

Greenhouse Gas Emissions Inventory Report

Prepared in accordance with the Greenhouse Gas Protocol and ISO 14064-1 and Category
Reporting in ISO 14064-1:2018

Waikato District Council – FY2023

Waikato District Council

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For the period: 1/7/2022 to 30/6/2023

Base year: 1/7/2019 to 30/6/2020

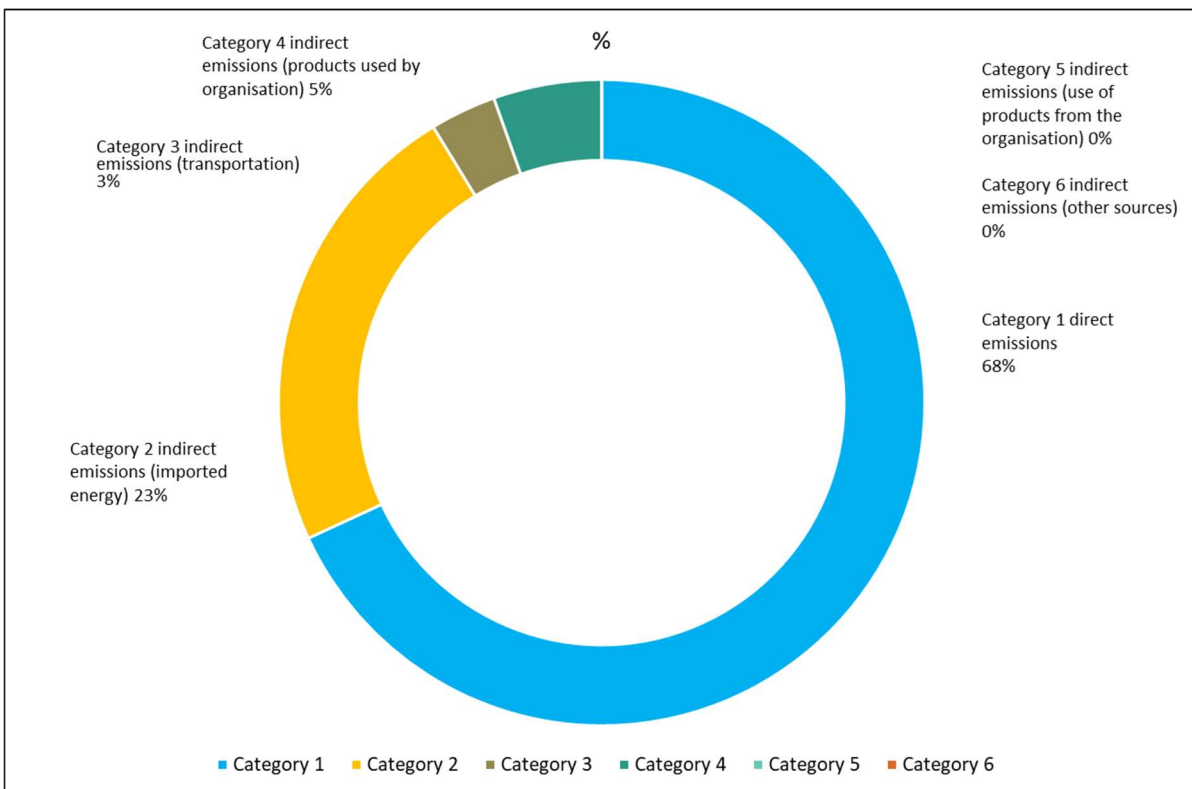
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Table 1: Summary emissions and removals (tCO₂e) by Category for this measurement period 1/7/2022 to 30/6/2023

Category	FY23 (tCO ₂ e)
Scope 1, Category 1 direct emissions	689.18
Scope 2, Category 2 indirect emissions (imported energy)	234.44
Scope 3, Category 3 indirect emissions (transportation)	34.28
Scope 3, Category 4 indirect emissions (products used by organisation)	54.76
Scope 3, Category 5 indirect emissions (use of products from the organisation)	0.00
Scope 3, Category 6 indirect emissions (other sources)	0.00
Total direct emissions	689.18
Total indirect emissions	323.48
Total gross emissions	1,012.66
Scope 1, Category 1 direct removals	0
Certified renewable energy certificates	0
Total net emissions	1,012.66

Figure 1: Emissions by Category for all measured emissions for 1/7/2022 to 30/06/2023

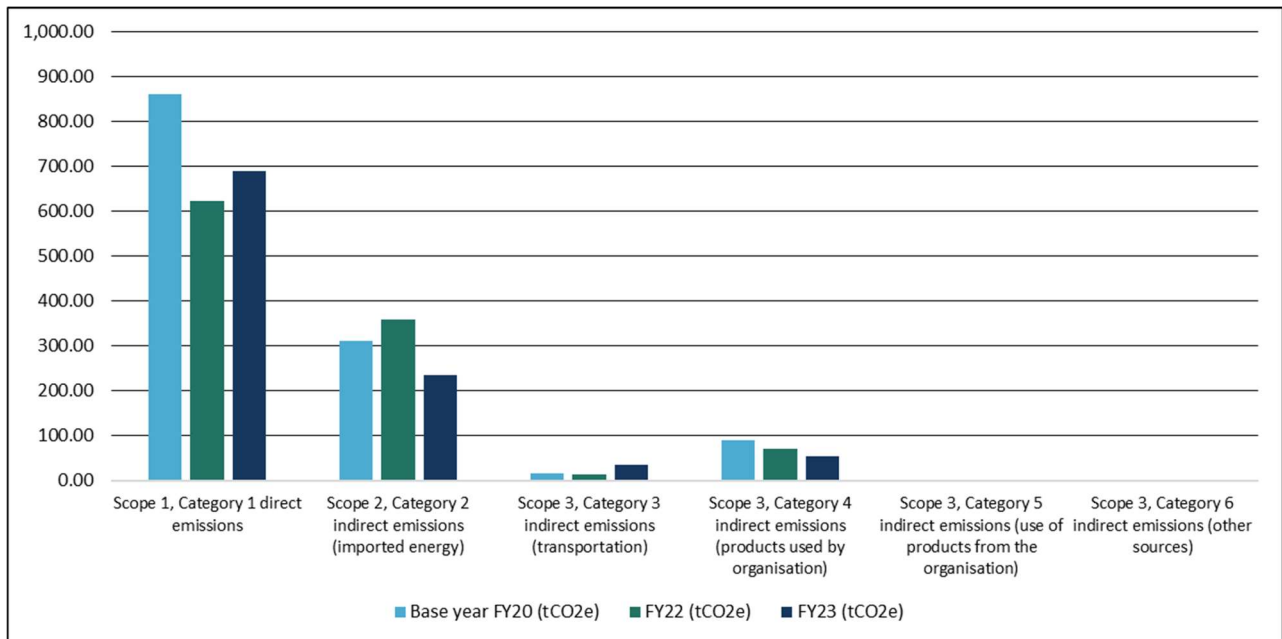


Comparison to Previous Inventories

Table 2: Historical GHG inventory summary comparisons

Category	Base year FY20 (tCO2e)	FY22 (tCO2e)	FY23 (tCO2e)
Scope 1, Category 1 direct emissions	861.35	623.41	689.18
Scope 2, Category 2 indirect emissions (imported energy)	310.71	358.22	234.44
Scope 3, Category 3 indirect emissions (transportation)	16.28	13.04	34.28
Scope 3, Category 4 indirect emissions (products used by organisation)	88.57	69.93	54.76
Scope 3, Category 5 indirect emissions (use of products from the organisation)	0.00	0.00	0.00
Scope 3, Category 6 indirect emissions (other sources)	0.00	0.00	0.00
Total direct emissions	861.35	623.41	689.18
Total indirect emissions	415.56	441.19	323.48
Total gross emissions	1,276.91	1,064.60	1,012.66
Scope 1, Category 1 direct removals	0	0	0
Certified renewable energy certificates	0	0	0
Total net emissions	1,276.91	1,064.60	1,012.66

Figure 2: Summary of historical emissions inventories

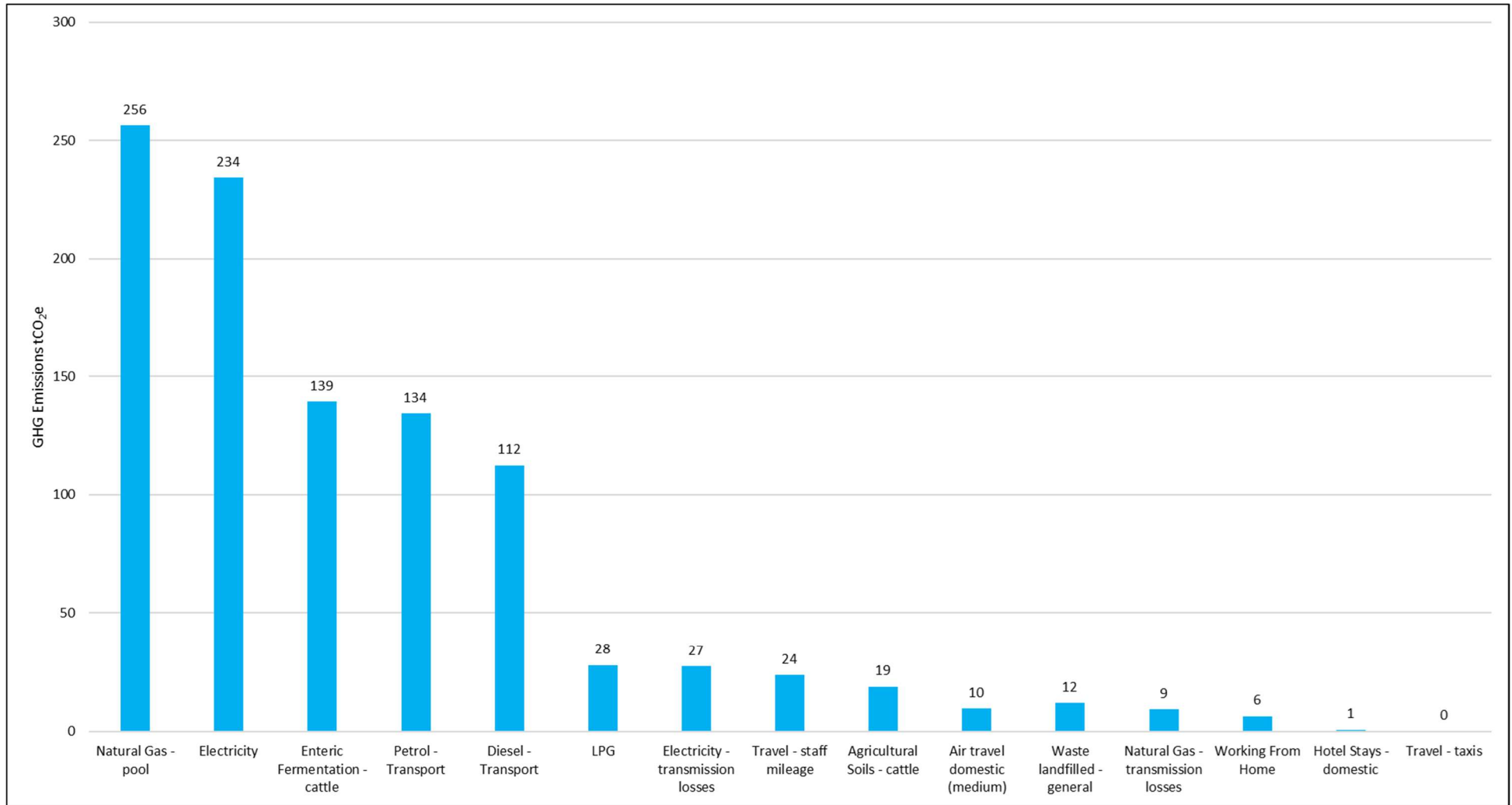


Emission Source Inventory Results

Table 3: GHG emissions inventory summary, for this measurement period 1/7/2022 to 30/06/2023

Category	Emission sources	All measured emissions (tCO ₂ e)
Scope 1, Category 1 direct emissions	Natural Gas (heating), Diesel (transport), Petrol (transport), LPG, Agricultural Soils (cattle), Enteric Fermentation (cattle)	689.18
Scope 2, Category 2 indirect emissions (imported energy)	Electricity	234.44
Scope 3, Category 3 indirect emissions (transportation)	Air travel domestic (medium), Hotel stays (domestic), Travel (staff mileage), Travel (taxis)	34.28
Scope 3, Category 4 indirect emissions (products used by organisation)	Transmission Losses (electricity and natural gas), Waste to landfill – general, Working From Home.	54.76
Scope 3, Category 5 indirect emissions (use of products from the organisation)	None	0
Scope 3, Category 6 indirect emissions (other sources)	None	0
Total direct emissions		689.18
Total indirect emissions		323.48
Total gross emissions		1012.66
Total net emissions		1012.66
Emissions intensity	Intensity unit	TCO ₂ e per intensity unit
\$M Revenue	224	4.53
Full Time Employee	400	2.53

Figure 3: FY23 GHG emissions (tonnes CO₂e) by source



Organisation Context

1 Introduction

This report is the annual greenhouse gas (GHG) emissions inventory report for Waikato District Council. The inventory is a complete and accurate quantification of the amount of GHG emissions that can be directly attributed to the organisation's operations within the declared boundary and scope for the specified reporting period (1 July 2022 to 30 June 2023).

The inventory has been prepared in accordance with the requirements of the publication Measuring Emissions: A Guide for Organisations, Ministry of Environment 2023. The most recent emission factors have been used and these were updated by the Ministry of Environment in July 2023. This guidance is in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard and ISO 14064-1. Emission sources have been further allocated into categories in accordance with ISO 14064-1:2018.

2 Statement of intent

This inventory forms part of Waikato District Council's commitment to measure and manage our emissions.

3 Organisation description & reduction activities

Waikato District Council is the local government authority for the Waikato District in the north island of New Zealand. The Council supplies infrastructure and community services across a wide area bounded by the west coast of Raglan to Port Waikato and across to the eastern Hauraki Plains. Council's main office is in the township of Ngaruawahia, twenty kilometres north of Hamilton, the nearest city. Council had total revenue of \$224 million and employed 400 full time equivalent staff in the financial year ending 30 June 2023.

Council has reported its organisation GHG emissions since 2019. The Base Year reporting period was reset to FY2020 to take into account the change in operational responsibility for water treatment and wastewater treatment activities – these are now operated and managed by Watercare. Council has undertaken a number of initiatives to reduce its emissions over the past three years including replacing LPG hot water systems with an electric hot water heat pump, reduction of livestock, reduction of fleet, and purchase of hybrid and plug-in electric vehicles.

Council operates 36 Hybrid vehicles and 8 Plugin Hybrid EV's and 3 electric vehicles, which make up 66% of the total fleet. The remainder are diesel. In the next few months, a further diesel vehicle will be replaced with a hybrid and an older hybrid will be switched to a new electric vehicle.

Electric vehicle charging stations have been installed at the Ngaruawahia Office fleet compound to support the introduction of more electric vehicles.

The Procurement, Entitlement and Disposal of Council Vehicle Policy has been reviewed and approved. This document introduces a sinking lid on personal use vehicles, removes the ability for existing personal use vehicles to be replaced with internal combustion engine vehicles and also sets out the preference for low carbon vehicles for pool and team vehicle replacement.

Council was successful in gaining funding from the Energy Efficiency & Conservation Authority to upgrade the existing gas fired boiler at Huntly Aquatics to a low carbon electric heat pump system. This will make a significant reduction in Council's GHG emissions and will be completed by June 2024.

In addition, LED Lighting upgrades in the Ngaruawahia Office are being scoped for EECA funding.

Improved reporting is underway to incorporate a waste management KPI and reporting on Service Provider Contractors. Minimising waste to landfill produces environmental benefits and supports reductions in GHG emissions.

The Climate Action and Sustainability Works Programme has been set for the next 2 years and the Climate Response and Resilience Strategy has been approved by council. The strategy is an overarching document that sets direction, aims and key projects that will align with annual emission reduction targets. Internal and external climate action plans will be developed to drive the strategy.

Council established a Sustainability and Wellbeing Committee in 2022. The Climate Action and Sustainability team report regularly to the council committee and Executive Leadership Team.

4 Organisational boundaries included for this reporting period

Organisational boundaries were set with reference to the methodology described in the GHG Protocol and ISO 14064-1:2006 standards. The GHG Protocol allows two distinct approaches to be used to consolidate GHG emissions: the equity share and control (financial or operational) approaches. We used an operational control consolidation approach to account for emissions.

Figure 4 shows the organisational structure for the Waikato District Council and its main Groups. Councillors lead high level decision-making for the organisation. The Executive Leadership Team oversees management of the organisation and fulfilment of the decisions made by Council. The Executive Leadership Team does this by managing and co-ordinating the work of the four Groups. Each Group employs staff and contractors split into Business Units. For clarification, this inventory encompasses all of Waikato District Council activities shown in Figure 1 unless otherwise noted.

Organisations not included are shaded crimson:

- Council Controlled Organisations being Strada Corporation Ltd, Waikato Regional Airport Ltd, Waikato Local Authority Shared Services Ltd, Waikato District Community Wellbeing Trust.

Figure 4: Organisational structure (as at June 2023)

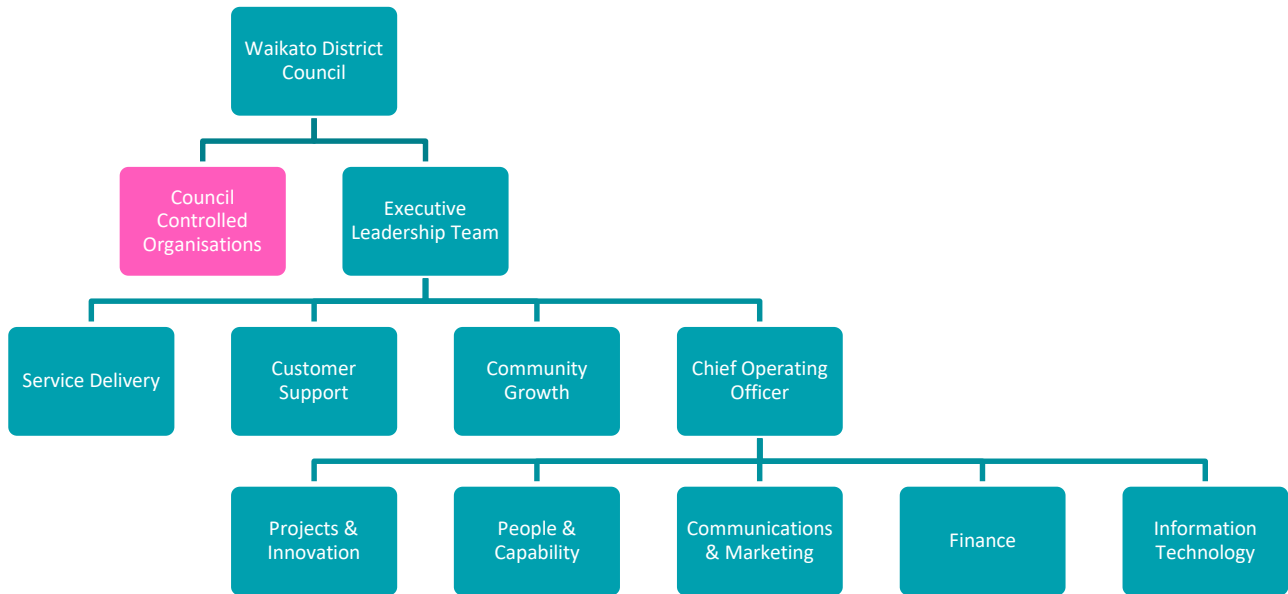


Figure 5 shows the Waikato District Council boundary in bold. Service centres and other facilities are spread across the district.

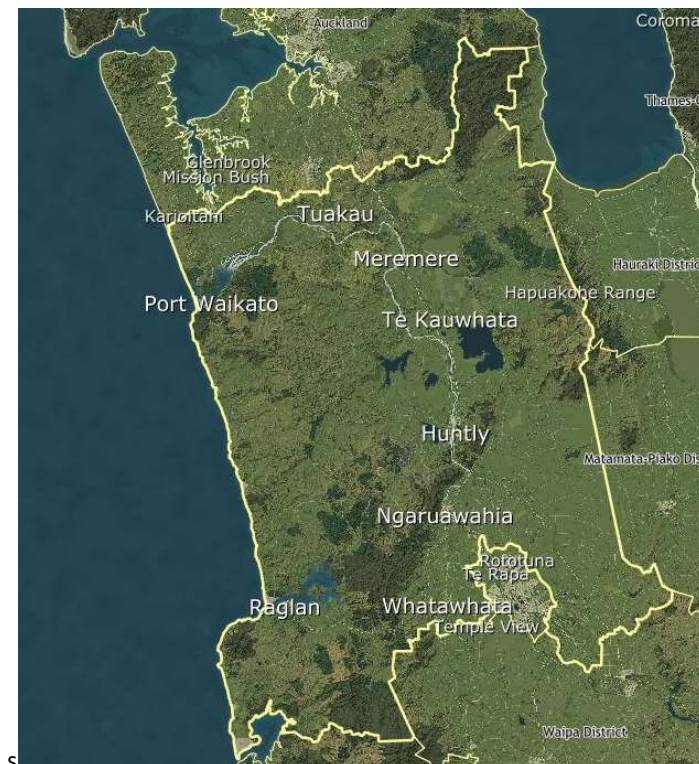


Figure 5: Waikato District Council Bordered By Bold Yellow Line.

Table 4: Brief description of business units in the certifying entity.

Group/Unit	Address	Purpose
Service Delivery Community Connections	Multiple addresses for sites, but staff are principally based at Head Office, 15 Galileo Street, Ngaruawahia.	This includes teams for Venue and Events, Facilities, and Open Spaces. These teams operate, manage and maintain key facilities such as cemeteries and halls, Woodlands venue, holiday parks (overview only), offices, libraries, service centres, toilets, and parks.
Service Delivery Strategic Property	Principally based at Head Office, 15 Galileo Street, Ngaruawahia.	To secure and manage land and property required for strategic development.
Service Delivery Community Projects	Principally based at Head Office, 15 Galileo Street, Ngaruawahia.	To manage the design, development, project delivery of community projects.
Service Delivery Contracts & Partnering	Principally based at Head Office, 15 Galileo Street, Ngaruawahia.	Management of roading contracts and road safety, management of waste management and minimisation.
Service Delivery Community Assets	Principally based at Head Office, 15 Galileo Street, Ngaruawahia with multiple plants located in key towns.	Management of assets including water, wastewater, facilities and roading.
Customer Support Consents	Principally based at Head Office, 15 Galileo Street, Ngaruawahia.	Management of consenting processes and land development.
Customer Support Customer Delivery	Based at Service Centres including Raglan, Tuakau, Huntly, TeKauwhata, Meremere, and Ngaruawahia.	Operation of service centres including libraries.
Customer Support Regulatory Manager	Principally based at Head Office, 15 Galileo Street, Ngaruawahia.	This includes the animal control team, regulatory administrators, environmental health and monitoring and compliance officers.
Customer Support Building Quality	Principally based at Head Office, 15 Galileo Street, Ngaruawahia.	This includes the building review and building inspection teams and administration.
Community Growth Analytics	Principally based at Head Office, 15 Galileo Street, Ngaruawahia.	Analysis of community growth and development contributions.
Community Growth Economic and Community	Principally based at Head Office, 15 Galileo Street, Ngaruawahia.	Economic development and youth engagement in the Waikato district.
Community Growth Planning and Policy	Principally based at Head Office, 15 Galileo Street, Ngaruawahia.	Strategic, environmental and policy planning for the Waikato District.

Group/Unit	Address	Purpose
COO Projects and Innovation	Principally based at Head Office, 15 Galileo Street, Ngaruawahia.	This covers procurement, project management, risk & innovation, and business improvement.
COO People & Capability	Principally based at Head Office, 15 Galileo Street, Ngaruawahia.	Management of human resources and training within the organisation.
COO Communications & Marketing	Principally based at Head Office, 15 Galileo Street, Ngaruawahia.	Delivery of communications across the organisation and engagement with the community.
COO Finance	Principally based at Head Office, 15 Galileo Street, Ngaruawahia.	Financial management and accounting, rates administration and payroll, and legal counsel.
COO Information Technology	Principally based at Head Office, 15 Galileo Street, Ngaruawahia.	To provide business intelligence, records and property information, analysis and IT infrastructure support.

5 Organisational business units excluded from inventory

There are no business units excluded from the inventory. There are a number of activities that have oversight by the organisation which are operated by third parties and include Scope 1 and Scope 2 emission sources paid for directly by the third party. This includes Raglan Holiday Park and Aquatic facilities.

Activity	Operated By Third Party	Emission Sources
Raglan Holiday Park	Raglan Holiday Park Trust	Natural Gas, Electricity, LPG
Huntly, Tuakau, Ngaruawahia Pools	Belgravia Leisure	Natural Gas, Electricity

Council has a high level of influence on the operation and asset replacement of these activities, and chosen to include them as part of Council's corporate greenhouse gas inventory.

From 1 October 2019, water operations including treated water, wastewater and storm water are managed and operated by WaterCare Ltd. This report excludes emissions arising from water operations. From 1 October 2019 onwards, emissions from these activities are reported separately by Watercare.

6 Emission source identification method and significance criteria

The GHG emissions sources included in this inventory are those that are referenced to the methodology described in the ISO 14064-1:2018 standard. This included personal communications with relevant staff, review of operational expenditure records, review of asset registers, and site walkarounds.

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

- All direct emissions sources that contribute more than 1% of total Category 1 and 2 emissions
- All indirect emissions that contribute more than 1% of total emissions and we can influence.

The significance criteria has increased for the FY2023 year compared to when we first reported our emissions sources in FY2020.

7 GHG emissions source inclusions and uncertainties

The GHG emissions sources included in this inventory were identified with reference to the methodology in the *GHG Protocol* and *ISO14064-1:2006* standards. As adapted from the *GHG Protocol*, these emissions were classified under the following categories:

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

Table 5 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/assessment of any uncertainties or assumptions made.

A calculation methodology has been used for quantifying the emissions inventory using emissions source activity data multiplied by emission or removal factors. All emission factors were sourced from the Ministry for the Environment's 2023 Measuring Emissions: A Guide for Organisations, and where applicable, Market Economics Ltd, 2023, Consumption Emissions Modelling, report prepared for Auckland Council.

Information management and monitoring procedures

All information used for compiling the inventory is stored in a dedicated folder on the Council server system under the sustainability programme. Records are stored and managed in compliance to the organisation's Standard Operating Procedures for document retention practices. Specifically, emissions source data is collated into one central workbook for performing final calculations into sources and sink totals. This includes any pre-work such as unit conversions, filtering, and pro-rating.

Table 5: GHG emissions sources included in the inventory.

Group/Business unit	GHG emissions source	GHG emissions level scope	Data source	Data collection unit	Uncertainty (description)
All Council	Air travel domestic (national average)	Scope 3, Category 3	Data was received from Karen Breseden. This detailed the flights taken by staff as compiled by Council's administrators from bookings. Passenger kms were calculated using travel details and the Air NZ distance calculator.	pkm	Low. As air travel data was collected retrospectively across multiple departments, there is some uncertainty that the amount reported is complete and accurate. We have recently adopted Orbit our travel booking tool, which will capture all travel data going forward.
All Council	Hotel Stays	Scope 3, Category 3	Data was received from Karen Breseden. This detailed the number of hotel stays as compiled by Council's administrators from bookings.	nights	Low. As hotel stays data was collected retrospectively across multiple departments, there is some uncertainty that the amount reported is complete and accurate. We have recently adopted Orbit our travel booking tool, which will capture all travel data going forward.
All Council	Staff – Personal Cars Taxi	Scope 3, Category 3	Mileage data was received from Pippa Berry-Cope. This detailed the mileage allowance paid and was extracted from Council's financial system. Distance travelled was calculated using the mileage rate. Emissions were calculated using the default emissions factor for a private car 2,000-3000cc. Taxi data was received from Karen Breseden. This detailed taxi trips including start and end locations. Kilometres travelled were calculated using Google Maps and assumed the shortest distance.	days	Low. It is assumed that staff claimed all personal car travel and it is noted that the generic vehicle used may not be representative of staff private vehicles. Medium. Some data for taxi trips is missing from Karen's report.

Group/Business unit	GHG emissions source	GHG emissions level scope	Data source	Data collection unit	Uncertainty (description)
All Council	Waste	Scope 3, Category 4	This applies to Council buildings and Raglan Holiday Park only. Waste collection reports have been provided by the waste contractors and where this is not possible calculations of waste volumes are made based on bin size and collection frequency.	Bins collected	Medium. This year we were unable to obtain actual weight of waste. There will be medium uncertainty with the waste data as a 10% diversity factor is applied to bin volume and frequency of pickups.
All Council	Diesel Petrol	Scope 1, Category 1	Tracey Morgan, Fleet Manager provided consumption reports from e-Roads. This detailed all vehicle fuel transactions except bulk fuel purchases. Bulk diesel to Woodlands was provided directly from Waitomo Group who deliver fuel to this site.	L	Low. The supplier reports are mostly complete for fleet vehicles, but some historical transactions for wildcards have not been provided. Very Low. The supplier reports are complete and accurate.
All Council	LPG	Scope 1, Category 1	LPG usage was extracted from invoices and is based on the number of gas bottles and nominal weight (typically 45kg). Data was provided directly from Council administrators.	kg	Low. Data was based on the number of bottles used at sites multiplied by rated fill weight and is assumed to be accurate.
All Council	Natural Gas	Scope 1, Category 1	Online consumption report downloaded from EnergyPro (holds suppliers invoices). Copies of invoices are available on request. Supplier invoices for the Huntly Camp ground were provided by Emah Lane, at Huntly Camp.	kWh	Very low. The supplier reports are complete and accurate.
All Council	Electricity	Scope 2, Category 2	Online consumption report downloaded from EnergyPro (holds suppliers invoices). Copies of invoices are available on request.	kWh	Very low. The supplier reports are complete and accurate.

Group/Business unit	GHG emissions source	GHG emissions level scope	Data source	Data collection unit	Uncertainty (description)
All Council	Enteric Fermentation Agricultural Soils	Scope 1, Category 1	Based on head of cattle shown in invoices relating to the period 30 June 2023. Updated information was provided by Noel Barber.	Head	Very low. We are confident data is accurate.
All Council	Transmission Losses – electricity	Scope 3, Category 4	Online consumption report downloaded from EnergyPro (holds suppliers invoices). Copies of invoices are available on request.	kWh	Very low. We are confident data is accurate.
All Council	Transmission Losses – natural gas	Scope 3, Category 4	Online consumption report downloaded from EnergyPro (holds suppliers invoices). Copies of invoices are available on request.	kWh	Very low. We are confident data is accurate.
All Council	Working From Home	Scope 3, Category 4	Based on anecdotal comments and a survey of a 3month period Jul 2020 to Sep 2020, its estimated that on average 75 staff would work from home over the last 12 months on an ongoing basis.	Employee Days	Medium. Formal records are not maintained of staff numbers working from home and this is a best guess. There are still a reasonable number of staff who work from home on a regular basis.

8 GHG emissions source exclusions

Waikato District Council recognises the extent of Scope 3 emissions can be significant. We have chosen to declare the following notable emissions sources that have been excluded from the emissions inventory.

Table 6: GHG emissions sources excluded from the inventory

Business unit	GHG emissions source	GHG emissions level scope	Reason for exclusion
All Council	Materials (Concrete, Steel, Aluminium)	Scope 3	The quantity of materials is not monitored on a regular basis. The cost and effort of obtaining the information retrospectively was considered too high.
All Council	HCFC	Scope 3	Staff were not able to provide records of refrigerant replacement for this reporting period. Neither could they advise refrigerant holdings. This information should be reported in future.
All Council	Indirect Services	Scope 3	Council has not investigated the indirect emissions associated with services supplied to Council.

9 GHG emissions calculations and results

GHG emissions for the organisation for this measurement period are provided in the GHG Inventory summary section at the start of this report.

Figure 6 compares emissions by general activity or source for the Base Year FY20, FY22 and the most recent year FY23. It also shows where emissions are occurring across Council.

The two largest emission sources in FY23 were natural gas and electricity being 266 and 262 TCO₂e respectively. This includes the transmission losses in delivering electricity and natural gas to site.

Natural gas is mostly used for hot water production and space heating at the indoor swimming pool facility at Huntly. Natural gas use in FY23 was 77% more than Base Year FY20, and emissions by a similar amount. This is in part explained by a shutdown of the facility during Base Year for maintenance and reduced operating hours due to Covid. FY21 to FY22 present more typical years of operation but gas usage for FY23 is still 35% above. The increase for FY23 is considered to relate to a number of factors including, end of controls relating to Covid, cooler temperatures and mechanical changes to the boiler plant.

The second largest emission source is electricity. Electricity is used for many applications, and some of Council's largest loads include streetlighting, irrigation, the municipal offices building, Raglan holiday park and Huntly pool. Electricity use has increased by only 3% since FY20, but emissions have fallen by 25%. The emissions factor for grid electricity has fallen sharply in the last 18 months as less thermal power generation has been needed compared to previous years. As more renewable generation is installed, electricity emissions are expected to fall further.

The third largest emission sources are enteric fermentation (methane) and agricultural soils (nitrous oxide) (158 TCO₂e) arising from cattle grazing at Wainu Reserve in Raglan. Cattle numbers have reduced across the last two years and are now 19% less than that in FY20. This has resulted in a drop in emissions.

Vehicle fuel emissions from petrol and diesel are collectively 246 TCO₂e. Council is rapidly shifting its fleet from diesel to hybrid-petrol and electric where viable. Petrol emissions have fallen by 7% and diesel emissions have fallen by 46% since Base Year FY20.

Electricity, natural gas, cattle and fleet fuels make up 92% of Council’s operational emissions. Travel, LPG, waste to landfill, and working from home make up the remaining 8%.

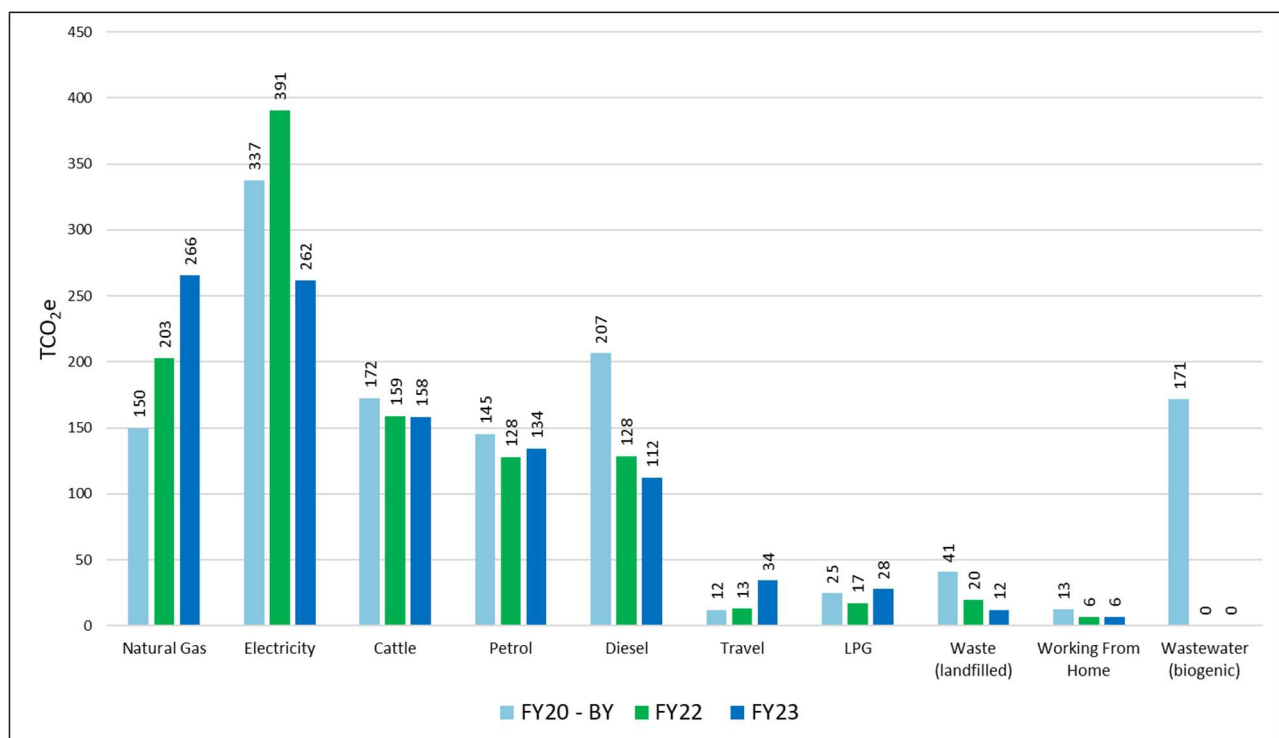


Figure 6: GHG emissions by source/activity (TCO₂-e)

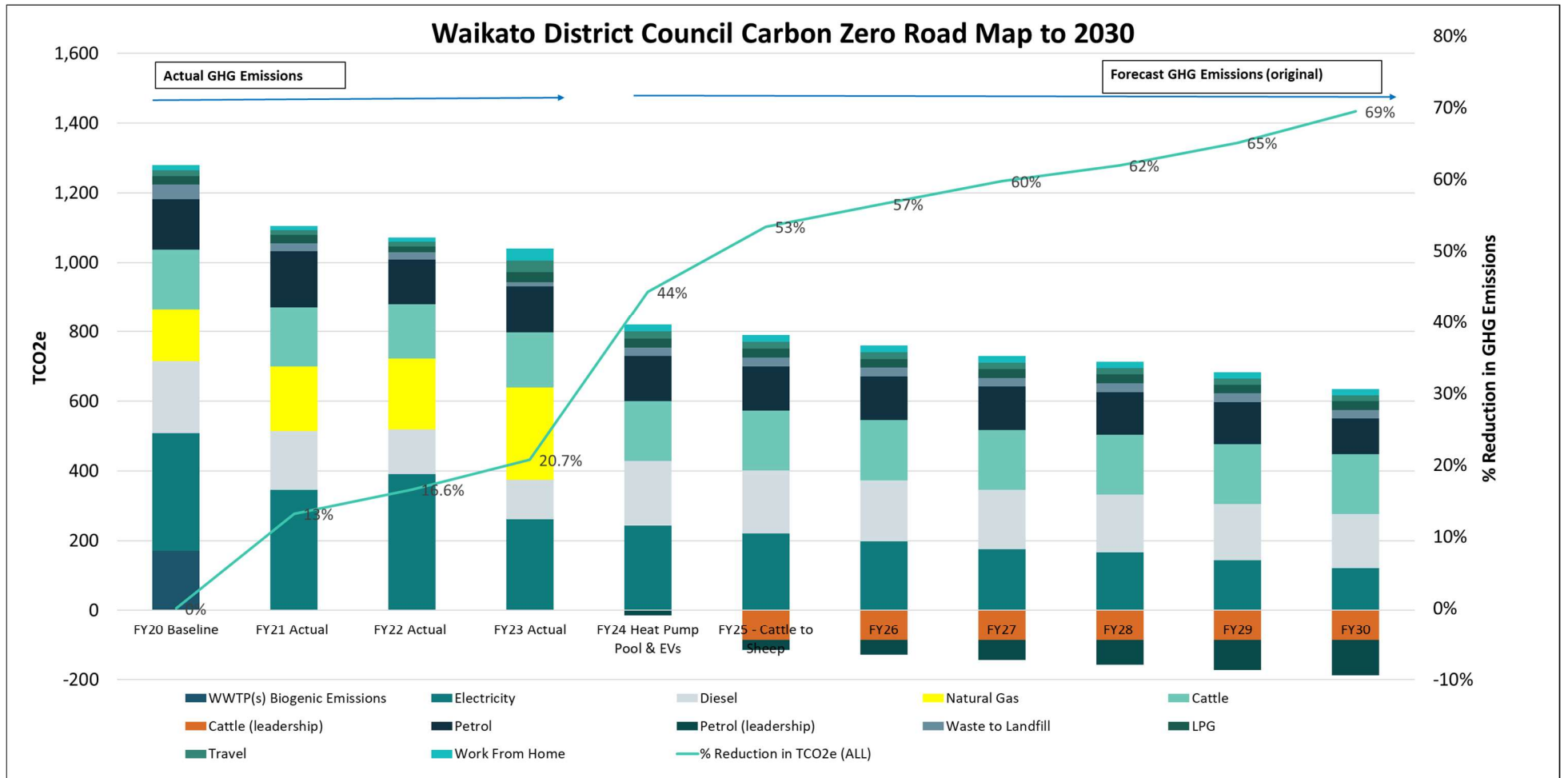
Emissions from Travel have doubled since FY20 but still remain relatively modest at 4% of total emissions. The increase is largely due to the resumption of domestic air travel that was curtailed during the Covid pandemic.

Council reports its operational emissions using two indicators, \$M revenue and number of Full Time Equivalent (FTE) staff.

- Per FTE, emissions reduced from 3.73 TCO₂e in FY20 to 2.53 TCO₂e in FY23.
- Per \$M revenue, emissions reduced from 7.29 TCO₂e in FY20 to 4.53 TCO₂e in FY23.

Council’s carbon road map out to 2030 has been prepared and shows how Council’s emissions could reduce in line with internationally agreed 1.5 degree warming limits. A critical project to achieve this is the replacement of the Huntly Aquatic Centre gas boiler with an electric hot water heat pump system. See Figure 7 overleaf.

Figure 7



10 Liabilities

10.1 GHG stocks held

HFCs, PFCs and SF₆ represent GHGs with high global warming potentials. Their accidental release could result in a large increase in emissions for the reporting period. Therefore, any GHG stocks should be included in the greenhouse gas emissions inventory summary section at the start of this report to identify significant liabilities and implement procedures for minimising the risk of their accidental release.

Table 7: HFCs, PFCs and SF₆ GHG emissions and liabilities.

GHG gas	Amount held - start of reporting period	Amount held - end of reporting period	Potential tCO ₂ e	Liability
Refrigerant	Not Reported	Not Reported		0
Diesel Fuel Tank 240L	0.6	0.6		0.6
Total	0.6	0.6		0.6

10.2 Land-use change

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. If a sequestration is claimed, this also represents a liability in future years should fire, flood or other management activities release the stored carbon.

11 References

International Organization for Standardization. ISO14064-1:2006/2018. Greenhouse gases – Part 1: *Specification with guidance at the organisation level for quantification and reporting of greenhouse gas GHG emissions and removals*. Geneva: ISO.

World Resources Institute and World Business Council for Sustainable Development. 2004. *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard* (revised). Geneva: WBCSD.

Appendix 1 – Supplementary Data

Tables 8 to Table 14 summarise the greenhouse gas (GHG) emissions for Waikato District Council covering the financial year July 2022 to June 2023 as per reporting guidance from the GHG Protocol. Total emissions were 999.97 T CO₂-e. This inventory report is part of the framework for ongoing repeatable data collection which will allow Council to develop carbon reduction initiatives and measure progress over time.

Table 8: GHG emissions data summary.

Component Gas (expressed as TCO ₂ -e)								
FY23	CO ₂	CH ₄	N ₂ O	HFCs	PFCs	SF ₆	Total TCO ₂ -e	Percent By Scope
Scope 1 ¹	523	142	24	-	-	-	689	68%
Scope 2 ²	228	6	1	-	-	-	234	23%
Scope 3 ³	65	22	1	-	-	-	88	9%
Total	816	170	26	-	-	-	1,012	100%

Table 9: Biogenic CO₂

Source	Quantity (m ³)	T Biogenic CO ₂
Wastewater Treatment Plant	0	0
Total	0	0

Table 10: Forestry

Source	Quantity	TCO ₂ -e
Carbon lost (deforestation)	0	0
Carbon Sequestered (forest growth)	0	0
Net balance	n/a	0

¹ **Scope 1 - Direct** GHG emissions from sources that are owned or controlled by the company.

² **Scope 2 - Indirect** GHG emissions from the generation of purchased electricity, heat and steam consumed by the company.

³ **Scope 3 - Indirect** GHG emissions that occur as a consequence of the company's activities but from sources not owned or controlled by the company.

Table 11: GHG stock liability (refrigerants and diesel storage)

Source	Unit	Quantity	Potential Liability TCO ₂ -e
Refrigerant 1	kg	0	0
Refrigerant 2	kg	0	0
Diesel Fuel Tank Woodlands	l	240	0.6
Total			0.6

Table 12: Forestry liabilities.

Type of sequestration	Liability TCO ₂ -e
Contingent liability (carbon sequestered since base year)	0

Table 13: Renewable electricity generation on-site⁴

Renewable generation on-site	kWh generated	TCO ₂ -e avoided
Solar PV	0	0

Table 14: Emissions per KPI

KPI	Quantity				TCO ₂ e / KPI					
		FY20	FY21	FY22	FY23		FY20	FY21	FY22	FY23
Full Time Employees		342	351	376	400		3.73	3.16	2.84	2.53
\$M		175	208	230	224		7.29	5.32	4.63	4.53

⁴ Solar electricity is generated at the Te Kauwhata Library, however the quantities generated are not monitored.

Appendix 2 – Data Summary Workbook

Detailed GHG emissions data are available on the accompanying spreadsheet(s) to this report:

- Waikato District Council – Carbon Emissions Workbook FY23