

End of Year Climate Change Report 2021/22



To: **Whakatāne District Council**

Date: **Wednesday, 21 September**

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Reference: **A2296325**

1 Reason for the report - *Te Take mō tēnei rīpoata*

The purpose of this report is to provide:

- a six-monthly progress update against our climate change actions and the Council's interim carbon footprint audit results
- a prioritised set of actions out of the current Action Plans we are committing to delivering this financial year (the final year of the current Climate Change Strategy) and updates on the work programme
- responses to queries raised by Councillors at the climate change workshop on the 22 June, and
- next steps on the proposed approach for the refreshed Climate Change Strategy.

2 Recommendation - *Tohutohu akiaki*

THAT the End of Year Climate Change Report 2021/22 be **received**.

3 Background - *He tirohanga whakamuri*

In March 2022, the Mid-Year Climate Change Report was received by Council (A2193212). This provided a progress update on the climate change targets and actions for the first half of the 2021/22 financial year, and the second year of the current Climate Change Strategy.

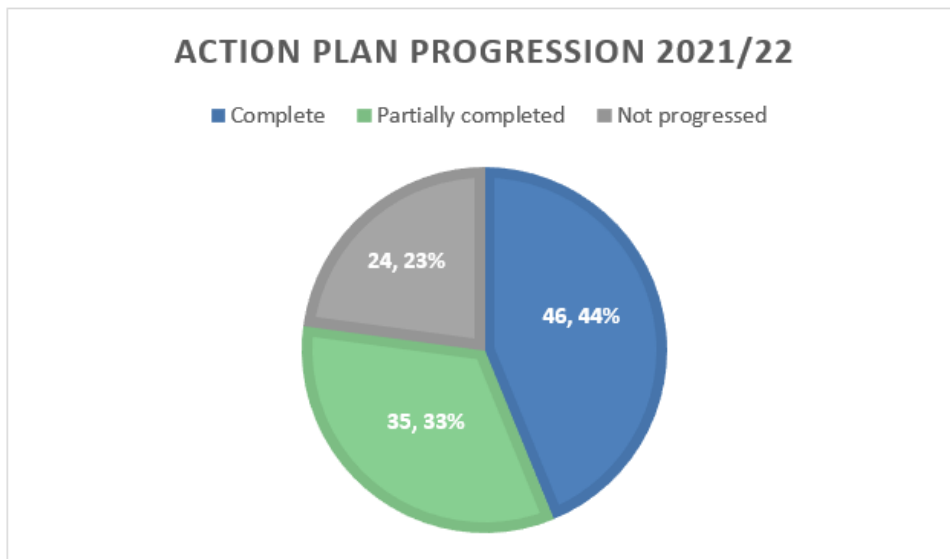
At the time of this report the Council had reduced its carbon footprint by 23% (excluding wastewater emissions), and thus on track to exceed the target of reducing emissions (excluding wastewater emissions) by 15% by 2022.

4 Six-monthly progress against targets and action plans

This report continues Council's six-monthly reporting against the targets and actions outlined in Council's Climate Change Strategy and six Action Plans. An overview of the progress for each action plan is captured in the Six-monthly Climate Change Report 2021/22 attached as Appendix 1.

4.1 Progress against Action Plans

As previously reported, as at the end of June 2022 we had completed 44 (41%) of actions, partially completed 39 actions (37%) and not progressed 24 actions (22%). In June, we reported a summary of actions achieved to date (A2249033).



4.2 Interim carbon footprint audit results

Over the 2021/22 financial year, Whakatāne District Council's carbon footprint was 4,227.09 tCO₂e. This is an 26% increase on the emitting activity measured over the 2020/21, at 3,357.46 tCO₂e. Note that this is an interim result, while we await the result of the current carbon emission auditing process, as part of Toitu Carbon Reduce certification. We expect to have final verification of the data and our certification by the end of October.

Our carbon footprint increased this year as we have added additional, relatively large emitters to the 'inventory' that we have measured. We added a one-off forestry harvesting event and for the first time, refrigerant leakage.¹ The harvesting event of 1.1 hectares of forest added 745 TCO₂e and refrigerant leakage 180.93 TCO₂e. These two events are the second and third largest emitting events for 2021/22.

An overview of other key indicators is captured in Appendix 1, including use of electricity, diesel, natural gas, LPG, fibre and envelopes, as well as air travel and total visitor nights. Highlights include:

- Without the addition of the two additional emitting activities added to the audit this year, the Council's carbon footprint resulting largely from a change in energy use has reduced by almost 29% since 2017/18 (refer slide 5).
- The wastewater treatment plant accounted for 1993.50 tCO₂e (~47%) of our emissions. This is an increase of 7% over 2020/21. A key driver of the increase is an increase in the total volume of treated wastewater discharged, which increased the load of nitrogen discharged, resulting in higher NO₃ emissions (refer slide 6).
- Air travel has bounced back from lows in 2019/20 and 2020/21, largely due to the return of face-to-face meetings and conferences around the country (refer slide 11).

¹ Refrigerants are used in refrigerators and air conditioning units. They are made up of chlorofluorocarbons (CFCs) and hydrofluorocarbons (HFCs). Both compounds are potent greenhouse gases. When a leakage event occurs, these are released into the atmosphere contributing to warming.

- The amount of petrol and diesel decreased from past reporting years, and there has been a 47% reduction in transport generated emissions since the base year (refer slide 13). This could be attributed to the transition to electric vehicles, and the lockdown periods and work from home periods over the last year.
- LPG use increased over the last year. LPG is used at the Crematorium and the Holiday Park. (Refer to slide 10). The holiday park accounts for only 2.6% of total electricity used by Council, however it accounts for over 8% of annual carbon emissions. Its energy related carbon emissions are 81,000 kgCO₂e/year, making it the third largest emitter of all of Council's facilities. This is due to the higher emissions associated with LPG use compared to electricity. The Council has initiated a feasibility study that will include a detailed business case for replacing LPG califonts with a low carbon alternative.

As the Council looks to account for a greater number of emissions sources that it has influence over, the Council expects our total carbon emissions to fluctuate over the coming years, as we better measure our emitting activity. For example, the auditors have recommended that next year, we add the carbon dioxide which is added to swimming pools to manage PH levels. As another example, organisations are being urged to account for emissions across the supply chain and product lifecycle to speed up decarbonisation. The increased demand for supply chain decarbonisation is providing organisations the opportunity to influence these indirect emission sources.

As seen in Figure 1, in most cases your supply chain will be a significant portion of your total emissions. A recent report found the average of Scope 3 emissions is 11 times more than Scope 1 and 2 emissions. This highlights the opportunity to influence many suppliers, and ultimately reduce these indirect emission sources.² Officers think that including a project to embed the identification of a broader scope of emitting sources, including in our supply chain where possible, should be a key element of the revised Climate Change Strategy work.

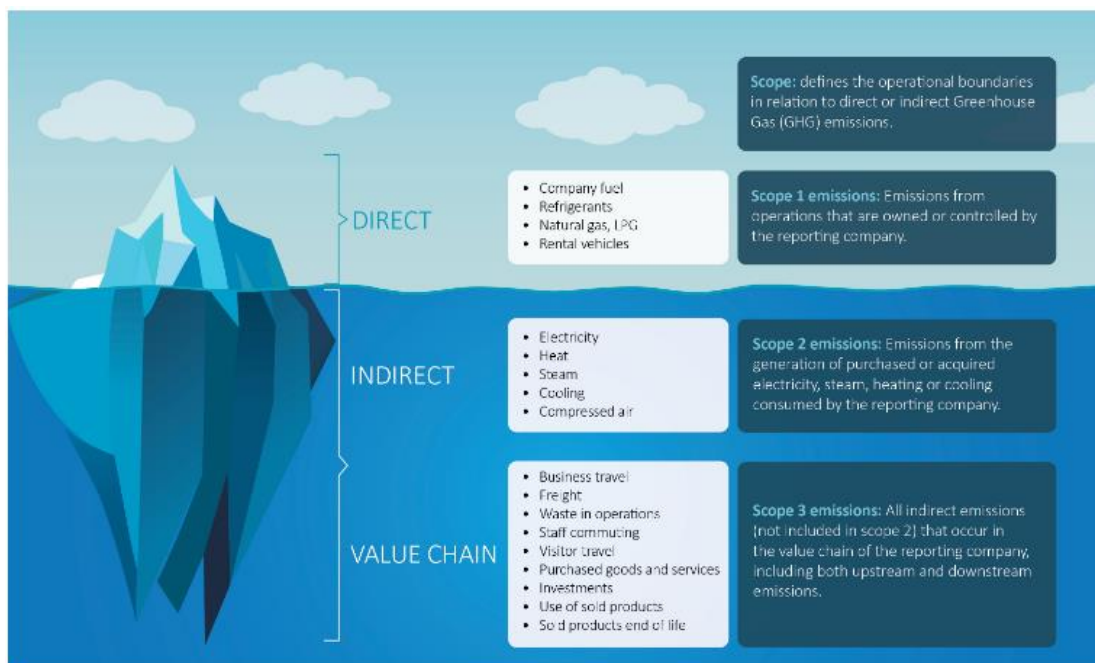


Figure 1. Supply chain emissions are likely to represent a significant portion of total emissions

² Toitu (2022). *Explainer Series | Supply chain engagement to reduce greenhouse gas emissions*. Retrieved from https://www.toitu.co.nz/news-and-events/news/measure/supply-chain-engagement-for-greenhouse-gas-emission-reductions?utm_source=august_newsletter&utm_medium=email&utm_campaign=explainer_supply-chain

5 Update on current Climate Change Strategy work programme

The Council has a year remaining on the work programme developed for the current Climate Change Strategy and Action Plans. Officers have pulled together a list of actions from the current Action Plans to prioritise this financial year.

As discussed with Councillors at the climate change workshop in June, there are a lot of actions and milestones in the current Strategy, with some milestones being significantly more beneficial in allocating resource to than others. Most teams do not have additional resource to allocate to delivery of the Action Plans and are progressing the actions in addition to BAU. This is in the context of current resourcing having to be allocated to navigating a significant programme of Central Government reform.

With this in mind, the existing climate change work programme has been narrowed, with the actions prioritised to take forward aligning with newly established and/or upcoming national requirements, such as the Emissions Reduction Plan and National Adaptation Plan. This approach will focus our resources on the actions that will better contribute to the Council's and District's future direction for climate change and set us up to deliver on new national climate change and sustainability related requirements.

A list of the prioritised actions are attached as Appendix 2. Key actions include:

- Identifying the levels of risk and local impacts from climate change to council infrastructure (transport, three waters, solid waste and community infrastructure).
- Developing further Active Whakatāne implementation plans.
- Reducing electricity and natural gas usage through energy efficiency measures identified through the energy audit.
- Investigating viable solar technology options to generate localised renewable energy for Council use.
- Increasing internal and community understanding and education around water use.
- Implementing the Waste Management Minimisation Plan.
- Identifying local effects on local communities and determine areas most at risk.

We will report progress against these actions in the next climate change update report due in March 2023. Below is an update on a few key projects.

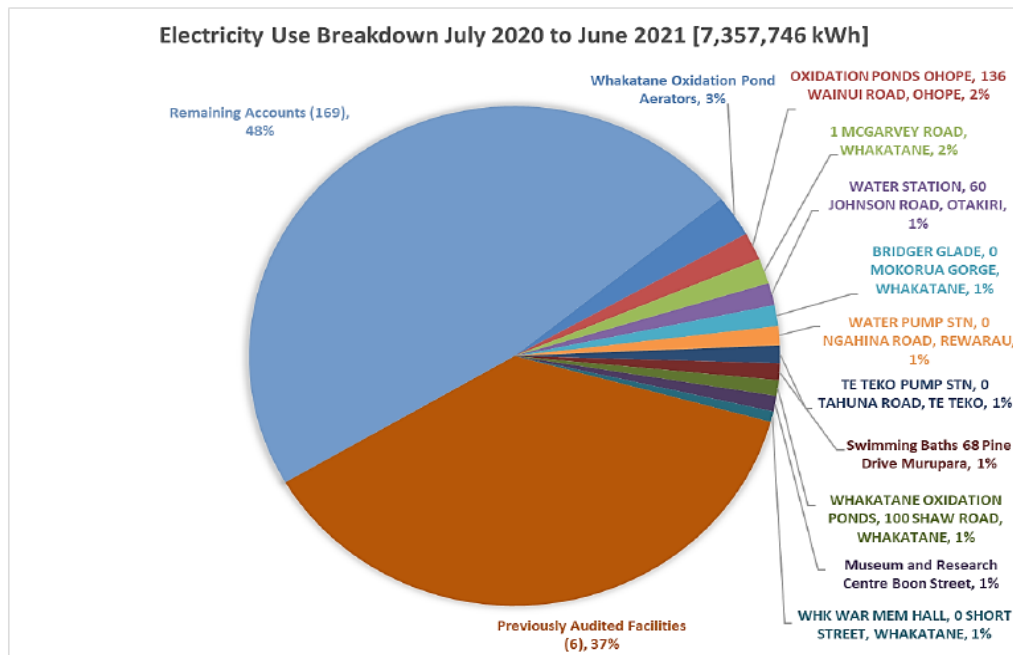
5.1 Updated Energy Audit for 2021/22

In 2018, EMSOL undertook an energy audit on the largest emitting facilities to determine energy cost savings. The updated audit completed earlier this year focussed on the next tier of emitters including the 193 electricity, natural gas and LPG accounts. The energy audit identified larger accounts and focussed on facilities which were not included in the 2018 audit (e.g. Museum and Research Centre, Whakatāne Holiday Park, Murupara Swimming Baths, War Memorial Hall and the Ohope and Whakatāne oxidation ponds).

The audit found that:

- Annual reductions in carbon emissions of 26,000 kgCO₂e have been identified and energy cost savings of \$118,000 a year, with investment payback periods varying from 0 to 4.5 years.
- Energy cost of \$1,473,559, this included costs for electricity, natural gas, and LPG (for the 2021/22 FY). Compared to the 2018 audit, energy costs have decreased by \$260,808 per year.
- Electricity usage has increased by 124,198 kWh since the 2018 audit, and natural gas usage decreased by 554,305 kWh since the 2018 audit. Carbon emissions attributed to the Whakatane District Council's energy consumption were 981,846 kgCO₂e.

- Carbon emissions from electricity and natural gas have also decreased from 2018 levels, by 263,114 kg CO₂e per year, with the opportunity to reduce carbon emissions by approximately 100,000 KG CO₂e and save energy costs of approximately \$108,000 a year.



The audit identified several opportunities for Council to investigate, including:

- Reducing capacity of transformers on accounts with excess capacity
- Improvements to the oxidation ponds, such as improving aerator control
- Install pool cover at Murupara Swimming Baths, and various improvements of the water pumps
- Replace gas califont water heating with hot water heat pumps at Holiday Park
- Replace natural gas boilers with hot water heat pumps for space heating at Museum and Research Centre, and replace natural gas space heating at the War Memorial Hall with combination of heat pumps and radiant heaters

Officers have been investigating the above-mentioned opportunities to understand the funding implications. In addition, we are currently exploring the opportunity of including diesel and petrol use in our energy management programme going forward. Also, to consider.

5.2 Solar Feasibility Study

Officers have commissioned a Council-wide Solar PV scoping study to determine whether any of our land and facilities are viable locations for the installation of solar panels. We have determined criterion and associated importance (weighting) to determine if solar PV would be feasible in specific locations, including but not limited to: cost, payback period, levels of energy savings and carbon emission reduction, use of innovative technologies, and the visible promotion of the benefits of solar PV within the community.

We have provided a list of potential land and facilities to EMSOL, who have been contracted to undertake the study. We expect the study to be completed in November this year and following this, will provide Council with our assessment of the study and recommended next steps.

5.3 Future Fit Carbon Emissions Calculator

Officers are working with the Bay of Plenty Regional Council and several other Territorial Authorities, to roll out FutureFit - an online carbon emissions calculator, to our communities. We are attending training this month and will develop a communications plan to support the roll-out.

Future Fit is an online carbon emissions calculator developed by Auckland City Council. Users are able to use the tool to track their personal carbon footprint. Users do this by answering questions about, for example, how they move around and travel, what they eat, the power they use. Users can see their total carbon footprint next to the New Zealand average (7.7T CO₂e per capita) and the OECD World average (10.8T CO₂e per capita).

The benefit of the tool is that it raises awareness about the activities that generate carbon emissions and incentivises users to change behaviours to reduce their carbon footprint. Users can set weekly goals to reduce their carbon footprint.

If Councillors would like to try the calculator prior to the roll-out, you can find it on the Future Fit website, linked here <https://www.futurefit.nz/>

Auckland City Council's 'Live Lightly' website illustrates the kind of things you could do using Future Fit, on the following link <https://livelightly.nz/>

Genless (EECA) has also partnered with Future Fit and you can find more information about this on the following link <https://genless.govt.nz/stories/wondering-where-to-start/>

6 Response to queries raised at the June workshop

During the Climate Change Workshop in June, the following queries were raised by Councillors:

- Information on the cost of the climate change work programme per year (do the financial benefits outweigh the financial costs).
- Information on whether historic disused landfill sites (such as Burma Road site) are covered by the gas capture requirements in the Emission Reduction Plan.

6.1 Climate Change work programme costs per year

To undertake a detailed study of the costs and savings made from the ongoing climate change work programme would take considerable time and resource. This is because a budget for all of the work that can be attributed to reducing carbon emissions is not separately ring-fenced. There are many changes across the organisation that have been made over the last three to four years that will have contributed to both costs and savings. For example, the transition of the vehicle fleet to hybrids and EVs, the installation of charging stations, improvements to water pumps and the work undertaken to reduce and better dispose of waste.

Thus, below are some key costs, but not an exhaustive list:

- The budget allocated specifically to the Council's Climate change work is \$150,000 per year. This budget is largely for the use of consultants to progress key projects (such as the solar PV feasibility study), and to pay for subscriptions (such as our Toitu Carbon Reduce certification programme, at \$15,000 per year). In addition, there is approximately two FTEs allocated to climate change work (not including manager level).
- Since 1 July 2019, the Council has spent about \$630,000 on infrastructure improvements that will reduce energy related carbon emissions. This includes removing gas boilers and installing heat pumps. Some of these costs are a part of ongoing infrastructure renewals. We have

also spent \$143,000 on support services for the Energy Management Programme, and \$63,000 on our Toitu carbon Reduce Certification Programme.

6.1.1 Cost savings through the EMSOL energy management programme

Financial Year	Cost Savings
July 2021 – June 2022	\$157,497 (\$25,900 from vacation of Civic Centre)
July 2020 – June 2021	\$47,092
July 2019 – June 2020	\$56,693
Total	\$261,282 (\$235,382 excluding cost savings relating to the Civic Centre)
Cumulative cost savings since July 2018	\$317,423 (\$291,523 excluding cost savings relating to the civic centre)

6.2 Historic landfill sites

The Ministry for the Environment has advised that historic landfill sites, such as Burma Road, are not included in the gas capture changes coming through the ERP. The ERP covers operational landfills only. However, we understand that the Ministry for the Environment has proposed a climate change risk assessment for landfills and contaminated sites. This is due to recent failures of some closed municipal landfills and unexpected discharges of waste into the environment. This proposed action alongside any future consenting and upkeep for the closed Burma Rd landfill will likely require funding.

7 Next steps

Council will be undertaking work over the next year to develop the next climate change pathway for the District.

In June, a workshop was held with Councillors to discuss the drivers for, and approach to, developing a revised Climate Change Strategy. Council committed to developing the next iteration of a Climate Change Strategy for commencement in 2023. At the workshop, officers and elected members acknowledged the achievements and successes of the Council's first Strategy, discussed the insights gained from the current Strategy, and recognised the importance of taking stock of the challenges and opportunities presented by the Government's reform programme.

Officers indicated a preferred approach to the next strategy, as follows:

- Using national long-term and interim targets alongside current District targets, with current targets enabling actions to be localised for our context and specific needs.
- Responding to national requirements and drawing from national and regional support rather than developing a new separate District strategy with a number of additional workstreams

to implement in addition to Central Government reforms. Our strategy becomes a “response” or “implementation” strategy (of the Emissions Reduction Plan, the National Adaptation Plan, Resource Management Reform, etc), contextualised for our communities.

- Pivoting to more externally focussed actions and district-wide implementation with stakeholders, Māori, and communities (while continuing our own efforts internally).
- Better matching expectations with resources.

We expect to have developed a work plan by early next year that outlines the overarching process, with any necessary governance and/or working group structures in place early in the second quarter of the year.

By mid-2023, we aim through engagement with residents, communities, businesses and iwi/hapū to develop the vision, goals and priorities for the District’s next climate change response. This work will consider the Council’s role within any relevant national requirements that come into effect by this time.

8 Significance and Engagement Assessment - Aromatawai Pāhekoheko

8.1 Assessment of Significance

While the Council’s overall Climate Change programme is of high significance, the recommendations in this report are assessed to be of low significance in accordance with Council’s Significance and Engagement Policy.

8.2 Engagement and community views

The progress on Council’s Climate Change Strategy and Action Plans (as attached to this Report) will be made publicly available through this agenda and will be posted on the Council’s website.

9 Considerations - Whai Whakaaro

9.1 Financial/budget considerations

The recommendations of this report do not have any financial implications.

The Climate Change Action Plans identify some actions which require specific budget allocation. These are noted in the ‘resource requirement’ column with a ‘\$’ symbol. For the medium- and long-term actions in the Action Plans, budget has been allocated through the Long-Term Plan 2021-31 and budget will need to be allocated through the Long-Term Plan 2024-34.

9.2 Strategic alignment

The Climate Change Strategy and Action Plans have implications for a range of Council policies and planning processes. This includes the Long-Term Plan 2021-31, Procurement Policy, Operative District Plan, and others. The intention is for climate change to be embedded across all Council processes.

9.3 Climate change assessment

The decisions and matters of this report specifically are assessed to have low climate change implications and considerations, in accordance with the Council’s Climate Change Principles.

However, this report provides updates on actions that specifically deliver on Council's Climate Change Action Plans and can so be determined to have high significance.

9.4 Risks

Not taking climate change action quickly enough may pose the biggest risk, with far-reaching environmental, social, cultural, economic, legislative, and other consequences to our District. The development, adoption and continued monitoring of the Council's Climate Change Strategy and Action Plans ensures a systemic response to climate change. These documents are intended to be 'live' and continually reviewed to ensure they are fit for purpose and respond to new data, legislation, and government direction as these arise.

Attached to this report:

- Appendix 1 - Six-Monthly Climate Change Report 2021/22
- Appendix 2 - Climate Change work programme 2022/23