



GREENHOUSE GAS EMISSIONS INVENTORY REPORT

Toitū carbonreduce and Toitū carbonzero programme



Greater Wellington Regional Council

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Prepared by: Ben Barrett

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For the period: 01 July 2018 to 30 June 2019

Base year: 01 July 2018 to 30 June 2019

Verification status: Limited for mandatory emissions sources

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GREENHOUSE GAS EMISSIONS INVENTORY SUMMARY

Table 1: GHG emissions data summary.

	2019
Scope 1	3,887.87
Scope 2	3,126.00
Scope 3 Mandatory	1,156.49
Scope 3 Additional	34,611.92
Scope 3 One time	0.00
Total gross emissions	42,782.28
Certified green electricity	0.00
Purchased emission reductions	0.00
Net GHG emissions (all scopes)	42,782.28
Total gross GHG emissions per Turnover/revenue (\$Millions)	93.59
Total mandatory GHG emissions per Turnover/revenue (\$Millions)	17.87

Note: total mandatory emissions includes scope 1, scope 2, and scope 3 (i.e. excludes scope 3 one-time and scope 3 additional).

Table 2: Gross organisation GHG emissions by scope for current measurement year.

Indicator	tCO₂e
Scope 1	
Other fuels	140.02
Passenger vehicles - default age	0.12
Passenger vehicles - post-2015	2.06
Stationary Energy	2.04
Transport fuels	3,743.62
Scope 2	
Electricity	3,126.00
Scope 3	
Electricity	238.36
Freight	1.28
Passenger vehicles - default age	12.73
Scope 3 Additional	34,611.92
Transport - other	261.80

Indicator	tCO ₂ e
Waste	642.33
Total	42,782.28

Table 3: GHG emissions inventory summary by scope and business unit.

Component gas	Scope 1	Scope 2	Scope 3	Total	Removals	After removals
CH ₄	6.13	140.46	8,967.58	9,114.17	0.00	9,114.17
CO ₂	3,821.45	2,982.66	26,633.99	33,438.10	0.00	33,438.10
HFCs	0.00	0.00	0.00	0.00	0.00	0.00
N ₂ O	60.29	2.88	166.84	230.01	0.00	230.01
PFCs	0.00	0.00	0.00	0.00	0.00	0.00
SF ₆	0.00	0.00	0.00	0.00	0.00	0.00
Total	3,887.87	3,126.00	35,768.41	42,782.28	0.00	42,782.28

Table 4: Mobile and stationary combustion of biomass.

Biomass	Quantity	Tonnes Biogenic CO ₂
No activity recorded	n/a	n/a

Table 5: Deforestation of two hectares or more.

Source	Mass	tCO ₂ e
Deforestation tCO ₂ e (tCO ₂ e)	1,207.17	1,207.17

Table 6: GHG stock liability (see Table 13: for mass of individual gases).

Source	Units	Quantity	Potential Liability tCO ₂ e
Diesel commercial	litres	178,245.00	474.79

Table 7: Land-use liabilities.

Type of sequestration	Liability tCO ₂ e
Contingent liability (carbon sequestered this reporting period)	5,456.37
Potential sequestration liability (total carbon stock)	69,833.00

Table 8: Renewable electricity generation on-site.

Renewable generation on-site	kWh generated	tCO₂e avoided
On-site renewable generation (kWh) 1/07/2018 to 30/06/2019 - Greater Wellington Regional Council	1,320,175.00	128.98
On-site renewable generation (kWh) 1/07/2017 to 30/06/2018 - Wellington Water - managed GW assets 100%	980,125.00	95.76

Table 9: Purchased emissions reductions.

Type of emission reductions purchased	Amount	tCO₂e
Certified green electricity (tCO ₂ e)	0.00	0.00
Purchased emission reductions (tCO ₂ e)	0.00	0.00
Total	0.00	0.00

1 INTRODUCTION

This report is the annual greenhouse gas (GHG) emissions¹ inventory report for the named organisation. The inventory is a complete and accurate quantification of the amount of GHG emissions that can be directly attributed to the organisation's operations within the declared boundary and scope for the specified reporting period. The inventory has been prepared in accordance with the requirements of the **measure**-step² 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*³. Where relevant, the inventory is aligned with industry or sector best practice for emissions measurement and reporting.

2 STATEMENT OF INTENT

This inventory forms part of the organisation's commitment to gain Programme certification.

This inventory reports into the Toitū carbonreduce programme. This inventory also used to report into the Carbon Disclosure Project (CDP) of which Greater Wellington is a signatory.

3 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 environment management, flood protection and land management, provision of regional parks, regional public transport planning and service procurement, and catchment for several metropolitan water supplies. 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 in corporate operations. The Council has committed to reduce emissions as much as possible over the next decade and become carbon neutral by 2030. The Council has committed to begin offsetting 40% net neutral emissions by 30 June 2025 and ten percent more each year after that until achieving 100% neutrality by 30 June 2030. The Council has aspiration to be a net carbon sink, providing greenhouse gas emissions available for another organisation to offset. The Council's goals contribute directly to specific United Nations Sustainable Development Goals. The Council is also signatory of the Carbon Disclosure Project (CDP) and publicly discloses all carbon related data through the Annual Report.

¹ Throughout this document "emissions" means "GHG emissions".

² Programme refers to the Toitū carbonreduce and the Toitū carbonzero programme.

³ Throughout this document 'GHG Protocol' means the *GHG Protocol Corporate Accounting and Reporting Standard* and 'ISO 14064-1:2006' means the international standard *Specification with Guidance at the Organizational Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals*.

4 ORGANISATIONAL BOUNDARIES INCLUDED FOR THIS REPORTING PERIOD

Organisational boundaries were set with reference to the methodology described in the GHG Protocol and ISO 14064-1:2006 standards. The GHG Protocol allows two distinct approaches to be used to consolidate GHG emissions: the equity share and control (financial or operational) approaches. The Programme specifies that the operational control consolidation approach should be used unless otherwise agreed with the Programme.

A financial control consolidation approach was used to account for emissions. As Greater Wellington has complex governance and ownership model a multiple control approach has been used to represent actual ownership and level of influence regarding greenhouse gas emissions. Overall a financial control approach has been used to determine the actual influence across Council and the Council Organisations that make up the Group. All Group revenue that flows through Greater Wellington financial accounts has been included in the emissions inventory. The operational control approach has been used for business that Greater Wellington has full control over, and for assets that are owned and managed by others. However, the majority of services provided to the public by Greater Wellington are through service provider contracts and Council Organisations that have separate governance and management. For this business a financial control approach has been used where Greater Wellington is the financial sponsor and has strong influence over the nature of business resulting from these contracts. For Council Organisations, Greater Wellington is a shareholder and equity share has been applied. Full and thorough measurement of all greenhouse gas emissions under Greater Wellington influence is a requirement under the Local Government Act (DATE). The act requires that on behalf of the community Council must have regard for the sustainability of operations and public services it provides.

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. 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.

Greater Wellington structure

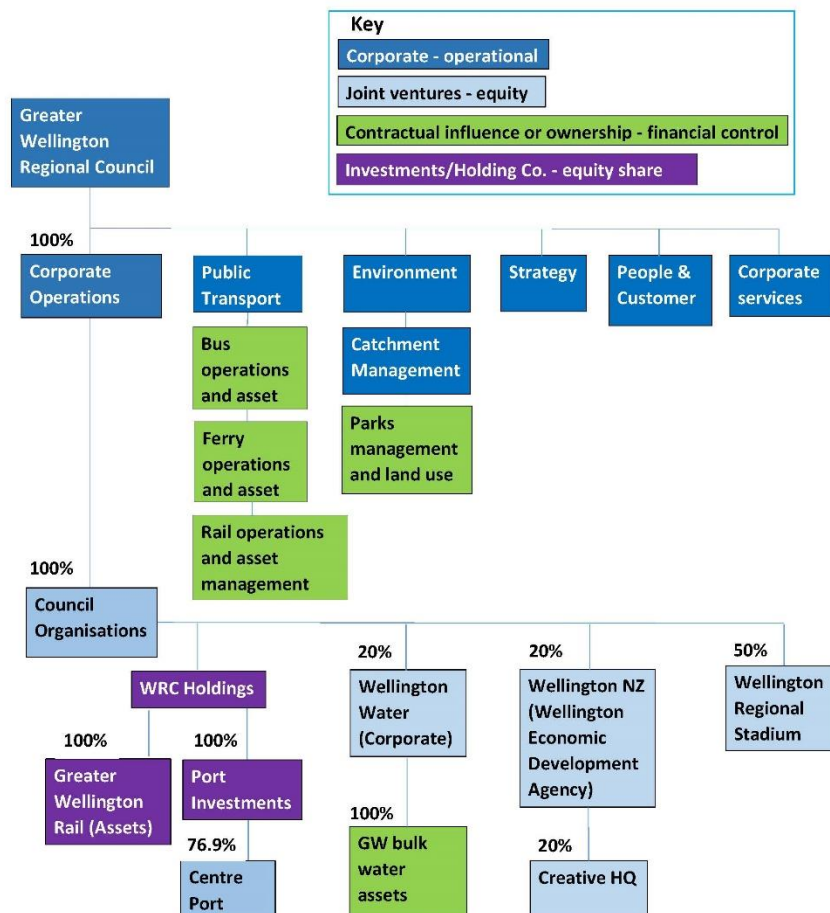


Figure 1: Organisational structure.

Table 10: Brief description of business units in the certifying entity.

Business unit	Address	Purpose
Greater Wellington Regional Council		
Corporate operations	15 Walter Street, Te Aro, Wellington	Corporate office & environmental services base
	Shed 39, Fryatt Quay, Wellington	Corporate office
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

Business unit	Address	Purpose
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

5 ORGANISATIONAL BUSINESS UNITS EXCLUDED FROM INVENTORY

The Corporate Operations (business unit) bundles up emissions for the other corporate operations business units. Public transport and Environment business units have significant emissions in their own right. These have been separated out to assist reporting.

WRC Holdings, Greater Wellington Rail and Port Investments are legal holding entities only, and as a result have no emissions and are excluded from this inventory. All other business units are included in the inventory.

Creative HQ emissions are incorporated in to the Wellington NZ business unit.

6 GHG EMISSIONS SOURCE INCLUSIONS

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 14064-1:2006 standards. Identification of emissions sources was achieved via personal communications with Greater Wellington Regional Council staff, and cross-checked against operational expenditure records for the reporting period. These records were viewed in order to see what activities may be associated with emissions from all of the operations.

As adapted from the GHG Protocol, these emissions were classified into the following categories:

- **Direct GHG emissions (Scope 1):** GHG emissions from sources that are owned or controlled by the company.
- **Indirect GHG emissions (Scope 2):** GHG emissions from the generation of purchased electricity, heat and steam consumed by the company.
- **Indirect GHG emissions (Scope 3):** GHG emissions required by the Programme that occur as a consequence of the activities of the company but occur from sources not owned or controlled by the company. Inclusion of other Scope 3 emissions sources is done on a case-by-case basis.

After liaison with the organisation, the emissions sources in Table 11 have been identified and included in the GHG emissions inventory.

On behalf of the public it serves, Greater Wellington Regional Council Group has voluntarily committed to measure (and own) all known greenhouse gas emissions that it has financial, operational, and or equity share control over. These emissions include direct and indirect, scopes 1, 2 and 3 mandatory and additional. The organisation has made great effort to include all meaningful emissions from across the Greater Wellington Group operations, Council Organisations (share holdings), and a high influence on contracts that have significant levels of emissions.

Table 11: GHG emissions sources included in the inventory

Business unit	GHG emissions source	GHG emissions level scope	Data source	Data collection unit	Uncertainty (description)
Council Operations	Air travel domestic (average)	Scope 3	From Neal Croft at APX travel management to Ben Barrett, Sustainability Coordinator, Greater Wellington	pkm	It is assumed data source represents a complete and accurate account of all travel activity.
Council Operations	Air travel short haul (econ)	Scope 3	From Neal Croft at APX travel management to Ben Barrett, Sustainability Coordinator, Greater Wellington	pkm	It is assumed data source represents a complete and accurate account of all travel activity.
Council Operations	Bus travel (city)	Scope 3	Survey data from Ben Barrett, Sustainability Coordinator. Analysis by Christoph Gerds, Senior Data Analyst/ Modeller	pkm	This internal workplace travel survey data was adjusted from staff travel survey, it represents an estimate of monthly workplace travel.
Council Operations	Diesel stationary combustion	Scope 1	Reported by Tim Penwarden, Building Manager, Jigsaw Property	L	It is assumed data source represents a complete and accurate account of all diesel backup purchasing. It is assumed that the building maintenance provider has supplied a complete and accurate record.
Council Operations	Diesel	Scope 1	E-road (vehicle tracking) report by Ben Barrett, Sustainability Coordinator/Pat Gray, Fleet Administrator	L	It is assumed data source represents a complete and accurate account of all travel activity.

Business unit	GHG emissions source	GHG emissions level scope	Data source	Data collection unit	Uncertainty (description)
Council Operations	Electricity	Scope 2	Energy Pro report by Lily Wang Data Steward, Wellington Water	kWh	It is assumed the supplier has provided data for all meters. Invoices are monitored and Energy Pro software used to collect and report data.
Council Operations	Electricity	Scope 3	E-road (vehicle tracking SAAS) report by Ben Barrett, Sustainability Coordinator/Pat Gray, Fleet Administrator	kWh	It is assumed the supplier has provided data for all meters. It is assumed data source represents a complete and accurate account of all charging activity.
Council Operations	Natural Gas distributed commercial	Scope 1	Reported by Tim Penwarden, Building Manager, Jigsaw Property to Ben Barrett, Sustainability Coordinator	kWh	It is assumed that the building maintenance provider has supplied a complete and accurate record
Council Operations	Petrol premium	Scope 1	E-road (vehicle tracking SAAS) report by Ben Barrett, Sustainability Coordinator. Pat Gray, Fleet Administrator	L	It is assumed data source represents a complete and accurate account of all travel activity.
Council Operations	Petrol regular	Scope 1	E-road (vehicle tracking SAAS) report by Ben Barrett, Sustainability Coordinator. Pat Gray, Fleet Administrator	L	It is assumed data source represents a complete and accurate account of all travel activity.
Council Operations	Rail travel (national)	Scope 3	Survey data from Ben Barrett, Sustainability Coordinator. Analysis by Christoph Gerds, Senior Data Analyst/ Modeller.	pkm	This internal workplace travel survey data was adjusted from staff travel survey, it represents an estimate of monthly workplace travel.

Business unit	GHG emissions source	GHG emissions level scope	Data source	Data collection unit	Uncertainty (description)
Council Operations	Taxi (regular)	Scope 3	GW Finance report using Taxi Charge NZ data by Nela Prahbu, Team Leader, Financial Services	\$	It is assumed the supplier has provided complete and accurate transactions data
Council Operations	Taxi (regular)	Scope 3	GW Finance report using Taxi Charge NZ data by Nela Leader, Financial Services	pkm	It is assumed the supplier has provided complete and accurate transactions data
Council Operations	Waste	Scope 1	Report by service provider Waste Management to Ben Barrett, Sustainability Coordinator, Greater Wellington		It is assumed the supplier has provided complete and accurate transactions data
Council Operations/Environment, Catchment & Parks	Diesel	Scope 3	Financial reports by Stephen Hill, Strategic Business Partner, Greater Wellington	L	It is assumed the supplier has provided complete and accurate transactions data
Council Operations/Environment, Catchment & Parks	Electricity	Scope 2	Energy Pro report by Lily Wang, Data Steward, Wellington Water	kWh	It is assumed the supplier has provided data for all meters. Invoices are monitored and Energy Pro software used to collect and report data.
Council Operations/Environment, Catchment & Parks	Enteric Fermentation Beef Cattle	Scope 3 Additional	GW Land use report by Andrea Brandon, Climate Change Lead, Greater Wellington	head	It is assumed that land use data provided is accurate. It was assumed maximum animal head allowable per land use (grazing) contract. MfE 2016 land use workbook used.
Council Operations/Environment, Catchment & Parks	Enteric Fermentation Horses	Scope 3 Additional	GW Land use report by Andrea Brandon, Climate Change Lead, Greater Wellington	head	It is assumed that land use data provided is accurate. It was assumed maximum animal head allowable per land use (grazing) contract. MfE 2016 land use workbook used.

Business unit	GHG emissions source	GHG emissions level scope	Data source	Data collection unit	Uncertainty (description)
Council Operations/Environment, Catchment & Parks	Enteric Fermentation Sheep	Scope 3 Additional	GW Land use report by Andrea Brandon, Climate Change Lead, Greater Wellington	head	It is assumed that land use data provided is accurate. It was assumed maximum animal head allowable per land use (grazing) contract. MfE 2016 land use workbook used.
Council Operations/Environment, Catchment & Parks	Fertiliser use Lime	Scope 3 Additional	GW Land use report by Andrea Brandon, Climate Change Lead, Greater Wellington	kg	It is assumed that land use data provided is accurate. It was assumed maximum animal head allowable per land use (grazing) contract. MfE 2016 land use workbook used.
Council Operations/Environment, Catchment & Parks	Fertiliser use Nitrogen	Scope 3 Additional	GW Land use report by Andrea Brandon, Climate Change Lead, Greater Wellington	kg	It is assumed that land use data provided is accurate. It was assumed maximum animal head allowable per land use (grazing) contract. MfE 2016 land use workbook used.
Council Operations/Environment, Catchment & Parks	Jet A1	Scope 3	Financial reports from Stephen Hill, Strategic Business Partner, Greater Wellington	L	It is assumed the supplier has provided complete and accurate transactions data
Council Operations/Environment, Catchment & Parks	Petrol	Scope 3	Financial reports from Stephen Hill, Strategic Business Partner, Greater Wellington	L	It is assumed the supplier has provided complete and accurate transactions data
Council Operations/Environment, Catchment & Parks	Waste	Scope 3	Financial reports from Stephen Hill, Strategic Business Partner, Greater Wellington		It is assumed the supplier has provided complete and accurate transactions data

Business unit	GHG emissions source	GHG emissions level scope	Data source	Data collection unit	Uncertainty (description)
Council Operations/Metlink Public Transport	Diesel	Scope 3	Rail data by Barry Fryer, Team Leader, Rail Assets, Greater Wellington	L	It is assumed the supplier has provided complete and accurate transactions data. It is assumed that associated bus modelling data is accurate to individual trip level.
Council Operations/Metlink Public Transport	Diesel	Scope 3	Ferry data from East by West, Coralie Christian to Rob Braddock, Manager, Greater Wellington	L	It is assumed the supplier has provided complete and accurate transactions data
Council Operations/Metlink Public Transport	Diesel	Scope 3	GW bus model Chris Vallyon, Principal Advisor, Transport Data Analyst, Greater Wellington	L	It is assumed that data provided from modelling is accurate to individual trip level. See bus model notes and assumptions in documentation.
Council Operations/Metlink Public Transport	Electricity	Scope 2	Energy Pro data report by Lily Wang, Data Steward, Wellington Water	kWh	It is assumed the supplier has provided data for all meters. Invoices are monitored and Energy Pro software used to collect and report data.
Council Operations/Metlink Public Transport	Electricity	Scope 3	GW bus model Chris Vallyon, Principal Advisor, Transport Data Analyst, Greater Wellington		It is assumed that data provided from modelling is accurate to individual trip level. See bus model notes and assumptions in documentation.
Council Operations/Metlink Public Transport	Electricity	Scope 3	Rail data by Barry Fryer, Team Leader, Rail Assets, Greater Wellington		It is assumed the supplier has provided accurate data for all meters.
Council Operations/Metlink Public Transport	Taxi (regular)	Scope 3	Ferry data from East by West, Coralie Christian to Rob Braddock, Manager, Greater Wellington	\$	It is assumed the supplier has provided complete and accurate transactions data

Business unit	GHG emissions source	GHG emissions level scope	Data source	Data collection unit	Uncertainty (description)
Council Operations/Metlink Public Transport	Waste landfilled LFGR Mixed waste	Scope 3	Waste Management report from Service Resources Ltd by Nick Herbert to Mitchel Davis, Rail Assets, Fixed Asset Adviser, Greater Wellington	t	It is assumed the supplier has provided complete and accurate waste weights and transactions data
Council Organisations/Centre Port 76.9%	Air travel domestic (average)	Scope 3	Travel data report from Tandem Travel by Jeff Shiu to William Woods, Strategic Planning Manager, Centre Port	pkm	It is assumed data source represents a complete and accurate account of all travel activity.
Council Organisations/Centre Port 76.9%	Air travel long haul (econ+)	Scope 3	Travel data report from Tandem Travel by Jeff Shiu to William Woods, Strategic Planning Manager, Centre Port	pkm	It is assumed data source represents a complete and accurate account of all travel activity. The organisation has a mandatory rule whereby all staff must book via the company travel provider. Discussion with the accounts team confirmed that they were unaware of any travel being booked via staff credit card or staff expense claims
Council Organisations/Centre Port 76.9%	Air travel short haul (econ)	Scope 3	Travel data report from Tandem Travel by Jeff Shiu to William Woods, Strategic Planning Manager, Centre Port	pkm	It is assumed data source represents a complete and accurate account of all travel activity. The organisation has a mandatory rule whereby all staff must book via the company travel provider. Discussion with the accounts team confirmed that they were unaware of any travel being booked via staff credit card or staff expense claims

Business unit	GHG emissions source	GHG emissions level scope	Data source	Data collection unit	Uncertainty (description)
Council Organisations/Centre Port 76.9%	Diesel	Scope 1	Bulk tank and fuel card report from BP to Tim Gresham, Centre Port Marine fuel report compiled by Charles Smith, Marine Manager, Centre Port	L	It is assumed data source represents a complete and accurate account of all diesel purchasing. It is assumed this is a complete and accurate record.
Council Organisations/Centre Port 76.9%	Electricity	Scope 2	Report provided by Mike Janus, Meridian Energy to William Woods, Centre Port	kWh	It is assumed the supplier has provided data for all meters. Invoices are monitored and Energy Pro software used to collect and report data.
Council Organisations/Centre Port 76.9%	Petrol regular	Scope 1	Bulk tank and fuel card report from BP to Tim Gresham, Centre Port Marine fuel report compiled by Charles Smith, Marine Manager, Centre Port	L	It is assumed the supplier has provided complete and accurate transactions data
Council Organisations/Centre Port 76.9%	Rental Car Medium (petrol 1600-2000cc) - post-2015	Scope 3	Data report compiled from on Avis invoices by William Woods, Strategic Planning Manager, Centre Port	km	It is assumed the supplier has provided complete and accurate transactions data
Council Organisations/Centre Port 76.9%	Taxi (regular)	Scope 3	Data report compiled from invoices by William Woods, Strategic Planning Manager, Centre Port	pkm	It is assumed the supplier has provided complete and accurate transactions data
Council Organisations/Wellington NZ 20%	Air travel domestic (average)	Scope 3	See Wellington City Council EIR	pkm	See Wellington City Council EIR

Business unit	GHG emissions source	GHG emissions level scope	Data source	Data collection unit	Uncertainty (description)
Council Organisations/Wellington NZ 20%	Air travel long haul (econ)	Scope 3	See Wellington City Council EIR	pkm	See Wellington City Council EIR
Council Organisations/Wellington NZ 20%	Air travel long haul (econ+)	Scope 3	See Wellington City Council EIR	pkm	See Wellington City Council EIR
Council Organisations/Wellington NZ 20%	Air travel short haul (econ)	Scope 3	See Wellington City Council EIR	pkm	See Wellington City Council EIR
Council Organisations/Wellington NZ 20%	Electricity	Scope 2	See Wellington City Council EIR	kWh	See Wellington City Council EIR
Council Organisations/Wellington NZ 20%	Natural Gas distributed commercial	Scope 1	See Wellington City Council EIR	kWh	See Wellington City Council EIR
Council Organisations/Wellington NZ 20%	Petrol	Scope 1	See Wellington City Council EIR	L	See Wellington City Council EIR
Council Organisations/Wellington NZ 20%	Rental Car average (fuel type unknown)	Scope 1	See Wellington City Council EIR	km	See Wellington City Council EIR
Council Organisations/Wellington NZ 20%	Taxi (regular)	Scope 3	See Wellington City Council EIR	\$	See Wellington City Council EIR

Business unit	GHG emissions source	GHG emissions level scope	Data source	Data collection unit	Uncertainty (description)
Council Organisations/Wellington Regional Stadium Trust 50%	Air travel domestic (average)	Scope 3	See Wellington City Council EIR	pkm	See Wellington City Council EIR
Council Organisations/Wellington Regional Stadium Trust 50%	Air travel short haul (econ)	Scope 3	See Wellington City Council EIR	pkm	See Wellington City Council EIR
Council Organisations/Wellington Regional Stadium Trust 50%	Diesel	Scope 1	See Wellington City Council EIR	L	See Wellington City Council EIR
Council Organisations/Wellington Regional Stadium Trust 50%	Electricity	Scope 2	See Wellington City Council EIR	kWh	See Wellington City Council EIR
Council Organisations/Wellington Regional Stadium Trust 50%	Natural Gas distributed commercial	Scope 1	See Wellington City Council EIR	kWh	See Wellington City Council EIR
Council Organisations/Wellington Regional Stadium Trust 50%	Petrol	Scope 1	See Wellington City Council EIR	L	See Wellington City Council EIR
Council Organisations/Wellington Regional Stadium Trust 50%	Rental Car average (fuel type unknown)	Scope 1	See Wellington City Council EIR	km	See Wellington City Council EIR
Council Organisations/Wellington Regional Stadium Trust 50%	Taxi (regular)	Scope 3	See Wellington City Council EIR	\$	See Wellington City Council EIR

Business unit	GHG emissions source	GHG emissions level scope	Data source	Data collection unit	Uncertainty (description)
Council Organisations/Wellington Water/Wellington Water - managed GW assets 100%	Electricity	Scope 2	Energy Pro report by Geoff Williams, Senior Advisor Strategy, Wellington Water	kWh	It is assumed the supplier has provided data for all meters. Invoices are monitored and Energy Pro software used to collect and report data.
Council Organisations/Wellington Water/Wellington Water - managed GW assets 100%	Freight Road rigid truck (average)	Scope 3	Sludge to landfill estimate by Genevieve Smith, Beca for Fraser Clark, Wellington Water	tkm	It is assumed the supplier has provided complete transactions data. Assumption on dry sludge weight was made from sludge wet mass weight. Assumption on freight distances were obtained from Google Maps.
Council Organisations/Wellington Water/Wellington Water - managed GW assets 100%	Waste to Landfill Sludge (CO ₂)	Scope 3	Sludge to landfill estimate by Genevieve Smith, Beca for Fraser Clark, Wellington Water	kg	It is assumed the supplier has provided complete transactions data. Assumption on dry sludge weight was made from sludge wet mass weight.
Council Organisations/Wellington Water/Wellington Water Corporate 20%	Air travel domestic (average)	Scope 3	Travel data report from by Arina Anderson, FCM Travel Solutions for Fraser Clark, Principal Advisor, Strategy, Wellington Water	pkm	It is assumed the supplier has provided complete and accurate transactions data
Council Organisations/Wellington Water/Wellington Water Corporate 20%	Air travel long haul (average)	Scope 3	Travel data report from by Arina Anderson, FCM Travel Solutions for Fraser Clark, Principal Advisor, Strategy, Wellington Water	pkm	It is assumed the supplier has provided complete and accurate transactions data

Business unit	GHG emissions source	GHG emissions level scope	Data source	Data collection unit	Uncertainty (description)
Council Organisations/Wellington Water/Wellington Water Corporate 20%	Air travel short haul (average)	Scope 3	Travel data report from by Arina Anderson, FCM Travel Solutions for Fraser Clark, Principal Advisor, Strategy, Wellington Water	pkm	It is assumed the supplier has provided complete and accurate transactions data
Council Organisations/Wellington Water/Wellington Water Corporate 20%	Diesel	Scope 1	Fuel report by Graham Bennett, City Care for Lily Wang, Data Steward, Wellington Water	L	It is assumed data source represents a complete and accurate account of all travel activity.
Council Organisations/Wellington Water/Wellington Water Corporate 20%	Electricity	Scope 2	Energy Pro report by Geoff Williams, Senior Advisor Strategy, Wellington Water	kWh	It is assumed the supplier has provided data for all meters. Invoices are monitored and Energy Pro software used to collect and report data.
Council Organisations/Wellington Water/Wellington Water Corporate 20%	Petrol premium	Scope 1	Fuel report by Graham Bennett, City Care for Fraser Clark, Principal Advisor, Strategy, Wellington Water	L	It is assumed data source represents a complete and accurate account of all travel activity.
Council Organisations/Wellington Water/Wellington Water Corporate 20%	Petrol regular	Scope 1	Fuel report by Graham Bennett, City Care for Fraser Clark, Principal Advisor, Strategy, Wellington Water	L	It is assumed data source represents a complete and accurate account of all travel activity.
Council Organisations/Wellington Water/Wellington Water Corporate 20%	Rental Car Medium (petrol 1600-2000cc) - post-2015	Scope 1	Travel data report from by Arina Anderson, FCM Travel Solutions for Fraser Clark, Principal Advisor, Strategy, Wellington Water	km	It is assumed the supplier has provided complete and accurate transactions data

Business unit	GHG emissions source	GHG emissions level scope	Data source	Data collection unit	Uncertainty (description)
Council Organisations/Wellington Water/Wellington Water Corporate 20%	Taxi (regular)	Scope 3	Report to Fraser Clark, Principal Advisor, Strategy, Wellington Water	\$	It is assumed the supplier has provided complete and accurate transactions data



6.1 Other emissions – HFCs, PFCs and SF₆

We use HFCs but they are excluded (e.g. due to de minimis or operational control reasons).

No operations use perfluorocarbons (PFCs), Nitrogen Trifluoride (N₃) nor sulphur hexafluoride (SF₆), therefore no holdings of these are reported and no emissions from these sources are included in this inventory.

6.2 Other emissions – biomass

No biomass is combusted in the operations and therefore no emissions from the combustion of biomass are included in this inventory.

6.3 Other emissions – deforestation

Deforestation has been undertaken by the organisation and is included in the inventory. Deforestation emissions occurred as a result of the deforestation of 1.42 hectares of natural forest. This estimate is derived from the latest land use maps that are produced periodically by the Ministry of Environment. The annual average rate of deforestation that occurred between 2012 and 2016, the most recent land use maps available, was applied to this inventory period.

6.4 Pre-verified data

Pre-verified data is included in this inventory. Toitū pre-verified data from Wellington City Council, Council (Controlled) Organisations is included in this inventory. The organisations are Wellington NZ (20% equity share), Wellington Regional Stadium Trust (50% equity share).

7 GHG EMISSIONS SOURCE EXCLUSIONS

Emissions sources in Table 12 have been identified and excluded from the GHG emissions inventory.

Table 12: GHG emissions sources excluded from the inventory

Business unit	GHG emissions source	GHG emissions level scope	Reason for exclusion
GW Council Operations	Reimbursed: Air Travel/ rental cars	Scope 3 Mandatory	Most emissions from travel are included in the EIR. There is a small proportion (estimated at < 1%) of travel that has been reimbursed separately to the corporate booking service. This record has not been coded separately in the general ledger from service provider booked travel. As a result a report is unobtainable. Calculating this would have taken excessive amount of time and it has been excluded due to the programme de minimis rule.

Business unit	GHG emissions source	GHG emissions level scope	Reason for exclusion
GW Council Operations	Refrigeration	Scope 1 Mandatory	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	Couriers & Postage	Scope 3 Mandatory	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 due to the programme <i>de minimis</i> rule.
CentrePort, Wellington Water (corporate), Wellington NZ, Wellington Regional Stadium Trust	Waste to landfill	Scope 3 Mandatory	Waste to landfill has been excluded based on the programme <i>de minimis</i> rule.

8 DATA COLLECTION AND UNCERTAINTIES

Table 11 provides an overview of how data were collected for each GHG emissions source, the source of the data and an explanation of any uncertainties or assumptions made. Estimated numerical uncertainties are reported with the emissions calculations and results.

All data was calculated using Toitū emanage and GHG emissions factors as provided by the Programme.

A calculation methodology has been used for quantifying the GHG emissions inventory using emissions source activity data multiplied by GHG emissions or removal factors.

To date operational fluorocarbons have been assessed as insignificant and or hard to accurately measure. Assessment of fluorocarbons from the number of mobile public transport air conditioning units is noted for future inventory improvement.

9 GHG EMISSIONS CALCULATIONS AND RESULTS

GHG emissions for the organisation for this measurement period are provided in Table 1 where they are stated by greenhouse gas, by scope, by business unit and as total emissions.

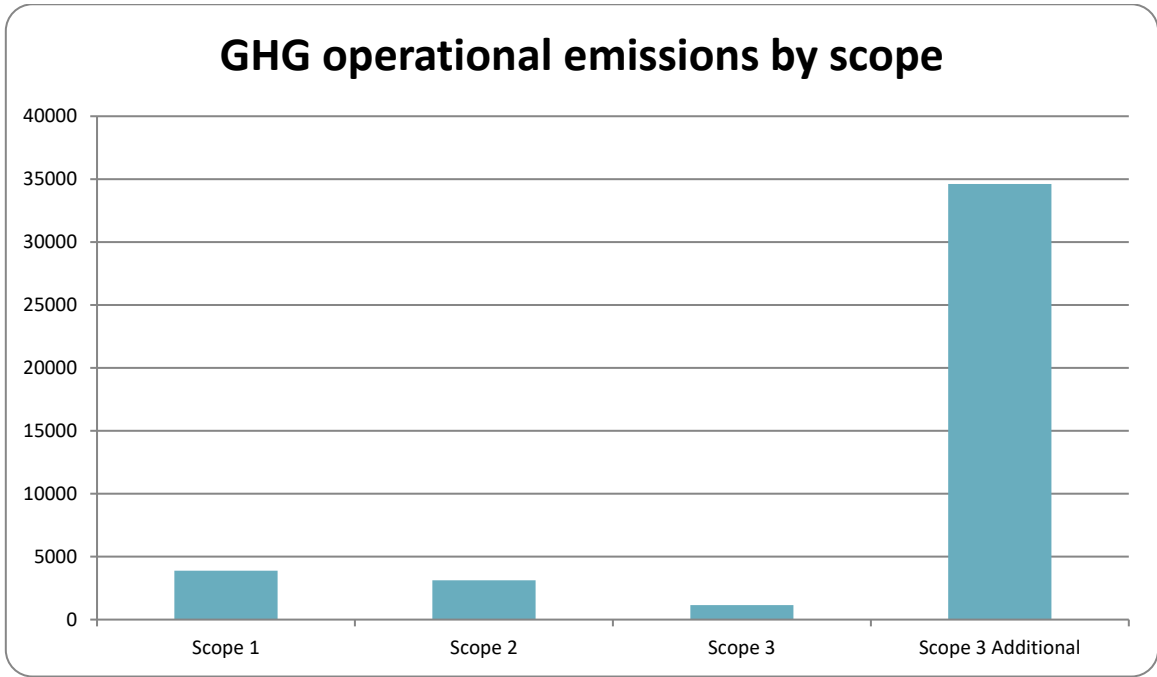


Figure 2: GHG emissions (tonnes CO₂e) by scope

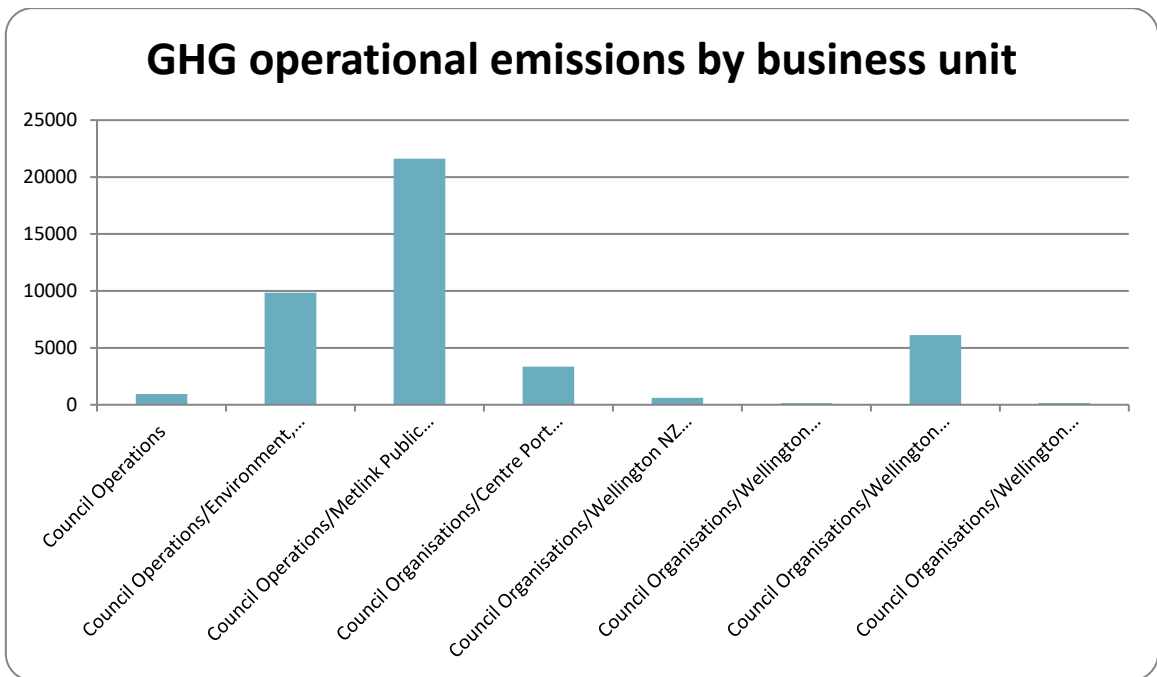


Figure 3: GHG emissions (tonnes CO₂e) by business activity.

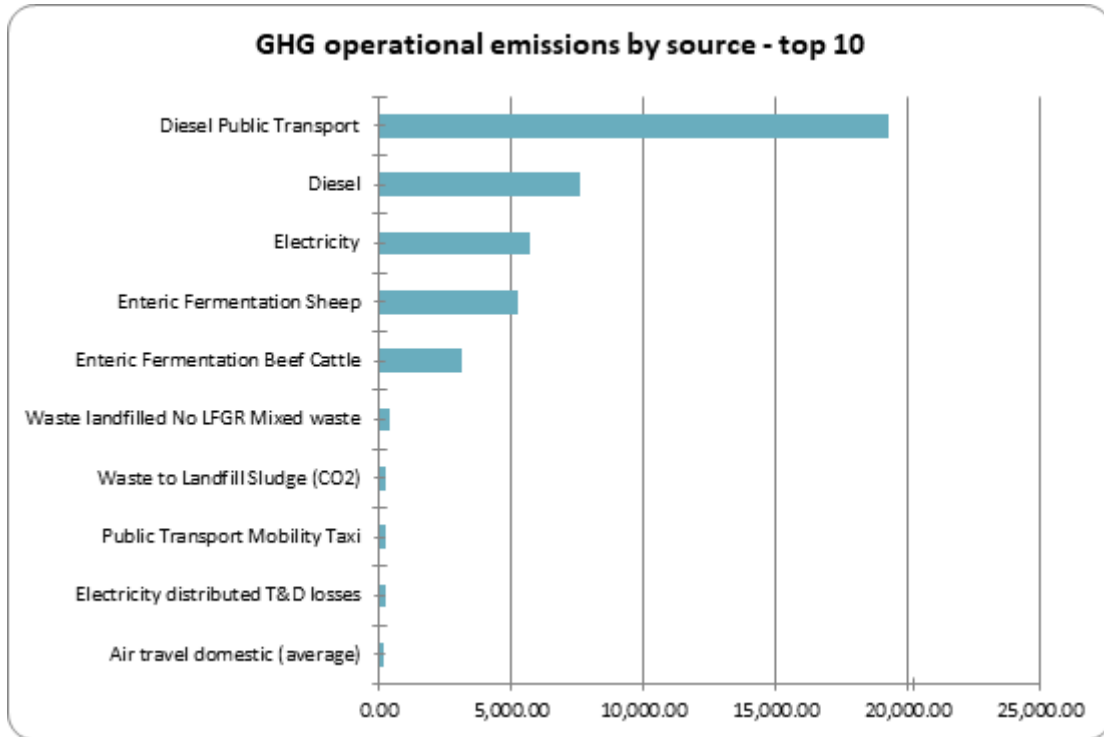


Figure 4: GHG emissions sources by source.

The inventory report and any GHG assertions are expected to be verified by a Programme-approved, third-party verifier. The level of assurance is reported in a separate Assurance Statement provided to the directors of the certified entity.

10 EMISSIONS REDUCTIONS AND REMOVALS ENHANCEMENT

The management and reduction plan has not changed since certification.

The organisation will have an updated management plan in place for managing and reducing emissions in the future in order to maintain Programme recertification.

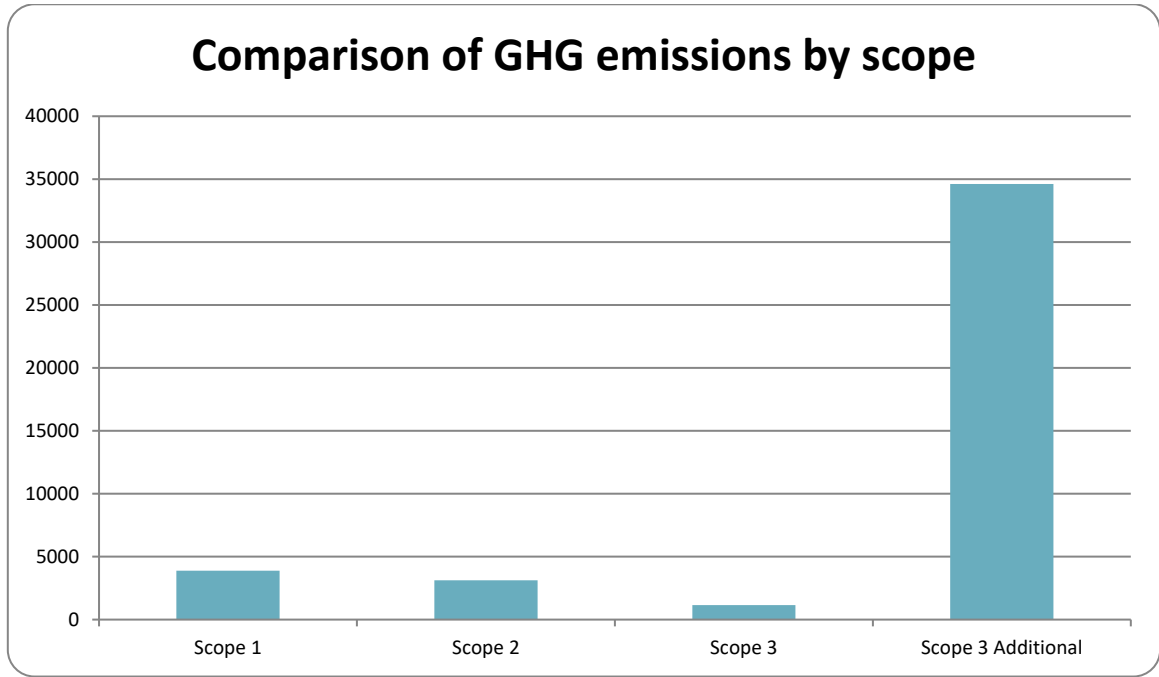


Figure 5: Comparison of GHG operational emissions by scope between the reporting periods.

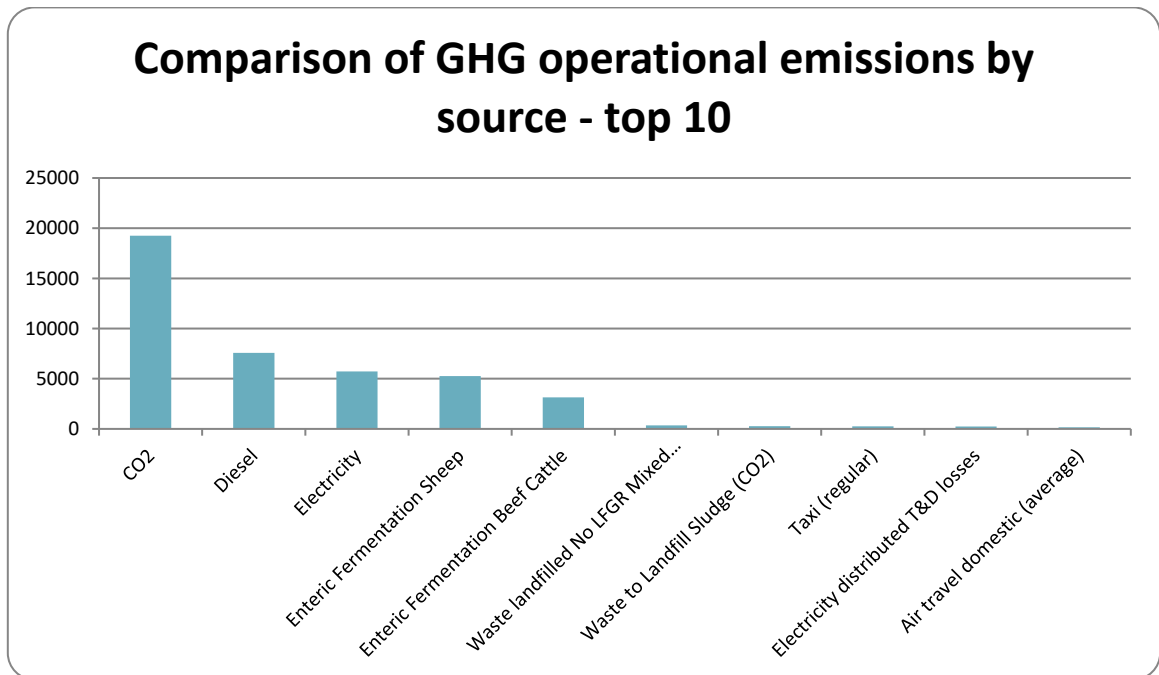


Figure 6: Comparison of GHG operational emissions by emissions sources between the reporting periods.

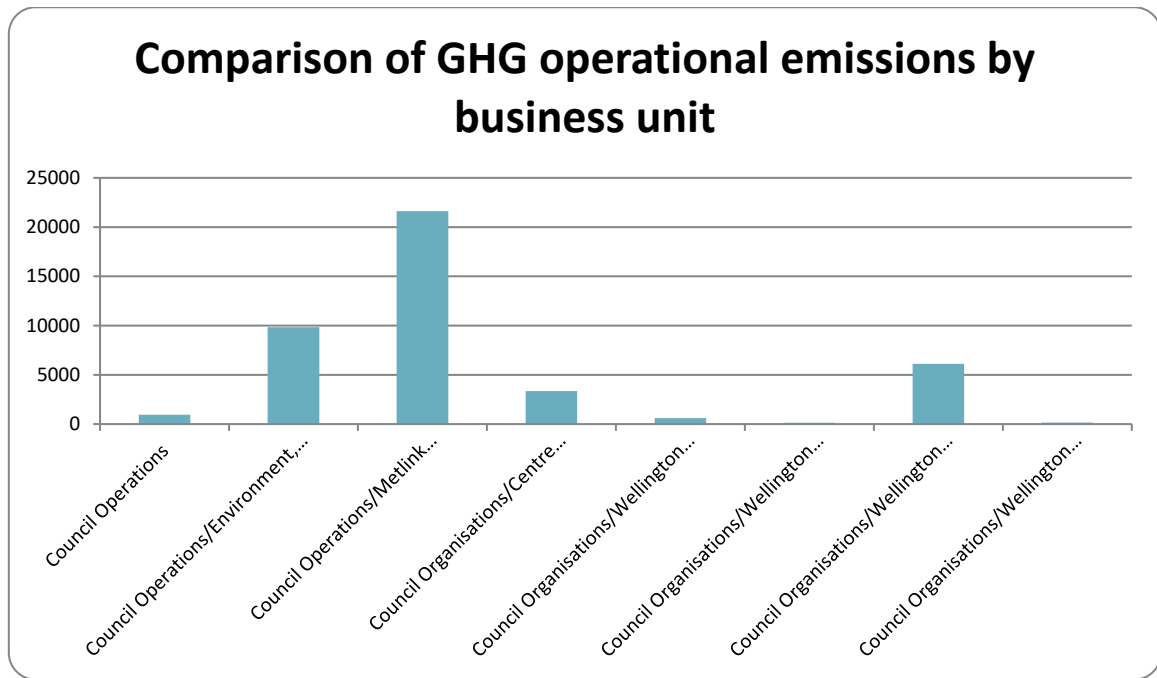


Figure 7: Comparison of emissions by business unit between the reporting periods.

11 LIABILITIES

11.1 GHG stocks held⁴

HFCs, PFCs and SF₆ represent GHGs with high global warming potentials. Their accidental release could result in a large increase in emissions for that year, and therefore the stock holdings are reported under the Programme (Table 13).

GHG stocks have been reported in this inventory and added into the GHG Stock Liability questionnaire. The total stored carbon in all forestry is Forestry 69,833 tCO₂-e. Council Operations Diesel back up generators at office sites totals 745 litres (Shed 39 is 495 litres and Masterton, 250 litres. Centre Port has a 55,000 litre bulk diesel tank on site. Wellington Water has 122,500 litres in various diesel storage capacity.

Table 13: HFCs, PFCs and SF₆ GHG emissions and liabilities.

Business Unit	Source	Units	Amount held - start of reporting period	Amount held - end of reporting period	Potential Liability tCO ₂ e
Greater Wellington Regional Council	Diesel commercial	litres	(no data)	178245	474.79477

⁴ HFC stock liabilities for systems under 3 kg can be excluded.

11.2 Land-use change

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

Land-use change has been included in this inventory. Emissions from afforestation are included in this inventory – GW has 440.03 hectares of afforestation registered in the PFSI scheme.

12 PURCHASED REDUCTIONS

Purchased reductions could include certified “green” electricity, verified offsets or other carbon-neutral-certified services. Organisations may choose to voluntarily purchase carbon credits (or offsets) or green electricity that meets the eligibility criteria set by a regulatory authority. The reported gross emissions may not be reduced through the purchase of offsets or green tariff electricity.

Purchased emission reductions have not been included in this inventory.

Certified green electricity has not been included in this inventory.

We generate on-site renewable electricity, and this is included in the inventory. A mini hydro-generation asset owned by Greater Wellington and managed by Wellington Water is fed by bulk water and assists bulk water pumping. The hydro-generation was 980,125 kWh over the 2018-19 financial year period.

13 DOUBLE COUNTING / DOUBLE OFFSETTING

Double counting/offsetting refers to situations where:

- Parts of the organisation have been prior offset.
- The same emissions sources have been reported (and offset) in both organisation and product.
- 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 (Scope 2 and 3) emissions sources.
- 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.

14 REFERENCES

International Organization for Standardization, 2006. ISO 14064-1:2006. Greenhouse gases – Part 1: Specification with guidance at the organisation level for quantification and reporting of greenhouse gas GHG 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.

15 APPENDIX 1: GHG EMISSIONS DATA SUMMARY

More GHG emissions data is available on the accompanying spreadsheet to this report:
(no documents provided)