# 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): Georgia Mischefski-Gray - Strategic Policy Analyst

Dated: 10 October 2024

Verification status: Reasonable for all mandatory emissions of the programme except wastewater treatment. Limited for wastewater treatment and all non-mandatory emissions.

Measurement period: 01 July 2023 to 30 June 2024

Base year period: 01 July 2017 to 30 June 2018

*Approved for release by:*

Steven Perdia - General Manager Strategy & Transformation

## COPYRIGHT



## DISCLAIMER



## AVAILABILITY

This report will be made publicly available on the Council's website following the November Environment, Energy and Resilience Committee.

## 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 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

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

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.

Chapter 2, the reduction plan and progress report, forms the manage step part of the organisation's application for Programme certification.

See Appendix 1 and the related Spreadsheet for detailed emissions inventory results, including a breakdown of emissions by source and sink, emissions by greenhouse gas type, and non-biogenic and bio-genic emissions. Appendix 1 also contains detailed context on the inventory boundaries, inclusions and exclusions, calculation methodology, liabilities, and supplementary results.

This overall report provides emissions information that is of interest to most users but must be read in conjunction with the inventory workbook for covering all of the requirements of ISO 14064-1:2018.

[2] Throughout this document 'GHG Protocol' means the *GHG Protocol Corporate Accounting and Reporting Standard* and 'ISO 14064-1:2018' means the international standard *Specification with Guidance at the Organizational Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals*.

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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 2023 to 30 June 2024.[3]

**Table 1: Inventory summary**

| **Category (ISO 14064-1:2018)** | **Scopes (ISO 14064-1:2006)** | **2018** | **2023** | **2024** |
|---|---|---|---|---|
| Category 1: Direct emissions ($tCO_2e$) | Scope 1 | 2,513.42 | 2,864.88 | 3,072.55 |
| Category 2: Indirect emissions from imported energy (location-based method*) ($tCO_2e$) | Scope 2 | 754.52 | 420.94 | 463.07 |
| Category 3: Indirect emissions from transportation ($tCO_2e$) | Scope 3 | 57.26 | 39.64 | 24.94 |
| Category 4: Indirect emissions from products used by organisation ($tCO_2e$) | | 136.31 | 76.70 | 240.29 |
| Category 5: Indirect emissions associated with the use of products from the organisation ($tCO_2e$) | | 0.00 | 0.00 | 0.00 |
| Category 6: Indirect emissions from other sources ($tCO_2e$) | | 0.00 | 0.00 | 0.00 |
| **Total direct emissions ($tCO_2e$)** | | **2,513.42** | **2,864.88** | **3,072.55** |
| **Total indirect emissions* ($tCO_2e$)** | | **948.08** | **537.28** | **728.30** |
| **Total gross emissions* ($tCO_2e$)** | | **3,461.50** | **3,402.16** | **3,800.86** |
| Category 1 direct removals ($tCO_2e$) | | 0.00 | 0.00 | 0.00 |
| Purchased emission reductions ($tCO_2e$) | | 0.00 | 0.00 | 0.00 |
| **Total net emissions ($tCO_2e$)** | | **3,461.50** | **3,402.16** | **3,800.86** |

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

[3] Throughout this document "emissions" means "GHG emissions". Unless otherwise stated, emissions are reported as tonnes of carbon dioxide equivalent ($tCO_2e$).

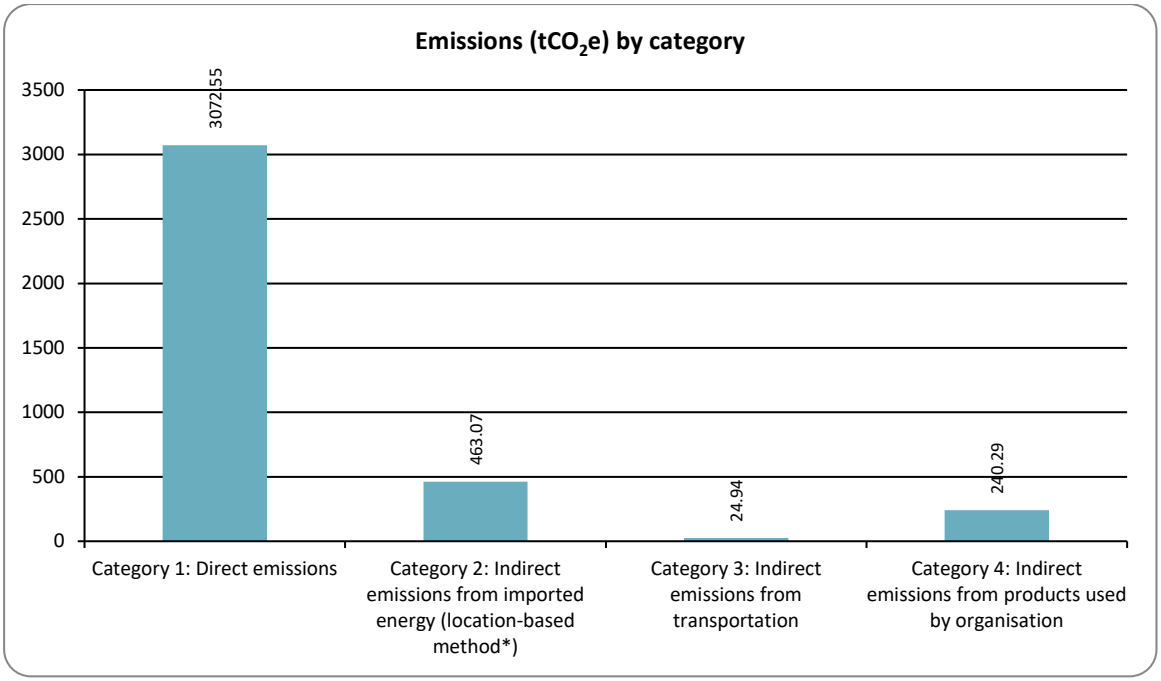


**Figure 1: Emissions ($tCO_2e$) by Category for this measurement period**

# CHAPTER 1: EMISSIONS INVENTORY REPORT

## 1.1. INTRODUCTION

This report is the annual greenhouse gas (GHG) emissions inventory and management report for 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 continuously working to improve their reporting practices to ensure that emissions are measured to a high standard.

The GHG inventory aligns with the objectives of our Climate Change Strategy 2020-23.

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: Emissions inventory summary for this measurement period**

Measurement period: 01 July 2023 to 30 June 2024.

| Category | Toitū carbon mandatory boundary ($tCO_2e$) | Additional emissions ($tCO_2e$) | Total emissions ($tCO_2e$) |
|---|---|---|---|
| Category 1: Direct emissions | 3,072.55<br>Diesel, Fertiliser use Dolomite, Fertiliser use Lime, Fertiliser use Nitrogen, HFC-134a, LPG stationary commercial, Natural Gas distributed commercial, Petrol premium, Petrol regular, R-407C, R-410A, WWTP sewage ($tCO_2e$) | 0.00 | 3,072.55 |
| Category 2: Indirect emissions from imported energy (location-based method*) | 463.07<br>Electricity - Annual factor | 0.00 | 463.07 |
| Category 3: Indirect emissions from transportation | 21.51<br>Air travel domestic (average), Rental Car average (fuel type unknown), Taxi (regular) | 3.43<br>Accommodation - New Zealand | 24.94 |
| Category 4: Indirect emissions from products used by organisation | 237.60<br>Electricity distributed T&D losses, Natural Gas distributed T&D losses, Waste landfilled LFGR Mixed waste | 2.68<br>Paper (envelopes - white), Paper use - default | 240.29 |

| Category | Toitū carbon mandatory boundary ($tCO_2e$) | Additional emissions ($tCO_2e$) | Total emissions ($tCO_2e$) |
|---|---|---|---|
| Category 5: Indirect emissions associated with the use of products from the organisation | 0.00 | 0.00 | 0.00 |
| Category 6: Indirect emissions from other sources | 0.00 | 0.00 | 0.00 |
| **Total direct emissions** | **3,072.55** | **0.00** | **3,072.55** |
| **Total indirect emissions*** | **722.19** | **6.12** | **728.30** |
| **Total gross emissions*** | **3,794.74** | **6.12** | **3,800.86** |
| Category 1 direct removals | 0.00 | 0.00 | 0.00 |
| Purchased emission reductions | 0.00 | 0.00 | 0.00 |
| **Total net emissions** | **3,794.74** | **6.12** | **3,800.86** |
| **Emissions intensity** | | **Mandatory emissions** | **Total emissions** |
| Rating Units - Number of rating units in the District (gross $tCO_2e$ / unit) | | 0.22 | 0.22 |
| Operating revenue (gross $tCO_2e$ / $Millions) | | 34.81 | 34.87 |

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

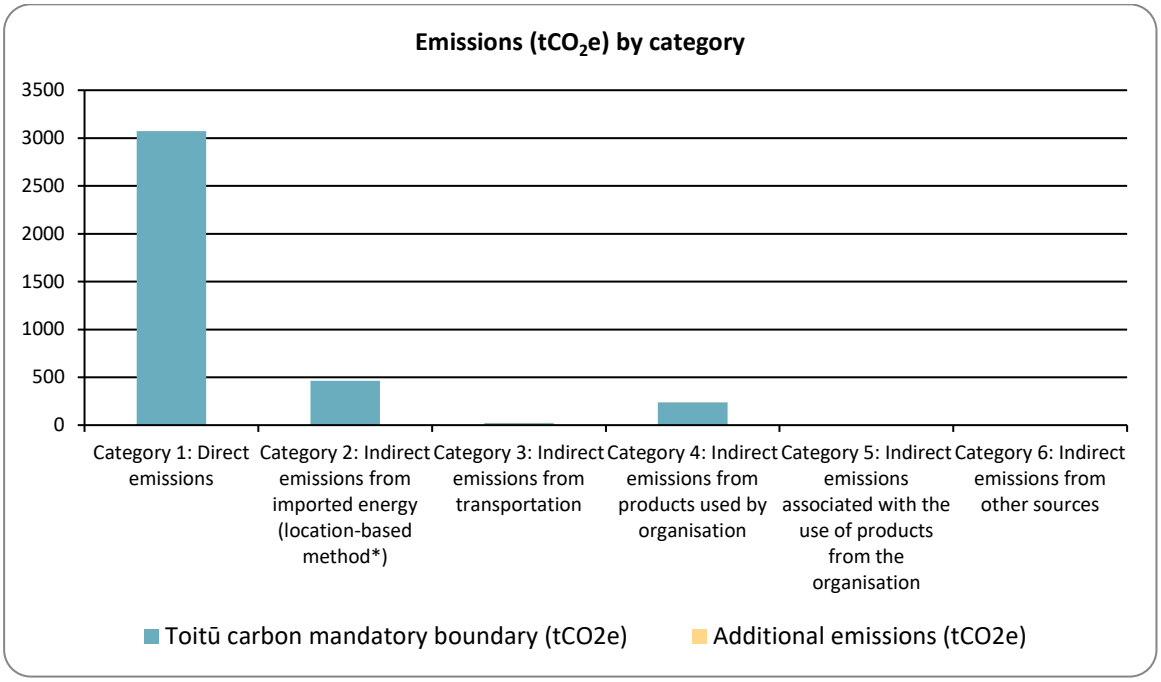


**Figure 2: Emissions ($tCO_2e$) by category**

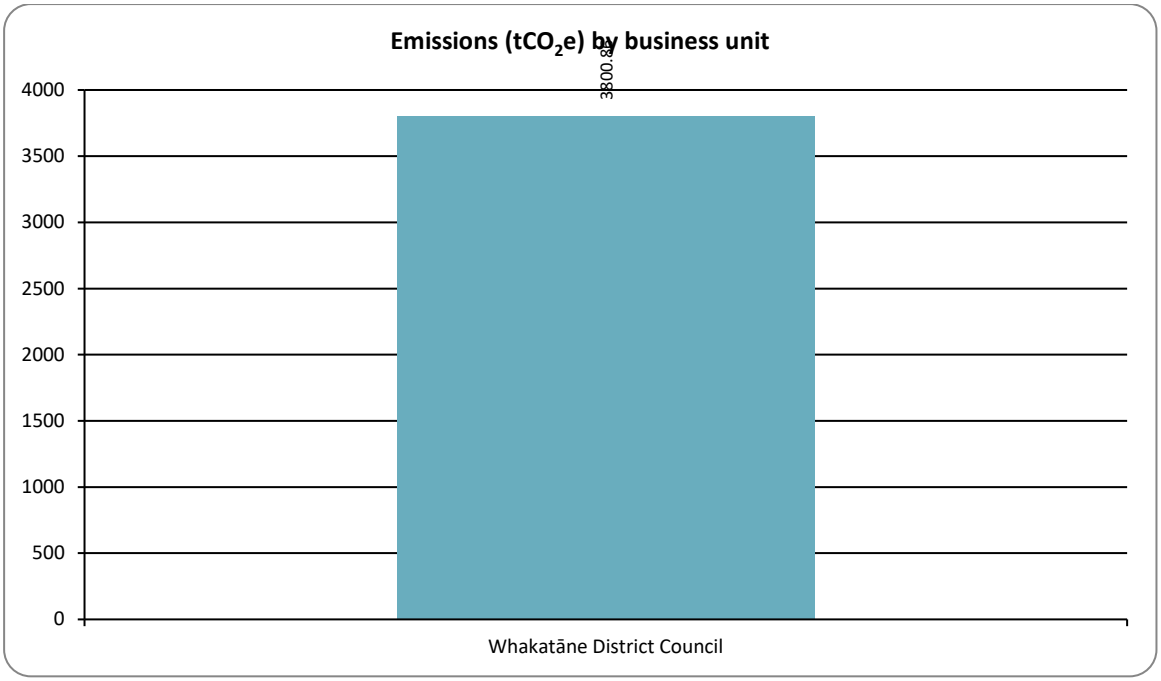


**Figure 3: Emissions ($tCO_2e$) by business unit**

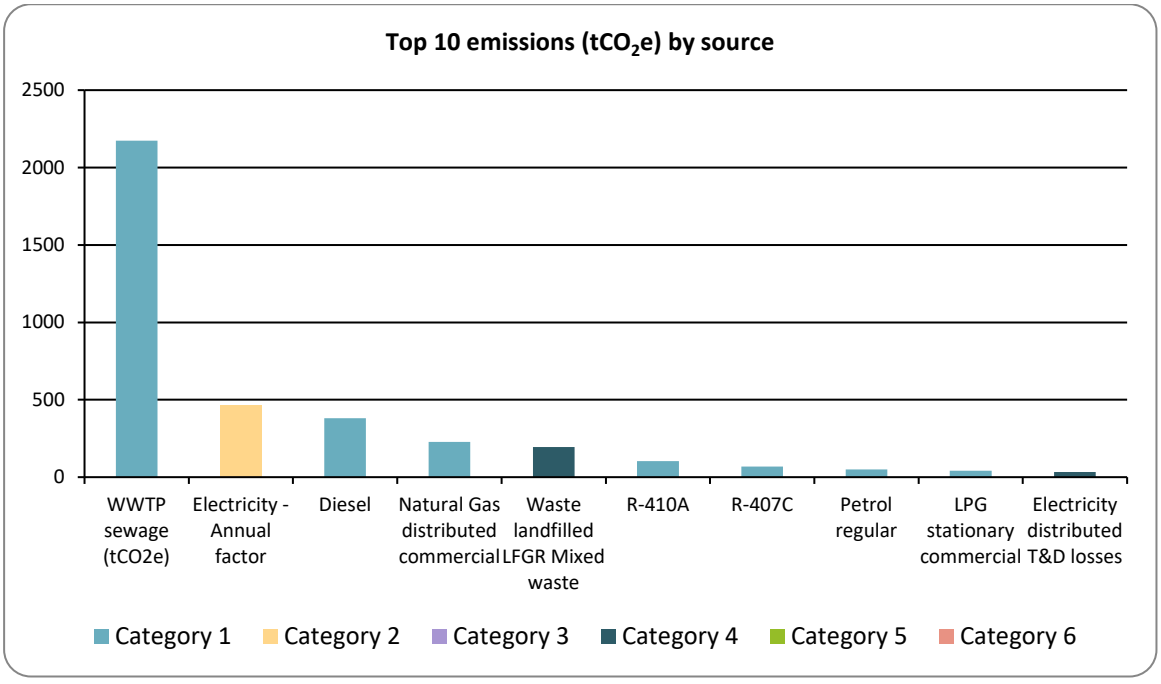


**Figure 4: Top 10 emissions ($tCO_2e$) by source**

### 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.

Whakatāne District Council has been undertaking an Energy Management Programme since 2018. EECA funding was secured and used to fund an initial energy audit. Energy Management Solutions (EMSOL) have since undertaken another audit and provided energy reduction actions. They continually support us to complete these actions which includes helping in purchasing decisions and continual monitoring. This work allows the Council to identify, implement and monitor opportunities for energy savings and emission reductions.

A feasibility study was completed in 2022-23 which explored the possibility of solar implementation. Continual solar exploration and potential implementation is a key action within the new Climate Change Strategy (2024-27). These projects aim to reduce the Council's emissions from purchased and generated energy.

**Table 3. Dual reporting of indirect emissions from imported energy**

| Category | Location-based methodology ($tCO_2e$) | Market-based methodology ($tCO_2e$) |
|---|---|---|
| Category 1: Direct emissions | 3,072.55 | 3,072.55 |
| Category 2: Indirect emissions from imported energy | 463.07 | 439.73 |
| Category 3: Indirect emissions from transportation | 24.94 | 24.94 |
| Category 4: Indirect emissions from products used by organisation | 240.29 | 240.29 |
| 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** | **3,072.55** | **3,072.55** |
| **Total indirect emissions** | **728.30** | **704.96** |
| **Total gross emissions** | **3,800.86** | **3,777.51** |
| Category 1 direct removals | 0.00 | 0.00 |
| **Total net emissions** | **3,800.86** | **3,777.51** |

## 1.3. ORGANISATIONAL CONTEXT

### 1.3.1. Organisation description

The Whakatāne District Council's (the Council) activities make an important contribution to the 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 (Councillors) are responsible for making key policy decisions that guide activities and provide direction for the district's future.

The Council carries out several 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, 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.

The Council recognises that their activities have a direct impact on the environment. The Council is 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 their activities across the district. This includes creating policies, monitoring energy usage, improving procurement and completing risk assessments. The Council aspires to support their communities by ensuring that the infrastructure and services provided promote resilience.

The Mayor signed the Local Government Leader's Climate Change Declaration in 2017. Since then, the Council has embarked on a journey of climate action. The Council adopted a Climate Change Strategy and six action plans for the 2020 to the 2023-24 reporting periods. Over the past year, the Council has developed the next strategy for the reporting periods of 2024-25 until 2027-28. This involved the community, staff, Councillors and climate experts. This new strategy builds on the strengths and weaknesses of the previous strategy and sets achievable yet ambitious targets. These include creating internal climate policy, updating the current procurement policy, creating staff learning modules and making environmentally friendly asset upgrade decisions. This 2024-27 strategy is now adopted after significant and vigorous work. The emission reduction targets included within it will be first reported on in the 2024/25 reporting period. This current report is still using the 2020-23 reporting targets.

### Commitment to certification

The Council aspires to show leadership by actively considering climate change in all their decisions and working to mitigate and adapt to climate change throughout all their activities across the district.

Through signing the 2017 New Zealand Local Government Leaders' Climate Change Declaration, they showed a commitment to taking ambitious climate action to reduce greenhouse gas emissions and support the resilience of Council and local communities. The development and implementation of the first Climate Change Strategy and six action plans saw many new actions working towards reaching the climate change targets. At the conclusion of the first three years of this strategy, a new plan has been developed which includes periodical targets which incrementally lower emissions. Having good data collection and reporting of Council emissions helps to make decisions and track progress against these targets.

The Council is committed to working with communities to understand, prepare for and respond to the physical impacts of climate change. This also involves working with central government to deliver on national emission reduction targets.

The Council acknowledges 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: Whakatāne District Council will actively lead and support Whakatāne District to mitigate and adapt to the effects of climate change to be great ancestors for future generations. This report will help the Council lead by example, as it demonstrates the commitment to recording and reducing emissions.

Participating in Toitū's Carbon Reduce programme aligns with several of the Councils climate change principles from its 2020-23 strategy, 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 - reducing emissions is necessary to achieve this.

3. We will learn - as this report helps us understand the impacts of various Council activities.

4. We will be part of the solution as participation in this programme demonstrates our commitment towards climate change.

### Climate Change Impacts

The Council is obligated to promote the environmental, social, cultural, economic wellbeing of communities in the Whakatāne district as set out in the Local Government Act 2002. Services that are affected by the impacts of climate change include three waters services, planning for housing and population growth, emergency management, infrastructure, roads and key Council buildings.

## 1.3.2. Statement of intent

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

### Intended use and users

The essential intended use of the inventory is to ensure compliance with the requirements of the ISO14064:2018 emissions reporting standard and to inform what Councils core emissions are.

The Council is committed to publicly reporting its GHG inventory following verification on the Whakatāne District Council website. This report is intended for all Whakatāne residents, Councillors, suppliers, staff, and other parties across Aotearoa New Zealand interested in the Council's GHG inventory and efforts to manage down emissions. This report is intended to support decision making of Councillors, Executive Leadership team and asset managers.

### Other schemes and requirements

The Council does not plan to use this inventory to align or comply with a scheme. The inventory will be reported through six monthly climate change reporting and annual reporting.

## 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

Georgia Mischefski-Gray - Strategy and Policy Analyst

Leny Woolsey - Manager Strategy and Performance

### Top management commitment

The Mayor of Whakatāne District Council signed the 2017 New Zealand Local Government Leaders' Climate Change Declaration. The Council adopted the first Climate Change Strategy (2020-2023) in 2019 showing ambitious commitment to climate action. In 2024, the Council adopted a new Climate Change Strategy which will cover the reporting periods of 2024-25 until 2027-28.

The Environment, Energy and Resilience Committee continue to oversee the wider Climate Change Strategy and receive regular updates on progress. The Committee also monitors the progress towards the targets, goals and actions outlined in the Council's Climate Change Strategy and Action Plans. These reports are provided to the Committee six-monthly.

### Management involvement

Overall, responsibility for the Climate Change Strategy sits with the Climate Change Project Lead, Steven Perdia and the Chief Executive.

*The people listed were in those roles during the measurement period.

## 1.3.4. Reporting period

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

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

Whakatāne District Council expanded the scope of the emission sources included in the inventory for this reporting period, to include lime fertiliser, more accurate waste data and an additional refrigerant (HFC-134a).

**Measurement period of this report: 01 July 2023 to 30 June 2024**

This report is annual.

This report covers the most recent financial year period of 1 July 2023 to 30 June 2024. 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 (i.e. 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

The Council is involved in a broad range of products and services within the district. To facilitate best practice and efficiency, it is not always practical to have full authority over operational policies and procedures; rather it is best to have relevant industry experts to control these.

[4]control: 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.

In these circumstances, facilities may be provided while the services are contracted out 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.

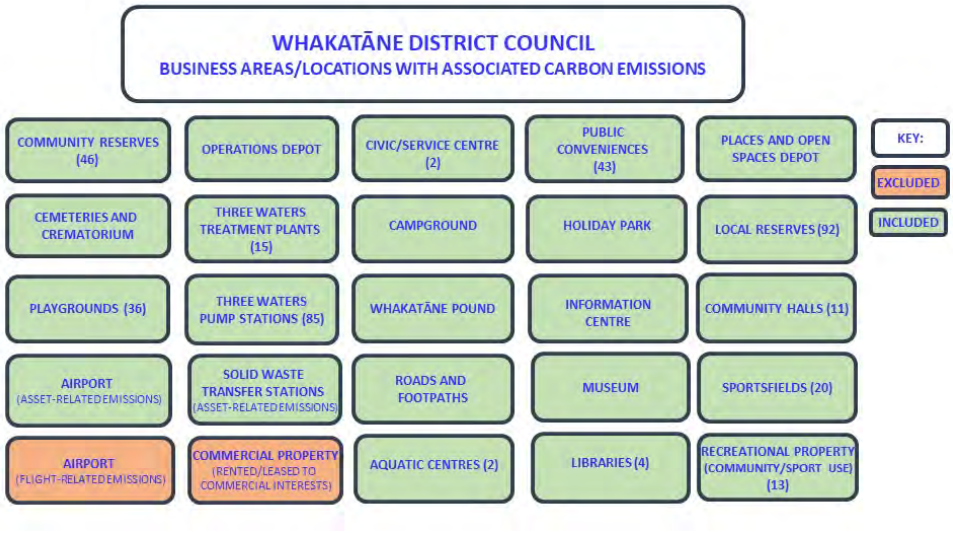


**Figure 5: Organisational structure**

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

| Company/Business unit/Facility | Physical location | Description |
|---|---|---|
| Community reserves (46) | Multiple | The WDC is responsible for 46 reserves across the district. |
| Operations Depot | 0 Tāneatua Road, Whakatāne | The operations depot is both a workspace and equipment storage. |
| Civic centre | 14 Commerce Street, Whakatāne | The civic centre is the main office building. |
| Service centre | 0 Main Road, Murupara | The service centre is a both a workspace and equipment storage. |
| Public conveniences (43) | Multiple | Public conveniences include public bathrooms. |
| Places and open spaces depot | 60 Keepa Road, Whakatāne | The places and open spaces depot is a workspace and equipment storage. |
| Cemeteries and crematorium | Hillcrest Cemetery, Whakatāne | Crematorium and cemetery. |

| Company/Business unit/Facility | Physical location | Description |
|---|---|---|
| Three waters and treatment plants (15) | Multiple | Treatment of wastewater, storm water and drinking water. Whakatāne and Ōhope are the biggest. |
| Campground | State Highway 2, Pikowai | Pikowai campsite. |
| Holiday Park | 1 McGarvey Road, Whakatāne | Whakatāne holiday park. |
| Local reserves (92) | Multiple | Community reserves. |
| Playgrounds (36) | Multiple | Includes 36 playgrounds across the district. |
| Three water pump stations (85) | Multiple | Storm water and wastewater pumping infrastructure. |
| Whakatāne Pound | 51 Te Tahi Street, Whakatāne | Dog pound, for lost animals. |
| Information centre | 1 Kakaharoa Whakatāne | The information centre provides information to tourists visiting the district. |
| Community halls (11) | Multiple | 11 community halls across the region. |
| Airport (asset related emissions) | 216 Aerodrome Road, Whakatāne | The airport site. |
| Solid waste transfer stations | 44 Te Tahi Street, Whakatāne | The solid waste transfer station is a recycling centre. |
| Roads and footpaths | Multiple | District footpaths and roads (excl. state highways). |
| Museum | 51 Boon Street, Whakatāne | The museum and research centre holds artifacts and acts as an office. |
| Sports fields (20) | Multiple | Multiple sports fields across the district. |
| Aquatic centres (2) | 28 Short Street, Pine drive, Whakatāne | Two aquatic centres - Whakatāne and Murupara. |
| Libraries (4) | Multiple | Four libraries across the district in Ōhope, Whakatāne, Edgecumbe and Murupara. |
| Recreational property (communal/sport use) (13) | Multiple | Sports clubs and recreational buildings across the district. |

### 1.3.6. Excluded business units

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

The Airport:

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.

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 Chatham's and is not influenced by 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 Chathams flights within the district, it does have influence over the airport as an asset – with the airport's other emission sources (electricity, petrol from mowing) 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, in the coming year a deeper look into the Airport's emissions will be completed alongside the development of the Airport Masterplan.

Waste:

The waste management services are contracted to Waste Management - who collect waste and recycling material on behalf of Council for processing. Waste Management are experts, and they are also part of Toitū's Carbonreduce certification programme; as such, emissions from Waste Management's services in our district are not included by the Council. To avoid double-counting of emissions, we have excluded waste management services from this report. The Council does still include the waste created from their buildings and activities.

Leases:

Council currently owns several leasehold titles within the district. These titles are leased to various stakeholders, which are used for different purposes (commercial shops, farm/grazing land etc.). As such, Council does not have authority to control what tenants do with the land.

# CHAPTER 2: EMISSIONS MANAGEMENT AND REDUCTION REPORT

## 2.1. EMISSIONS REDUCTION RESULTS

Whakatāne District Council has not reduced their emissions from the baseline of 2017/18. An increase of 10% total net emissions was recorded this reporting period. With the learnings from the previous years, new targets were set during 2023-24 for the future reporting periods.

**Table 5: Comparison of historical GHG inventories**

| Category | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|
| Category 1: Direct emissions ($tCO_2e$) | 2,513.42 | 2,479.96 | 2,514.36 | 2,536.62 | 3,543.67 | 2,864.88 | 3,072.55 |
| Category 2: Indirect emissions from imported energy (location-based method*) ($tCO_2e$) | 754.52 | 788.04 | 850.83 | 977.59 | 626.74 | 420.94 | 463.07 |
| Category 3: Indirect emissions from transportation ($tCO_2e$) | 57.26 | 71.33 | 51.13 | 45.16 | 27.35 | 39.64 | 24.94 |
| Category 4: Indirect emissions from products used by organisation ($tCO_2e$) | 136.31 | 116.19 | 106.33 | 85.05 | 77.14 | 76.70 | 240.29 |
| Category 5: Indirect emissions associated with the use of products from the organisation ($tCO_2e$) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Category 6: Indirect emissions from other sources ($tCO_2e$) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total direct emissions ($tCO_2e$)** | **2,513.42** | **2,479.96** | **2,514.36** | **2,536.62** | **3,543.67** | **2,864.88** | **3,072.55** |
| **Total indirect emissions* ($tCO_2e$)** | **948.08** | **975.55** | **1,008.29** | **1,107.80** | **731.23** | **537.28** | **728.30** |
| **Total gross emissions* ($tCO_2e$)** | **3,461.50** | **3,455.51** | **3,522.65** | **3,644.43** | **4,274.90** | **3,402.16** | **3,800.86** |
| Category 1 direct removals ($tCO_2e$) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Purchased emission reductions ($tCO_2e$) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total net emissions ($tCO_2e$)** | **3,461.50** | **3,455.51** | **3,522.65** | **3,644.43** | **4,274.90** | **3,402.16** | **3,800.86** |
| **Emissions intensity** | | | | | | | |
| Rating Units - Number of rating units in the District (gross $tCO_2e$ / unit) | 0.21 | 0.21 | 0.21 | 0.21 | 0.25 | 0.21 | 0.22 |
| Rating Units - Number of rating units in the District (gross mandatory $tCO_2e$ / unit) | 0.21 | 0.21 | 0.21 | 0.21 | 0.25 | 0.21 | 0.22 |
| Operating revenue (gross $tCO_2e$ / $Millions) | 45.91 | 46.51 | 44.45 | 38.09 | 48.98 | 35.44 | 34.87 |
| Operating revenue (gross mandatory $tCO_2e$ / $Millions) | 45.79 | 46.42 | 44.37 | 38.02 | 48.94 | 35.39 | 34.81 |

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

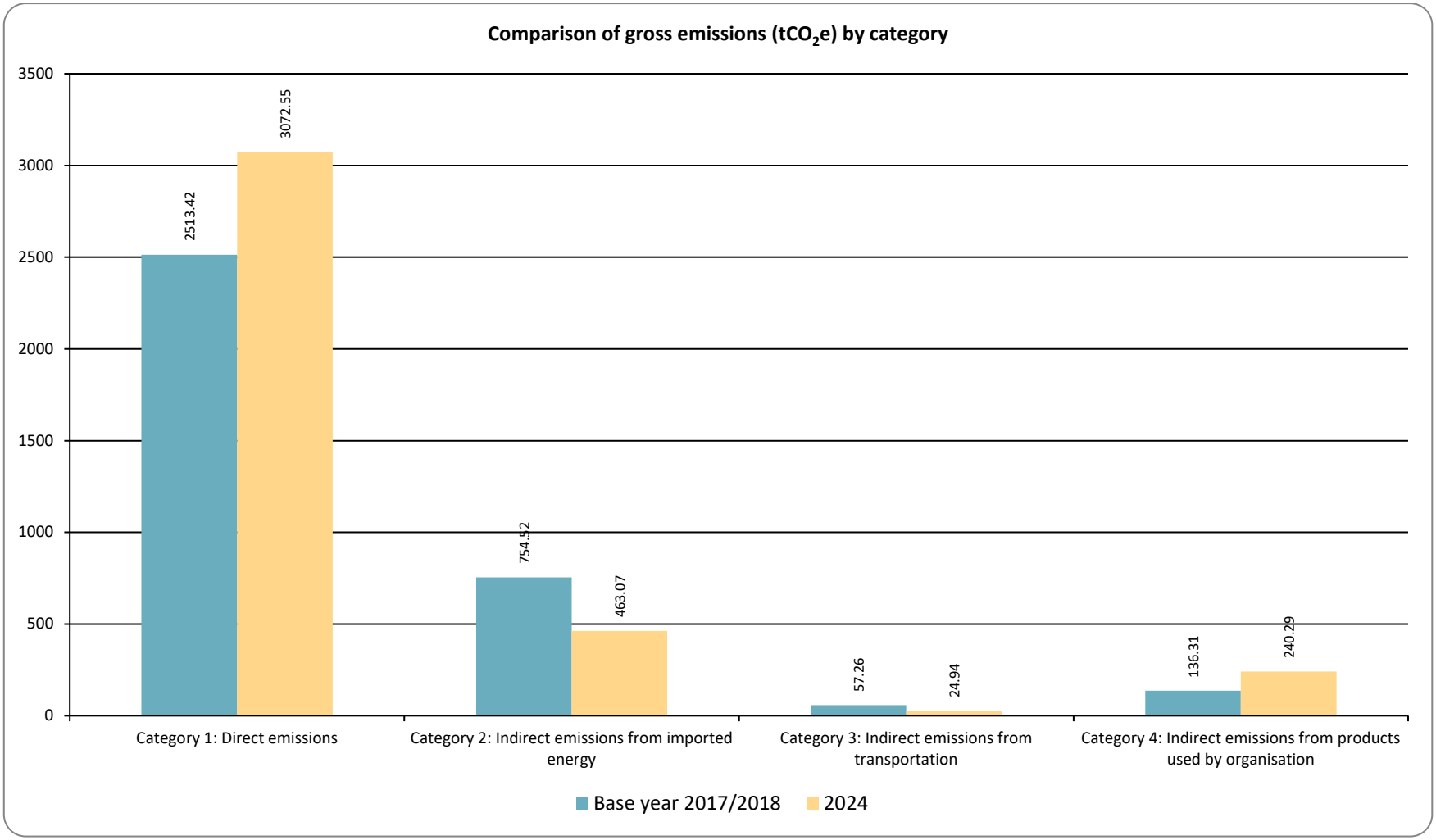


**Figure 6: Comparison of gross emissions ($tCO_2e$) by category between the reporting periods**

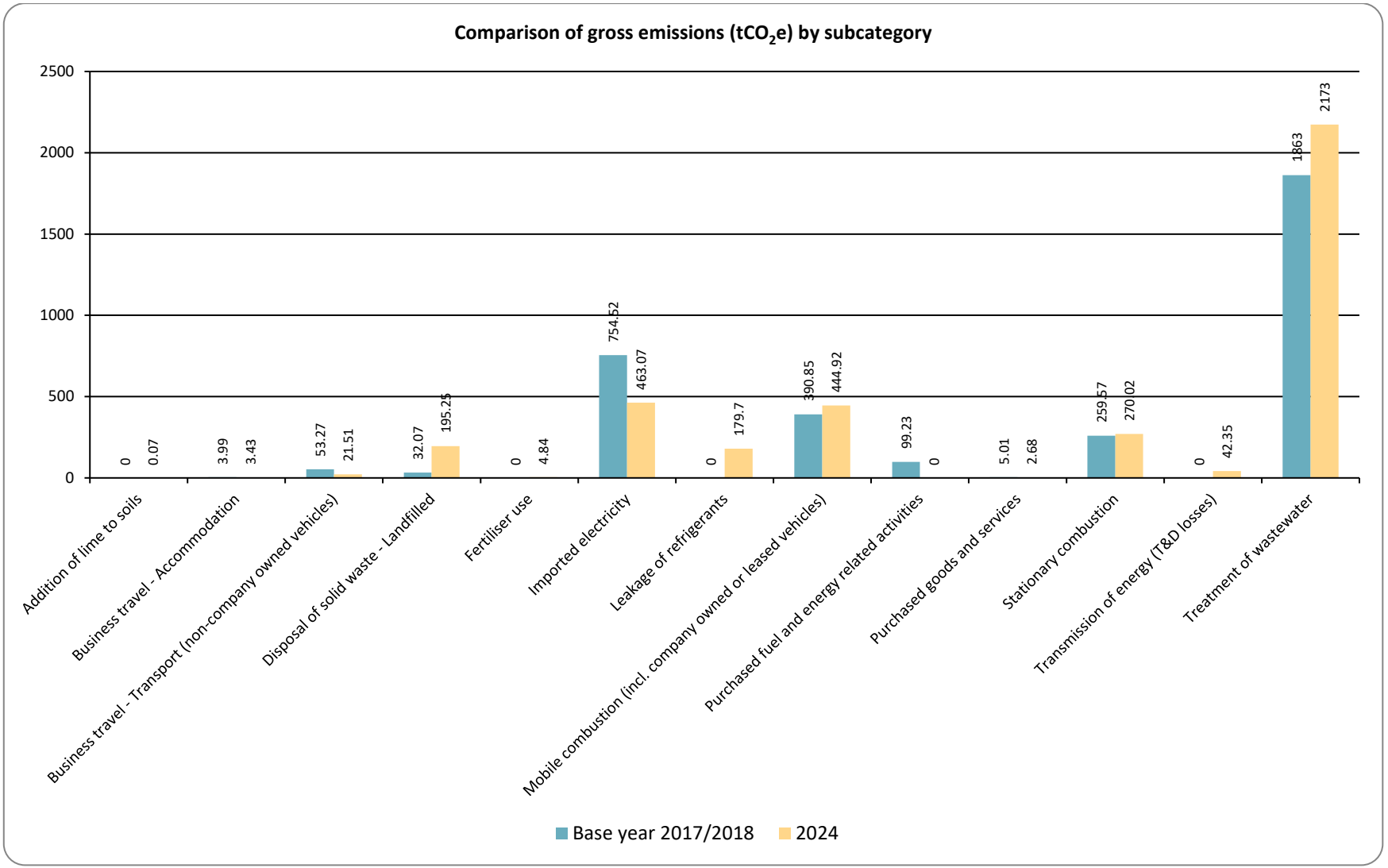


**Figure 7: Comparison of gross emissions ($tCO_2e$) by subcategory between the reporting periods**

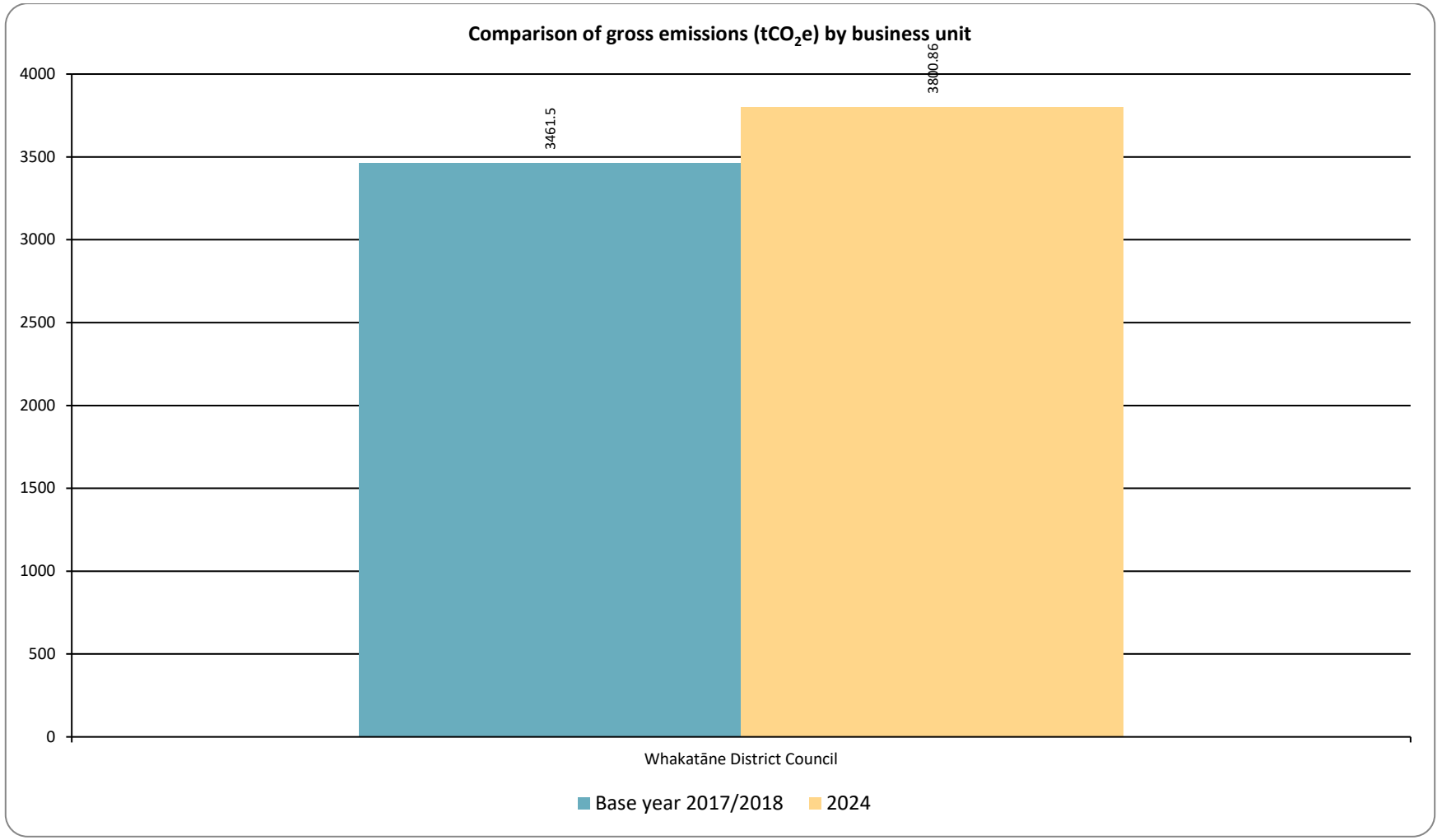


**Figure 8: Comparison of gross emissions ($tCO_2e$) by business unit between the reporting periods**

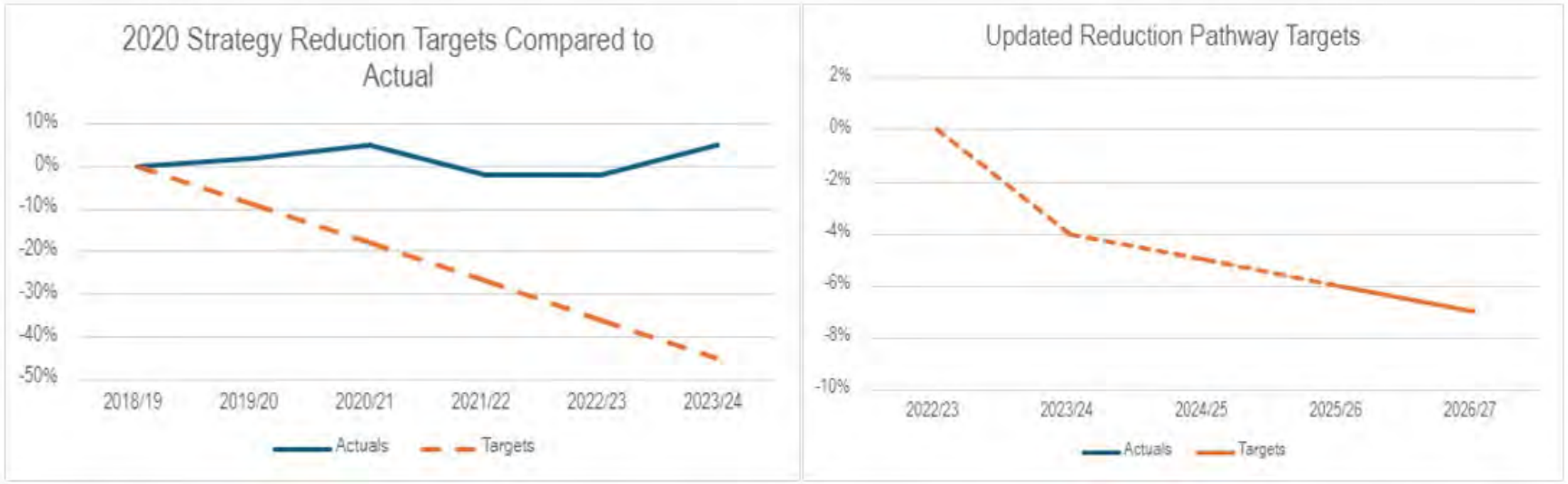


**Figure 9: Performance against target since base year**

**Table 6. Performance against plan**

| Target name | Baseline period | Target date | Type of target (intensity or absolute) | Current performance ($tCO_2e$) | Current performance (%) | Comments |
|---|---|---|---|---|---|---|
| Energy Action Plan target: Council will deliver the benefits of 1.8GWh p.a energy savings from the 2018 baseline. | 2018 | 1/07/2022 | Absolute | 4.86GWh | 45.8% decrease | As no further targets were set, this report compares this target to 2023-24 year. Significant reductions were made within energy usage. Measurement in GWh. |
| Strategy target: Council will reduce its carbon footprint by 15% by 2022, excluding biogenic methane and nitrous oxide | 2018 | 2/07/2022 | Intensity | 1141t$CO_2e$ | 29% decrease | These are the emissions profile with the wastewater emissions removed. We have experienced a reduction from our baseline of 2018. |
| Net Carbon zero excluding biogenic methane and nitrous oxide | 2018 | 2030 | Absolute | Not monitored | Not monitored | This target has been updated as of June 2024 (end of monitoring period). The target was changed to be more realistic. |
| Organisational biogenic methane emission reduction of 24% to 47% by 2050 | 2018 | 2050 | Intensity | Not monitored | Not monitored | This target has been updated as of June 2024. No progress was made. |

## 2.2. SIGNIFICANT EMISSIONS SOURCES

### Significant sources

The top three sources of emissions make up 80% 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 40,000 people, it is known that this is a large source of greenhouse gas emissions for the Council. Most 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 to reduce greenhouse gas emissions from this activity.

2) Electricity and electricity T&D losses:

Electricity is used for administrative services and the large range of public facilities and services the Council maintains. The Council has had an Energy Management Programme since 2018 which identifies and implements a range of energy saving and emission reduction initiatives. This programme is run with continued collaboration with the Energy Efficiency and Conservation Authority (EECA) and Council's energy management contractor EMSOL. There have been noticeable reductions of electricity usage over the years.

3) Diesel

Diesel is used in a variety of critical Council operations. These include maintenance such as for the gardens and parks which often requires trailers or a significant amount of equipment to be transported around. Other activities include inspections of roads or accessing remote areas. Lastly, diesel generators and Utes are critical in emergency management and response.

### 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: most Council business units use electricity as a significant (if not their main) source of power.

Diesel: Ute vehicle usage within everyday operations and within emergency management or response.

### 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.

Electricity: As a main power source for many services and business units within Council and with a conscious effort to increase electric cars, virtual meetings and services, this may lead to increased electricity usage.

Diesel: This is required in many 4WD vehicles which is critical to Council operations.

### Significant sources that cannot be influenced

Wastewater is extremely hard to reduce, small incremental changes can be made however they are large old assets. While the Council is actively exploring and trying to reduce these emissions, they are significant assets and changes will take many years.

There will always be some form of diesel usage as there is no other viable options during emergency response i.e. generators or large 4WD vehicles to drive in inaccessible areas.

## 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 first Climate Change Strategy. The overarching emission reduction target for the Council was to become a net zero carbon organisation by 2030 (excluding biogenic methane and nitrous oxide). The short-term mitigation target was a 15% emission reduction by 1 July 2022 (excluding biogenic methane and nitrous oxide). A specific biogenic methane target was set in line with national targets, striving for a 24% to 47% biogenic methane emission reduction by 2050. The Energy Action Plan also set out an energy specific reduction target of 1.8GWh per annum reduction by 1 July 2022.

New targets have been set this past year, to be more achievable and reflect the capability and capacity of Council resources. The new targets follow the Climate Change Commission demonstration path and use 2023 as the baseline. As the new targets were adopted in June 2024, this report will still refer to the 2020-23 targets.

Due to the broad nature of the Council's Climate Change Strategy and the connection it has to all of Council's operations and activities, the strategy and action plans are reviewed every 3 years (or earlier if required). As they have just been reviewed in this past reporting period, the targets will not be reviewed again until 2027.

Council had four overarching climate change targets, two of which are long term and the two others short term.

Long term:

1- Be net zero (excluding biogenic methane and nitrous oxide) by 2030.

2- Reduce organisational biogenic methane emissions by 24% to 47% by 2050.

These were not monitored closely, and the targets were too far out of reach. The Council is building better understanding about reporting and data. This means, the nature of the targets is evolving as the Council gets a clearer picture of their emissions profile.

Short term:

1- 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 the 8.9GWh that was recorded within Council in 2018. In the last financial year, the total energy (electricity and natural gas) output by Council was 4.9GWh, representing an average reduction of 0.7GWh per annum. Although the target of 1.8GWh p.a. from the baseline was not reached, Council made significant progress in energy savings. This shows that Council has become more efficient with energy usage. The Council will continue to decrease energy usage and embed these practises within the organisation.

2- Reduce Council's Carbon Footprint by 15%

Council has not met the target of reducing our carbon footprint (excluding biogenic methane and nitrous oxide) by 15% in 2023. This was calculated by removing the wastewater emissions from the total emissions. However, many one-off issues occurred, or more/better reporting is happening. The Council will be more deeply looking at its emissions particularly those which rose in this period. The new strategy and targets should also help correct this.

Targets 2024/25 until 2026/27

The Council set new targets and a new baseline in June 2024. These will be reported against from 2025 onwards. The new baseline is the 22/23 reporting period. The new targets follow the demonstration pathway and are detailed in Table 7.

**Table 7. Emission reduction targets**

| Target name | Baseline period | Target date | Type of target (intensity or absolute) | Categories covered | Target | | Responsibility | Rationale |
|---|---|---|---|---|---|---|---|---|
| Electricity & Natural Gas reduction | 2018 | 1/07/2022 | Absolute | Category 2 | 1.8 GWh | 8.5GWh | 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% | 1627 | 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 | | 1889 | 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. |
| Targets 2024-27 | | | | | | | | |
| 1- Transport emission reduction | 2023 | 30/06/2027 | Absolute | Category 1, 3 | 399 | 5% | Whole council/Finance/procurement | Increase the electrification of the Council fleet, promote low-travel or low emission options. |
| 2- Stationary/non-transport energy emissions reduction | 2023 | 30/06/2027 | Absolute | Category 1, 2, 3, 4 | 602.28 | 16% | Whole council/asset management/procurement | Continued energy efficiency/reductions. |

| Target name | Baseline period | Target date | Type of target (intensity or absolute) | Categories covered | Target | | Responsibility | Rationale |
|---|---|---|---|---|---|---|---|---|
| 3- Industrial Process and Product use (IPPU) emissions | 2023 | 30/06/2027 | Absolute | Category 1 | 36.63 | 1% | Asset Management | Changing of assets as they come up for renewal and their efficient use and ongoing upkeep. |
| 4- Waste reduction | 2023 | 30/06/2027 | Absolute | Category 4 | 8.9 | 11% | Waste/Whole Council | Waste audits, internal awareness and promotion of waste reduction techniques. |
| 5- Waste water reduction | 2023 | 30/06/2027 | Absolute | Category 1 | 2130.24 | 4% | Wastewater | Consideration of reduction within asset renewal and ongoing upkeep. |
| 6- Total Council emissions reduction | 2023 | 30/06/2027 | Absolute | Category 1, 2, 3 | 2063.67 | 7% | Whole Council | Combination of all the above. |

## 2.4. EMISSIONS REDUCTION PROJECTS

In order to achieve the reduction targets identified in Table 7, specific projects have been identified to achieve these targets, and are detailed in Table 8 below.

**Table 8. Projects to reduce emissions**

| Objective | Project | Responsibility | Completion date | Potential co-benefits | Potential unintended consequences | Actions to minimise unintended consequence |
|---|---|---|---|---|---|---|
| Reduce emissions created from wastewater | Reduce storm water infiltration to the wastewater system - Council is continuing to undertake assessment of underwater wastewater network via CCTV inspection. | Glenn Cooper - Manager Three Waters | Ongoing | This not only reduces infiltration but adds longevity to the life of the asset. | This work requires high investment costs. | Projects will be included in asset management plans to secure funding through the Long-Term Plan process. |

| Objective | Project | Responsibility | Completion date | Potential co-benefits | Potential unintended consequences | Actions to minimise unintended consequence |
|---|---|---|---|---|---|---|
| Reduce emissions created from wastewater | At this stage we are in early stages of the planned phase any technologies to reduce emissions will be incorporated into treatment plant upgrades after a new Resource Consent has been granted. | Glenn Cooper - Manager Three Waters | Ongoing | OPEX cost savings, depending on technology. | High CAPEX cost of investing in new technology. | Further feasibility studies will be undertaken to weigh up best outcomes. |
| Minimise natural gas and LPG use | Fuel switching at sites which rely on stationary energy to electric. The Natural gas elimination study supports this work. | Michael Harris - Assets Manager | 2030 | By removing gas use at Council facilities, we will reduce emissions as well as deliver cost savings. | Loss of instant on demand heating (especially for water). | Research units that will be best suited for very cold days with little heat loss. |
| Minimise electricity use | Civic centre redevelopment project - including updating lights to be LEDs. | Michael Harris - Assets Manager | Ongoing | Reduces power costs for day to day running of the building. | Increase costs to the project. Higher initial costs as older inefficient units are replaced with more efficient units. | Identify actions that will have the biggest benefit compared to cost. Research on what replacement units to use – lifespan, cost of maintenance, cost of equipment and how efficient compared to cost. |
| Minimise electricity use | Monitoring electricity use with onsite sensors. | Michael Harris - Assets Manager | Ongoing | Identify power trends and abilities to adjust schedules to minimise costs, and increases the ability to identify equipment that is unsuitable. | Increase costs to the project. Higher initial costs as older inefficient units are replaced with more efficient units. | Identify actions that will have the biggest benefit compared to cost. Research on what replacement units to use – lifespan, cost of maintenance, cost of equipment and how efficient compared to cost. |
| Minimise electricity use | Reduce electricity related emissions from three waters infrastructure (pumping stations etc). High lift pumps have been upgraded to be more efficient. VSDs installed on some pumps. | Glenn Cooper - Manager Three Waters | Ongoing | Lower OPEX costing as the more efficient pumps would use less energy. This work will be key as we experience more flooding in the future. | High CAPEX costs for initial works. Embodied emissions from projects. | Feasibility studies undertaken. |

| Objective | Project | Responsibility | Completion date | Potential co-benefits | Potential unintended consequences | Actions to minimise unintended consequence |
|---|---|---|---|---|---|---|
| Minimise refrigerant leakage | Measured the refrigerants at different sites, and checked for leaks in systems. | Michael Harris - Assets Manager | Ongoing | Finding leaks early will reduce the amount of refrigerant discharged into the atmosphere. Will also improve air quality. | Higher cost if multiple leaks found at once – or if looking at new equipment to replace old equipment. It's cheaper to find a leak as soon as possible to prevent loss of refrigerant. | Exploring extra corrosion prevention and anti-vibration measures to help reduce leaks from happening again. |
| Minimise diesel (commercial) use for portable generators | Feasability study to fuel switch Nesi Diesel pump from diesel to electricity. | Glenn Cooper - Manager Three Waters | 2025 | OPEX cost savings. Improved air quality. | High CAPEX costing of investing in a new generator. | Identifying different market options and looking for external funding. |
| Minimise petrol and diesel use from fleet. | Transitioning fleet from diesel/petrol to EV and hybrid. | Georgia Mischefski-Gray- Strategy and Policy Analyst | Ongoing | OPEX cost savings from purchasing less fuel. | Increased electricity use. | Reducing electricity use from other sources. Feasibility into creating our own renewable electricity sources and renewable energy certificates. Staff education around reducing electricity use. |
| Minimise petrol and diesel use from fleet. | Encouraging work from home - hybrid working policy. | Georgia Mischefski-Gray- Strategy and Policy Analyst | Ongoing | Cost savings of less electricity use. Commuting cost savings for staff. | Less use of facilities. | Staff survey will be undertaken for the next footprint to inform the emissions associated with staff commuting. |
| Reduce emissions created from electricity generation | Solar feasibility study - to investigate how we can generate renewable energy on Council owned facilities. | Georgia Mischefski-Gray- Strategy and Policy Analyst | 2025 | Showing leadership within our community. Revenue generation once investments have been paid off. | Embedded emissions and environmental impacts from the lifecycle of panels (cradle to grave emissions). | Solar projects will be explored, Part of this will look at minimising embedded emissions from the creation and recycling of materials. |

Table 9 highlights emission sources that have been identified for improving source the data quality in future inventories.

**Table 9. Projects to improve data quality**

| Emissions source | Actions to improve data quality | Responsibility | Completion date |
|---|---|---|---|
| All sources | Break the airport data up in audit by the business units. Explore the flight related data. | Georgia Mischefski-Gray | 31/12/2024 |
| Scope three emissions | Undertake a staff wide survey to better understand commuting and work from home emissions. | Georgia Mischefski-Gray | 31/12/2025 |
| All sources | Procurement policy being updated which will explore freight/supply chain reporting. | Georgia Mischefski-Gray and Ingrid McNiven | 1/06/2025 |

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

**Table 10. Projects to prevent emissions from liabilities**

| Liability source | Actions to prevent emissions | Responsibility | Completion date |
|---|---|---|---|
| Air conditioning units | Regular servicing to preventing damage to units | Facilities manager | Ongoing |
| Air conditioning units | Ensuring units with lower GWP refrigerants are purchased. | Facilities manager | Ongoing |
| Diesel | Ensure generators are regularly serviced | Facilities manager. Three waters manager | Ongoing |
| Diesel | Explore electric options for generators | Facilities manager. Three waters manager | Ongoing |
| Natural Gas | Explore the reasons for increases and how to prevent these occurring. | Facilities manager. Three waters manager | Ongoing |
| Refrigerants | Anti-vibration work and continual monitoring, upgrading to better systems | Facilities manager | Ongoing |
| Forestry | Exploration of other options, some blocks will be felled in the next few years. | Open spaces | Ongoing |
| Fuel Tanks | Upgrades and monitoring. | Various | Ongoing |

## 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 the Council's website: https://www.whakatane.govt.nz/residents/climate-change/climate-change-reporting. Since the start of the Council's Climate Change Strategy, celebrating our wins along the way has been an important principle on our climate change journey. 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 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 has an internal Climate Change Group representing teams across the organisation, to ensure that climate change considerations are embedded into all Council activities. Council has an analyst whose role includes climate change, and a new 'Climate and Resilience' team has been included in the Long-Term Plan with an expected establishment in early 2025.

## 2.6. KEY PERFORMANCE INDICATORS

One of the Councils KPI's is the yearly rating units. The Whakatāne district is currently experiencing low to moderate population growth. This is measured and forecast by anticipated increases in rating units over time. This growth is applied as a form of KPI to monitor performance.

## 2.7. MONITORING AND REPORTING

The Environment, Energy and Resilience Committee will continue to oversee the wider Climate Change Strategy and receive regular updates on progress. The committee monitors progress towards its targets, goals and actions. Reports are provided to the Committee six-monthly and are publicly available on Council's website: https://www.whakatane.govt.nz/climate-change. A section relating to climate change activities will 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 11. Direct GHG emissions and removals, quantified separately for each applicable gas**

| Category | $CO_2$ | $CH_4$ | $N_2O$ | $NF_3$ | $SF_6$ | HFC | PFC | Desflurane | Sevoflurane | Isoflurane | Emissions total ($tCO_2e$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stationary combustion | 269.27 | 0.62 | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 270.02 |
| Mobile combustion (incl. company owned or leased vehicles) | 436.36 | 1.37 | 7.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 444.92 |
| Emissions - Industrial processes | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Removals - Industrial processes | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Leakage of refrigerants | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 179.70 | 0.00 | 0.00 | 0.00 | 0.00 | 179.70 |
| Treatment of waste | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fugitive Emissions | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Treatment of wastewater | 2,173.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2,173.00 |
| Emissions - Land use, land-use change and forestry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Removals - Land use, land-use change and forestry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fertiliser use | 0.00 | 0.00 | 4.84 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.84 |
| Addition of livestock waste to soils | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Addition of crop residue to soils | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Addition of lime to soils | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 |
| Enteric fermentation | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open burning of organic matter | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Electricity generated and consumed onsite | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Medical gases | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Exported electricity | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total net emissions | 2,878.70 | 2.00 | 12.15 | 0.00 | 0.00 | 179.70 | 0.00 | 0.00 | 0.00 | 0.00 | 3,072.55 |

**Table 12. Non-biogenic, biogenic anthropogenic and biogenic non-anthropogenic $CO_2$ emissions and removals by category**

| Category | Anthropogenic biogenic $CO_2$ emissions | Anthropogenic biogenic ($CH_4$ and $N_2O$) emissions ($tCO_2e$) | Non-anthropogenic biogenic ($tCO_2e$) |
|---|---|---|---|
| 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 | 195.25 | 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** | **195.25** | **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 year.

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 management

As adapted from ISO 14064-1, the emissions sources deemed significant for inclusion in this inventory were classified into the following categories:

- **Direct GHG emissions (Category 1):** GHG emissions from sources that are owned or controlled by the company.
- **Indirect GHG emissions (Category 2):** GHG emissions from the generation of purchased electricity, heat and steam consumed by the company.
- **Indirect GHG emissions (Categories 3-6):** GHG emissions that occur as a consequence of the activities of the company but occur from sources not owned or controlled by the company.

Table 13 provides detail on the categories of emissions included in the GHG emissions inventory, an overview of how activity data were collected for each emissions source, and an explanation of any uncertainties or assumptions made based on the source of activity data. Detail on estimated numerical uncertainties are reported in Appendix 1.

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 databases and drawn upon when requested from the Strategic Policy team when writing this report.

**Table 13. GHG emissions activity data collection methods and inherent uncertainties and assumptions**

| GHG emissions category | GHG emissions source or sink subcategory | Overview of activity data and evidence | Explanation of uncertainties or assumptions around your data and evidence | Use of default and average emissions factors | Pre-verified data |
|---|---|---|---|---|---|
| Category 1: Direct emissions and removals | Stationary combustion | LPG stationary commercial, Natural Gas distributed commercial | Assumed all supplier reports are accurate, and all energy used has been captured in our internal systems. There is a higher level of uncertainty in regard to the LPG gas, as the supplier changed ownership and there were some reporting issues, however, this should have been corrected. | | No |
| | Mobile combustion (incl. company owned or leased vehicles) | Diesel, Petrol premium, Petrol regular | Assumed all supplier reports are accurate, and all additional fuel spent has been captured within our internal financial tracking systems. | | No |
| | Leakage of refrigerants | HFC-134a, R-407C, R-410A | Assumed the invoices are correct, some do not include the gas leakage and therefore having to rely on our own measurements. | | No |
| | Treatment of wastewater | WWTP sewage ($tCO_2e$) | Assumed the internal measurement system and calculations is correct. | | No |
| | Fertiliser use | Fertiliser use Nitrogen | Assumed the supplier reports are accurate, and all fertiliser used has been tracked in our internal systems. Assumptions made around the percentage of Nitrogen/Dolomite within the fertiliser. | | No |
| | Addition of lime to soils | Fertiliser use Dolomite, Fertiliser use Lime | Assumed the supplier reports are accurate, and all lime used has been tracked in our internal systems. | | No |
| Overall assessment of uncertainty for Category 1 emissions and removals | | 40% | High | | No |
| Category 2: Indirect emissions from imported energy | Imported electricity | Electricity - Annual factor | Assumed the reports from suppliers are correct. | | |

| GHG emissions category | GHG emissions source or sink subcategory | Overview of activity data and evidence | Explanation of uncertainties or assumptions around your data and evidence | Use of default and average emissions factors | Pre-verified data |
|---|---|---|---|---|---|
| Overall assessment of uncertainty for Category 2 emissions and removals | | 7% | Medium | | |
| Category 3: Indirect emissions from transportation | Business travel - Transport (non-company owned vehicles) | Rental Car average (fuel type unknown), Air travel domestic (average), Taxi (regular) | Assumed the reports from the suppliers are correct. | The internal claims system and the system which our suppliers use, does not yet track the fuel litres or kilometres travelled. | No |
| | Business travel - Accommodation | Accommodation - New Zealand | Assumed the reports from the suppliers are correct. | | No |
| Overall assessment of uncertainty for Category 3 emissions and removals | | 37% | Medium | | |
| Category 4: Indirect emissions from products used by organisation | Purchased goods and services | Paper (envelopes - white), Paper use - default | Assumed the reports from the suppliers are correct and that the calculations are correct. | | No |
| | Disposal of solid waste - Landfilled | Waste landfilled LFGR Mixed waste | Assumed the calculations and methods of measurement from suppliers and internal staff are correct. | | No |
| | Transmission of energy (T&D losses) | Electricity distributed T&D losses, Natural Gas distributed T&D losses | Assumed the reports from suppliers are correct. | | No |
| Overall assessment of uncertainty for Category 4 emissions and removals | | 36% | Medium | | |

### A1.1.3 Excluded emissions sources and sinks

Emissions sources in Table 14 have been identified and excluded from this inventory.

**Table 14. GHG emissions sources excluded from the inventory**

| Business unit | GHG emissions source or sink | GHG emissions category | Reason for exclusion |
|---|---|---|---|
| Airport | Flight related emissions | Category 4 | Whakatāne District Council does not have operational control over Air Chathams flight schedule. Therefore, flight related emissions are excluded from our footprint. |
| Waste | Solid waste emissions | Category 4 | Community waste management services are contracted to Waste Management. As they are part of the Toitū Carbon Reduce Programme, emissions from these services are not currently included. We plan to include these in scope 3 emissions as we improve our reporting processes. |
| Leases | Commercial properties on council-owned land | Category 4 | 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. |
| Staff | Employee work from home | Category 3 | No data has yet been collected to understand how many days per week employees work from home. |
| Staff | Employee commuting | Category 3 | No data has yet been collected to understand employee commuting |
| Freight | Purchase related emissions | Category 4 | No data is collected on freight emissions. |

## 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*

(no answer provided)

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 conversion[5].

Where applicable, unit conversions applied when processing the activity data has been disclosed.

There are systems and procedures in place that will ensure applied quantification methodologies will continue in future GHG emissions inventories.

[5] If emission factors have been derived from recognised publications approved by the programme, which still use earlier GWPs, the emission factors have not been altered from as published.

## A1.2.2 GHG Storage and liabilities

### A1.2.2.1 GHG STOCKS HELD ON SITE

Refrigerants and fuels may be stored on site, but their accidental leakage or release could result in a large increase in emissions for that period. Refrigerants such as HFCs, PFCs and $SF_6$ are GHGs with high global warming potentials, so material volumes of these or fuel are reported as potential liabilities.

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

| GHG gas stock held | Quantity | Unit | Potential liability ($tCO_2e$) |
|---|---|---|---|
| Diesel commercial | 1,720.00 | litres | 4.61 |
| HFC-32 | 30.00 | kilograms | 20.31 |
| Petrol | 40.00 | litres | 0.09 |
| Pre-calculated ($tCO_2$-e) - Forest contingent liability | 4,816.00 | tonnes | 4,816.00 |
| Pre-calculated ($tCO_2$-e) - Forest potential liability | 21,110.00 | tonnes | 21,110.00 |
| R-407C | 107.40 | kilograms | 174.44 |
| R-410A | 176.95 | kilograms | 340.36 |
| Total potential liability | | | 26,465.82 |

## 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.

# APPENDIX 2: SIGNIFICANCE CRITERIA USED

**Table 16. 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 the 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 EMSOL 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. Electricity efficient lights are selected in procurement. | 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 for spending funds on accommodation to attend events. | Not deemed as significant as indirect emissions are low. | Emissions from the accommodation activities. | 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. | Possible reputational risk for spending funds on flights to attend events. | 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 |
| 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 possible. | 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 |
| Taxi | <1% | This is only done when travel is essential for staff activities. | No identified risk exposure. | Use electric or hybrid cars taxis if possible. | 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? |
|---|---|---|---|---|---|---|---|---|
| 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 when they become 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 help and 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<br>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<br>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<br>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<br>9.3.2 i | TR5.4, TR5.6, TR5.17, TR5.18, |
| A1.1.3 Excluded emissions sources and sinks | 9.3.1 i | TR5.21, TR5.22, TR5.23 |
| A1.2 Quantified inventory of emissions and removals | | |
| A1.2.1 Calculation methodology | 9.3.1 m, n, o, t | |
| A1.2.2 Historical recalculations | | |
| A1.2.3 GHG Storage and liabilities | | |
| A1.2.3.1 GHG stocks held on site | | TR4.18 |
| A1.2.3.2 Land-use liabilities | 9.3.3. | TR4.19 |

| | | |
|---|---|---|
| A1.2.4 Supplementary results | | |
| A1.2.4.1 Carbon credits and offsets | 9.3.3.3 | |
| A1.2.4.2 Purchased or developed reduction or removal enhancement projects | 9.3.2 c | |
| A1.2.4.3 Double counting and double offsetting | | |
| Appendix 2: Significance criteria used | 9.3.1.e | TR4.12 |
| Appendix 3: Certification mark use | | TR3.6 |
| Appendix 4: References | | |
| Appendix 5: Reporting index | | |
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