GREENHOUSE GAS EMISSIONS INVENTORY REPORT

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

Horizons Regional Council

Dated: 02 June 2021

Verification status: Reasonable

Measurement period: 01 July 2019 to 30 June 2020

Base year period: 01 July 2019 to 30 June 2020

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

AVAILABILITY

REPORT STRUCTURE

The Inventory Summary contains a high-level summary of this year's results.

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

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*.

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From the carbon footprint it can be seen that Horizons main carbon emission sources are fuel use from company vehicles, electricity and waste to landfill. These make up 95% of the total carbon emissions for the baseline year. With an understanding of the key emission sources Horizons now have the knowledge to be able to optimize and reduce their carbon emissions across their business.

Table 1: Inventory summary.

Category	2020
Category 1: Direct emissions	607.47
Category 2: Indirect emissions from imported energy	102.39
Category 3: Indirect emissions from transportation	29.35
Category 4: Indirect emissions from products used by organisation	175.59
Category 5: Indirect emissions associated with the use of products from the organisation	0.00
Category 6: Indirect emissions from other sources	0.00
Total direct emissions	**607.47**
Total indirect emissions	**307.34**
Total gross emissions	**914.80**
Category 1 direct removals	-36,001.00
Certified renewable electricity certificates	0.00
Purchased emission reductions	0.00
Total net emissions	**-35,086.20**

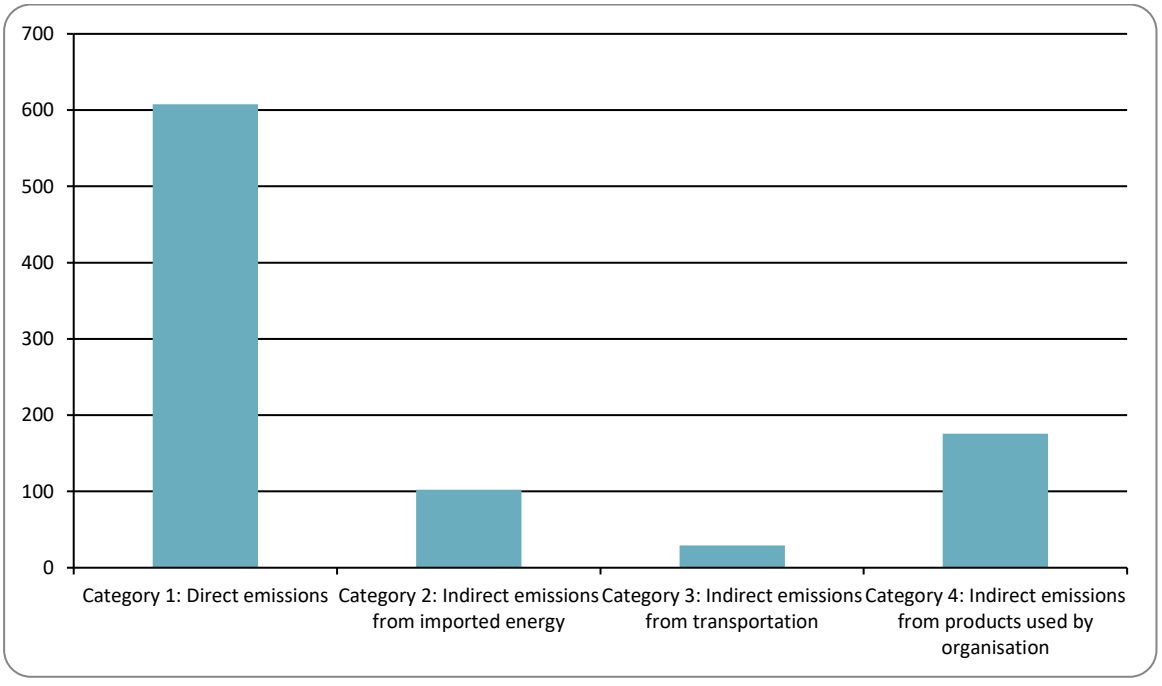

Figure 1: Emissions (tCO_2e) by Category for this measurement period

CHAPTER 1: EMISSIONS INVENTORY REPORT

1.1. INTRODUCTION

This report is the annual greenhouse gas (GHG) emissions inventory and management report for Horizons Regional Council[3]

The purpose of this report is to allow Horizons Regional Council to gain an understanding of the profile of their carbon emissions. Once this has been understood a plan will be developed around how this can be reduced in the coming years.

1.2. EMISSIONS INVENTORY RESULTS

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

Measurement period: 01 July 2019 to 30 June 2020.

	Emissions sources	All measured emissions (tCO_2e)	Toitū carbon mandatory boundary (tCO_2e)
Category 1: Direct emissions	Diesel stationary combustion, Diesel, Fertiliser use Nitrogen, Natural Gas distributed commercial, Petrol premium, R-410A	607.47	607.47
Category 2: Indirect emissions from imported energy	Electricity	102.39	102.39
Category 3: Indirect emissions from transportation	Accommodation - New Zealand, Air travel domestic (average), Air travel long haul (econ), Air travel short haul (econ), Car Average (unknown fuel type), Diesel, Petrol regular, Rail travel (national), Rental Car average (fuel type unknown), Taxi (regular)	29.35	29.35
Category 4: Indirect emissions from products used by organisation	Waste landfilled LFGR Office waste, Waste landfilled No LFGR Office waste	175.59	175.59
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		**607.47**	**607.47**
Total indirect emissions		**307.34**	**307.34**
Total gross emissions		**914.80**	**914.80**

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

[4] The Toitū carbon programmes mandatory boundary requires of All Category 1 and 2 emissions; Category 3 emissions associated with business travel and freight paid for by the organisation; Category 4 emissions associated with waste disposed of by the organisation, and transmissions and distribution of electricity and natural gas, where appropriate; and any Sector specific mandatory emissions sources as outlined by the Programme (Technical Requirements R4.6)

	Emissions sources	All measured emissions (tCO_2e)	Toitū carbon mandatory boundary (tCO_2e)
Category 1 direct removals		-36,001.00	-36,001.00
Certified renewable electricity certificates		0.00	0.00
Purchased emission reductions		0.00	0.00
Total net emissions		**-35,086.20**	**-35,086.20**
Emissions intensity	**Intensity unit**	**tCO_2e per intensity unit**	**tCO_2e per intensity unit**
Operating revenue ($Millions)	$Millions	0	0

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.

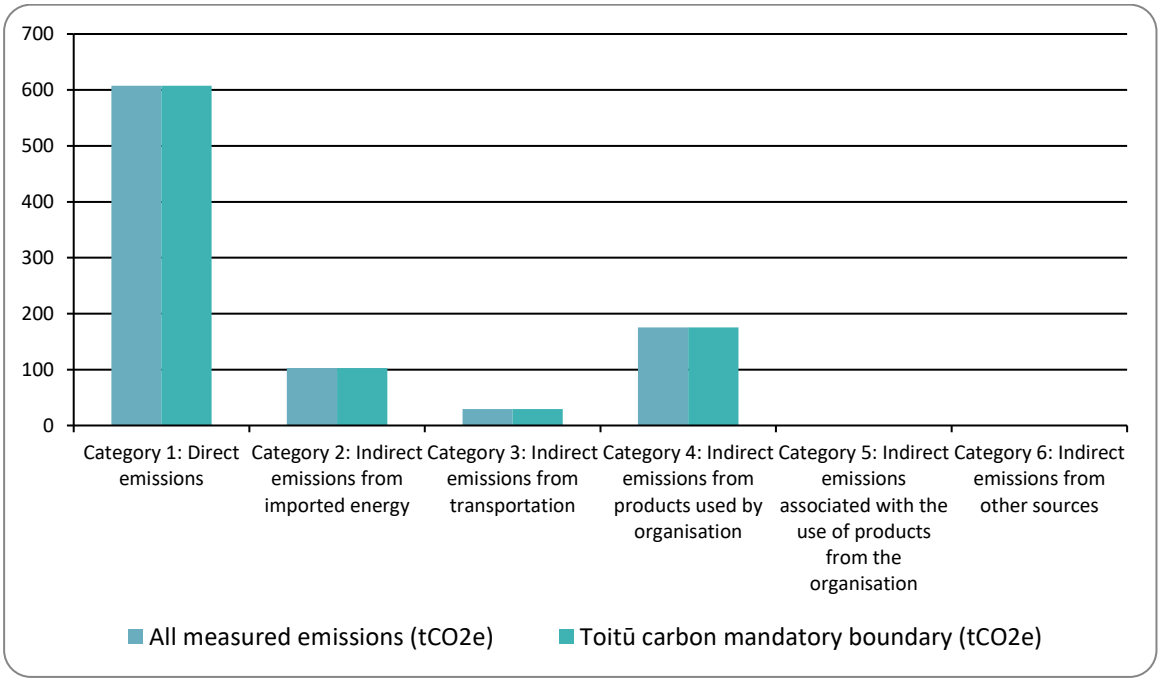

Figure 2: GHG emissions (tonnes CO_2e) by category

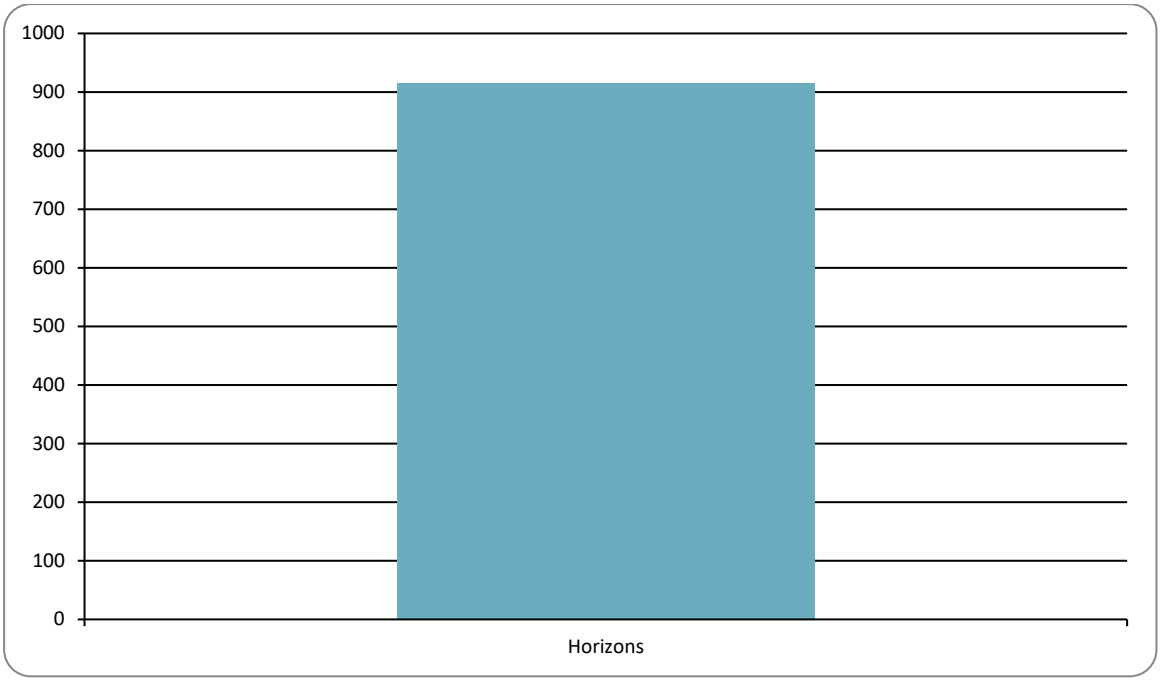

Figure 3: GHG emissions (tonnes CO_2e) by business unit

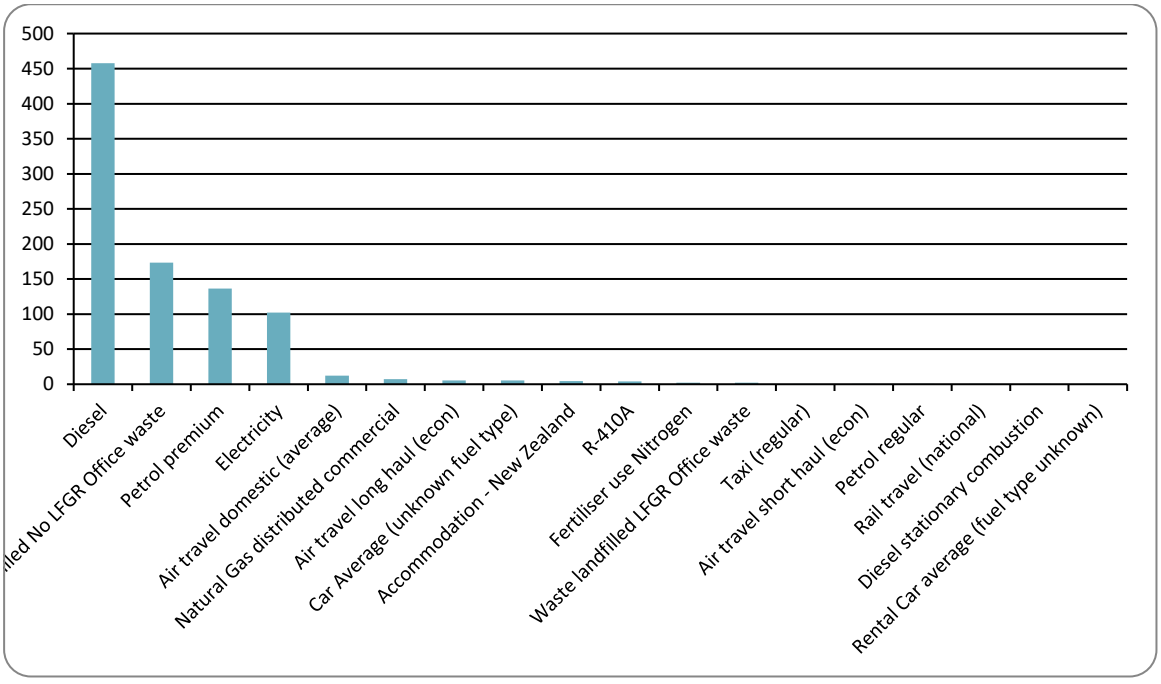

Figure 4: GHG emissions sources by source

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.

1.3. ORGANISATIONAL CONTEXT

1.3.1. Organisation description

Horizons is the regional council for the Manawatū-Whanganui Region, which extends over 22,200km^2 - from Ruapehu in the north and Horowhenua in the south, to Whanganui in the west and Tararua in the east. It's a landscape as vast and varied as the 250,000 people who call it home, including three major river systems and two coasts. Horizons' responsibilities include managing the region's natural resources, leading regional land transport planning, contracting passenger transport services and coordinating our region's response to natural disasters. Our activities span several city and district council areas. , At Horizons Regional Council we work for a healthy environment where people are thriving. We have multiple offices, land holdings and investments around the country and offshore: our portfolio includes some activities that sequester carbon, as well as a diverse range of emitters.

As a council, our purpose is to enable local decision making for our communities and enable their social, economic, environmental and cultural wellbeing – in the present and for the future. As our communities respond to climate change, our council will need to make changes to mitigate or minimise its own impacts. Like many other councils, Horizons is committed to achieving carbon neutrality. This report is a first step on that journey. It allows us to understand our carbon footprint and reveals the main sources of our emissions. We will be able to use this knowledge to develop our carbon reduction plan, which will inform future investment decisions and operational policies.

1.3.2. Statement of intent

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

This document will allow Horizons Regional Council to report on our carbon footprint, to develop a reduction pathway and shape our sustainability and investment policies. It will provide a baseline for any future reporting council chooses to undertake.

1.3.3. Person responsible

David Neal, Business Services Manager is responsible for overall emission inventory measurement and reduction performance, as well as reporting results to top management. David Neal, Business Services Manager has the authority to represent top management and has financial authority to authorise budget for the Programme, including Management projects and any Mitigation objectives.

Tom Bowen, Principal Advisor; Megan Peterson, Corporate Projects Leader; Kristy Rodgers, Assets and Fleet Administrator; Ian Stuart, Assets Team Leader; Pen Tucker, Senior Policy Analyst; and DETA Consulting were also involved in the development of this carbon footprint.

Climate change is one of the key issues Horizons faces. We have adopted a Climate Action Strategy, which includes an interim target of reducing organisational emissions by thirty percent by 2030. This target is 'interim', to allow it to be refined once we understand our carbon footprint and options to reduce emissions.

The Horizons project team and DETA Consulting were involved in agreeing on the boundary conditions. , Kristy was responsible for data collection. Kristy has worked at Horizons for the last year as Assets and Fleet Administrator, primarily focusing on fleet management and procurement. In this role, she has built a good understanding of the various departments within the organisation. Her background is in administration and accounts, having worked in such roles for the last 18 years. Kristy has engaged with DETA Consulting for data analysis. , DETA Consulting has carried out multiple carbon footprints across a variety of industries as well as producing Energy Transition Accelerators and Carbon Reduction roadmaps.

1.3.4. Reporting period

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

This base year period was selected because it represents the first year in which we have access to a materially complete set of data records for forming the inventory. A calendar year was chosen to align to our Financial reporting cycles.

Measurement period of this report: 01 July 2019 to 30 June 2020

Frequency of reporting will be annual.

1.3.5. Organisational boundary and consolidation approach

Organisational boundaries were set with reference to the methodology described in the GHG Protocol and ISO 14064-1:2018 standards. The standards allow two distinct approaches to be used to consolidate GHG emissions: the equity share or control (either financial or operational) approaches[4].

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

Horizons has a range of emission sources from multiple different businesses which include electricity, fuel consumption and a continuously changing investment portfolio. Due to the complexity of the investment portfolio, the best approach is operational control. This allows us to capture all of the operational emissions across our multiple businesses. We believe this approach aligns best with our forward plan and gives us control to be able to make changes that will have an impact.

Figure 5 shows what has been included in the context of the entire organisational profile.

We can see from Figure 5 that 13 of the Horizons Facilities have been included and 6 facilities are excluded under the operational control model. These are excluded as we have no control over how these 6 facilities operate.

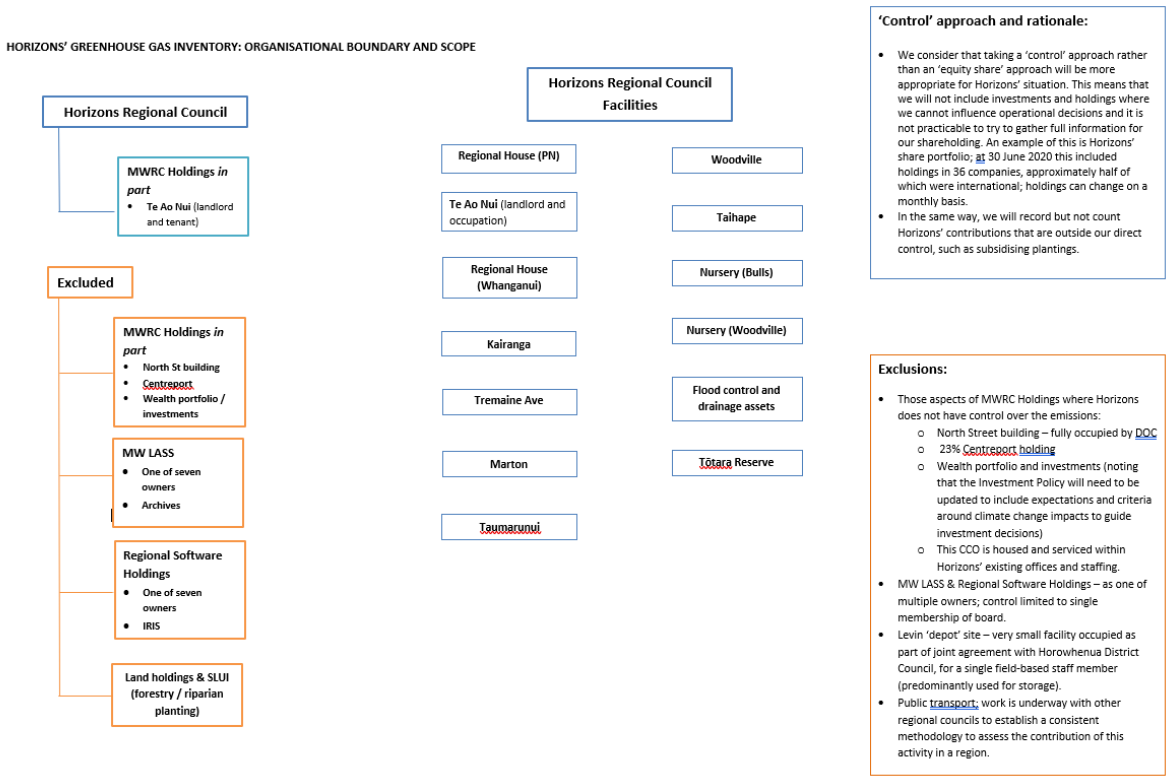

Figure 5: Organisational structure

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

Table 3. Brief description of business units included in this emissions inventory.

Company/Business unit/Facility	Description
Regional House Palmerston North	Main Horizons office
Regional House Whanganui	Service Centre
Taihape	Service Centre
Taumarunui	Service Centre
Woodville	Service Centre
Kairanga	Service Centre
Bulls Nursery	Plant Nursery
Woodville Nursery	Plant Nursery
Te Ao Nui (as landlord and tenant)	Commercial building owned by MWRC Holdings.
Tremaine Ave	Additional office space
Flood Control and Drainage Scheme	Pump sites that aid in flood control
Flow Metering/Monitoring Scheme	Sites that assist with monitoring water quality

1.3.6. Excluded business units

Some emissions associated with Horizon's activities (but not under Horizons' control) have been excluded from this report, due to a lack of data. Freight has been excluded due to the limited information that we hold. Currently, we only record cost; locations and weights (which would be required to estimate emissions) are not captured. Current systems do not allow for efficient capture of this data; enhancements will be investigated when negotiating future contracts with service providers. Emissions from outbound freight likely make up a small proportion of our total emissions. During the reporting period, Horizons' was a tenant in premises at Tremaine Avenue, Palmerston North. Electricity usage at that site is unknown, as it was included in the fixed rental cost of the building., Horizons' investment company, MWRC Holdings, owns a commercial property on North Street, Palmerston North. Horizons has no control over the building's emissions, as it is fully occupied and operated by the tenant. In accordance with standard reporting practice, this building is excluded from our inventory. Conversely, Te Ao Nui (also owned by MWRC Holdings, but operated and partially occupied by Horizons) is included in the inventory, except for tenants' electricity usage., Emissions associated with other investments are excluded as they are outside of our operational control boundary. We propose to update our investment guidelines to reflect our position on greenhouse-gas emissions., It is normal for data gaps to be identified in a baseline inventory. Should Horizons decide to regularly report in emissions as part of its emissions reduction strategy, progressive improvements in data availability and quality will be able to be made.

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 Horizons Regional Council.xls).

Table 4. Direct GHG emissions, quantified separately for CO_2, CH_4, N_2O, NF_3, SF_6 and other appropriate GHG groups (HFCs, PFCs, etc.).

Category	CO_2	CH_4	N_2O	NF_3	SF_6	HFC	PFC	Desflurane	Sevoflurane	Isoflurane	Emissions total (tCO_2e)
Direct emissions from stationary combustion	7.11381	0.01483	0.00354	0	0	0	0	0	0	0	7.13218
Direct emissions from mobile combustion	580.24	2.15	11.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	594.01
Process emissions/removals arising from industrial processes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Direct fugitive emissions arising from the release of GHGs in anthropogenic systems	0.00	0.00	0.00	0.00	0.00	4.18	0.00	0.00	0.00	0.00	4.18
Direct emissions from 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
Agriculture - Synthetic fertiliser	0.00	0.00	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.15
Direct removals from land use, land-use change and forestry	-36,001.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-36,001.00
Agriculture - 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
Agriculture - 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
Agriculture - Enteric Fermentation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agriculture - 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
Agriculture - Open burning of crop residues etc	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total gross emissions	-35,413.65	2.16	13.78	0.00	0.00	4.18	0.00	0.00	0.00	0.00	-35,393.53

Table 5. Non-biogenic, biogenic anthropogenic and biogenic non-anthropogenic CO_2 emissions and removals by category.

Category	Emissions sources	Anthropogenic biogenic CO_2 emissions	Anthropogenic biogenic (CH_4 and N_2O) emissions (tCO_2e)	Non-anthropogenic biogenic (tCO_2e)
Category 1: Direct emissions	Diesel, Diesel stationary combustion, Fertiliser use Nitrogen, Forests - removals(tCO_2), Natural Gas distributed commercial, Petrol premium, R-410A	0.00	0.00	0.00
Category 2: Indirect emissions from imported energy	Electricity	0.00	0.00	0.00
Category 3: Indirect emissions from transportation	Accommodation - New Zealand, Air travel domestic (average), Air travel long haul (econ), Air travel short haul (econ), Car Average (unknown fuel type), Diesel, Petrol regular, Rail travel (national), Rental Car average (fuel type unknown), Taxi (regular)	0.00	0.00	0.00
Category 4: Indirect emissions from products used by organisation	Waste landfilled LFGR Office waste, Waste landfilled No LFGR Office waste	0.00	175.59	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	175.59	0.00

Table 6. Renewable electricity generation on-site.

Electricity
(No information supplied)
Total

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.

Multiple workshops were held with a number of Horizons staff to discuss the organisational boundary consolidation approach. Once the operational control model was confirmed, the list of emissions sources and sinks included and excluded within the boundary could also be confirmed.

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 answer provided)

A1.1.2 Included sources and activity data collection

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 7 provides detail on emissions sources 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. Detail on estimated numerical uncertainties are reported in Appendix 1.

Table 7. GHG emissions sources and sinks included in the inventory.

Business unit	GHG emissions source or sink	GHG emissions category	GHG contribution to inventory (tCO_2e)	Data source	Data collection unit	Uncertainty (qualitative)	Availability of evidence	Pre-verified?
Accommodation	visitor nights	Cat 4	4.58	Staff Travel Job Cost Report - Finance	visitor nights	Assume booked through our official process	Staff Travel Job Cost Report	no
Air travel- Domestic	Flights	Cat 3	12.298	Air NZ Travel Card Statements	person km	Assume booked through our official process	Statements from Air New Zealand	no
Air travel- Long Haul	Flights	Cat 3	5.542	Air NZ Travel Card Statements	person km	Assume booked through our official process	Statements from Air New Zealand	no
Air Travel- Short Haul	Flights	Cat 3	0.338	Air NZ Travel Card Statements	person km	Assume booked through our official process	Statements from Air New Zealand	no
Staff Travel own car	Transport	Cat 1	5.354	Staff Travel Job Cost Report - Finance	km	Assume all travel recorded is done for work	Staff Travel Job Cost Report	no
Staff Travel own car Diesel	Transport	Cat 1	0.148	Staff Travel Job Cost Report - Finance	$	Assume all travel recorded is done for work	Staff Travel Job Cost Report	no
Staff Travel own car Petrol	Transport	Cat 1	0.234	Staff Travel Job Cost Report - Finance	$	Assume all travel recorded is done for work	Staff Travel Job Cost Report	no
Company Vehicle Fleet petrol	Transport	Cat 1	136.234	BP Fuel Card Web Report + Allied Fuel Invoices	Litres	Assume all fuel card consumption is captured on invoices	BP Fuel Card Web Report + Allied Fuel Invoices	no
Company Vehicle Fleet diesel	Transport	Cat 1	457.561	BP Fuel Card Web Report + Allied Fuel Invoices	Litres	Assume all fuel card consumption is captured on invoices	BP Fuel Card Web Report + Allied Fuel Invoices	no
Electricity	Office Electricity	Cat 2	102	Supplied direct from electricity supplier + Invoices	kWh	Assume all electricity use is captured on invoices	Data direct from electricity supplier + Invoices	no
Refrigerant	All sites Refrigeration	Cat 1	4.176	SC Co Ordinators + Ruapehu Refridgeration	kg	Assumed all 'top-ups' done by service provider represents actual leakage that occurred during this measurement period	Emails from SC Co Ordinators and Technicians	no
Rail Travel	Transport	Cat 3	0.218	Staff Travel Job Cost Report - Finance	person kms	Assume all trips have been captured	Staff Travel Job Cost Report	no

Business unit	GHG emissions source or sink	GHG emissions category	GHG contribution to inventory (tCO_2e)	Data source	Data collection unit	Uncertainty (qualitative)	Availability of evidence	Pre-verified?
Rental Cars	Transport	Cat 3	0.153	Rental Car Company Invoices	kms	Assume booked through our official process	Rental Car Company Invoices	no
Taxi	Transport	Cat 3	0.173	Direct from Taxi Charge	$	Assume all taxi use has been captured in invoices	Report from Taxi Charge	no
Waste to Landfill with gas recovery	Rubbish	Cat 4	2.087	SC Co Ordinator's + Invoices	kg	We assume it is going to LFGR due to it's location	Emails from SC Co Ordinator's and Invoices	no
Waste to Landfill without gas recovery	Rubbish	Cat 4	117.085	SC Co Ordinator's + Invoices	kg	Assumed to be primarily made up of office waste	Emails from SC Co Ordinator's and Invoices	no
Natural Gas	Heating	Cat 1	7.132	Invoice - Percentage of total use	kWh	Assume all Natural gas use is captured on invoices	Invoices from Supplier	no

A1.1.3 Excluded emissions sources and sinks

Emissions sources in Table 8 have been identified and excluded from this inventory.

Table 8. GHG emissions sources excluded from the inventory.

Business unit	GHG emissions source or sink	GHG emissions category	Reason for exclusion
Tremaine Avenue Electricity Consumption	Source	Cat 2	KWh usage is unknown as the cost of electricity is currently included in the building rental costs
Freight	Source	Cat 4	Km and weight of freight is unknown, only current costs are known
Travel	Source	Cat 3	10 trips have combined costs with limited info so have been excluded
Tremaine Avenue waste disposal	Source	Cat 4	Waste was minimal and disposed of in a shared bin included in the building rental cost.
Environmental Data sites (unmetered electricity)	Source	Cat 2	There are 15 unmetered water monitoring sites. These have been set up like this for more than 10 years. They only power a small battery charger each.

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:

Emissions = activity data x emissions factor

The following alternative emissions quantification approaches have been used in this inventory:

- Forest removals using programme supplied template based on growth rate lookup tables.

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 used as the preferred GWP conversion6.

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 Historical recalculations

No historical recalculations have been conducted

A1.2.3 Liabilities

A1.2.3.1 GHG STOCKS HELD

HFCs[5], PFCs and SF_6 represent GHGs with high global warming potentials. Their accidental release could result in a large increase in emissions for that year, and therefore the stock holdings are reported under the Programme (Table 9).

GHG stocks have been reported in this inventory and added into the GHG Stock Liability questionnaire.

Table 9. HFCs, PFCs and SF_6 GHG emissions liabilities.

GHG gas stock held	Business Unit	Potential Liability (tCO_2e)
HFC-32	Horizons	26.26
R-404A	Horizons	7.84
R-407C	Horizons	3.55
R-410A	Horizons	136.33
Total	**All reporting units**	**173.98**

A1.2.3.2 LAND-USE LIABILITIES

Organisations that own land subject to land-use change may achieve sequestration of carbon dioxide through a change in the carbon stock on that land. Where sequestration is claimed, then this also represents a liability in future years should fire, flood, management activities or other intentional or unintentional events release the stored carbon.

Land-use change has been included in this inventory.

Table 10. Land-use liabilities (total).

Site name	Total sequestration during reporting period (tCO_2e)	Contingent liability (tCO_2e)	Total potential liability (tCO_2e)
Horizons	-36001	36001	36001

A1.2.4 Supplementary results

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

A1.2.4.1 CONTRACTUAL INSTRUMENTS FOR GHG ATTRIBUTES

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.

(no answer provided)

A1.2.4.2 CARBON CREDITS AND OFFSETS

(no answer provided)

[5] HFC stock liabilities for systems under 3 kg can be excluded.

A1.2.4.3 PURCHASED OR DEVELOPED REDUCTION OR REMOVAL ENHANCEMENT PROJECTS

Horizons lease land from landowners which is used to grow forests. This is part of 10 joint venture programmes. Horizons gets a portion of the carbon credits associated with these. Over the reporting period no forests were harvested, and Horizons were credited with 36,001 carbon credits.

A1.2.4.4 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

APPENDIX 2: SIGNIFICANCE CRITERIA USED

Table 11. Significance criteria used for identifying inclusion of indirect emissions.

Emissions source	Magnitude	Level of influence	Risk or opportunity	Sector specific guidance	Level of influence	Outsourcing	Employee engagement
Accommodation	Yes	Yes	Yes	No	Yes	No	Yes
Air travel	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employee commuting	Yes	Yes	No	Yes	Yes	No	Yes
Staff mileage claims	No	Yes	No	No	Yes	No	Yes
Taxi	No	Yes	No	Yes	No	Yes	Yes
Waste to landfill	Yes	No	Yes	No	No	Yes	Yes
Refrigerants	Yes	No	Yes	No	No	Yes	No
Fertilisers	Yes	Yes	No	No	No	Yes	No
Company Fleet fuel use	Yes	Yes	Yes	No	Yes	Yes	Yes
Electricity	Yes	Yes	No	No	Yes	Yes	Yes
Rail Travel	No	No	No	No	Yes	Yes	Yes

APPENDIX 3: 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 4: REPORTING INDEX

This report template aligns with ISO 14064-1:2018 and meet Toitū carbon 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	TR4.14
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 Treatment of biogenic emissions and removals	9.3.1 g	TR4.15
A1.1.4 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 Liabilities		
A1.2.3.1 GHG stocks held		TR4.18
A1.2.3.2 Land-use liabilities	9.3.3.	TR4.19

A1.2.4 Supplementary results		
A1.2.4.1 Contractual instruments for GHG attributes	9.3.3	TR4.16, TR4.17
A1.2.4.2 Carbon credits and offsets	9.3.3.3	
A1.2.4.3 Purchased or developed reduction or removal enhancement projects	9.3.2 c	
A1.2.4.4 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		