services	30/06/2023
Taxi travel	Investigate feasibility to ensure taxi travel is coded in a way to enable distinction between taxi travel associated with Total Mobility and staff use.	Finance Directorate	30/06/2023

The emissions inventory chapter identified various emissions liabilities (see GHG Storage and 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	Regular servicing and preventing damage to owned units	Team Leader Property and Fleet Services	Quarterly
Building lighting and heating systems	Regular night audits to identify inefficiencies	Team Leader Property and Fleet Services	Annually
Fleet vehicles	Regular servicing and preventing damage to vehicles	Team Leader Property and Fleet Services	Ongoing

2.5. STAFF ENGAGEMENT

Staff and contractors are made aware of our commitment to sustainability through organisation culture and purpose. Information on emissions reduction commitments is shared through internal communications and campaigns, as well as publicly available reports and communications. New staff are informed via the staff induction process.

Staff who provide emission source data or who have major influence on the management and reduction of emissions are invited to be part of the Emissions and Energy Reduction Group, which meets on a regular basis to discuss options for and progress towards emissions reduction. All staff have opportunities to engage in campaigns and/or workshops and/or training to support them reduce the emissions and other environment-related impacts of their role and activities.

2.6. KEY PERFORMANCE INDICATORS

In the base year, turnover was \$122 million and total tCO₂e were 1673. Emissions/turnover was 13.71 tCO₂e/\$M

In the last reporting year, turnover was \$163.4 million and total tCO₂e was 1,088. Emissions/turnover were 6.66 tCO₂e/\$M

In this reporting period, turnover is \$164.1 million and tCO₂e (excluding Public Transport emissions) was 950. Emissions/turnover were 5.76 tCO₂e/\$M.

This is a 58% reduction in emissions intensity compared to the base year.

2.7. MONITORING AND REPORTING

At an organisation-wide level, the emissions intensity has been calculated using the mandatory KPI of \$ turnover as defined in Rule 59b of the technical requirements. Additional KPIs of 'FTE' and 'absolute emissions' are being used to monitor performance in specific reductions projects.

Emissions will be reviewed regularly throughout the year, as will progress towards emissions reduction targets. The EMRP will be reviewed and updated annually in June.

Karen Bennett, Manager of the Chief Executive's Office, is responsible for overseeing overall emissions management and reduction. Karen is supported by appropriate staff (Emissions and Energy Reduction Group), contractors, and external organisations (including eBench and Toitū).



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 Waikato Regional Council.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	69.78	0.15	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.96
Mobile combustion (incl. company owned or leased vehicles)	515.85	1.43	9.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	526.79
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

Category	CO ₂	CH ₄	N ₂ O	NF ₃	SF ₆	HFC	PFC	Desflurane	Sevoflurane	Isoflurane	Emissions total (tCO ₂ e)
Total net emissions	585.63	1.58	9.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	596.75



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	2.38	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	2.38	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.

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.

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	Stationary combustion	Natural Gas distributed commercial	Natural gas is used in the Ward St Office building plantroom boiler for space heating and provision of domestic hot water. As WRC is only a tenant in the Ward St Office, gas use is paid for by the landlord. The landlord recovers this cost by dividing up the gas use according to the floor area leased by the three tenants in the building. WRC has the bulk of the building floor area. The other tenants operate similar hours to WRC and so it is assumed that apportionment of gas use by floor area is appropriate. However it is noted that the natural gas used by WRC is a best guess estimation and it is not metered tenant by tenant.	The default EF factor is used.	No
	Mobile combustion (incl. company owned or leased vehicles)	Diesel, Petrol, Petrol premium	Fuel data information was supplied by Fleet Partners and includes all transactions through WRC's fleet cards. In addition, bulk fuel was also collected directly from Waitomo Petroleum and this relates to fuel used for mobile machinery such as diggers out in the field. No refill of fuel was required for WRC's flood pump diesel gensets this year.	The default fuel factors were used.	No
Overall assessment of uncertainty for Category 1 emissions and removals		2%	Very low		
Category 2: Indirect emissions from imported energy	Imported electricity	Electricity	Electricity use is derived from reports run from the eBench system for the period. eBench collects all electricity invoice data from WRC's electricity suppliers on a monthly basis and verifies contracted rates.	The latest default electricity factors were used.	No
Overall assessment of uncertainty for Category 2 emissions and removals		7%	Medium		
Category 3: Indirect emissions from transportation	Business travel - Transport (non-company owned vehicles)	Air travel domestic (average), Rental Car (regular)	Travel provider Orbit provides a travel report of all flights and hotel stays undertaken by staff. It is assumed these reports are accurate. This includes the number of rental car days.	The default travel factors were used.	Yes

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
		Taxi	Taxi use is for the Mobility Service (a regional taxi subsidy service for qualifying community members.) Only the dollar amount is available not the fuel used or distance travelled.	Estimates are based on proxy data and calculated with an accuracy of (+/- 64%).	No
		Public Transport (regional buses)	Data calculated by Business Analyst from Regional Transport Connections, using internally collected data and Waka Kotahi NZ Transport Agency emissions factors	The factor used takes into account likely fuel use at different speeds, bus type, and kms travelled to determine the emissions.	Yes
		Public Transport (Te Huia train)	Data calculated by Business Analyst from Regional Transport Connections, using internally collected data and Waka Kotahi NZ Transport Agency emissions factors	The factor used is supplied by Kiwirail.	Yes
Overall assessment of uncertainty for Category 3 emissions and removals		42%	High		
Category 4: Indirect emissions from products used by organisation	Purchased fuel and energy related activities	Electricity distributed T&D losses, Natural Gas distributed T&D losses	Based on data collected in Categories 1 & 2	The default factors were used.	No
	Disposal of solid waste - Landfilled	Waste landfilled LFGR Mixed waste	Complete data is unavailable and no waste audit was carried out for FY 2021-22, so data from the most recent waste audit (May 2019) is extrapolated in order to calculate an estimate of waste generated per person per day	The default factors were used.	No
Overall assessment of uncertainty for Category 4 emissions and removals		7%	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
Waikato Regional Council	Staff rental cars	Category 3: Indirect emissions from transportation.	Distance travelled by rental cars was not given, only days hired. Twenty days hireage was reported in FY22. Assuming on average each vehicle travelled 120km per day, this would amount to < than 1 Tonne of CO ₂ e and well under 1% of our emissions inventory.
Waikato Regional Council	Freight emissions	Category 3: Indirect emissions from transportation.	Freight emissions have been excluded from this inventory as useful data cannot be collected with current purchasing and courier systems.
Organic Soils	Fugitive emissions resulting from drainage of organic soils	Category 5: Indirect emissions associated with the use of products from the organisation.	Fugitive emissions resulting from drainage of organic soils have been excluded until understanding of fugitive emissions from organic soils drainage increases and more accurate data can be collected. Available data and estimations will be provided in future inventories.

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.

A1.2.2 GHG Storage and liabilities

A1.2.2.1 GHG STOCKS HELD ON SITE

Refrigerants and fuels may be stored on site, but their accidental leakage or release could result in a large increase in emissions for that period. Refrigerants such as HFCs, PFCs and SF₆ are GHGs with high global warming potentials, so material volumes of these or fuel are reported as potential liabilities.

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.

Table 15. Total storage as of year end with potential GHG emissions liabilities.

GHG gas stock held	Quantity	Unit	Potential liability (tCO ₂ e)
Diesel commercial	95,900.00	litres	255.45
Total potential liability			255.45

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.

A1.2.3.1 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 not been included in this inventory.

Details

(No information supplied)

APPENDIX 2: SIGNIFICANCE CRITERIA USED

Table 16. Significance criteria used for identifying inclusion of indirect emissions

Appendix 2
(No information supplied)

APPENDIX 3: CERTIFICATION MARK USE

The Toitū certification mark is used on the front page of our Greenhouse Gas Emissions Inventory and Management Report.

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,	TR8.2, TR8.3
Availability	9.2 g	
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,
2.4. Emissions reduction projects	9.3.2 b	TR6.8, TR6.11, TR6.12, TR6.13, TR6.14, TR6.15
2.5. Staff engagement		TR6.1, TR6.9
2.6. Key performance indicators		TR6.19
2.7. Monitoring and reporting	9.3.2 h	TR6.2
Appendix 1: Detailed greenhouse gas inventory	9.3.1 f, g	TR4.9, TR4.15
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		