



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



Whakatāne District Council

Prepared by (lead author): Roland Daniher - Strategic Policy Analyst

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Measurement period: 01 July 2021 to 30 June 2022

Base year period: 01 July 2017 to 30 June 2018

Approved for release by:

A handwritten signature in black ink, appearing to be "S Perdia".

Steven Perdia - General Manager Strategy & Transformation

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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

This report will be available to staff on request.

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 net 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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EXECUTIVE SUMMARY

This is the annual greenhouse gas (GHG) emissions inventory and management report for Whakatāne District 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)	2018	2021	2022
Category 1: Direct emissions	Scope 1	2,541.65	2,540.99	3,354.81
Category 2: Indirect emissions from imported energy (location-based method*)	Scope 2	931.04	712.38	767.29
Category 3: Indirect emissions from transportation	Scope 3	55.94	39.13	28.50
Category 4: Indirect emissions from products used by organisation	Scope 3	123.28	64.96	76.49
Category 5: Indirect emissions associated with the use of products from the organisation	Scope 3	0.00	0.00	0.00
Category 6: Indirect emissions from other sources	Scope 3	0.00	0.00	0.00
Total direct emissions		2,541.65	2,540.99	3,354.81
Total indirect emissions*		1,110.26	816.47	872.28
Total gross emissions*		3,651.91	3,357.46	4,227.09
Category 1 direct removals		0.00	0.00	0.00
Purchased emission reductions		0.00	0.00	0.00
Total net emissions		3,651.91	3,357.46	4,227.09

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

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

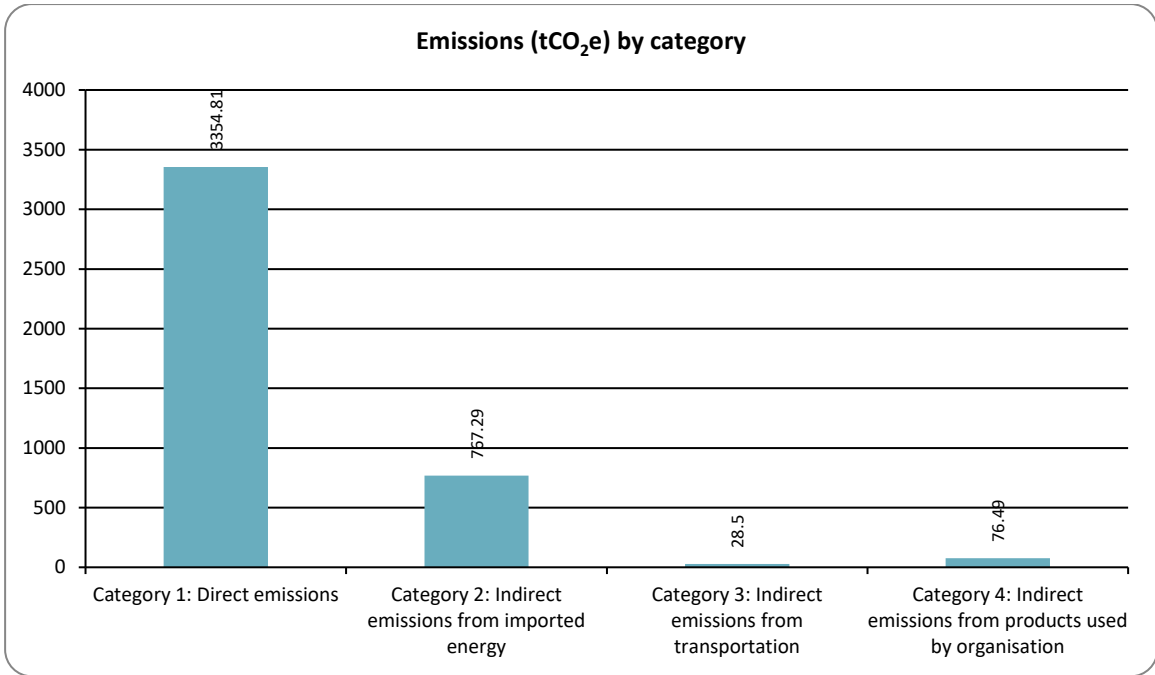


Figure 1: Emissions (tCO₂e) by Category for this measurement period

CHAPTER 1: EMISSIONS INVENTORY REPORT

1.1. INTRODUCTION

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

The inventory provides a 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. The inventory has been prepared in accordance with the requirements of the measure-step of the Programme, which is based on the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) and ISO 14064-1:2006 Specification with Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals. Where relevant, the inventory is aligned with industry or sector best practice for emissions measurement and reporting.

Although this data may have some limitations, the measures in this report have been audited and completed against an international standard. Whakatāne District Council is also continuously working to improve our reporting practices to ensure that emission measures are to a high standard.

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	3,354.81 Diesel commercial, Diesel, Fertiliser use Nitrogen, Forests - Harvesting (tCO ₂), LPG stationary commercial, Natural Gas distributed commercial, Natural Gas distributed T&D losses, Petrol premium, Petrol regular, R-407C, R-410A, WWTP sewage (tCO ₂ e)	0.00	3,354.81
Category 2: Indirect emissions from imported energy (location-based method*)	767.29	0.00	767.29
Category 3: Indirect emissions from transportation	26.08 Air travel domestic (average), Private Car average (fuel type unknown), Rental Car average (fuel type unknown), Taxi (regular)	2.42 Accommodation hotel/lodge/motor inn	28.50
Category 4: Indirect emissions from products used by organisation	74.53 Electricity distributed T&D losses, Waste landfilled LFGR Mixed waste	1.96 Paper (envelopes - white), Paper use - default	76.49
Category 5: Indirect emissions associated with the use of products from the organisation	0.00	0.00	0.00

Category	Toitū carbon mandatory boundary (tCO ₂ e)	Additional emissions (tCO ₂ e)	Total emissions (tCO ₂ e)
Category 6: Indirect emissions from other sources	0.00	0.00	0.00
Total direct emissions	3,354.81	0.00	3,354.81
Total indirect emissions*	867.90	4.38	872.28
Total gross emissions*	4,222.72	4.38	4,227.09
Category 1 direct removals	0.00	0.00	0.00
Purchased emission reductions	0.00	0.00	0.00
Total net emissions	4,222.72	4.38	4,227.09
Emissions intensity		Mandatory emissions	Total emissions
Rating Units - Number of rating units in the District (gross tCO ₂ e / unit)		0.25	0.25
Operating revenue (gross tCO ₂ e / \$Millions)		48.38	48.43

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

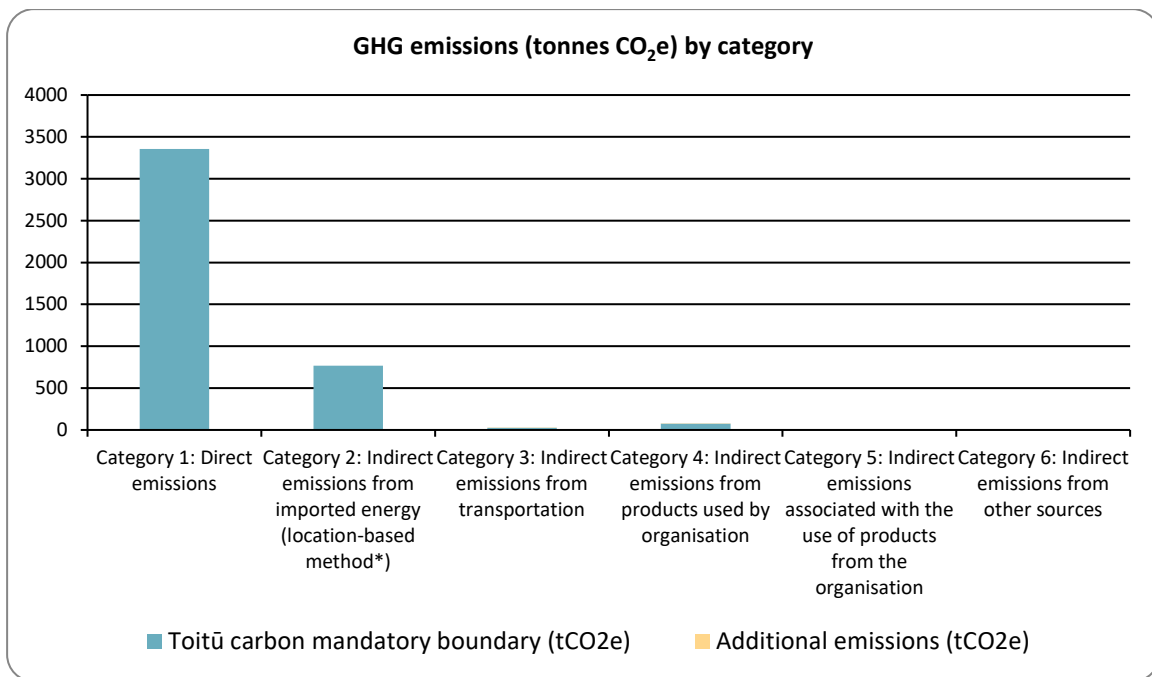


Figure 2: GHG emissions (tonnes CO₂e) by category

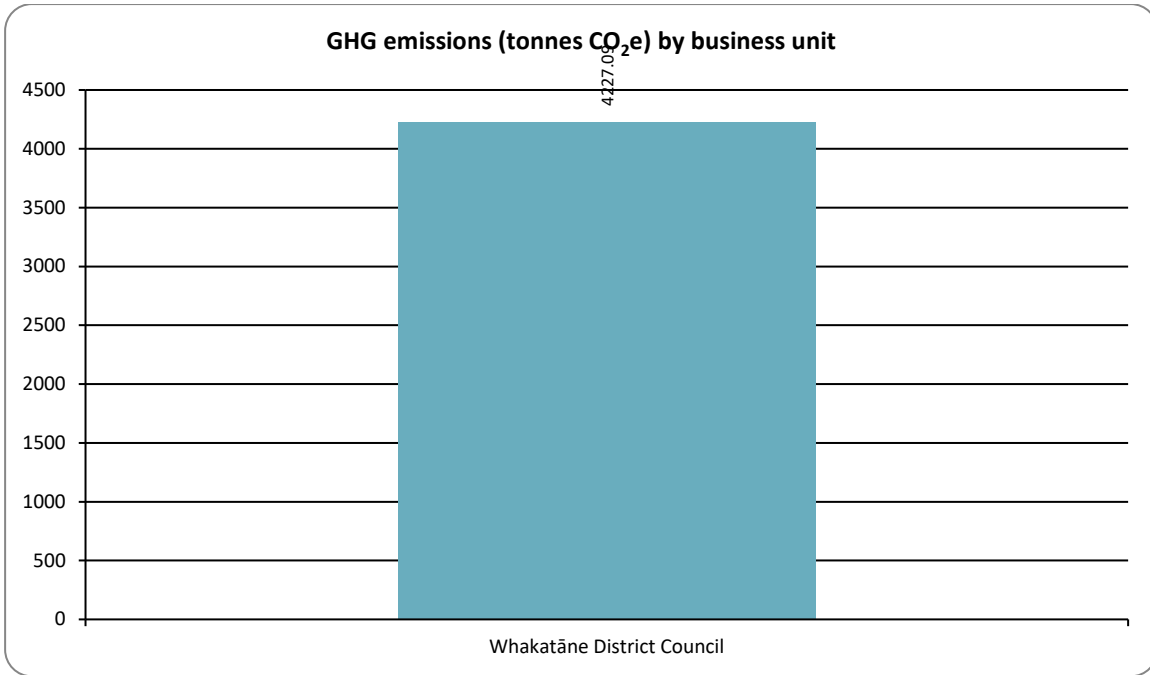


Figure 3: GHG emissions (tonnes CO₂e) by business unit

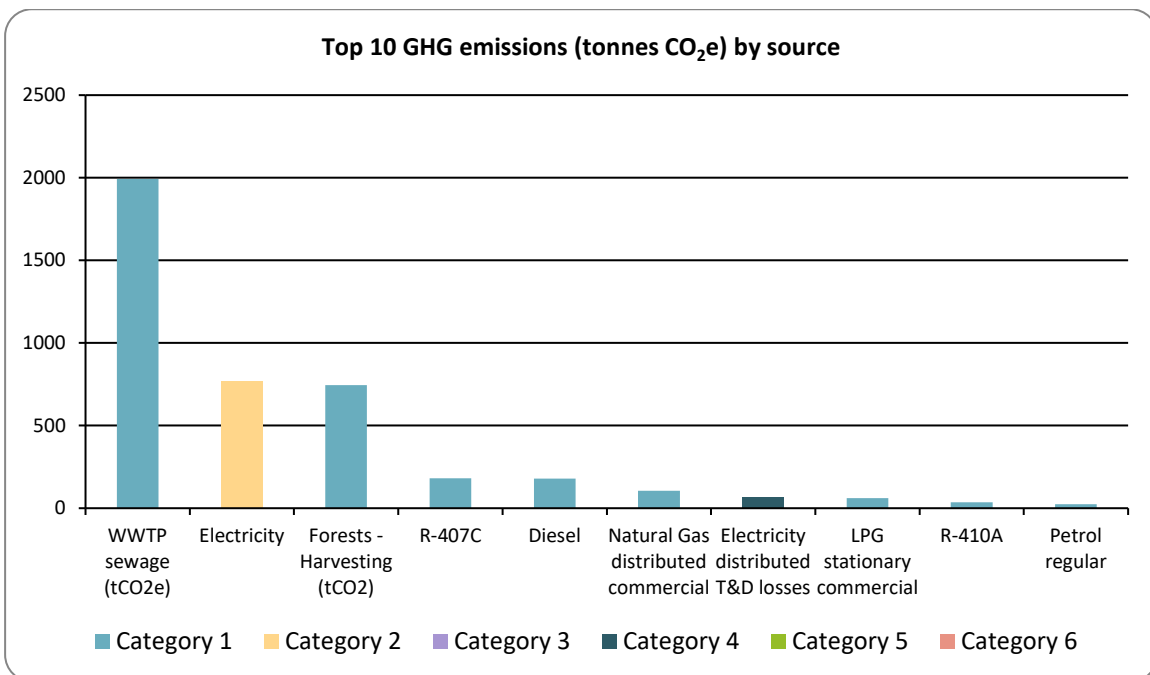


Figure 4: Top 10 GHG emissions (tonnes CO₂e) by source

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

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

Whakatāne District 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	3,354.81	3,354.81
Category 2: Indirect emissions from imported energy	767.29	794.17
Category 3: Indirect emissions from transportation	28.50	28.50
Category 4: Indirect emissions from products used by organisation	76.49	76.49
Category 5: Indirect emissions associated with the use of products from the organisation	0.00	0.00
Category 6: Indirect emissions from other sources	0.00	0.00
Total direct emissions	3,354.81	3,354.81
Total indirect emissions	872.28	899.17
Total gross emissions	4,227.09	4,253.98
Category 1 direct removals	0.00	0.00
Total net emissions	4,227.09	4,253.98

1.3. ORGANISATIONAL CONTEXT

1.3.1. Organisation description

The Whakatāne District Council delivers 24 internal and external activities under 11 activity groups and manages approximately \$850 million worth of community assets. The total annual cost of delivering those activities is typically around \$80 million in operating costs and \$30 million in capital costs. The Council employs over 208 FTE staff.

Our activities make an important contribution to our community, providing essential services and recreational opportunities that are used every day. Many Council functions are guided by legislation, including the Local Government Act 2002, the Resource Management Act 1991 and the Local Government (Rating) Act 2002. Within this framework, there is a considerable degree of flexibility in deciding what activities are undertaken and how they are carried out.

The elected Council representatives are responsible for making key policy decisions that guide our activities and provide the direction for our District's future.

The Whakatāne District Council carries out a number of functions, responsibilities and activities which include:

- Constructing, managing and maintaining local infrastructure on behalf of the community. This infrastructure includes: roads, water supply, sewage disposal, refuse collection and disposal, and storm water drainage.
- Providing and maintaining recreational facilities and community amenities which include: parks and gardens, reserves, libraries, community halls, museum, cemeteries, crematorium, swimming pools, public conveniences, airport and harbours.
- Planning for the future needs of the district.
- Managing the environment for present and future residents.
- Undertaking a regulatory role to ensure that residents have a safe, desirable and healthy environment in which to live.
- Advocacy on behalf of the local community with central government, other local authorities and other agencies.
- Promoting and facilitating development of the district that will benefit residents, and providing a comprehensive information service.

We recognise that our activities may have a direct impact on the environment. We are working to understand this impact and take steps to reduce it, particularly in the context of climate change. The Council aspires to show leadership by actively considering climate change in all decisions, and working to mitigate and adapt to climate change throughout our activities across the District. We want to support our communities by ensuring that the infrastructure and services we provide promote resilience.

In September 2019, Council adopted a set of climate change principles to guide our decision-making, integrate work already underway and support our future work. Council's seven principles are based on the seven set out in the Local Government Leader's Climate Change Declaration that Whakatāne District Council signed in 2017.

In September 2020, continuing the work set by the principles, we adopted a climate change strategy and six action plans. These documents place Council in an international, national and local context and set some ambitious targets for both the Council and the Whakatāne District. The strategy, together with the action plans, is our roadmap for reaching our climate change targets and show the specific steps we will take to get there.

We acknowledge that this is an ever evolving space and we will never have all the answers, however, we know we must continue to act with urgency, whilst learning and sharing as we go. Council has made notable strides through the ambitions of the initial Climate Change Strategy and Action Plans. Over three quarters of the 105 short-term milestones were either completed or partially completed by the end of June 2022. The review of the current Climate Change Strategy is underway, and a new climate change response is due in 2023. Council will look to build on strengths and lessons from the existing Strategy.

Commitment to certification

We aspire to show leadership by actively considering climate change in all of our decisions, and working to mitigate and adapt to climate change throughout all our activities across the District.

Through signing the 2017 New Zealand Local Government Leaders' Climate Change Declaration, we showed commitment to taking ambitious climate action to reduce greenhouse gas emissions and support the resilience of Council and our local communities. The development and implementation of our climate change principles, strategy and six action plans see us take ambitious action towards reaching our climate change targets. We strive to become a net carbon zero organisation by 2030, as well as a net carbon zero District by

2030 (excluding biogenic methane and nitrous oxide). This is 20 years prior to the national New Zealand emission reduction target under the Climate Change Response (Zero Carbon) Amendment Act (the Act) 2019.

We are committed to working with our communities to understand, prepare for and respond to the physical impacts of climate change, and with central government to deliver on national emission reduction targets and to support the resilience in our communities.

We acknowledge that the future is uncertain. However, as we learn more about climate change and how it will impact us as an organisation and a community, we will continue to take steps to ensure that the Whakatāne District remains the place of choice to live, work, and play for generations to come.

GHG Reporting

Our climate change vision is for Whakatāne District Council will actively lead and support the Whakatāne District to mitigate and adapt to the effects of climate change to be great ancestors for future generations. This report will help us lead by example, as it demonstrates our commitment to reducing our emissions.

Participating in Toitū's Carbon Reduce programme aligns with several of our climate change principles, including:

1. We will act now - as this programme helps council set targets to reduce our emissions and understand how to achieve them.
2. We will care for and protect the environment - as reducing emissions is necessary to achieve this.
3. We will learn - as this report helps us understand the impacts of various council activities and services.
4. We will be part of the solution - as participation in this programme demonstrates our commitment towards climate change mitigation.

Council currently has a range of action plans to achieve our climate change goals. All action plans focus on different areas within council (such as transport, energy, etc.) with a key objective to reduce emissions in each.

More information on our climate change strategy, principles, and action plans can be found in the following weblink: <https://www.whakatane.govt.nz/climate-change>.

Climate Change Impacts

Whakatāne District Council is obligated to promote the environmental, social, cultural, economic wellbeing of communities in the Whakatāne district. Services that are being impacted from climate change include three waters services, planning for housing and population growth (including where this growth will be located), emergency services, and helping inform residents on risks that climate change may pose (examples include producing Land Information Memorandums for prospective house buyers).

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

We think this is most appropriate for us at this stage, as we work to improve the quality of our data, knowledge, and capacity in this area. Following this, we intend to increase the number of our intended uses and users, and expand our reporting to include other functions and services that we can improve upon to reduce emissions.

1.3.3. Person responsible

Steven Perdia - General Manager Strategy & Transformation is responsible for overall emission inventory measurement and reduction performance, as well as reporting results to top management. Steven Perdia - General Manager Strategy & Transformation has the authority to represent top management and has financial authority to authorise budget for the Programme, including Management projects and any Mitigation objectives.

State any other people/entities involved

Overall responsibility for the Climate Change Project sits with the Climate Change Project Lead, Steven Perdia, General Manager Strategy & Transformation.

The Strategy and Policy Committee continue to oversee the wider climate change project and receive regular updates on project progress.

The Organisational Performance Committee will monitor the progress towards the targets, goals and actions outlined in Council's Climate Change Strategy and six Action Plans. These reports are provided to the Committee six-monthly.

A report on the climate project will also be included in the annual report following each financial year.

Top management commitment

The Mayor of Whakatāne District Council has signed the 2017 New Zealand Local Government Leaders' Climate Change Declaration.

Management involvement

Overall, responsibility for the Climate Change Project sits with the Climate Change Project Lead, Steven Perdia.

The Strategy and Policy Committee continue to oversee the wider climate change project and receive regular updates on project progress.

The Organisational Performance Committee will monitor the progress towards the targets, goals and actions outlined in Council's Climate Change Strategy and six Action Plans. These reports are provided to the Committee six-monthly.

A report on the climate project will also be included in the annual report following each financial year.

1.3.4. Reporting period

Base year measurement period: 01 July 2017 to 30 June 2018

Our commitment to the New Zealand Local Government Leaders' Climate Change Declaration in 2017 committed us to put into place ambitious action plans to reduce GHG emissions, and to build the ability of our organisation and the community to recover quickly from difficulties. Becoming a Toitū carbonreduce certified organisation is a key step for us to implement our climate change action plans; as such, we committed to the carbonreduce certification programme from the 2017-18 financial year onwards.

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

This report is done annually.

This report covers the most recent financial year period of 1 July 2021 to 30 June 2022. Local government tends to report according to the financial year. Having this report cover the financial year ensures there is alignment with other reports; some of which may use data from this report (an example being the Annual Report).

1.3.5. Organisational boundary and consolidation approach

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

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

Justification of consolidation approach

Whakatāne District Council is a large organisation that is involved with a broad range of products and services within the district. In order to facilitate best practice and efficiency, it is not always practicable for us to have full authority over operational policies and procedures; rather it is best to have relevant industry experts to have these control. In these circumstances, we may provide facilities and contract out the services and operational control to relevant experts. These experts are also best placed to reduce emissions themselves, as they have in-depth knowledge of their industry. As such, an operational control consolidation approach has been used to account for emissions.

Organisational structure

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

The chart below provides an overview of business areas and locations of the Whakatāne District Council which have associated carbon emissions. The orange boxes indicate areas that have been excluded from the inventory. These are explained further in section 5.

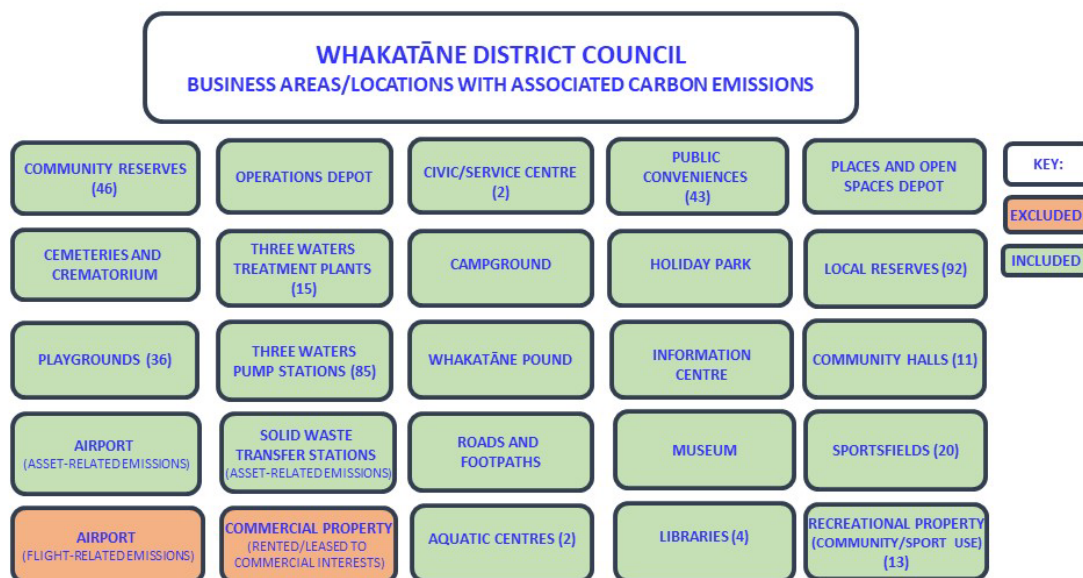


Figure 5: Organisational structure

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

Business units
(No information supplied)

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.

1.3.6. Excluded business units

There are three business units that are excluded from the GHG emissions boundary: flight-related emissions relating to the Whakatāne airport, solid waste (excluding waste from council facilities), and a range commercial properties that are located on Council-owned land.

The Whakatāne Airport is a Council-Controlled Organisation (CCO) under the Local Government Act 2002. It was formed as a CCO in 2006 and is a joint venture partnership between Council and the Ministry of Transport, with each party owning a 50 percent share. The Whakatāne Airport is classified as a 'lifeline utility', meaning that it provides essential infrastructure; in emergencies the airport may be used to provide essential facilities and services (the Whakaari eruption being a recent example).

Whakatāne District Council provides facilities for flights, including maintenance of the runway and terminal building. Council also ensures that the airport is compliant with Civil Aviation Authority of New Zealand requirements. The scheduling of flights is determined solely by Air Chathams and has no influence from Council. As such, Council does not have operational control over the emissions created from airport-flight activities. Flight-related emissions from the Whakatāne Airport are therefore excluded from this report.

Despite not having operational control over Air Chatham's flights within the district, it does have influence over the airport as an asset – with the airport's greenhouse gases captured in this report. The Whakatāne Airport does see opportunities to help the Council reduce emissions, and is working to achieve this in the future.

Our waste management services are contracted to Waste Management - who collect waste and recycling material on behalf of Council for processing. Waste Management are industry experts and they are also part of Toitū's Carbonreduce certification programme; as such, emissions from Waste Management's services in our district. To avoid double-counting of emissions, we have excluded waste management services from this report.

Council currently owns a number of leasehold titles within the district. These titles are leased to various stakeholders; however, Council does not own these buildings. As such, Council does not have authority to control what lessees do with the building, nor can Council introduce and implement operating policies at an operating level.

There is a small subset of buildings that council has purchased for development. These buildings are yet to be developed; however, council does have authority to introduce and implement operating policies at an operating level via lease conditions. Once these leases are ready for renewal, these relevant buildings will no longer be excluded from the GHG emissions boundary.

CHAPTER 2: EMISSIONS MANAGEMENT AND REDUCTION REPORT

2.1. EMISSIONS REDUCTION RESULTS

Table 5: Comparison of historical GHG inventories

Category	2018	2019	2020	2021	2022
Category 1: Direct emissions	2,541.65	2,498.31	2,526.25	2,540.99	3,354.81
Category 2: Indirect emissions from imported energy (location-based method*)	931.04	754.24	722.86	712.38	767.29
Category 3: Indirect emissions from transportation	55.94	69.71	43.73	39.13	28.50
Category 4: Indirect emissions from products used by organisation	123.28	73.71	69.67	64.96	76.49
Category 5: Indirect emissions associated with the use of products from the organisation	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
Total direct emissions	2,541.65	2,498.31	2,526.25	2,540.99	3,354.81
Total indirect emissions*	1,110.26	897.66	836.25	816.47	872.28
Total gross emissions*	3,651.91	3,395.97	3,362.50	3,357.46	4,227.09
Category 1 direct removals	0.00	0.00	0.00	0.00	0.00
Purchased emission reductions	0.00	0.00	0.00	0.00	0.00
Total net emissions	3,651.91	3,395.97	3,362.50	3,357.46	4,227.09
Emissions intensity					
Rating Units - Number of rating units in the District (gross tCO ₂ e / unit)	0.22	0.20	0.20	0.20	0.25
Rating Units - Number of rating units in the District (gross mandatory tCO ₂ e / unit)	0.25	0.25	0.25	0.25	0.25
Operating revenue (gross tCO ₂ e / \$Millions)	48.44	45.70	42.43	35.09	48.43
Operating revenue (gross mandatory tCO ₂ e / \$Millions)	48.31	45.62	42.35	35.02	48.38

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

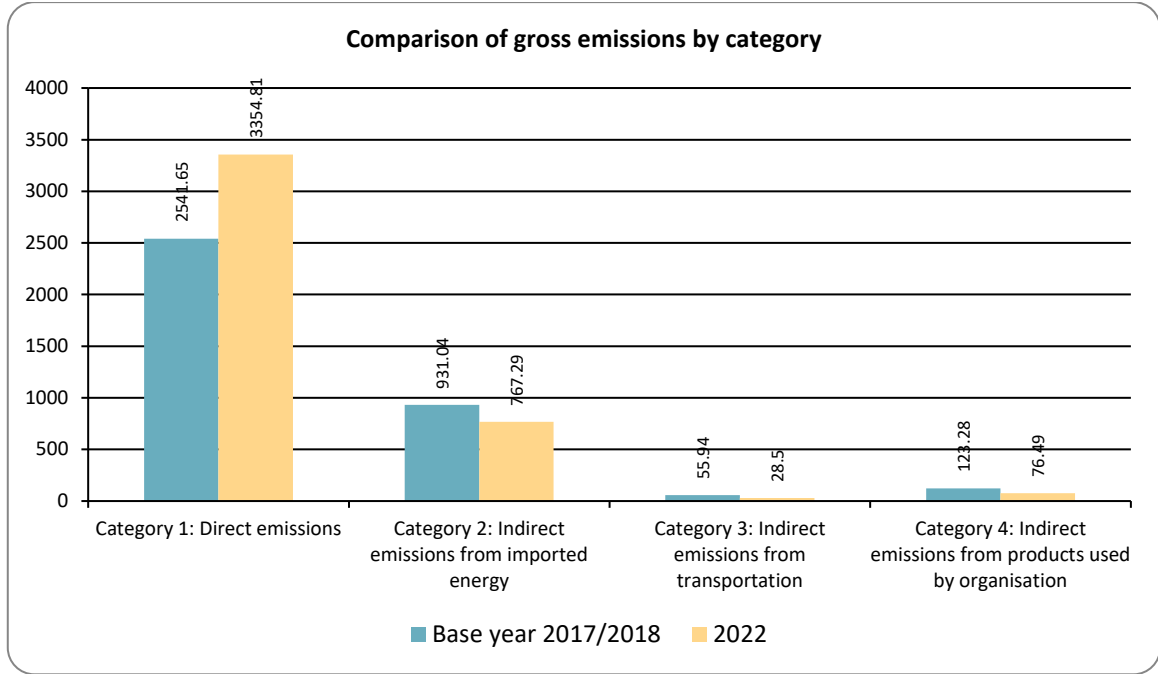


Figure 6: Comparison of gross emissions by category between the reporting periods



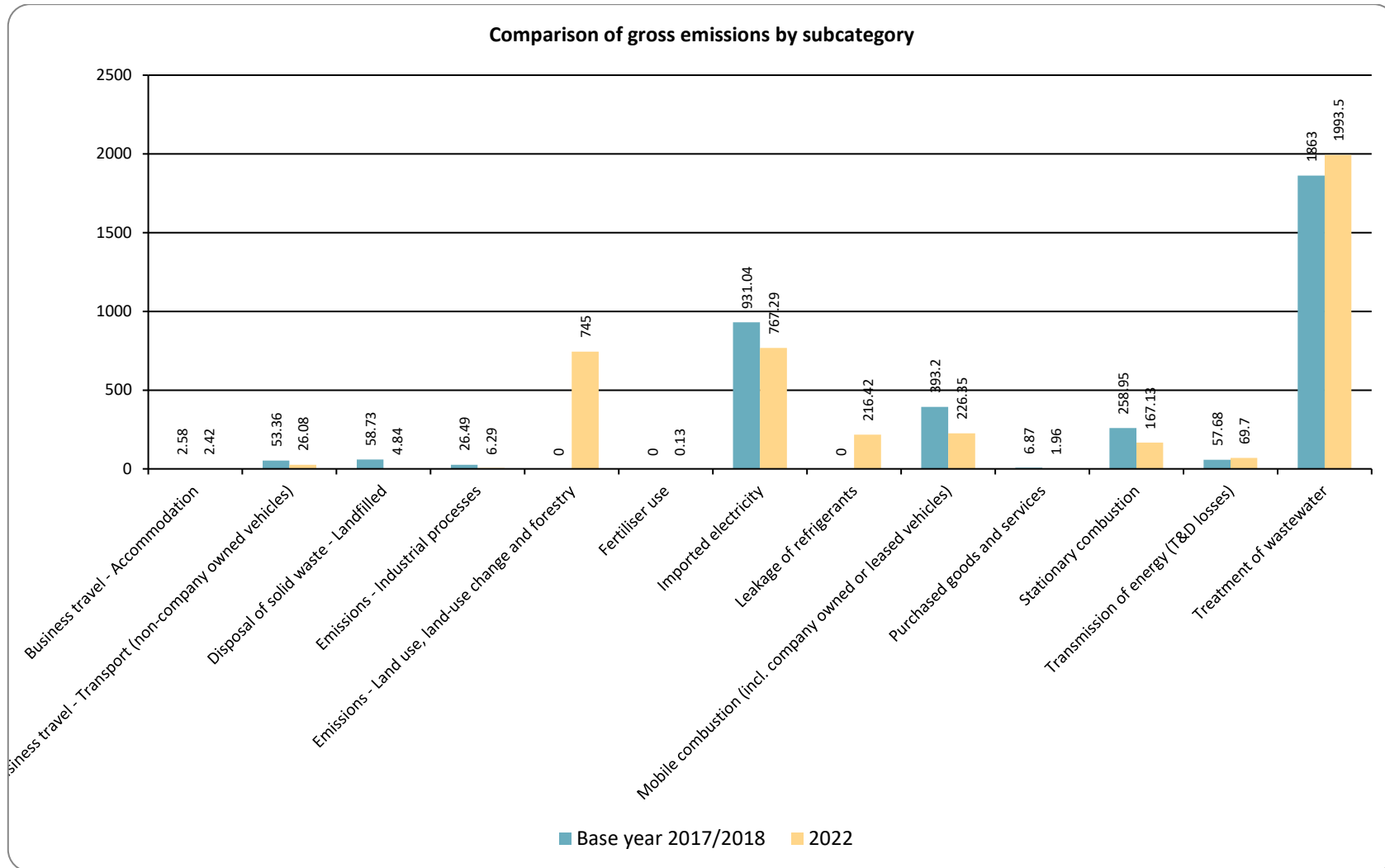


Figure 7: Comparison of gross emissions by subcategory between the reporting periods

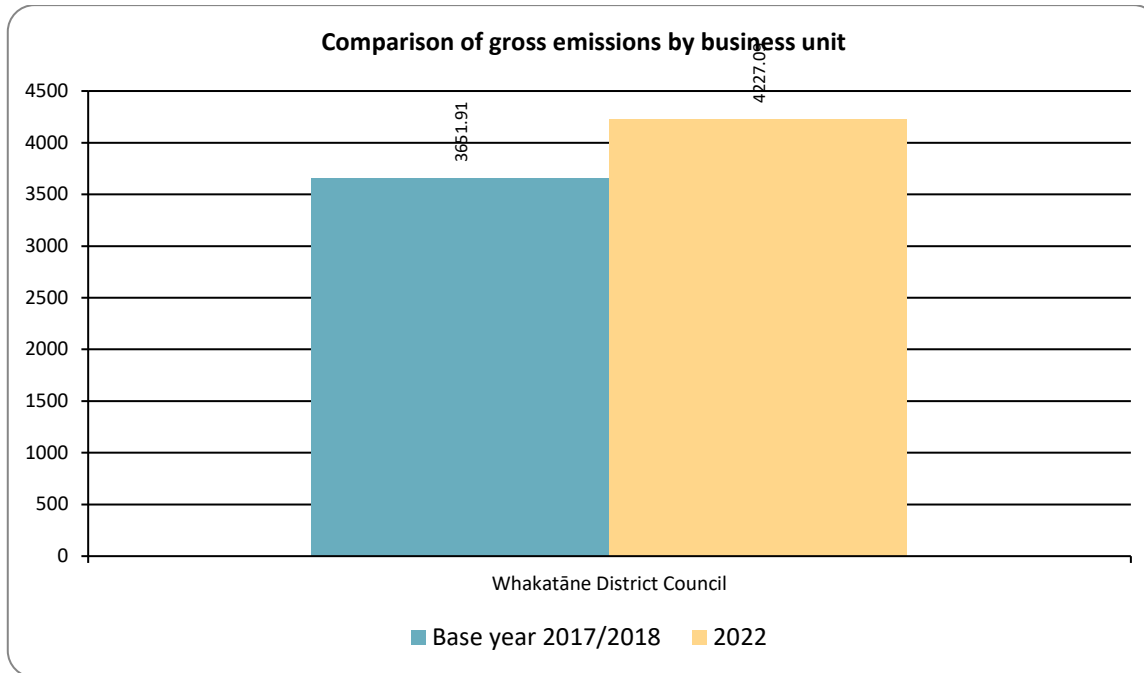


Figure 8: Comparison of gross emissions by business unit between the reporting periods

Performance against target has not been provided

Figure 9: Performance against target since base year



Table 6. Performance against plan

Target name	Baseline period	Target date	Type of target (intensity or absolute)	Current performance (tCO ₂ e)	Current performance (%)	Comments
Energy Action Plan target: Council will deliver the benefits of 1.8GWh p.a energy savings by June 2022	2018	1/07/2022	absolute	1.885 GWh	N/A	This is a measure of GWh (not carbon emissions). The target has not been reached but significant progress has been made since 2018.
Strategy target: Council will reduce its carbon footprint by 15% by 2022, excluding biogenic methane and nitrous oxide	2018	2/07/2022	intensity	1828 (tCO ₂ e)	2.18% increase	
Net Carbon zero excluding biogenic methane and nitrous oxide	2018	2030	absolute	Not monitored	Not monitored	This will involve offsetting, as well as providing services towards a growing population. As such, Council is focusing on maximising carbon efficiency before considering offsetting emissions in 2030 to reach net zero.
Organisational biogenic methane emission reduction of 24% to 47% by 2050	2018	2050	intensity	Not monitored	Not monitored	Biogenic methane is emitted from Wastewater Treatment plant processes. Council is looking towards changing the treatment processes to land-based processes in upcoming years which should create significant reductions.

2.2. SIGNIFICANT EMISSIONS SOURCES

Significant sources

The top three sources of emissions make up over 97% of the Whakatāne District Council's total emissions profile. These are listed below, along with a discussion of how Council is considering opportunities to reduce these emissions.

1) Wastewater treatment plants: As a provider of wastewater treatment services to a District of about 38,200 people, it is known that this is a large source of greenhouse gas emissions for the Council. Majority of Council's wastewater consents expire in 2026, and projects are underway to understand upgrades that will be required as part of this process. The upgrades will allow Council to head toward 'least-carbon' treatment options and provide opportunities to explore the capture and conversion of biogas into usable energy, along with other improvements in an effort to reduce greenhouse gas emissions from this activity.

2) Electricity and electricity T&D losses: As well as using electricity for administrative services, the Council maintains a large range of public facilities and services which require use of electricity. The Council had an Energy Audit undertaken in 2018 and has since then been running an ongoing energy management programme to identify and implement a range of energy saving and emission reduction initiatives. This programme is run in collaboration with the Energy Efficiency and Conservation Authority (EECA) and Council's energy management contractor Emsol.

3) Forestry: The Council owns a planted area of 45.4 hectares on 67.6 hectares of land, spread over 5 blocks. This forestry was planted prior to Council adopting a Climate Change Strategy. All forest are second rotation and were replanted in pinus Radiata between 1987 and 2000. When planting, this forestry was intended for harvest at approximately 27 years of age. As such, Eagle Hill (approximately 0.8 hectares, which was planted in 1994) was harvested in 2021. Council is yet to decide what to do with this block of land following Harvest.

With regards to Council's climate change strategy, to align Council's climate change objective to integrate and coordinate climate change-related work throughout different areas of Council, officials are working to ensure that future decisions (regarding our forestry assets) will consider climate change implications and mitigation options going forward.

Activities responsible for generating significant emissions

Wastewater treatment plants: the two largest sources of emissions are methane emissions from oxidation ponds, and nitrous oxide from wastewater discharges.

Electricity and electricity T&D losses: the majority of council business units use electricity as a significant (if not their main) source of power.

Forestry: once forestry is harvested, stored carbon is released into the atmosphere, mainly as carbon dioxide.

Influences over the activities

Wastewater treatment plants: Council estimates that the districts population will continue to grow in the future. This will increase both methane emitted from oxidation ponds, and nitrous oxide from discharges.

As mentioned previously electricity is used as a main power source for many services and business units within Council. The increase in electronic cars, virtual meetings and services may lead to increased electricity usage.

Council's forestry assets are generally scheduled for harvest after they reach 27 years of age.

Significant sources that cannot be influenced

All three of Council's highest sources of emissions can be reduced and Council is actively working towards doing so.

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).

In September 2020, the Council adopted its Climate Change Strategy and six Action Plans. The overarching emission reduction target for the Council is to become a carbon zero organisation by 2030 (excluding biogenic methane and nitrous oxide). The short-term mitigation target is a 15% emission reduction by 1 July 2022 (excluding biogenic methane and nitrous oxide). A specific biogenic methane target has been set in line with the national target, striving for a 24% to 47% biogenic methane emission reduction by 2050. The Energy Action Plan also sets out an energy specific reduction target of 1.8GWh reduction by 1 July 2022.

The Council supported and submitted on the Climate Change Response (Zero Carbon) Amendment Act (the Act) in 2019 and have since submitted on related Central Government processes like the Climate Change Commission's first advice to Government in early 2021. The Council continues to closely follow national developments and identify opportunities to participate and feed into these processes.

Due to the broad nature of Council's climate change framework and the impact it has across all of Council's operations and activities, the strategy and action plans are intended to be reviewed every 3 years (or earlier if required). The quickly evolving information about climate change and the global impacts will require the targets, goals and actions to be continually reviewed.

Council has four overarching climate change targets. Two of these targets are long term: being net zero (excluding biogenic methane and nitrous oxide) by 2030, and reducing organisational biogenic methane emissions by 24% to 47% by 2050. The two short-term targets are to reduce Council's carbon footprint by 15% (excluding biogenic methane and nitrous oxide) by 1 June 2022, and to deliver benefits of 1.8 GWh per annum energy savings by June 2022. These short-term targets are considered key indicators four Council's progress towards the long term targets, and are discussed below.

Delivering benefits of 1.8GWh per annum of energy savings

This ambitious target aimed to deliver benefits of 1.8GWh p.a. of energy savings, down from 8.9GWh that was recorded within Council in 2018. In the last financial year, the total energy saved (electricity and natural gas) by Council was 1.885 GWh. Although this target was not reached, Council made significant progress in energy savings since the baseline period of 2018. This shows that council has become significantly more efficient with energy usage over the last four years.

Reduce Council's Carbon Footprint by 15%

Council has not met the target or reducing our carbon footprint (excluding biogenic methane and nitrous oxide) by 15% by 2022. A major factor that contributed to this was deforestation of approximately 1.1 hectares of Council forestry in 2021. In accordance to standard forestry practice, it was decided several years ago (prior to the establishment of Council's climate change strategy) that this forestry would be harvested once the trees reached the age of 27 years (which was reached in 2021). Council's forestry is spread over 5 blocks (with the age of the forestry ranging between each block); as such, deforestation of this does not happen regularly, with the next harvest scheduled to happen in 2027. This deforestation was Council's third highest source of emissions in the 2021-22 financial year, and officials had overlooked this when setting this target.

In light of this, Council will consider be proactive with regards to future harvesting dates of other Council forestry - which will include more comprehensive consideration of climate change impacts and mitigation options. This highlights the benefits of Council participating in Toitū's carbonreduce program, as it encompasses a vast range of council activities and informs future decision making to better align with climate change aspirations.

Table 7. Emission reduction targets

Target name	Baseline period	Target date	Type of target (intensity or absolute)	Categories covered	Target	KPI	Responsibility	Rationale
Electricity & Natural Gas reduction	2018	1/07/2022	absolute	Category 2	1.8 GWh	8.9 GWh	Energy Action Group/ Energy Management programme	Reduction in total energy consumption through continued delivery of energy management programme and responding to recommendations identified through the Energy audit
Reduction of carbon footprint excluding biogenic methane and nitrous oxide	2018	1/07/2022	intensity	Cat 1, 2, 3	15%	1789	Whole Council/ Energy Action Group	Reduction in carbon footprint through continued delivery of energy management programme and other emission reduction initiatives
Net Carbon zero excluding biogenic methane and nitrous oxide	2018	2030	absolute	All		1789	Whole Council/ Energy Action Group	Achieved by ongoing identification and delivery of emission reduction initiatives and eventual emission offsetting
Organisational biogenic methane emission reduction	2018	2050	intensity	Cat 1 & 3	24 to 47%		3 Waters/ TBD	Greenhouse gas reduction opportunities are considered alongside wastewater upgrades required to achieve new discharge consents in 2026.

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

Projects
(No information supplied)

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

Projects
(No information supplied)

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

Table 10. Projects to prevent emissions from liabilities

Projects
(No information supplied)

2.5. STAFF ENGAGEMENT

The Council is committed to regular, six-monthly reporting on the progress made towards our climate change targets, goals and actions set through our Climate Change Strategy and six Action Plans. These reports are publicly available on our climate change website: <https://www.whakatane.govt.nz/residents/climate-change/climate-change-reporting>. Since the start of Council's climate change project, celebrating our wins along the way has been an important principle on our climate change journey. As a way to achieve this, specific climate change case studies have been developed, available on our climate change page: <https://www.whakatane.govt.nz/climate-change/case-studies>. These case studies have been shared widely both internally with our staff and elected members and externally with our stakeholders and partners.

For general awareness and training purposes around climate change, the Council has developed a climate change e-learning hub, publicly available on our climate change website: <https://www.whakatane.govt.nz/climate-change>. The purpose of the hub is to provide the public, as well as Council staff, with a library of information and resources that cover a variety of climate change-related topics. The modules have been designed to be a source of accurate and engaging information on climate change and include YouTube clips, TED Talks, scientific articles, academic research, recent publications and reports.

Since April 2021, all Council reports now include a climate change assessment. Internal staff training around Council's climate change programme, including our own Council specific mitigation targets, has been provided to regular report writers.

The Council also has an internal Climate Change Project Team representing teams across the organisation, to ensure that climate change considerations are embedded into all Council activities. Council also has an analyst whose role is dedicated to climate change.



2.6. KEY PERFORMANCE INDICATORS

Table 11. Key Performance Indicators (KPIs).

KPI	Rationale of using the additional KPI
Number of rating units	This KPI is included to factor in the growing population within Whakatāne District. It is important to be aware of population growth, as an increase in emissions may not necessarily reflect a decrease in efficiency and emission-related performances.

2.7. MONITORING AND REPORTING

The Strategy and Policy Committee will continue to oversee the wider climate change project and receive regular updates on project progress.

The Organisational Performance Committee will monitor the progress towards the targets, goals and actions outlined in Council's Climate Change Strategy and six Action Plans. These reports are provided to the Committee six-monthly and are publicly available on Council's climate change website: <https://www.whakatane.govt.nz/climate-change>.

A report on the climate project will also be included in the annual report following each financial year.

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 Whakatāne District Council.xls).

Table 12. 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	166.71	0.34	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	167.13
Mobile combustion (incl. company owned or leased vehicles)	221.99	0.61	3.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	226.35
Emissions - Industrial processes	0.00	6.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.29
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	216.42	0.00	0.00	0.00	0.00	216.42
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	1,993.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,993.50
Emissions - Land use, land-use change and forestry	745.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	745.00
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	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
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
Total net emissions	3,127.20	7.24	3.95	0.00	0.00	216.42	0.00	0.00	0.00	0.00	3,354.81

Table 13. 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	4.84	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	4.84	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.

Carbon sources were identified through communications with relevant staff leaders who oversee the broad range of services provided by council. Different teams within council often keep registers that help monitor carbon related activities - which they use to extract data following the end of the financial.

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.

Additional detail on significance criteria used, by source and sink, is included in Appendix 2.

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.

Error! Reference source not found. 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.

The various teams within council have people that are responsible for monitoring and reporting on activities throughout the financial year. This data is stored within council's database (called Objective) and drawn upon once requested from the Strategic Policy team that writes this report.

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

KPI	Rationale of using the additional KPI
-----	---------------------------------------

A1.1.3 Excluded emissions sources and sinks

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

Table 15. GHG emissions sources excluded from the inventory

Appendix 1
(No information supplied)

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 Liabilities

A1.2.2.1 GHG STOCKS HELD

HFCs⁶, PFCs and SF₆ represent GHGs with high global warming potentials. Their accidental release could result in a large increase in emissions for that year, and therefore the stock holdings are reported under the Programme (Table 16).

Table 16. HFCs, PFCs and SF₆ GHG emissions liabilities

GHG gas stock held	Quantity (kg)	Potential liability (tCO ₂ e)
Diesel commercial	5,250.00	14.01
R-410A	424.00	885.10
Total	5,674.00	899.11

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.

⁶ HFC stock liabilities for systems under 3 kg can be excluded.

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 17. Significance criteria used for identifying inclusion of indirect emissions

Emission source	Magnitude	Level of influence	Risk or opportunity	Sector specific guidance	Outsourced	Employee engagement	Intended Use and Users	Include in inventory?
Electricity	>1%	Electricity is essential for Council to conduct most of its core functions. Despite this, Council does have ability to consider energy source options that reduce greenhouse gas emissions (e.g. renewable energy). Council does have the ability to monitor electricity consumption through invoices, and works with Esmol to help monitor consumption and find options for improvement.	There is an opportunity to invest in renewable energy (such as solar panels), that may reduce costs in the future and contribute to a positive image for the Council.	GHG emissions are deemed as significant; however, this is preferable to alternative forms of energy - specifically natural gas and LPG.	Production of electricity produces GHG emissions (e.g. burning fossil fuels, etc)	Staff are encouraged to ensure devices and lights are off when not being used.	Yes - this measure must be measured for Toitū and Toitū staff.	Yes
Accommodation	<1%	Depending on reason for travel, there may be options for staff to attend events electronically (via Zoom, or teams, etc.). However, there are some events where it is more beneficial for council and the community to attend in person.	Possible reputational risk from public for spending funds on accommodation to attend events.	Not deemed as significant as indirect emissions are low.		Encouraging staff to attend electronically, unless in-person attendance has substantial benefits.	Yes - this measure must be measured for Toitū and Toitū staff.	Yes

Emission source	Magnitude	Level of influence	Risk or opportunity	Sector specific guidance	Outsourced	Employee engagement	Intended Use and Users	Include in inventory?
Air travel	<1%	Depending on reason for travel, there may be options for staff to attend events electronically (via Zoom, or teams, etc.). Staff could also travel via alternative means. However, there are some events where it is more beneficial for council and the community to attend in person. Furthermore, given the distance of some events, it is in Councils interest for air travel to save time and money.		Some airlines do offer optional flight offsets when purchasing tickets.	Emissions from the fuels used to power the planes	Staff are aware of Councils Climate Change Strategies - this encourages minimisation of flights when possible.	Yes - this measure must be measured for Toitū and Toitū staff.	Yes
Private car travel for work purposes	<1%	This is only done when travel is essential for staff activities.	Risks of staff having inefficient cars.	Not deemed as significant as indirect emissions are low.	Emissions from fuel consumption for vehicle use.	Fuel repayments must pass strict criteria - reducing incentives for staff to travel for non-essential work-related reasons.	Yes - this measure must be measured for Toitū and Toitū staff.	Yes
Rental Car use	<1%	This is only done when travel is essential for staff activities.	No identified risk exposure.	Use electric or hybrid cars if needed.	Emissions result from fuel consumption.	Staff are aware of Councils Climate Change Strategies - this encourages minimisation of flights when possible.	Yes - this measure must be measured for Toitū and Toitū staff.	Yes

Emission source	Magnitude	Level of influence	Risk or opportunity	Sector specific guidance	Outsourced	Employee engagement	Intended Use and Users	Include in inventory?
Taxi	<1%	This is only done when travel is essential for staff activities.	No identified risk exposure.	Use electric or hybrid cars if possible.	Fuel consumption	Staff are aware of Councils Climate Change Strategies - this encourages minimisation of flights when possible.	Yes - this measure must be measured for Toitū and Toitū staff.	Yes
Electricity T&D losses	>1%	Can minimise by consuming electricity that is produced close to council facilities.	Supply chain risks that could interfere with supply of electricity	electricity-related emissions lost from the transport and distribution of electricity	GHGs created in transmission and distribution of electricity	Staff are encouraged to ensure devices and lights are off when not being used.	Yes - this measure must be measured for Toitū and Toitū staff.	Yes
Waste Landfilled	<1%	Council provides recycling options to reduce the amount of waste sent to landfill.	Supply chain risk of access to landfills were compromised (unlikely)	Recycle and reuse products when necessary.	Emissions from waste in landfill and not having conditions to break-down naturally - often producing methane.	Signage on bins helping educate staff on types of products that can be recycled.	Yes - this measure must be measured for Toitū and Toitū staff.	Yes

APPENDIX 3: CERTIFICATION MARK USE

This certification mark is displayed in the Council's website at <https://www.whakatane.govt.nz/about-council/toitu-envirocare-certification>.

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 Liabilities		
A1.2.3.1 GHG stocks held		TR4.18
A1.2.3.2 Land-use liabilities	9.3.3.	TR4.19

Section of this report	ISO 14064-1:2018 clause	Organisational Technical Requirement rule
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		