

Emissions Management and Reduction Plan

CEMARS and the carboNZero programme



Waikato Regional Council

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1 Introduction

This report is the annual greenhouse gas (GHG) Emissions Management and Reduction Plan prepared for Waikato Regional Council and forms the manage step part of the organisation's application for Programme certification.¹²

2 Rationale

The council's mission "working together to build a Waikato region that has a healthy environment, strong economy and vibrant communities" signals the council's commitment to valuing our natural capital and the ecosystem services it provides for people's wellbeing and economic activity. Sustainability principles and values are interwoven into our policies, the services we provide, and the way we operate. The United Nations Sustainable Development Goals were the starting point for the council's 2016-2019 Strategic Direction, and tackling climate change is an integral part of this.

As well as having many direct and indirect effects on the communities we work in, climate change will directly affect the work of the Waikato Regional Council.

In New Zealand, regional councils have statutory responsibilities regarding climate adaptation, particularly with a view to natural hazards, infrastructure and assets management. In addition, it has been recognised that regional and local councils can also contribute to climate mitigation and transition to a low carbon economy, and address the opportunities and risks that climate change presents.

WRC is a signatory to the Local Government New Zealand's 2017 Leaders Climate Change Declaration outlining the key commitments and actions that councils plan to undertake to support action on climate change. Aligned to this, WRC completed a regional greenhouse gas inventory in 2017 to enhance its understanding of the region's carbon profile and facilitate discussion regarding options and pathways for transition to a lower carbon regional economy.

At a corporate level, WRC has committed to managing and reducing greenhouse gas emissions. This means that as well as reducing our emissions to help mitigate climate change, we will also need to adapt our services and operations to changing weather and climate conditions.

In order to manage and reduce greenhouse gas emissions and other environmental impacts of our operations, the Waikato Regional Council encourages staff (and the wider Waikato community) to engage with sustainability issues and initiatives. The organisation also seeks to ingrain environmental best practices into operations, systems and decision-making.

Details of commitments and sustainability policies are publicly available and can be found online or through hard copies of documents located at the organisation's main office (401 Grey Street, Hamilton East).

This emissions management and reduction programme applies only to WRC's corporate activities and does not include regional policy interventions.

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

²Programme means the Certified Emissions Measurement And Reduction Scheme (CEMARS) and carboNZero certification programme.



3 Top management commitment

Waikato Regional Council is aiming for sustainability to be integral to all activities, including its customer and stakeholder relationships and approach to risk management. Sustainability is part of the organisational values of doing the right thing for people and planet, and making a positive difference to Waikato and New Zealand by making sure our activities add value environmentally, economically and socially. As part of its commitment to improving its sustainability performance, the Council's executive leadership team (ELT) has committed to managing and reducing emissions, and reporting on progress, through participation in the CEMARS programme. The ELT will be kept informed of emissions reduction initiatives and progress towards emissions reduction goals through regular reporting.

4 Person responsible

Karen Bennett, Manager of the Chief Executive's Office, is the ELT member responsible for overseeing overall emissions management and reduction. She is supported by the Core Sustainability Team, comprising members with functional responsibility for emissions management and reduction, and other staff with a passion for improving sustainable practices throughout the organisation. Expertise and support is also provided by contractors and external organisations (including E-Bench, Go Eco and Enviro-Mark).

5 Awareness raising and training

Staff and contractors are made aware of our emissions reduction commitments through internal communications and campaigns, as well as publicly available reports and communications. New staff are informed via the staff induction process.

Staff who provide emission source data or who have major influence on the management and reduction of emissions are invited to be part of the Core Sustainability Team, who meet on a monthly basis to discuss options for and progress towards emissions reduction. All staff have opportunities to engage in campaigns and/or workshops and/or training to support them reduce the emissions and other environment-related impacts of their role and activities.

6 Significant emissions sources

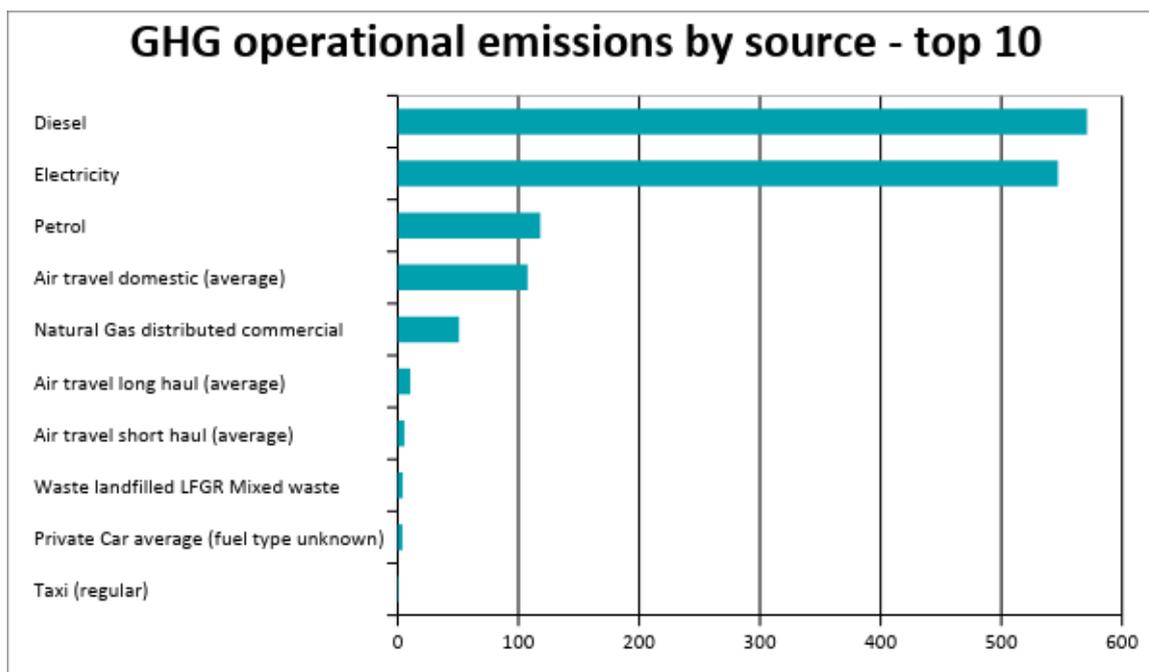


Figure 1: GHG emissions by source for 2017-18

The Emissions Inventory Report identifies the most significant ongoing emissions sources as diesel and electricity. Petrol use, air travel (domestic) and natural gas are also significant contributors. Waikato Regional Council has direct control over all the emissions sources mentioned above, and the organisation is using a mix of behaviour, operational and investment interventions to reduce emissions from these areas.

Looking more closely at emissions sources through data available on E-Bench, it has been noted that the activities of the Integrated Catchment Management Directorate (specifically the flood pumps, as well as diesel vehicle use) are by far the greatest sources of emissions. After these Integrated Catchment Management Directorate activities, the next largest contributor to emissions is electricity use in buildings, which is managed by the Finance Directorate. Vehicle travel makes up a large proportion of emissions from every Directorate.

All these factors have been considered in order to develop a Carbon Management and Reduction Programme that is appropriate and effective for the organisation. It is important to note that while the organisation aims to improve the efficiency of flood pumps, Waikato Regional Council has a duty to protect people and property from flood risks. Therefore, flood pumps must be used during flood events, even though it increases the organisation's carbon emissions.



7 Targets for emissions reduction

The organisation is committed to managing and reducing its emissions in accordance with the Programme requirements. Table 1 provides details of the emission reduction targets to be implemented. These are 'SMART' targets (specific, measurable, achievable, realistic, and -mostly- time-constrained), and the organisation is also exploring the principles of 'science-based targets', for incorporation into emissions management and reduction plans in the future.

Targets for emissions reduction are developed to coincide with updates for the Long Term Plan (LTP), which take place every three years. Progress is monitored continuously and reviewed on an annual basis to ensure the organisation is staying on track to meet these targets.

The overall target is to reduce emissions intensity by 2% per year from the base year, which may involve steady reductions and/or larger reductions followed by maintenance of reductions. Note: reductions are to be compared to base year, rather than the previous year.

The most recent review of the LTP was in June 2018. For this date there was a soft target of a 2% reduction in emissions from the base year, which was met and exceeded. In time for the following review of the LTP (June 2021), the target for emissions reduction is 8%. Due to the scope of the organisation's activities and the factors that influence the organisation's ability to act, a reduction target based on emissions intensity per \$ M turnover (inflation adjusted) will be used.

As shown in Table 1, there are specific sub-targets at a more detailed level, by emission source. By achieving each sub-target, the aggregated results will mean we achieve our overall target for the total inventory. The current targets were developed in October 2017.

Table 1: Emission reduction targets.

Emissions reduction initiative	Target	Baseline (tCO ₂ e)	Target date	Metrics/ KPI	Responsibility	Rationale
Total Scope 1, Scope 2 and Scope 3 (mandatory) emissions	8%	1658.00	1/06/2021	\$ M turnover	Karen Bennett, Manager of Chief Executive's Office.	Achievable through the application of the reduction projects discussed further below. The \$ M turnover metric was selected as it is linked to the capacity of the organisation to engage in different activities.
Electricity	10%	718.00	1/06/2021	\$ M turnover	Mike Garrett (Chief Financial Officer) and Clare Crickett (Director of ICM).	Achievable through operational changes (by optimising time of use of flood pumps), and supported by behavioural changes (engagement of staff in energy-efficient practices).
Diesel	8%	646.00	1/06/2021	\$ M turnover	Nicki Hamilton (Fleet Management Coordinator), and personal responsibility of staff using vehicles. Also Clare Crickett (Director of ICM)	Achievable through adjustment of fleet management system and staff support for more fuel efficient driving. Also through operational changes and/or investment into flood pump and diesel generator fuel efficiency.
Petrol	5%	114.00	1/06/2021	FTE staff	Nicki Hamilton (Fleet Management Coordinator), and personal responsibility of staff using vehicles.	Achievable through adjustment of fleet management system and staff support for more fuel efficient driving.
Air travel (all)	8%	127.00	1/06/2021	\$ M turnover	Managers of Directorates	Achievable through behavioural changes.
Natural Gas	40%	47.00	1/06/2021	Absolute	Appropriate ICM staff	Achievable if natural gas heating sources are switched off when not required (e.g. summer).

8 Specific emissions reduction projects

In order to achieve the reduction targets identified in Table 1 specific projects have been evaluated to achieve these targets. These are detailed below.

Several projects from the 2017-18 EMRP have been completed and so are no longer included in the 2018-19 EMRP (this document).

Table 2: Projects to reduce emissions.

Objective	Actions	Responsibility	Completion date
Reduction of electricity use	Campaign for resource efficiency in offices.	Core Sustainability Team and WRC Communications.	Ongoing and recurring
Reduction of electricity use	Identify unnecessary energy use in offices, and actions to reduce this use.	Charmaine Van Niekerk (Facilities Management Coordinator) with support from Martin Lynch (Energy Consultant for LASS).	March 2019
Reduction of electricity use	Reset WEL Capacity charge from 280kVA to 240kVA	Charmaine Van Niekerk (Facilities Manager)	February 2019
Reduction of vehicle fuel use	Staff engagement campaign in fuel-efficient driving.	Nicki Hamilton (Fleet Management Coordinator) and WRC Communications	Continued roll out in 2018-19
Reduction of vehicle fuel use	Transition WRC fleet to lower emissions vehicles.	Nicki Hamilton (Fleet Management Coordinator).	Continued review
Increase flood pump system efficiency	Utilise past flood pump energy audit and current usage data to identify any flood pump systems which justify earlier renewal	Appropriate staff from ICM, with support from Martin Lynch (Energy Consultant for LASS)	June 2019 and at regular intervals

Table 3 below highlights emission sources that contributed to poor data quality in the Emissions Inventory Report, and describes the actions that will be taken to improve the data quality in future inventories. In addition to these, Waikato Regional Council will work to improve its understanding and data collection on emissions and sequestration relating to land use changes.

Table 3: Projects to improve data quality.

Emissions source	Actions to improve data quality	Responsibility	Completion date
Waste	Extend waste auditing to all sites; not just Hamilton offices	Leah Wyatt	1/06/2019
Freight (all)	Investigate options for collecting use data on freight and associated emissions	Jonathan Mardon (Senior Business Analyst)	1/03/2019

The emissions inventory identified various emissions liabilities. Table 4 details the actions that will be taken to prevent GHG emissions from these potential emissions sources.

Table 4: Projects to prevent emissions and reduce liabilities.

Emissions source	Actions to reduce liabilities	Responsibility	Completion date
Air conditioning units	Regular servicing and preventing damage to units	Charmaine Van Niewkerk (Facilities Management Coordinator)	Ongoing
Fuel storage tanks	Regular monitoring and ensuring up-to-date safety certification	Relevant ICM staff	Ongoing
Fleet vehicles	Regular servicing	Nicki Hamilton (Fleet Management Coordinator)	Ongoing

9 Unintended environmental impacts

The projects to reduce emissions (as listed in section 8) have been assessed to identify any impacts on other aspects of the environment. Additional measures, based on guiding principles from our sustainability policy, will be implemented to ensure that any impacts are minimised.

ENVIRONMENTAL IMPACTS	Campaign for office resource efficiency	Reduce office energy use inefficiency	Reset WEL Capacity charge from 280kVA to 240kVA	Staff engagement in fuel-efficient driving	Transition WRC fleet to lower emissions vehicles	Flood pump efficiency improvement
Resource use	Dark Green	Dark Green	Dark Green	White	White	Dark Green
Electricity consumption	Dark Green	Dark Green	Dark Green	White	Yellow	Dark Green
Fuel consumption	White	White	White	Dark Green	Dark Green	Dark Green
Water consumption	Dark Green	White	White	White	White	White
Wastewater discharge	Light Green	White	White	White	White	White
Waste to landfill	Dark Green	White	White	White	White	White
Air, land and water quality	White	White	White	Dark Green	Dark Green	White
Transport congestion	White	White	White	Light Green	White	White
Biodiversity	White	White	White	White	White	White
Land use	White	White	White	White	White	White
Flooding	White	White	White	White	White	White
Local economy	White	White	White	White	Light Green	White
Dark Green	Significant positive impact					
Light Green	Some positive impact					
White	No change					
Yellow	Some adverse impact					
Red	Significant adverse impact					

10 Key performance indicators

Table 5: KPIs.

KPI	2017	2018
Turnover/revenue (\$Millions)	122.00	125.50

Table 6: GHG emissions per KPI.

KPI	2017	2018
Total gross GHG emissions per Turnover/revenue (\$Millions)	13.71	11.31
Total mandatory GHG emissions per Turnover/revenue (\$Millions)	13.71	11.31

KPI's are as follows:

Year	2017-18	2018-19
Turnover	\$122 million	\$125.5 million
FTE staff	483	496
Total emissions	1,673 tCO ₂ e	1,419 tCO ₂ e
Total emissions per turnover	13.71 tCO ₂ e	11.31 tCO ₂ e

11 Monitoring and reporting

At an organisation-wide level, the emissions intensity has been calculated using the mandatory KPI of \$ turnover as defined in Rule 59b of the technical requirements. Additional KPIs of 'FTE' and 'absolute emissions' are being used to monitor performance in specific reductions projects.

Emissions will be reviewed regularly throughout the year, as will progress towards emissions reduction targets. The EMRP will be reviewed and updated annually in June.

Karen Bennett, Manager of the Chief Executive's Office, is responsible for overseeing overall emissions management and reduction. She is supported by appropriate staff, contractors, and external organisations (including E-Bench, Go Eco and Enviro-Mark).

12 Emissions reduction calculations

Table 7: GHG inventory results.

	2017	2018
Scope 1	806.75	739.91
Scope 2	714.99	546.89
Scope 3 Mandatory	151.21	132.65
Scope 3 Additional	0.00	0.00
Scope 3 One time	0.00	0.00
Total gross emissions	1,672.95	1,419.45
Reporting reductions		
5-year average (tCO ₂ e)	1,672.95	1,546.20
5-year average (tCO ₂ e) (scope 1 & 2)	1,521.74	1,404.27
Emissions intensity reductions		
Turnover/revenue (\$Millions)	122.00	125.50
GDP deflator values Yr1 prices (assumed)		
Adjusted turnover (\$M)		
Emissions intensity (tCO ₂ e/\$M)	13.71	11.31
5-year average emissions intensity (tCO ₂ e/\$M)	13.71	12.51
Percentage change in absolute emissions	(no data)	-15.15
Percentage change in emissions intensity	(no data)	-17.52

13 Performance against plan

The organisation has performed well against the emissions reduction targets set in the base year (last year). Targets of reducing emissions by 2% have been vastly exceeded, with CO₂e emissions almost 15% lower than in the base year.

It is uncertain whether all reductions can be maintained consistently as a significant proportion of these emissions reductions were due to reduced use of flood pumps, and their use is entirely dependent on rainfall and other weather conditions. However, this is nevertheless a positive start to WRC's emissions reduction journey.