



# 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



Greater Wellington Regional Council

Prepared by (lead author): Ben Barrett

Dated: 15 August 2022

Verification status: Reasonable for mandatory scope of programme and Limited for additional categories

Measurement period: 01 July 2020 to 30 June 2021

Base year period: 01 July 2018 to 30 June 2019

*Approved for release by:*

A handwritten signature in black ink, appearing to read "Nigel Corry".

Nigel Corry

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

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

## AVAILABILITY

This report is available to the public via Toitū Envirocare Website and to all employees via GWRC intranet.

## 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<sup>1</sup>, which is based on the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) and ISO 14064-1:2018 Specification with Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals<sup>2</sup>. 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.

<sup>1</sup> Programme refers to the Toitū carbonreduce and the Toitū net carbonzero programmes.

<sup>2</sup> 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

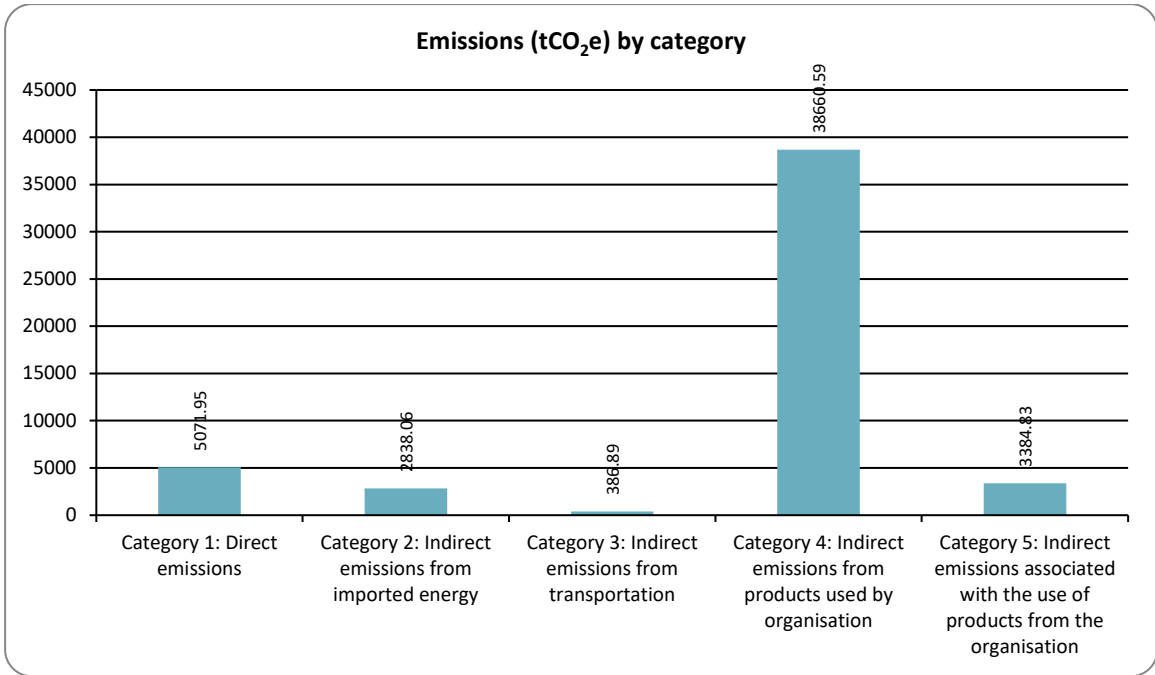
This is the annual greenhouse gas (GHG) emissions inventory and management report for Greater Wellington Regional Council covering the measurement period 01 July 2020 to 30 June 2021.<sup>3</sup>

Greater Wellington can proudly say we've collectively made great progress in terms of understanding our emissions profile and how to reduce that substantively over the decade. However, we are the first to admit, there is still much mahi to do. The emissions inventory and independent audit play a vital role in making our full carbon footprint explicit, creating an emissions record, and showing the business where we must improve and change to reduce emissions. While emissions have risen over the year, this rise before reduction has been anticipated. We are confident that our planned business change will create climate positive outcomes that meet our Long-Term Plan goals of significant emissions reductions across operations and to become carbon neutral by 2030.

**Table 1: Inventory summary**

Category (ISO 14064-1:2018)	Scopes (ISO 14064-1:2006)	2019	2020	2021
Category 1: Direct emissions	Scope 1	3,885.69	3,981.79	5,071.95
Category 2: Indirect emissions from imported energy	Scope 2	3,126.00	3,055.18	2,838.06
Category 3: Indirect emissions from transportation	Scope 3	518.78	552.87	386.89
Category 4: Indirect emissions from products used by organisation		32,589.61	32,028.81	38,660.59
Category 5: Indirect emissions associated with the use of products from the organisation		3,759.83	3,906.81	3,384.83
Category 6: Indirect emissions from other sources		0.00	0.00	0.00
<b>Total direct emissions</b>		<b>3,885.69</b>	<b>3,981.79</b>	<b>5,071.95</b>
<b>Total indirect emissions</b>		<b>39,994.22</b>	<b>39,543.68</b>	<b>45,270.38</b>
<b>Total gross emissions</b>		<b>43,879.91</b>	<b>43,525.47</b>	<b>50,342.33</b>
Category 1 direct removals		0.00	0.00	0.00
Certified renewable electricity certificates		0.00	0.00	0.00
Purchased emission reductions		0.00	0.00	0.00
<b>Total net emissions</b>		<b>43,879.91</b>	<b>43,525.47</b>	<b>50,342.33</b>

<sup>3</sup> Throughout this document "emissions" means "GHG emissions".



**Figure 1: Emissions (tCO<sub>2</sub>e) 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 Greater Wellington Regional Council.

The purpose of this report is to inform all stakeholders about the trend of the Greater Wellington Group of companies greenhouse gas emissions over time. Regular updated and audited greenhouse gas reporting is essential to understand reduction opportunities and provide a foundation to communicate our intended emissions reduction pathway. This emissions reduction pathway aligns with our Long-Term Plan, Council's public declaration that we are in a Climate Emergency, and our Corporate Carbon Neutrality Action Plan.

The report informs Council, leadership, and management about our emissions trends, how they affect each part of the business, and are significant to services and operations. The report is essential to inform our organisation where strategic opportunities are for emissions reductions, accurately recording data, showing changes in emissions over time, and informing the business about emissions and for business proposal analysis. The report provides transparent disclosure of emissions for public view, informing our stakeholders and customers about our emissions activities.

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 2020 to 30 June 2021.

Category	Toitū carbon mandatory boundary (tCO <sub>2</sub> e)	Additional emissions (tCO <sub>2</sub> e)	Total emissions (tCO <sub>2</sub> e)
Category 1: Direct emissions	5,071.95 Diesel stationary combustion, Diesel, Natural Gas distributed commercial, Petrol premium, Petrol regular, Petrol	0.00	5,071.95
Category 2: Indirect emissions from imported energy	2,838.06 Electricity	0.00	2,838.06
Category 3: Indirect emissions from transportation	386.89 Air travel domestic (average), Car Average (unknown fuel type), Taxi (regular), Air travel long haul (average), Air travel short haul (average), Rental Car Medium (petrol 1600-2000cc) - post-2015, Rental Car average (fuel type unknown), Freight Road rigid truck (average)	0.00	386.89
Category 4: Indirect emissions from products used by organisation	1,957.60 Electricity distributed T&D losses, Natural Gas distributed T&D losses, Waste landfilled LFGR Mixed waste, Waste landfilled LFGR Garden, Waste to Landfill Sludge (CO <sub>2</sub> )	36,702.99 Diesel, Enteric Fermentation Dairy Cattle, Enteric Fermentation Horses, Enteric Fermentation Non-dairy cattle, Enteric Fermentation Sheep, Fertiliser use Lime, Fertiliser use Nitrogen, Jet A1, Petrol, CO <sub>2</sub>	38,660.59

Category	Toitū carbon mandatory boundary (tCO <sub>2</sub> e)	Additional emissions (tCO <sub>2</sub> e)	Total emissions (tCO <sub>2</sub> e)
Category 5: Indirect emissions associated with the use of products from the organisation	0.00	Electricity 3,384.83	3,384.83
Category 6: Indirect emissions from other sources	0.00	0.00	0.00
<b>Total direct emissions</b>	<b>5,071.95</b>	<b>0.00</b>	<b>5,071.95</b>
<b>Total indirect emissions</b>	<b>5,182.55</b>	<b>40,087.82</b>	<b>45,270.38</b>
<b>Total gross emissions</b>	<b>10,254.50</b>	<b>40,087.82</b>	<b>50,342.33</b>
Category 1 direct removals	0.00	0.00	0.00
Certified renewable electricity certificates	0.00	0.00	0.00
Purchased emission reductions	0.00	0.00	0.00
<b>Total net emissions</b>	<b>10,254.50</b>	<b>40,087.82</b>	<b>50,342.33</b>
<b>Emissions intensity</b>		<b>Mandatory emissions</b>	<b>Total emissions</b>
Operating revenue (gross tCO <sub>2</sub> e / \$Millions)		23.71	116.40

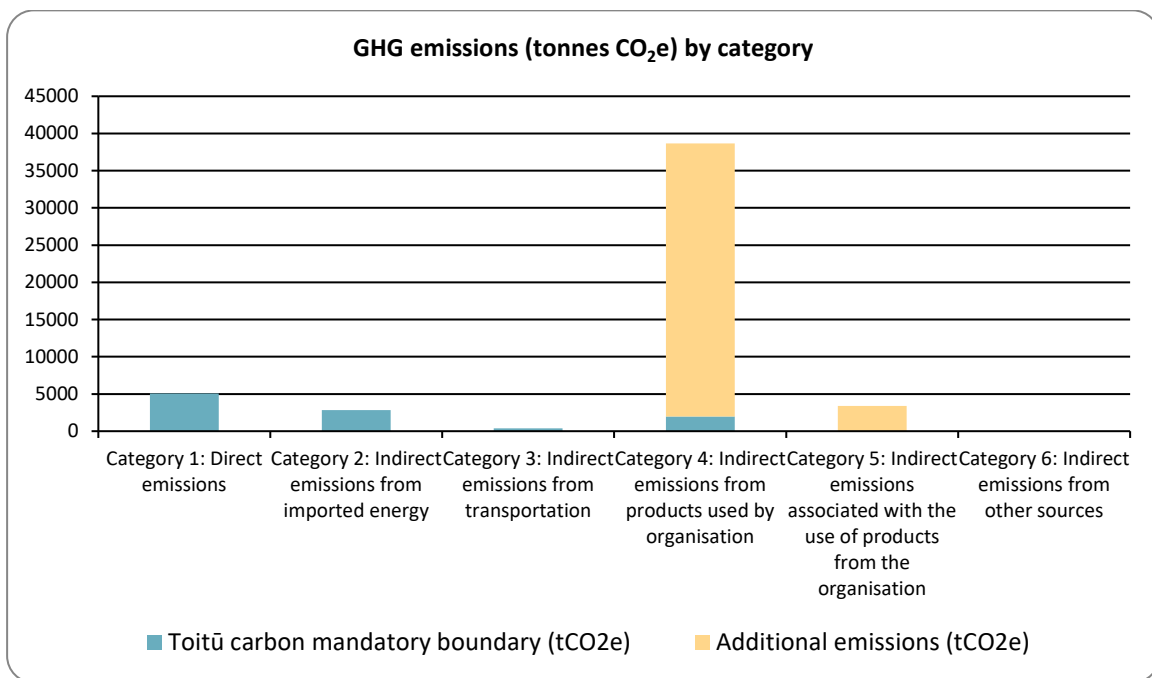


Figure 2: GHG emissions (tonnes CO<sub>2</sub>e) by category



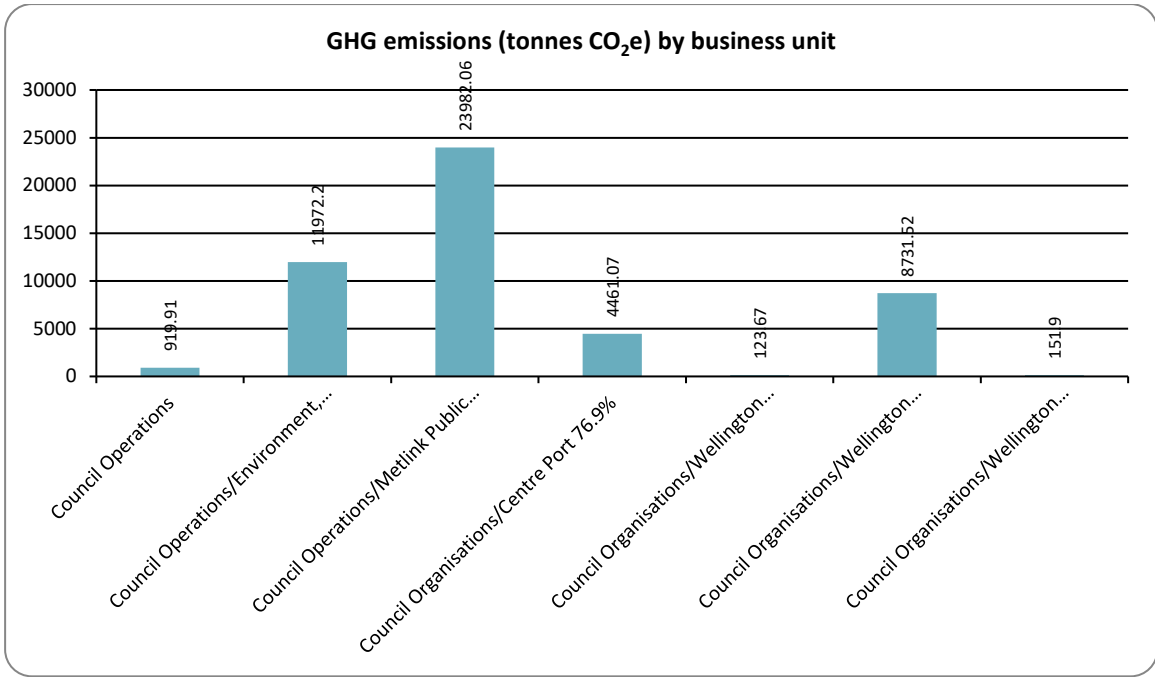


Figure 3: GHG emissions (tonnes CO<sub>2</sub>e) by business unit

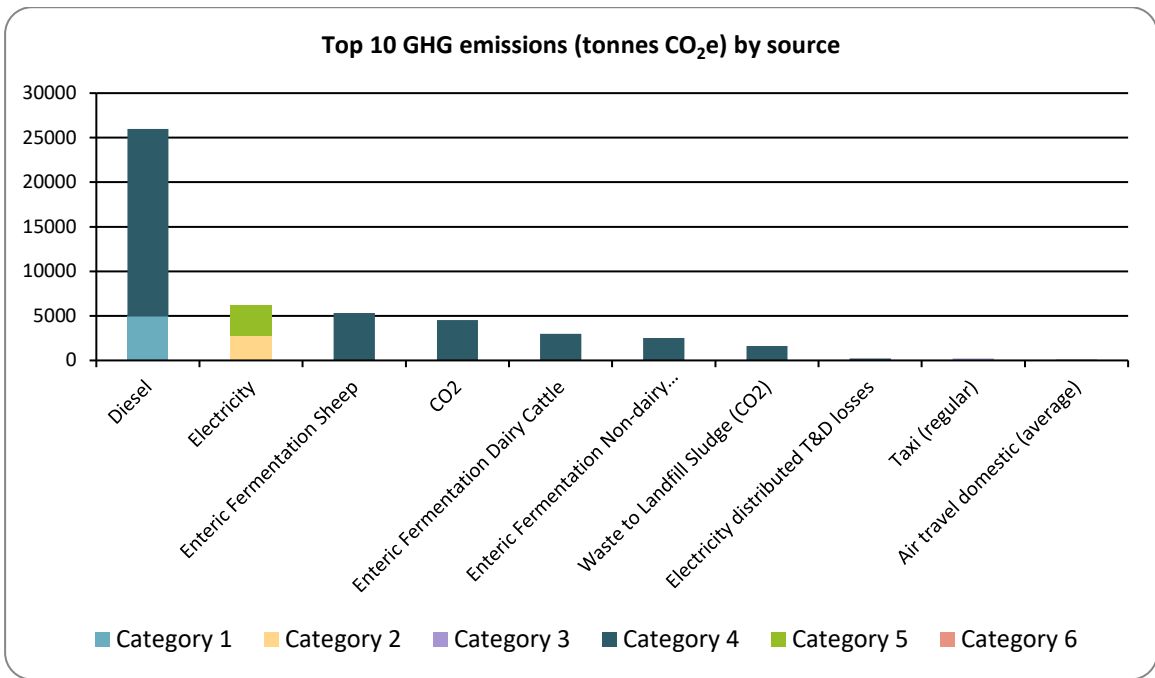


Figure 4: Top 10 GHG emissions (tonnes CO<sub>2</sub>e) by source

## 1.3. ORGANISATIONAL CONTEXT

### 1.3.1. Organisation description

Greater Wellington Regional Council promotes quality of life through environmental management while meeting the economic, cultural, and social needs of the community.

Our responsibilities include environmental management, flood protection and land management, provision of regional parks, regional public transport planning and service procurement, and regional water catchment and treatment. The Council has equity share in several Council Organisations including Centre Port, Wellington Water, Wellington NZ, and Wellington Regional Stadium Trust.

The Council has a Climate Emergency Programme of work involving adaptation and mitigation relating to the region and across operations and services. The Council has committed to reduce emissions as much as possible over the next decade and become carbon neutral by 2030. The Council intends to begin offsetting 40% (net neutral) emissions in 2025, and ten percent more each year after that until it has reached 100% net neutral in 2030. The Council has aspiration to be a net carbon sink and able to provide greenhouse gas emission offsets for other organisations. The Council is also signatory of the Carbon Disclosure Project (CDP) and publicly discloses carbon data in its Annual Report.

#### **Commitment to certification**

Climate Change is beginning to have a wide and varied effect on the Wellington region and Greater Wellington Group of companies. The latest regional climate change long term projections report (commissioned by Greater Wellington can be found here <http://www.gw.govt.nz/climate-change/>) shows that given the current global emissions trajectory the intensity of the regional impact of climate change will continue to increase. More severe droughts, infrequent and more intense rainfall, larger storms, and climate related events are anticipated. This will affect all parts of Greater Wellington operations, as well as the Wellington region that the organisation seeks to protect and enhance.

Greater Wellington has been committed to measuring carbon emissions since 2015. From 2019 on, the Council has committed to independently audit its carbon footprint in accordance with Toitū's Carbon Reduce programme. The programme includes the rigorous international (ISO14064) standard regarding emissions measurement and verification. The Toitū programme requires documented accountability and ongoing reduction plans to assist in the achievement of emissions reduction commitments.

In 2019 the Council committed to reduce emissions as much as possible over the decade and become carbon neutral by 2030.

#### **GHG Reporting**

Reporting and certification of carbon emissions supports planning and policy development, business planning and analysis across all parts of the Council.

This reporting aligns with our Long-Term Plan, Council's public declaration that we are in a Climate Emergency and our Corporate Carbon Neutrality Action Plan. The report is essential for Councillors (governance), leadership and management to understand emissions trends and how they affect the business, or are significant to the organisation. The report is essential to informing our organisation about where the strategic opportunities are for emissions reductions, accurately recording and showing changes emissions over time and informing the business about emissions, whether for awareness raising, or to be used as data for Council decisions and business proposals.

#### **Climate Change Impacts**

Climate change is already having a significant impact on Greater Wellington Council operations and the region. Climate change brings more complexity around the suitability of assets and services in the future. Climate change is now central to the Council's Long-Term Plan. More frequent and severe weather events are impacting levels service delivery. The regional climate modelling report commissioned by GWRC informs us that the changes will become more pronounced by 2030 and more extreme to 2050. Identifying the best

strategic approach to the mitigation and adaptation of climate change for the Council is becoming increasingly significant.

### 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**

This report is essential to inform Councillors, leadership, and management about emissions trends. Intended audiences of this report are Greater Wellington councillors, leadership, staff, and stakeholders. Aspects from the report are used in the Annual Report and to inform the public. The report is intended to be used by Council to identify each business group's part in the management and reduction of emissions.

The report is essential for informing our organisation about the strategic opportunities for emissions reductions, accurately recording and showing changes in emissions over time, informing business groups about their emissions and for analysis in Council decisions and business proposals.

#### **Other schemes and requirements**

This inventory also reports to the Carbon Disclosure Project (CDP).

### 1.3.3. Person responsible

General Manager Strategy is responsible for overall emission inventory measurement and reduction performance, as well as reporting results to top management. General Manager Strategy 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**

The Chief Executive has overall authority and performance indicators about emissions reduction performance and climate change related mitigation and adaptation activities in operations and in the Wellington region. The General Manager Strategy is the overarching manager for the Climate Emergency Programme of work. The Climate Change Team Lead, manages the Climate Emergency Response Programme, including the budget, and holds overall responsibility for reporting results to Council and Leadership.

The data process manager and author of the report is the Corporate Sustainability Advisor. This person has ten years experience in the field and has managed the GWRC carbon footprint processing of data and reports for the past five years. This person is specialist and has post graduate qualifications and on the job training to deliver these tasks. There are many contributors across the business that contribute to reporting, some are managers and others have a specialist role in Council. Staff who provide data to the carbon footprint are specialists in their respective fields and highly qualified to contribute data. Identification of process and reporting improvements and staff training is a necessary and ongoing part of the annual cycle surrounding the carbon footprint.

#### **Top management commitment**

At the beginning of 2020, newly elected Councillors formed a Climate Committee that governs the Climate Emergency Response Programme of work. The Chief Executive has climate change related key performance indicators. The General Manager Strategy owns climate change performance responsibility for the Chief executive. Responsibility for that KPI cascades down to all members of the leadership team. Progress on the Climate Emergency Response Programme is reported to leadership.

## Management involvement

The Climate Change Team Lead monitors performance and delivery of the carbon footprint. The Corporate Sustainability Advisor is responsible for delivery of the data acquisition, audit, and reporting, they collaborate with management and staff across the business in this process. The Leadership Team formally receive the inventory report and a presentation about the carbon footprint.

### 1.3.4. Reporting period

#### Base year measurement period: 01 July 2018 to 30 June 2019

The base period results from the first year the Council used Toitū's Carbon Reduce Standard, that includes the application of international standard - ISO10064. At this point the boundary of the carbon footprint was redefined to include the GW Group of companies as well as significant service contracts, including regional public transport and land management. The size of the footprint substantively increased by a factor of four and was no longer comparable to previous years.

#### Measurement period of this report: 01 July 2020 to 30 June 2021

The current inventory reporting frequency is an annual cycle. This aligns with annual report, in which an inventory summary is reported for public accountability. Emissions report data is also used to inform business planning in regard to the Long-Term Plan (a ten-year plan), that plan is fully reviewed by the organisation every three years.

The base period results from the first year the Council used Toitū's Carbon Reduce Standard, that includes the application of international standard - ISO14064. At this point the boundary of the carbon footprint was redefined to include the GW Group of companies as well as significant service contracts, including regional public transport and land management, that the organisation is responsible for delivering. The size of the footprint substantively increased by a factor of three and was no longer comparable to previous years.

### 1.3.5. Organisational boundary and consolidation approach

An equity share consolidation approach was used to account for emissions.<sup>4</sup>

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

#### Justification of consolidation approach

Overall an equity control approach has been used to determine the actual influence on emissions the Council has all on business across its Group of companies. A large proportion of the services provided to the public by Greater Wellington are delivered through service provider contracts and or Council Organisations that have separate governance and management.

The equity control approach has been applied where Council Organisations are part owned by Greater Wellington and managed by others. The equity approach has been used for business that Greater Wellington has full control over, and where it remains in full ownership of assets regardless if others manage those assets. An equity control approach has also been used for major contracts where Greater Wellington is the financial sponsor and has strong influence of the resulting contractual procurement requirements that determines the nature of the subsequent business.

#### Organisational structure

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

Greater Wellington is the parent company of all operations and the Council Organisations (the Group) on the chart. Corporate parts have operational control. Council organisations are joint ventures with an equity share.

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<sup>4</sup>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.

This share is designated on the chart as percentage. For contracts and where asset ownership is managed by others, financial control and contractual control gives Greater Wellington high level of influence over the nature of the business procured and how that will be managed. In those cases full ownership of greenhouse gas emissions is designated to Greater Wellington as the service procurer and sponsor. All business on this chart flows through Greater Wellington financial accounts.

**GWRC emissions boundary**

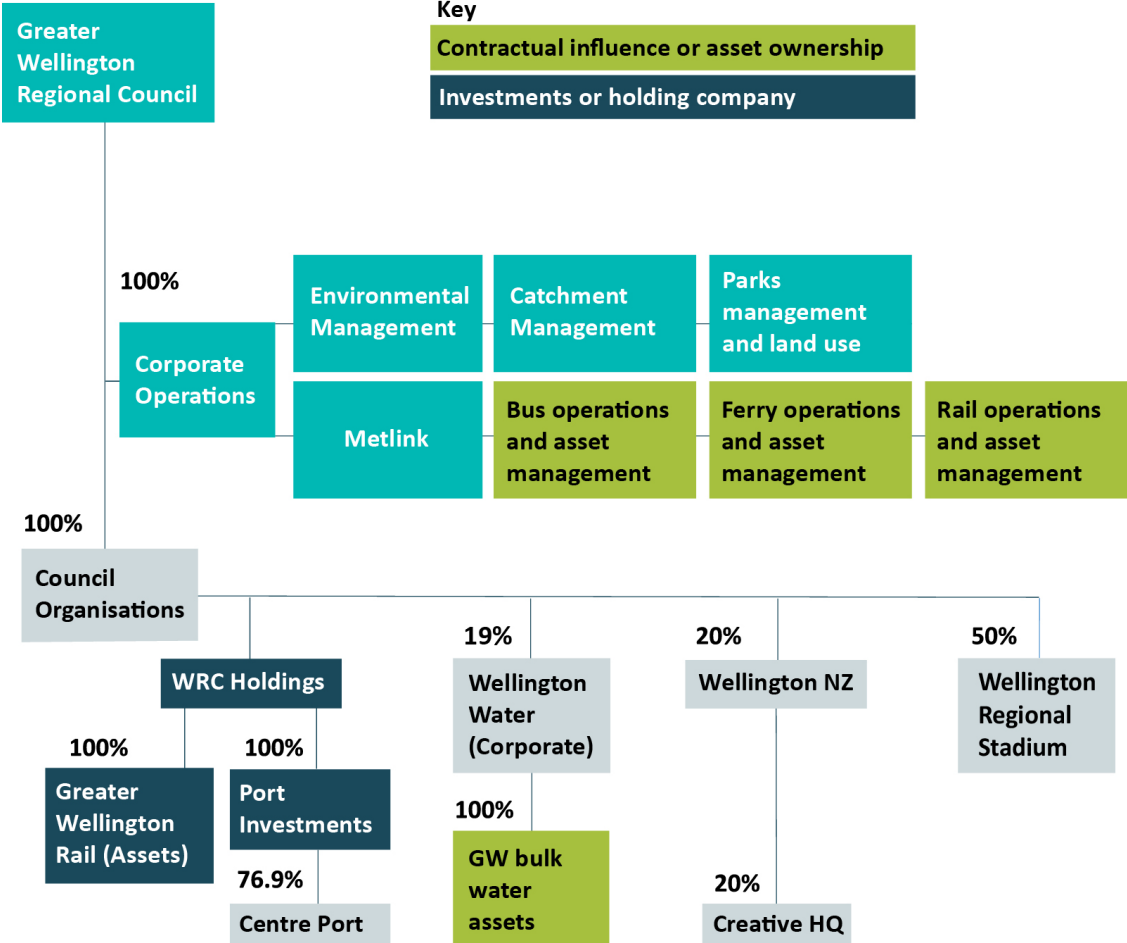


Figure 5: Organisational structure

Table 3. Brief description of business units, sites and locations included in this emissions inventory

Business unit	Address	Purpose
Greater Wellington Regional Council	100 Cuba Street, Te Aro Wellington, 6011, New Zealand	Corporate office & environmental services base
Centre Port	1 Hinemoa Street, Pipitea, Fryatt Quay, Wellington 6011	Corporate office & port operations
Wellington Water	Level 4, IBM House, 25 Victoria Street, Petone, Lower Hutt	Corporate office
Wellington Economic Development Agency (Wellington NZ)	See Wellington City Council pre-audited data	Corporate office
Wellington Regional Stadium Trust	See Wellington City Council pre-audited data	Corporate office

### 1.3.6. Excluded business units

The term Corporate Operations in this context refers to most corporate business group (unit) emissions. Other business units, Public transport and Environment have significant emissions in their own right and have been separated out from the Corporate Operations business group to separate emissions for reporting. From the 2020-2021 financial year reporting period onward, emissions from Council Organisations, Wellington NZ, and Creative HQ, no longer appear in the GWRC inventory. The other shareholder Wellington City Council has 75% ownership. They have opted to own and report 100% of these emissions as this portion of emissions is insignificant to the total footprint and it is more practical for a small organisation to report to one entity. Emissions reported in this inventory from CentrePort are not yet verified. CentrePort is currently undertaking an external audit that was not complete by this inventory verification close off date.

# CHAPTER 2: EMISSIONS MANAGEMENT AND REDUCTION REPORT

## 2.1. EMISSIONS REDUCTION RESULTS

Overall emissions reduction targets have not been met this reporting period. Significant progress has been made in commitments to reductions of the Council's two largest sources of emissions over the medium term and long term. A major contract for an additional 102 new electric buses, additional electric bus conversions to be added to the Metlink regional public transport fleet were completed. Further electrification of the public transport is planned as contract renewal opportunities arise over the coming years. Significant reductions are planned for grazing licenses on Council owned land. One renewal application has been rejected by Council in 2021. Further grazing related emissions reductions can be expected over coming years as contract renewals arise. With the procurement of the second of two main offices complete over the period, Greater Wellington has increased office electricity efficiency by a significant amount. Significant effort has taken place to influence building performance further from the base design. Accurate and clear building performance data resulting from office improvements will be available next reporting cycle.

**Table 4: Comparison of historical GHG inventories**

Category	2019	2020	2021
Category 1: Direct emissions	3,885.69	3,981.79	5,071.95
Category 2: Indirect emissions from imported energy	3,126.00	3,055.18	2,838.06
Category 3: Indirect emissions from transportation	518.78	552.87	386.89
Category 4: Indirect emissions from products used by organisation	32,589.61	32,028.81	38,660.59
Category 5: Indirect emissions associated with the use of products from the organisation	3,759.83	3,906.81	3,384.83
Category 6: Indirect emissions from other sources	0.00	0.00	0.00
<b>Total direct emissions</b>	<b>3,885.69</b>	<b>3,981.79</b>	<b>5,071.95</b>
<b>Total indirect emissions</b>	<b>39,994.22</b>	<b>39,543.68</b>	<b>45,270.38</b>
<b>Total gross emissions</b>	<b>43,879.91</b>	<b>43,525.47</b>	<b>50,342.33</b>
Category 1 direct removals	0.00	0.00	0.00
Certified renewable electricity certificates	0.00	0.00	0.00
Purchased emission reductions	0.00	0.00	0.00
<b>Total net emissions</b>	<b>43,879.91</b>	<b>43,525.47</b>	<b>50,342.33</b>
<b>Emissions intensity</b>			
Operating revenue (gross tCO <sub>2</sub> e / \$Millions)	95.99	83.74	99.32
Operating revenue (gross mandatory tCO <sub>2</sub> e / \$Millions)	18.45	15.77	20.23

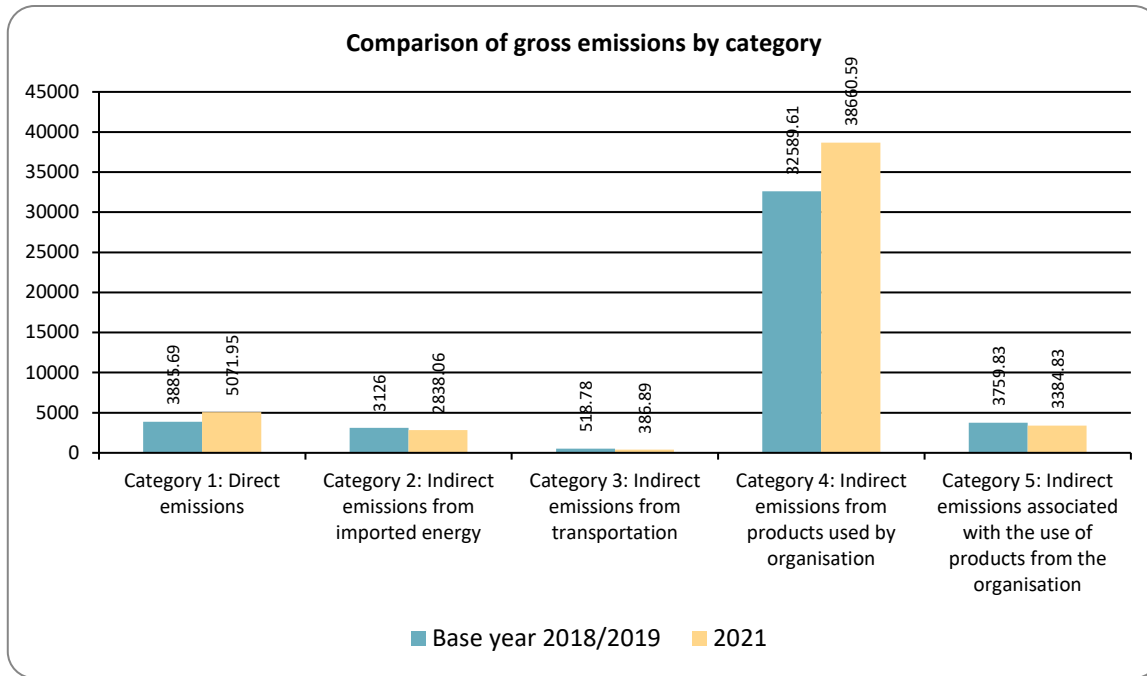


Figure 6: Comparison of gross emissions by category between the reporting periods





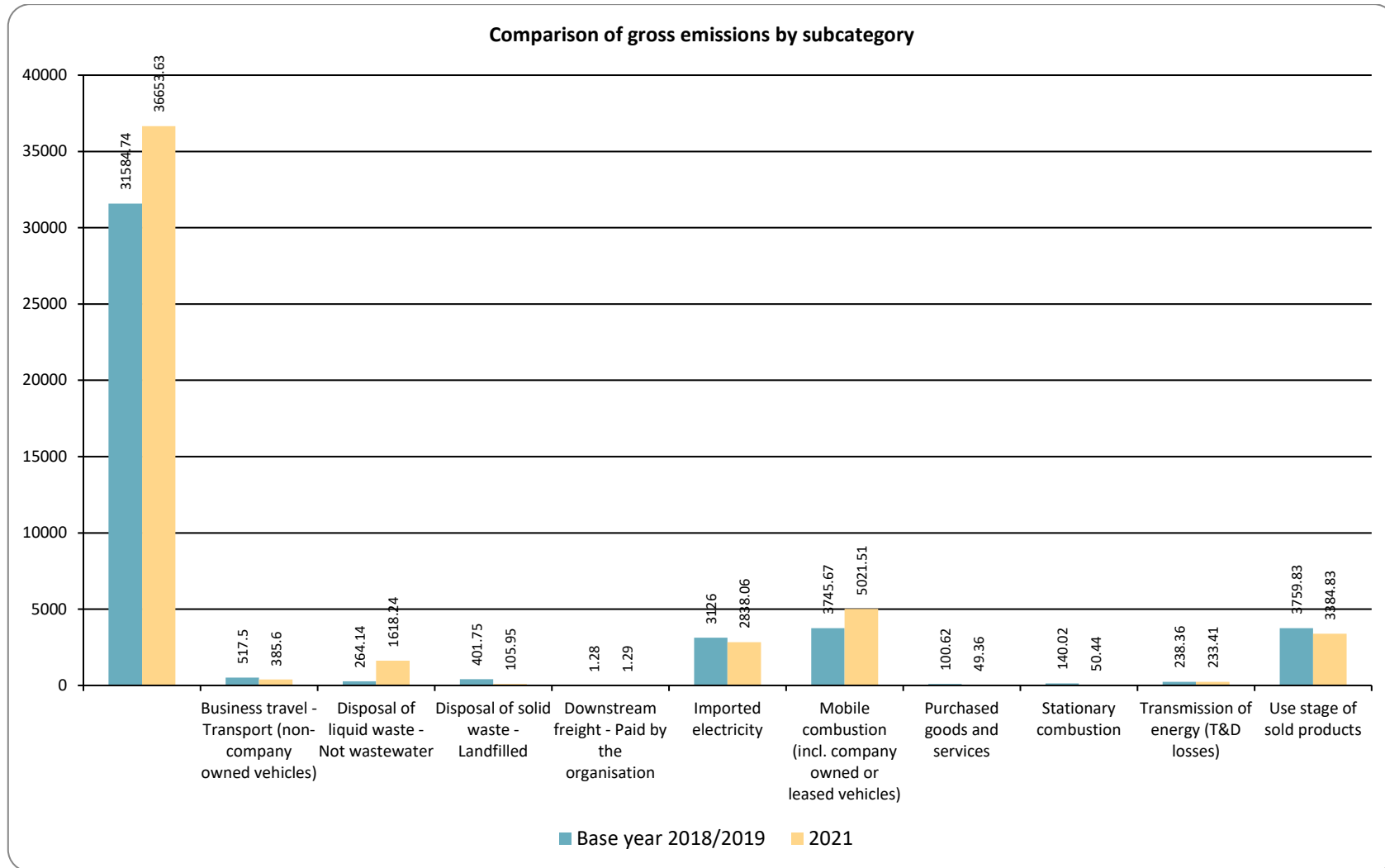


Figure 7: Comparison of gross emissions by subcategory between the reporting periods



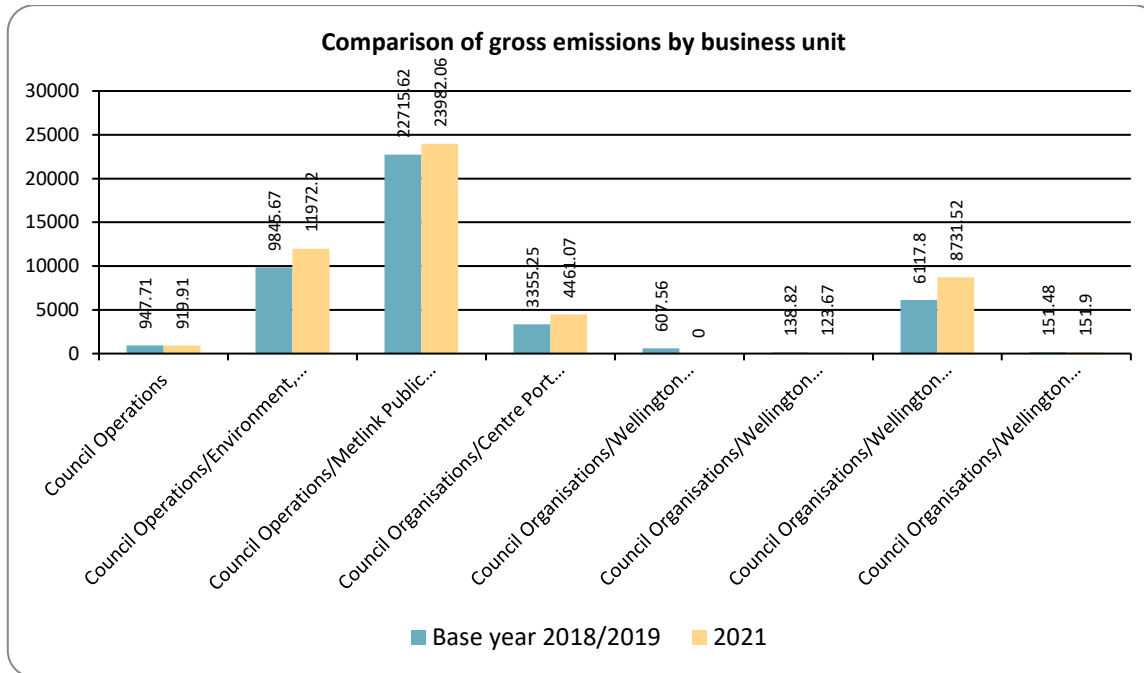


Figure 8: Comparison of gross emissions by business unit between the reporting periods

Performance against target has not been provided

Figure 9: Performance against target since base year

Table 5. Performance against plan

Performance
(No information supplied)

## 2.2. SIGNIFICANT EMISSIONS SOURCES

### Significant sources

The largest source of emissions is produced through the use of diesel as a fuel for regional public transport (Metlink buses and trains), operational fleets that include on and off-road vehicles and heavy machinery and other operations across the Greater Wellington Group. The greatest opportunity for Council to reduce emissions is in the reduction of diesel fuel used in public transport, operational off-road fleet vehicles and heavy machinery, though electrification as greater vehicle technology becomes available.

### Activities responsible for generating significant emissions

The second largest emissions source results from grazing animals and fertilizer from land use contractors on Council owned land and in regional parks. Land use change has been identified as an area for emissions reductions and this will need to happen to meet GWRC emissions reduction targets.

### Influences over the activities

The third largest source of emissions is purchased electricity used across the Greater Wellington Group offices, operations, and service delivery. The Council has direct control over limited portion of total group electricity use. Council manages and controls electricity in its main offices and many small sites, such as public transport stations and parks network facilities, and environmental monitoring stations. A significant proportion of electrical energy is consumed by Council Organisations Wellington Water and Centre Port, particularly to pump water from water catchments for municipal distribution. These entities have separate governance and management and are not under the direct management influence of Greater Wellington, who is a shareholder. A large proportion of electrical energy is consumed by public transport electric trains and increasingly in electric bus charging.

### Significant sources that cannot be influenced

The fourth largest source of emissions comes from Wellington Water waste to landfill sludge, a buy product of bulk water production. Wellington Water has separate governance and management to Greater Wellington to manage water assets that Greater Wellington owns. Current management influence of Wellington Water is limited to that of an equal shareholder with other councils. Wellington Water is also subject to national water reform, and will be restructured into a super entity yet to be formed. More certainty of future governance and ownership of Wellington Water is required to make sound asset investment evaluations.

## 2.3. EMISSIONS REDUCTION TARGETS

The organisation is committed to managing and reducing its emissions in accordance with the Programme requirements. Table 6 provides details of the emission reduction targets to be implemented. These are 'SMART' targets (specific, measurable, achievable, realistic, and time-constrained).

Greater Wellington Regional Council has committed to reduce the Group's emission as much as possible and becoming carbon neutral by 2030. In addition, the Council has committed to become 40% net carbon neutral by 2025. The Council will influence Council Organisations (those it has equity shares in) to attain the same targets.

These goals are in line with the need to keep average global temperatures below 1.5C above pre-industrial levels. The plan also meets the requirements of the New Zealand Government - outlined in the Climate Change Response (Zero carbon) Act 2019. The EMRP also meets the local Government Amendment Act 2019 purpose, for local authorities to play a broad role in promoting the social, economic, environmental, and cultural well-being of their communities, taking a sustainable development approach. Our emissions reduction goals also fulfil the United Nations Sustainable Development Goal, 17 - Action on Climate Change.

**Table 6. Emission reduction targets**

Target name	Baseline period	Target date	Type of target (intensity or absolute)	Categories covered	Target		KPI	Responsibility	Rationale
Electrifying the bus fleet	01 July 2018 to 30 June 2019	30/06/2030	Absolute	Category 1	75%	15,545 tCO <sub>2</sub> e	Total bus fleet emissions	GM Public Transport	Accelerate the implementation of an electric bus fleet in the region by 2030. * Subject to agreement and financial and planning support from other central and local government authorities.
Procurement of energy efficient office	01 July 2018 to 30 June 2019	30/06/2023	Absolute	Category 2	32%	114.8 tCO <sub>2</sub> e	Total CO <sub>2</sub> e resulting from total purchased main office energy (electricity and gas)	GM Corporate Planning	Procurement of the two office accommodation leases, the Wellington and Masterton, are underway. The Wellington office will have annual NABERS energy performance assessments over the 15-year lease agreement. Ongoing incremental energy performance improvements anticipated.
Reduce stock grazing emissions	01 July 2018 to 30 June 2019	30/06/2030	Absolute	Category 1	90%	8,433 tCO <sub>2</sub> e	Absolute reduction in stock head numbers	GM Environment	Review the future of grazing leases in regional parks as part of the review of the Parks Network Plan and options to use this land for native reforestation where appropriate to earn carbon credits. *Subject to multiple landowners and or leases adopting GW policy and guidelines.
Low carbon vehicle fleet	01 July 2018 to 30 June 2019	30/06/2030	Absolute	Category 1	80%	1,134 tCO <sub>2</sub> e	Absolute reduction in total emissions from all GW Group fleet vehicles	GM Strategy / GM Coronate Services	GW already has an EV first policy in place. And we have adopted a target of a fully electric [or low carbon] corporate vehicle fleet by 2030 (if mature technology is available).

## 2.4. EMISSIONS REDUCTION PROJECTS

In order to achieve the reduction targets identified in Table 6, specific projects have been identified to achieve these targets, and are detailed in Table 7 below.

**Table 7. Projects to reduce emissions**

Objective	Project	Responsibility	Completion date	Potential co-benefits	Potential unintended consequences	Actions to minimise unintended consequence
CEO responsibility for emissions targets	Allocate responsibility for corporate carbon emissions and attainment of the targets to the chief executive, with an associated performance indicator.	CEO	30/06/2020			
Carbon Policy	Introduce a carbon reduction policy for the organisation. Decisions must consider what impact they will have on Council's carbon target(s), with a strong bias towards those options that will avoid, reduce, or absorb emissions. The carbon reduction policy will be reflected in procurement policy.	GM Strategy Group	30/06/2021			
Carbon neutral Group by 2030	Align Council Organisations to reduce emissions and be carbon neutral by 2030.	GM Strategy Group	30/06/2022			
Secure 100% renewable and or carbon neutral electricity supplies	Investigate securing renewable electricity supplies. partnerships and/or direct investment. The Council is currently exploring the possibility of carbon neutral certified electricity in future contracts.	GM Corporate Planning	30/06/2021			
Explore electric vehicle fleet options	Investigate and evaluate options for off-road and high-performance four-wheel drive electric vehicles.	GM Strategy Group	30/06/2021			
Establish a low carbon acceleration fund	Use the potential liquidity of carbon credits (NZUs) GWRC has from its pre-1990 forests to create a 'low carbon acceleration fund'.	Treasury	30/06/2020			
Accelerate reforestation planting in regional parks	Allocate resources to accelerate reforestation planting in regional parks, plan future phases, secure external funding where possible and develop agreements with DOC regarding acquiring carbon credits associated with planting in Queen Elizabeth Park.	GM Strategy / GM Environment	30/06/2030			

Table 8 highlights emission sources that have been identified for improving source the data quality in future inventories.

**Table 8. Projects to improve data quality**

Emissions source	Actions to improve data quality	Responsibility	Completion date
GWRC owned land animal grazing emissions	GWRC Consolidated Stocktake Project. Consolidate all GWRC land use contracts and animal grazing numbers. Implement new business systems to fill data gaps, improve monitoring accuracy, and ensure ongoing and auditable record keeping. Requires monitoring and maintaining of up-to-date contract information and site specific maximum allowable grazing numbers of each animal type.	GM Environment/ GM Corporate Services	30/06/2023
Emissions liabilities	Complete consolidation of GWRC liabilities. Improve data gaps and quality.	GM Metlink/ GM Environment/ GM Corporate Services	30/06/2023

The emissions inventory chapter identified various emissions liabilities (see Liabilities section). Table 9 details the actions that will be taken to prevent GHG emissions from these potential emissions sources.

**Table 9. Projects to prevent emissions from liabilities**

Liability source	Actions to prevent emissions	Responsibility	Completion date
Permanent forest sink initiative (PFSI)	Best practice afforestation planning: Wild-fire prevention and containment planning. Health and safety planning.	Parks Manager	Ongoing
Public transport	Public transport strategy to increase patronage, efficiency and minimise breakdowns	GM Public Transport	Ongoing
Land use	Low Carbon policy: such as removal of high carbon land use grazing licences	GM Strategy	30/06/2021
Air conditioning /refrigeration units	Regular servicing and prevention of damage to units	Property manager	Ongoing
Fuel storage tanks	Regular servicing and prevention of damage to units	Site managers	Ongoing
Unintended accidents and or spills	Regular training and accident prevention, incident reporting system	Health and Safety	Ongoing

## 2.5. STAFF ENGAGEMENT

The Climate Emergency Response Programme has a project called the Climate Response Organisational Change Plan. This project is designed to have an all of organisation reach regarding climate change and emissions reductions awareness and training. The Climate Response Organisational Change Plan. This project is sponsored by a Programme Board who deliver outcomes to the Chief Executive. The project has dedicated resources and staff to project manage it, and will ensure ongoing engagement with staff in relation to emissions reductions over a multi-year period.

## 2.6. KEY PERFORMANCE INDICATORS

## 2.7. MONITORING AND REPORTING

Greenhouse gases will be monitored annually and reported publicly in the Annual Report. The Chief Executive has a climate change related KPI, and that performance is monitored annually by the Council (the governance board). The leadership team of general managers are responsible for delivering the carbon targets and projects to the Chief Executive. Emissions reduction targets and project KPIs are given in the respective tables contained in this report.

## 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 Greater Wellington Regional Council.xls).

**Table 10. Direct GHG emissions and removals, quantified separately for each applicable gas**

Category	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	NF <sub>3</sub>	SF <sub>6</sub>	HFC	PFC	Desflurane	Sevoflurane	Isoflurane	Emissions total (tCO <sub>2</sub> e)
Stationary combustion	50.31	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.44
Mobile combustion (incl. company owned or leased vehicles)	4,933.86	7.50	80.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,021.51
Emissions - Industrial processes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Removals - Industrial processes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Leakage of refrigerants	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Treatment of waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Treatment of wastewater	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions - Land use, land-use change and forestry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Removals - Land use, land-use change and forestry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fertiliser use	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Addition of livestock waste to soils	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Addition of crop residue to soils	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enteric fermentation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Addition of lime to soils	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Open burning of organic matter	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total net emissions</b>	<b>4,984.17</b>	<b>7.60</b>	<b>80.18</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5,071.95</b>



**Table 11. Non-biogenic, biogenic anthropogenic and biogenic non-anthropogenic CO<sub>2</sub> emissions and removals by category**

Category	Anthropogenic biogenic CO <sub>2</sub> emissions	Anthropogenic biogenic (CH <sub>4</sub> and N <sub>2</sub> O) emissions (tCO <sub>2</sub> e)	Non-anthropogenic biogenic (tCO <sub>2</sub> 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	11,032.86	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
<b>Total gross emissions</b>	<b>0.00</b>	<b>11,032.86</b>	<b>0.00</b>

## A1.1 REPORTING BOUNDARIES

### A1.1.1 Emission source identification method and significance criteria

The GHG emissions sources included in this inventory are those required for Programme certification and were identified with reference to the methodology described in the GHG Protocol and ISO 14064-1:2018 standards as well as the Programme Technical Requirements.

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

- All direct emissions sources that contribute more than 1% of total Category 1 and 2 emissions
- All indirect emissions sources that are required by the Programme.

(no 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 12 provides detail on the categories of emissions included in the GHG emissions inventory, an overview of how activity data were collected for each emissions source, and an explanation of any uncertainties or assumptions made based on the source of activity data. Detail on estimated numerical uncertainties are reported in Appendix 1.

**Table 12. GHG emissions activity data collection methods and inherent uncertainties and assumptions**

Appendix 1
(No information supplied)

### A1.1.3 Excluded emissions sources and sinks

Emissions sources in Table 13 have been identified and excluded from this inventory.

**Table 13. GHG emissions sources excluded from the inventory**

Business unit	GHG emissions source or sink	GHG emissions category	Reason for exclusion
GW Council Operations	Reimbursed: Air Travel/ rental cars	Category 3	Most emissions (estimated to be over 99%) from travel is included in the EIR. There is a very small proportion (believed to be estimated at < 1%) of travel that has been reimbursed separately to the corporate booking service. This record has not been coded separately from the in the general ledger from that of booked services, as a result a report is unobtainable. Calculating this would have taken excessive amount of time and we have excluded this due to the programme <i>de minimis</i> rule.
GW Council Operations	Refrigeration	Category 1	It is assumed that refrigeration (various fluorocarbons) is at a very low level (well under 1% of total emissions) and calculating this would be very time consuming. As a result there is no current record of refrigerants. Refrigerants have been excluded based on the programme <i>de minimis</i> rule.
GW Council Operations/ Environment	Fertiliser	Category 3	Fertiliser use in plant nurseries and all lease holdings, except Queen Elizabeth Park (which is included in the inventory).
GW Council Operations	Couriers & Postage	Category 3	It is assumed that this activity is at a very low level , well under 1% of total emissions. No general ledger code exists for these activities, as a result there is way to report this data. Calculating this would have taken excessive amount of time and we have excluded this based on the programme <i>de minimis</i> rule.
GW Council Operations	Waste to landfill	Category 4	Waste excluded for CentrePort, Wellington Water (corporate), Wellington NZ and Wellington Regional Stadium Trust.
GW Council Operations	Rental vehicles	Category 3	Estimated <i>de minimis</i> . Excluded based on the programme <i>de minimis</i> rule.
CentrePort	Workplace travel reimbursements	Category 3	No data available
CentrePort	Waste to landfill	Category 4	No data available
CentrePort	Refrigeration	Category 1	Estimated <i>de minimis</i> . Excluded based on the programme <i>de minimis</i> rule.
Wellington Water (corporate)	Refrigeration	Category 1	No data available

Business unit	GHG emissions source or sink	GHG emissions category	Reason for exclusion
Wellington Water (corporate)	Workplace travel reimbursements	Category 3	No data available
Wellington Water (corporate)	Waste to landfill	Category 4	No data available

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

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

(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<sup>5</sup>.

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

HFCs<sup>6</sup>, PFCs and SF<sub>6</sub> 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 14).

**Table 14. HFCs, PFCs and SF<sub>6</sub> GHG emissions liabilities**

GHG gas stock held	Quantity (kg)	Potential liability (tCO <sub>2</sub> e)
CO <sub>2</sub>	75,201,000.00	75,201.00
CO <sub>2</sub> (Refrigerant)	1,179.79	1.18
Diesel commercial	178,250.00	474.81
HFC-134a	14.49	20.72

<sup>5</sup> 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.

<sup>6</sup> HFC stock liabilities for systems under 3 kg can be excluded.

GHG gas stock held	Quantity (kg)	Potential liability (tCO <sub>2</sub> e)
HFC-32	190.35	128.49
R-290 (Propane)	0.47	0.00
R-410A	113.90	237.77
R-600A	1.77	0.01
<b>Total</b>	<b>75,380,750.77</b>	<b>76,063.97</b>

#### A1.2.2.2 LAND-USE LIABILITIES

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

**Table 15. Land-use liabilities (total)**

Site name	Total sequestration during reporting period (tCO <sub>2</sub> e)	Contingent liability (tCO <sub>2</sub> e)	Total potential liability (tCO <sub>2</sub> e)
Greater Wellington Regional Council	0	5368.366	75201.13

### A1.2.3 Supplementary results

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

#### A1.2.3.1 CONTRACTUAL INSTRUMENTS FOR GHG ATTRIBUTES

Contractual instruments are any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation, or for unbundled attribute claims. This includes Renewable Energy Certificates.

#### A1.2.3.2 DOUBLE COUNTING AND DOUBLE OFFSETTING

There are various definitions of double counting or double offsetting. For this report, it refers to:

- Parts of the organisation have been prior offset.
- The same emissions sources have been reported (and offset) in both an organisational inventory and product footprint.
- Emissions have been included and potentially offset in the GHG emissions inventories of two different organisations, e.g. a company and one of its suppliers/contractors. This is particularly relevant to indirect (Categories 2 and 3) emissions sources.
- Programme approved 'pre-offset' products or services that contribute to the organisation inventory
- The organisation generates renewable electricity, uses, or exports the electricity and claims the carbon benefits.
- Emissions reductions are counted as removals in an organisation's GHG emissions inventory and are counted or used as offsets/carbon credits by another organisation.

Double counting / double offsetting has not been included in this inventory.

#### Details

(No information supplied)

## APPENDIX 2: SIGNIFICANCE CRITERIA USED

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

<b>Appendix 2</b>
(No information supplied)

## APPENDIX 3: CERTIFICATION MARK USE

(No information supplied)

## 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
<a href="#">Cover page</a>	9.3.1 b, c, r 9.3.2 d,	TR8.2, TR8.3
<a href="#">Availability</a>	9.2 g	
<a href="#">Chapter 1: Emissions Inventory Report</a>		
<a href="#">1.1. Introduction</a>	9.3.2 a	
<a href="#">1.2. Emissions inventory results</a>	9.3.1 f, h, j	TR4.14
<a href="#">1.3. Organisational context</a>	9.3.1 a	
<a href="#">1.3.1. Organisation description</a>	9.3.1 a	
<a href="#">1.3.2. Statement of intent</a>		TR4.2
<a href="#">1.3.3. Person responsible</a>	9.3.1 b	
<a href="#">1.3.4. Reporting period</a>	9.3.1 l	TR5.1, TR5.8
<a href="#">1.3.5. Organisational boundary and consolidation approach</a>	9.3.1.d	TR4.3, TR4.5, TR4.7, TR4.11
<a href="#">1.3.6. Excluded business units</a>		
<a href="#">Chapter 2: Emissions Management and Reduction Report</a>		
<a href="#">2.1. Emissions reduction results</a>	9.3.1 f, h, j, k 9.3.2 j, k	TR4.14, TR6.18
<a href="#">2.2. Significant emissions sources</a>		
<a href="#">2.3. Emissions reduction targets</a>		TR6.1, TR6.2, TR6.4, TR6.6, TR6.8,
<a href="#">2.4. Emissions reduction projects</a>	9.3.2 b	TR6.8, TR6.11, TR6.12, TR6.13, TR6.14, TR6.15
<a href="#">2.5. Staff engagement</a>		TR6.1, TR6.9
<a href="#">2.6. Key performance indicators</a>		TR6.19
<a href="#">2.7. Monitoring and reporting</a>	9.3.2 h	TR6.2
<a href="#">Appendix 1: Detailed greenhouse gas inventory</a>	9.3.1 f, g	TR4.9, TR4.15
<a href="#">A1.1 Reporting boundaries</a>		
<a href="#">A1.1.1 Emission source identification method and significance criteria</a>	9.3.1 e	TR4.12, TR4.13
<a href="#">A1.1.2 Included emissions sources and activity data collection</a>	9.3.1 p, q 9.3.2 i	TR5.4, TR5.6, TR5.17, TR5.18,
<a href="#">A1.1.3 Treatment of biogenic emissions and removals</a>	9.3.1 g	TR4.15
<a href="#">A1.1.4 Excluded emissions sources and sinks</a>	9.3.1 i	TR5.21, TR5.22, TR5.23
<a href="#">A1.2 Quantified inventory of emissions and removals</a>		
<a href="#">A1.2.1 Calculation methodology</a>	9.3.1 m, n, o, t	
<a href="#">A1.2.2 Historical recalculations</a>		
<a href="#">A1.2.3 Liabilities</a>		
<a href="#">A1.2.3.1 GHG stocks held</a>		TR4.18
<a href="#">A1.2.3.2 Land-use liabilities</a>	9.3.3.	TR4.19

Section of this report	ISO 14064-1:2018 clause	Organisational Technical Requirement rule
<a href="#">A1.2.4 Supplementary results</a>		
<a href="#">A1.2.4.1 Contractual instruments for GHG attributes</a>	9.3.3	TR4.16, TR4.17
<a href="#">A1.2.4.2 Carbon credits and offsets</a>	9.3.3.3	
<a href="#">A1.2.4.3 Purchased or developed reduction or removal enhancement projects</a>	9.3.2 c	
<a href="#">A1.2.4.4 Double counting and double offsetting</a>		
<a href="#">Appendix 2: Significance criteria used</a>	9.3.1.e	TR4.12
<a href="#">Appendix 3: Certification mark use</a>		TR3.6
<a href="#">Appendix 4: References</a>		
<a href="#">Appendix 5: Reporting index</a>		